

Minidoka Project

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The Minidoka Project

According to the Idaho Historical Society, Minidoka is a Dakota word meaning "a fountain or spring of water."¹ The word is appropriate for the Project. One of the oldest Reclamation projects, the Minidoka Project contains seven dams, 1,600 miles of canals and nearly 4,000 miles of laterals. Part of the Minidoka Project lies in an arid and forbidding expanse of volcanic soil and sagebrush. The reservoirs of the Project lie in the forested hills and mountains of eastern Idaho and northwestern Wyoming. Even today, the area remains lightly populated. Only the hardy dare brave temperatures that consistently drop to twenty degrees below zero during the winter or skyrocket above 100 in the summer. The extreme dryness of the area made it a perfect candidate for irrigation by the Bureau of Reclamation.²

Project Location

The Minidoka Project operates in Reclamation's Pacific Northwest Region. The entire Project stretches across most of southeastern Idaho and into northwestern Wyoming. Minidoka irrigates over one million acres in Teton, Fremont, Jefferson, Bonneville, Bingham, Cassia, Minidoka, Power, Jerome, Lincoln, Bannock, Gooding, and Twin Falls Counties of Idaho to the tune of over one million acres. Teton County, Wyoming, contains Jackson Lake and Grassy Lake Dams and Reservoirs, and Cascade Creek Diversion Dam. Fremont County, Idaho has Island Park Dam and Reservoir, and Cross Cut Diversion Dam and Cross Cut Canal. American Falls Dam is located in Power County, Idaho while the reservoir lies in both Power and Bingham Counties. Minidoka Dam and Lake Walcott, as well as the North and South Side Divisions are in Cassia County. Milner-Gooding Canal irrigates Lincoln, Jerome, Twin Falls, and Gooding

1. See the Idaho Historical Society website at www.idahohistory.net/Reference%20Series/0034.doc.
2. Water and Power Resources Service, *Project Data* (Denver: Government Printing Office, 1981), 640, 645.

Counties.³

Historic Setting

Two Native American groups inhabited southeastern Idaho prior to immigration by Europeans in the nineteenth century. The Bannocks, a Northern Paiute speaking people, migrated from Oregon to the area of the Snake River plains. They differed from other Northern Paiutes by their acquisition of horses and organized buffalo hunts. The Bannocks co-existed peacefully in Idaho with Northern Shoshones. Native grasses supported buffalo in the upper Snake River plains until about 1840. Fish also contributed largely to both Native American groups' subsistence.⁴

In the 1850s, Mormon settlers established the Fort Lemhi mission in Idaho. By the end of the decade, escalating conflicts with the Bannocks turned violent. The 1857-58, clashes coincided with a U.S. military force approaching Utah, convincing Brigham Young, Utah's territorial Governor and President of the L.D.S. Church, to recall the settlers to Utah. Mormon settlers returned to southern Idaho in the 1860s, and gold miners entered the Sawtooth Mountains in force.⁵

The Bannocks and the various groups of the Shoshones found themselves placed on reservations starting in the late 1860s. The Federal government originally set up the Fort Hall Reservation in 1867, for the Boise and Bruneau Shoshone, and introduced the Bannock and other Shoshones to the reservation after the Fort Bridger Treaty of 1868. The government established the Lemhi Reservation in 1875, for the Lemhi and the Sheepeater Shoshone, but shut it down in

3. *Ibid.*

4. Robert F. Murphy and Yolanda Murphy, "Northern Shoshone and Bannock," in *Handbook of North American Indians* (Washington: Smithsonian Institution, 1986), ed. by William Sturtevant, vol. 11 *Great Basin*, vol ed. Warren L D'Azevedo, 284, 285.

5. F. Ross Peterson, *Idaho: A Centennial History* (New York: W. W. Norton, 1976), 51, 52; Murphy and Murphy, "Northern Shoshone and Bannock," 302.

1907, and then also moved its residents to Fort Hall. The swelling of the white population increased friction between the newcomers and the native inhabitants, and the reservation system did not prevent conflicts. One such conflict, the Bannock War of 1878, started in Idaho, but moved west and ended with the Northern Paiute in Oregon. Disputes between white miners and Sheepeater Shoshones erupted in the Sheepeater War of 1878-79. Both conflicts ended the same as other confrontations between Native Americans and whites, in favor of the latter.⁶

Irrigation began in Idaho in the 1840s, when Reverend Henry H. Spalding, a missionary at Lapwai, dug a ditch from the Clearwater River to supply his dying garden with water. The Mormon settlers brought more irrigation experience with them to the state, and the U.S. Geological Survey first conducted investigations of irrigation possibilities of Idaho in 1889-90. The Idaho State Engineer ordered further surveys five years later. Private organizations toyed with irrigation possibilities after 1887, but made no definitive investigations of the idea.⁷ Meanwhile, in Minidoka County, water wheels were used to irrigate 200 acres of the "Old Jimmy Howell Place."⁸ In 1900, Ira B. Perrine combined Idaho, Illinois, and Pennsylvania interests to bring water to the Twin Falls area. Perrine convinced Stanley Milner, a Salt Lake City businessman, to invest \$30,000 in a survey for the irrigation project. In 1903, the state of Idaho contracted with Twin Falls Land and Water Company (Perrine's group), and the company built Milner Dam, named for Stanley Milner. When Congress passed the Reclamation Act in 1902, D. W. Ross, Reclamation's District Engineer in Idaho, initiated the work of Reclamation in Idaho. Surveys began on the headwaters of the Snake River in order to determine water storage

6. Peterson, *Idaho*, 71, 72, 83-5; Murphy and Murphy, "Northern Shoshone and Bannock," 302.

7. Bureau of Reclamation, *Annual Project History, Minidoka Project, 1912*, Record Group 115, 3; Peterson, *Idaho*, 44-5, 124. Hereafter Record Group 115 cited as RG 115.

8. Minidoka County News, *The Minidoka Story*, 1.

potential.⁹

Project Authorization

On November 17, 1902, Secretary of the Interior Ethan A. Hitchcock withdrew the irrigable land of the Minidoka Project from public entry. Survey parties started initial work looking toward locating canals in the project area on both sides of the Snake River. Surveys indicated the North Side could be irrigated by gravity with canals. The South Side of the Project needed pumping plants to get river water to the area. In December 1903, Ross reported to Reclamation, recommending immediate construction of the Project. A consulting board reviewed a report of estimated costs the next spring. In March, the board reported favorably to the Secretary of the Interior. Ethan A. Hitchcock gave the Minidoka Project his approval on April 23, 1904, and allotted \$2.6 million to the Project.¹⁰

Construction History

Initial construction of the Minidoka Project began under D. W. Ross, the Project Engineer. Reclamation wasted no time in commencing work on the Project. On September 30, 1904, the Utah Portland Cement Company of Salt Lake City received a contract to supply 14,000 barrels of cement for construction of the Minidoka Dam. N. J. Blagan first received the contract for the construction of the dam, but failed to begin work. Reclamation then awarded the contract to Bates and Rogers Company, but two months of the working season had already been lost. Bates and Rogers started shipping equipment and making construction preparations in September 1904.¹¹

Work on the dam began with the excavation of a diversion channel. Afterwards Bates

9. Reclamation, *Project History, Minidoka Project, 1912*, 3; Peterson, *Idaho*, 130.

10. *Ibid.*, 3-5, 10-1.

11. *Ibid.*, 12, 16.

and Rogers erected a section of the eight foot high corewall. Due to the late start workers encountered a high stage of the Snake River which caused some problems in removing the water from the corewall area. Workers constructed the north side rockfill and the regulating gates of the dam and diverted the water through them. Work then commenced on the remaining fifty feet of the structure. First, workers completed the corewall, and then the remaining rock fill. Bates and Rogers excavated the spillway concurrently with construction of the dam. The contractor finished the excavation and began placing concrete on June 26, 1906. Work crews finished concrete work on the spillway the following October, completing the work on the dam.¹²

Most of the laborers on Minidoka Dam were from outside the United States because their work proved more satisfactory than the local hires. Greeks, Italians, Austrians, Irish, and Spanish workers participated in construction of the dam. The *Project History* of 1912 especially lauded the work of the Greeks, Italians, and Spanish.¹³

The Minidoka Project was one of the first Reclamation projects to incorporate hydroelectric power. The Minidoka Powerplant at Minidoka Dam became the first hydroelectric powerplant on the Project. After much debate, engineers J. H. Quinton, O. H. Ensign, and A. J. Wiley chose a site about 2,000 feet below the north end of the dam and 900 feet back from the river channel for the powerplant. They planned to divert water to the powerplant through a forebay canal and release it back to the river via a tailrace.¹⁴

In August 1904, two engineers, Storrs and Ross, proposed a significant change in the plans. Original plans called for a diversion channel near the north end of the rockfill of Minidoka Dam to control the river during construction of the fill. Afterwards, construction

12. *Ibid.*, 17-9.

13. *Ibid.*, 19.

14. *Ibid.*, 14.

workers would build a concrete dam, containing five regulating gates, across the channel. Storrs and Ross proposal widened the concrete dam, and built it as a foundation and upper wall for the powerplant. The concrete portion contained ten penstocks, each with a ten foot diameter. The modified plans necessitated the eventual excavation of a tailrace, but eliminated excavation of a forebay for the powerplant.¹⁵

The Minidoka Powerplant entered operation in 1909. The Minidoka Powerplant was the third power generation structure built by Reclamation. Construction of the plant finished in 1909. The powerplant supplied electricity for irrigation and drainage pumping. Reclamation sold the excess power commercially.¹⁶

The revised powerplant construction eliminated a portion of the construction contracted by Bates and Rogers. To make up for the lost work, Reclamation added the excavation of 2,000 feet of the main North Side Canal to the contract. Bates and Rogers completed the new work by October 1906, as well. During the month Reclamation closed the controlling gates of the diversion channel and began filling Lake Walcott, the reservoir behind Minidoka Dam.

Reclamation named the lake for Charles D. Walcott, Director of the U.S. Geological Survey.¹⁷

Located six miles south of Minidoka, Idaho, Minidoka Dam was eighty-six feet high, twenty-five feet wide at the crest, with a maximum base width of 418 feet. The dam's crest was 4,475 feet, and the dam contains 257,300 cubic yards of material. Lake Walcott has a total capacity of 210,000 acre-feet with an active capacity of 95,200 acre-feet.¹⁸

In the spring of 1905, Reclamation opened the contract bidding for the Project's canal

15. Reclamation, *Project History, Minidoka Project, 1912*, 14-5.

16. Walter K. M. Slavik, "Pioneering Public Power: Minidoka Project, Idaho," *The Reclamation Era*, September 1941, 234; Water and Power Resources, *Project Data*, 648.

17. Reclamation, *Project History, Minidoka Project, 1912*, 17, 21; George Wharton James, *Reclaiming the Arid West: The Story of the United States Reclamation Service* (New York: Dodd, Mead and Co., 1917), 148.

18. Water and Power Resources, *Project Data*, 645-6.

systems, and awarded contracts that July. Excavation of the canal systems commenced immediately upon approval of the contracts. The contractors in turn sublet much of the work to local workers. Severe winter weather hindered progress on initial grading leading to a thirty day contract extension by Reclamation. Reclamation furnished concrete, steel gates, and controlling machinery to all the contractors, and took over the construction of five structures in the canals and built them of wood to speed progress. In spite of this effort the contractors did not complete their work until July 1907.¹⁹

Excavation by contract began on the first and second lift canals in March 1908. Both contractors finished by the end of June. In order to supply water to the South Side in 1909, Reclamation decided at least one pumping unit needed to start operation. Construction of the pumping plant commenced in the fall of 1908, and continued through the winter. Farmers on the South Side received their first irrigation water the following May. The North Side Canal extended a distance of eight miles in a southwesterly direction from Minidoka Dam. The South Side Canal traveled from Minidoka Dam to the first lift pumping plant.²⁰

It became apparent to Reclamation that continuing development of irrigation in the Upper Snake River Valley required more water storage for future additions to the Project. Reclamation deemed Jackson Lake, in Teton County, Wyoming, the only site capable of storing the required 216,000 acre-feet of water. When Reclamation officially adopted the site, it made plans for a temporary timber dam to raise the surface of the lake ten feet. This would increase Jackson Lake's capacity to 350,000 acre-feet.²¹

Construction of the temporary dam began by force account in July 1906. Government

19. Reclamation, *Project History, Minidoka Project, 1912*, 27-8, 30.

20. Reclamation, *Project History, Minidoka Project, 1912*, 48, 55; Water and Power Resources, *Project Data*, 247-8.

21. Reclamation, *Project History, Minidoka Project, 1912*, 9, 40.

forces built a timber crib for the center section, floated it to the desired area, and sank it by filling it with rocks. The short work season, about three months, limited the amount of work accomplished in any one year. Reclamation finished the dam in June 1908. On July 5, 1910, the crib section of Jackson Lake Dam gave way because the wood in the crib rotted. This necessitated the construction of a permanent dam, which received approval in 1910.²²

Construction of the new Jackson Lake Dam involved enlarging Jackson Lake by raising it seventeen feet. Initially Reclamation awarded the construction contract to Kuhn Irrigation and Canal Company. Later Twin Falls Canal Company became involved in the contract. Kuhn experienced financial difficulties resulting in construction delays in 1913, the initial year of work. The contractors only completed preliminary work during the year. Reclamation instructed F. A. Banks, the Reclamation engineer at the dam, to continue work on April 4, 1914.²³

Reclamation wanted to raise the concrete portion in 1914, to a level where construction could resume in spring 1915, and also would allow enough stored water for the North Side Division's use. Work on the foundation of the south one-third of the dam, including the fish ladder, logway, and the south abutment. Foundation work and concrete placement of the rest of the dam followed shortly. The only concern about reaching the year's goals arose from finding the bedrock under the west wing of the north abutment was thirty to thirty-five feet below the estimated necessary water level, but the extra work caused no problems.²⁴

The new dike of Jackson Lake Dam was built on the site of the temporary structure. Stripping of the dike's foundation began in 1914, and finished June 11, 1915. The old dike

22. *Ibid.*, 40-2.

23. Bureau of Reclamation, *Annual Project History, The Minidoka Project (Jackson Lake Enlargement Program)*, 1913, RG 115, 35, 41-2, 45; Bureau of Reclamation, *Annual Project History, The Minidoka Project (Jackson Lake Enlargement Program)*, 1914, RG 115, 54.

24. Reclamation, *Project History, Jackson Lake Enlargement*, 1914, 52, 58-9.

formed the upstream face of the new dike. Meanwhile work on concrete placement continued in 1915, most of it finishing on June 16, except for some sections of the corewalls. Concreting of these finished on November 18, 1915. Workers completed work on the dam in 1916. Water first flowed over the spillway July 2, 1916, and workers placed the last dirt and riprap on the dike August 31.²⁵

The new Jackson Lake Dam is a concrete gravity dam with embankment wings. The dam is sixty five and a half feet high. It has a top width of twenty feet and a maximum base width of seventy-two feet. The dam is 4,920 feet long. Jackson Lake, a conglomeration of several small lakes combined because of the increased water elevation, held 847,000 acre-feet after post-construction improvements.²⁶

After construction of Jackson Lake Dam, Reclamation held off building any new structures during the 1910s. The 1920s brought construction of American Falls Dam across the Snake River as the next addition to the Minidoka Project. American Falls Dam brought with it more than engineering challenges. It also brought a new challenge for Reclamation, relocating most of the city of American Falls, Idaho. Upon completion American Falls Reservoir would inundate sections of Aberdeen, Springfield, and Sterling, Idaho, in addition to nearly three-quarters of American Falls. Reclamation offered to buy land on the prospective reservoir, and the *Project History* of 1920 claimed most owners accepted. Reclamation moved into court for condemnation proceedings against owners who refused to sell. One condemnation case went to the U.S. Supreme Court which upheld the government's action.²⁷

25. Bureau of Reclamation, *Annual Project History, The Minidoka Project (Jackson Lake Enlargement Program), 1915*, RG 115, 31-2, 34; Bureau of Reclamation, *Annual Project History, The Minidoka Project (Jackson Lake Enlargement Program), 1916*, RG 115, 2-3.

26. Peterson, *Idaho*, 133; Water and Power Resources, *Project Data*, 246.

27. Bureau of Reclamation, *Annual Project History, The Minidoka Project, 1920*, RG 115, 335, 337; Ivan E. Houk, "Moving the City of American Falls, Idaho," *Western Construction News*, 25 October 1928, 648-9.

Reclamation bought the new site for American Falls to keep property prices down for those residents of the old site forced to move. In 1923, Reclamation hired Russell V. Black, the city planner of Highstown, New Jersey, to plan the new city of American Falls. Reclamation also hired Sylvester Q. Cannon, the city engineer of Salt Lake City, to map out improvements in the city. Reclamation relocated many of the large structures from the old town site to the new town. Most building owners moved the buildings at their own expense. The three story Grand Hotel and several grain elevators were the largest buildings moved. Moving buildings often took several days or weeks, and the work continued well into 1926.²⁸

Utah Construction Company received the contract for construction of American Falls Dam in 1925. Originally the dam was to impound 1,045,000 acre-feet. Later Reclamation planned a larger structure in order to retain more water. During 1925, work on the dam was limited to the east half of the dam while deciding whether or not to increase the dam's size. Utah Construction placed twenty five by five foot high pressure outlet gates, the fifteen foot penstocks, for the Idaho Power Company, and the concrete in this section. Reclamation told Utah Construction in February 1926, to construct the larger dam. Early 1926, saw Utah Construction lay the foundation on the west section of the dam. The company installed the four 15 foot penstocks for the government powerplant, and started the corewall in the right embankment.²⁹

Utah Construction concentrated on the spillway and left abutment in the spring in order to allow the dam to capture as much storage water as possible for the irrigation season. Workers completed installation of the fifteen radial gates in October. Utah Construction finished all the

28. Reclamation, *Project History, Minidoka Project, 1920*, 337; Ivan E. Houk, "Moving the City of American Falls," 648, 652.

29. Bureau of Reclamation, *Annual Project History, The Minidoka Project: American Falls Dam, 1925*, RG 115, 3; Bureau of Reclamation, *Annual Project History, The Minidoka Project: American Falls Dam, 1926*, RG 115, 29-30.

concrete placement except for one section by September 1926, and in October removed the last cofferdams and the reservoir filled for the first time. Utah Construction completed the final work on American Falls Dam in April 1927. American Falls Dam was a concrete gravity structure with embankment wings. The dam was 103.5 feet high with a crest length of 5,277 feet. The crest width of the dam was 42.5 feet. American Falls Dam contained a volume of 1,374,300 cubic yards of material.³⁰

American Falls Reservoir flooded some of the lands of the Fort Hall Reservation. Reclamation negotiated with the Indian Service, later the Bureau of Indian Affairs, to appraise the reservation lands for purchase. In addition to flooding the lands, some people feared the reservoir would engulf Fort Hall itself. Fort Hall escaped flooding, but in 1993, Reclamation preservation officers debated the erosion threat to the fort, and it was listed as an endangered site.³¹

Milner-Gooding Canal began life as the Gravity Extension Division. Reclamation intended to connect Milner Lake, behind Milner Dam, with the various privately built canals of the area. This would increase the irrigable area on the Minidoka Project. North Side Canal Company, South Side Canal Company, and Twin Falls Canal Company built Milner Dam privately, completing it in 1905.³²

Derbon Construction, of Seattle, and Winston Brothers Company, of Minneapolis, contracted for one schedule each on Milner-Gooding Canal in July 1928. Derbon Construction encountered earth and cinder pockets and seams in the rock that resulted in breaking out more

30. Reclamation, *Project History, American Falls*, 1926, 30-2; Bureau of Reclamation, *Annual Project History, The Minidoka Project: American Falls Dam*, 1927, RG 115, 34; Water and Power Resources, *Project Data*, 646.

31. Bureau of Reclamation, *Annual Project History, The Minidoka Project*, 1921, RG 115, 13; Minerva Kohlhepp Teichert, *Drowned Memories*, (Salt Lake City: Deseret News, 1926), 7.

32. Peterson, *Idaho*, 130; Bureau of Reclamation, *Annual Project History, The Minidoka Project*, 1928, RG 115, 52; "Use of Milner Dam for Gooding Project," *New Reclamation Era*, June 1931, 121-2.

material during excavation than desirable in 1929. Reclamation responded by revising plans for lining the canal bottom with concrete and fill the seams in the rock sides with gunite. Derbon Construction fought through the difficulties and completed the contract on December 21, 1929.³³

Winston Brothers started construction on their contract before the end of the month, and before Reclamation notified both contractors in August to begin work. Winston Brothers stopped work during the winter of 1928-29, because of severe weather conditions. Excavation work resumed March 4, 1929. Winston Brothers encountered few problems outside of weather, and work continued smoothly. The company finished their contract on November 8, 1929.³⁴

Reclamation entered various contracts in the Milner-Gooding Division during 1929. John Phillips Company and Mittry Brothers Company for earthwork and structures on the Division. Phillips stopped work for the winter in December. Phillips also contracted to excavate a section of canal. Reclamation awarded several contracts for canal structures, bridges, and diversion works to connect the Milner-Gooding Canal with the existing Twin Falls Company Canal.³⁵

In June, Derbon Construction started work on the diversion facilities for the canal at Milner Lake. They built a cofferdam in Milner Lake and a channel above the headworks structure to divert water away from construction. Work proceeded quickly, allowing Derbon to complete the headworks in mid-December. Following completion of the canal past Station 38+25, the company erected a steel bridge at this point. Derbon once again encountered seamed rock while excavating for the concrete abutments. The rock shattered easily forcing the

33. Bureau of Reclamation, *Annual Project History, The Minidoka Project, 1928*, RG 115, 52; Bureau of Reclamation, *Project History, The Minidoka Project, 1929*, RG 115, 38, 41.

34. Reclamation, *Project History, Minidoka Project, 1928*, 52; Reclamation, *Project History, Minidoka Project, 1929*, 41-2.

35. Reclamation, *Project History, Minidoka Project, 1929*, 42-5, 47, 49.

company to extend the abutments deeper than originally planned.³⁶

Work on the Milner-Gooding Canal continued without serious hindrances. John Phillips Company's excavation came across very porous material in one section. Workers excavated the section two feet below the grade and back filled it with dirt to prevent seepage. In another section Reclamation discovered excessive excavation could be avoided, and better water tight integrity established by changing the alignment of the canal between Stations 1686 and 1760. Derbon Construction, Winston Brothers, and John Phillips finished work on their contracts by the end of 1931.³⁷

Reclamation entered into the final contracts on the Milner-Gooding Canal in 1931. The main construction contract went to Haas, Doughty, and Jones for construction of the canal below the Big Wood River. Morrison-Knudsen Company, Inc., connected the canal to the Big and Little Wood Rivers. Work progressed until the winter of 1931-32. Heavy rain and snow fall in the spring of 1932, slowed Haas, Doughty, and Jones considerably. The company finished their contract May 10, 1932, just one day before the time limit. The end of the Haas contract completed the Milner-Gooding Canal. Milner-Gooding Canal extended from Milner Lake to the vicinity of Gooding, Idaho. The canal covered a distance of seventy miles with a capacity of 2,700 second-feet.³⁸

During the late 1930s, Reclamation built Island Park Dam, Grassy Lake Dam, Cascade Creek Diversion Dam, and Cross Cut Diversion Dam and Cascade Creek Feeder Canal and Cross Cut Canal as part of the Upper Snake River Project. Upon their completion Reclamation transferred the dams, the canals, and the Fremont-Madison Division to the Minidoka Project.

36. *Ibid.*, 47, 49-50.

37. Bureau of Reclamation, *Annual Project History, The Minidoka Project, 1930*, RG 115, 46, 53; Bureau of Reclamation, *Annual Project History, The Minidoka Project, 1931*, RG 115, 41.

38. Reclamation, *Project History, Minidoka Project, 1931*, 16, 60; Bureau of Reclamation, *Annual Project History, The Minidoka Project, 1932*, RG 115, 41.

The transfer in 1940, added nearly 150,000 acre-feet of stored water, several miles of canals, and 995 farms to the Project.³⁹

Max J. Kuney received the contract for the construction of Island Park Dam in 1934. Kuney moved quickly on the construction beginning to clear the dam site and building the construction camp and access road before the end of the year. Work on the dam started in spring of 1935, when workers began excavating the spillway. Workers started the inlet and outlet tunnels in March. Three months later Kuney recommenced clearing the dam site after snow levels from the previous year had dropped enough to allow work to continue. Most of the early work concentrated on the diversion and outlet tunnels. Rock fill of the dam and dike embankment started in 1936.⁴⁰

Rhyolite rock in the spillway frequently shattered, slowing excavation. Workers excavated and lined the spillway with concrete through most of 1937. Workers brought the dam to within 12 inches of the final crest height in 1937, but heavy snow forced construction to halt for the winter. The contractor started again on June 11, 1938. Grouting work on the foundation rock started June 22, and was completed August 15. Derbon Construction resumed placement of earthfill on the upstream section of the dam above the auxiliary cutoff wall on July 27. This allowed the placement of earthfill over the rest of the dam until October 1, when workers completed the structure. Island Park Dam is a zoned earthfill dam and dike ninety-one feet high. The top width is thirty-five feet with a maximum base width of 585 feet and a length of 9,450 feet. Island Park Dam contains 564,000 cubic yards of material. The dam impounds 127,600

39. Bureau of Reclamation, *Annual Project History, The Minidoka Project, 1941*, RG 115, 210; Water and Power Resources, *Project Data*, 646-7.

40. Bureau of Reclamation, *Annual Project History, The Minidoka Project (Upper Snake River), 1935*, RG 115, 24; Bureau of Reclamation, *Project History, The Minidoka Project (Upper Snake River), 1936*, RG 115, 23, 25-8, 30-1.

acre-feet of water.⁴¹

Operations on the Cross Cut Diversion Dam and Canal began in August 1936. Otis Williams and Company and Brent Sturgill Company combined on the two projects. Otis Williams started the dam with Sturgill excavating the canal. Work on the diversion dam ran into problems when Reclamation discovered the foundation was composed of compacted gravel on top of finer gravel and sand. This required a change in dam design because Reclamation originally thought the dam would have a solid rock foundation. As a result workers laid an eight inch thick, fifty foot concrete apron extending upstream from the dam. An eight foot deep cutoff trench filled with impervious, compacted material and a five foot deep cutoff wall further reinforced the foundation integrity.⁴²

Because workers placed all the concrete on the Cross Cut Dam in cold or freezing weather they had to keep the cement mix heated. In the coldest weather crews heated the sand and gravel as well. Work on the dam eventually stopped for the winter and resumed in 1937, as soon as weather permitted. The contractors faced no more problems after the change in design, and they finished the dam by the end of the year. Clean up operations took place in the beginning of 1938. After completion, Cross Cut Diversion Dam was a seventeen feet high, concrete gravity, overflow, ogee weir. The total length of the dam is 457 feet with 7,400 cubic yards total volume.⁴³

Brent Sturgill Company started the work on Cross Cut Canal. Equipment breakdowns slowed progress on the canal by requiring time consuming repairs. The slowed progress forced

41. Bureau of Reclamation, *Annual Project History, The Minidoka Project (Upper Snake River), 1937*, RG 115, 31-2, 35; Bureau of Reclamation, *Annual Project History, The Minidoka Project (Upper Snake River), 1938*, RG 115, 14-5; Water and Power Resources, *Project Data*, 646-7.

42. Reclamation, *Project History, Upper Snake River, 1936*, 40, 42.

43. Reclamation, *Project History, Upper Snake River, 1936*, 43; Reclamation, *Project History, Upper Snake River, 1937*, 61.

the company to pour concrete for the canal structures in cold weather. As with the Cross Cut Dam, crews heated the mixture and structures after pouring. In 1937, Otis Williams Company took over excavation of the canal from Sturgill, subcontracting the work to A. L. Nelson. Nelson started work on the canal April 6. R. S. Humphrey assumed construction of canal structures from Sturgill's subcontractor Walter Bell. Most work on the canal finished in the spring of 1938. Testing and repairs of the canal started in May. Workers completed the final cleanup work on the Cross Cut Canal at the end of June 1938. Cross Cut Canal extended 6.6 miles south from the Cross Cut Diversion Dam to the Teton River.⁴⁴

Bids for the construction of Grassy Lake Dam opened in August 1936, with S.J. Groves and Sons Company of Minneapolis placing the winning bid. Reclamation did not give notice to proceed with work until 1937. Government forces built the construction camp for the dam as early as weather permitted in advance of the contract workers' arrival. Groves subcontracted construction of Grassy Lake Dam to Lobnitz Brothers of Willmar, Minnesota, for earthwork, and Landreth Construction of Scotts Bluff, Nebraska, for concrete work.⁴⁵

The subcontractors completed approximately almost one-quarter of the dam during the 1937 work season, which as usual proved short because of inclement weather conditions. During 1937, workers completed: the headworks structure and rough excavation of the spillway in the left abutment of the dam; preparation of the dam foundation, including completing cutoff trenches, cutoff walls and footings, and a grouting curtain in the dam foundation. Concrete placement in the outlet conduit began in August and ceased for the year in October. Nevada

44. Reclamation, *Project History, Upper Snake River, 1936*, 44-5; Reclamation, *Project History, Upper Snake River, 1937*, 61; Reclamation, *Project History, Upper Snake River, 1938*, 61, 63.

45. Reclamation, *Project History, Upper Snake River, 1936*, 45-6.

Construction Company commenced clearing timber from the reservoir in June 1937.⁴⁶

Work on the dam did not resume until June 1938, due to severe weather conditions. The contract required September 7, 1938, for the completion date. Reclamation extended the contract seventy-five days to November 21. By October 6, freezing weather forced still incomplete construction work to halt. Workers finished most of the structural work by the stop date, but completed only about half of the construction on the dam embankment. Rock and earthfill work on the dam continued in the 1939 work season. Workers put final touches on the dam, and Reclamation accepted the work on September 9, 1939. Grassy Lake Dam is zoned earthfill 118 feet high and thirty feet wide at the top. The maximum base width is 738 feet and with a crest length of 1,170 feet. The dam has a total volume of 539,000 cubic yards. Grassy Lake Dam retained 15,500 acre-feet of water.⁴⁷

Reclamation realized the water from Grassy Creek would not provide enough storage behind Grassy Lake Dam. To make up the deficiency Reclamation decided to build a diversion dam and canal to supply water to Grassy Lake from Cascade Creek. Bennett and Taylor of Los Angeles received the contract for both in July of 1937. Bennett and Taylor's work progressed rapidly from the start of construction on August 2. The contractor built a log crib structure with eight by eight foot compartments filled with rock. Each log in the crib had a minimum diameter of twelve inches. Bennett and Taylor constructed a reinforced concrete headworks structure to the canal. A log bridge across the canal provided the Forest Service with access to a large forested area for fire protection. Bennett and Taylor completed the contract October 16, 1937, more than a month before the date required by the contract. Cascade Creek Diversion Dam is a

46. Reclamation, *Project History, Upper Snake River, 1936*, 46; Reclamation, *Project History, Upper Snake River, 1937*, 40, 45-7, 49, 54, 61.

47. Reclamation, *Project History, Upper Snake River, 1938*, 43; Bureau of Reclamation, *Annual Project History, The Minidoka Project (Upper Snake River), 1939*, RG 115, 46; Water and Power Resources, *Project Data*, 647.

rockfilled timber crib weir. The dam is fourteen feet high, 217 feet long with a volume of 300 cubic yards. The Cascade Creek Feeder Canal stretches only 0.7 miles from Cascade Creek Diversion Dam to a natural channel which fed water to Grassy Lake Reservoir. Reclamation transferred all these structures from the Upper Snake River Project to the Minidoka Project in 1940.⁴⁸

Reclamation began the final additions to the Minidoka Project in 1954. Vernon Brothers received the contract for the Unit A Canal and laterals in the newly forming North Side Pumping Division. Work started on the contract October 21. Work continued steadily with no major problems and finished March 30, 1956. Unit A Canal runs 4.4 miles from the Snake River to within eight miles of Burley. Reclamation awarded numerous contracts for Unit B of the Division. The plans for Unit B specified 190 wells built by contract to supply most of the water for the division. This endeavor took many years to complete as contractors seemed to continually add on to the Project in later years. The Unit B contract was finally completed in November 1963. Upon completion Unit B had 177 wells.⁴⁹

Post Construction History

Early in the Minidoka Project Reclamation encountered few problems with its canal structures. Lack of capacity proved the most pressing concern. Reclamation enlarged the gravity canal of the South Side in 1909-10. The pumping canals received the same treatment between fall 1911, and spring 1912. Finally, Reclamation enlarged some of the canals on the Project in 1912. Breaks occurred in the main North Side Canal one in 1914, two in 1915, and

48. Reclamation, *Project History, Upper Snake River, 1937*, 54-6; Reclamation, *Project History, The Minidoka Project, 1941*, 19; Water and Power Resources, *Project Data*, 647.

49. Bureau of Reclamation, *Annual Project History, The Minidoka Project, 1954*, RG 115, 188; Bureau of Reclamation, *Annual Project History, The Minidoka Project, 1955*, RG 115, 151; Bureau of Reclamation, *Annual Project History, The Minidoka Project, 1956*, RG 115, 134; Bureau of Reclamation, *Annual Project History, The Minidoka Project, 1974*, RG 115, Appendix; Water and Power Resources, *Project Data*, 642, 648.

one in 1916.⁵⁰

Reclamation discovered in 1914, the waste canal used to drain water from the South Side Canal back into the Snake River was too high to drain properly. Reclamation decided to lower the canal and its associated drop six feet below their current level. Reclamation determined blasting the existing concrete lining was too dangerous so workers chiseled it out by hand. Water in the canal further delayed work, but Reclamation completed all the work on the waste canal by force account on April 15, 1914. Reclamation also repaired various checks during the year.⁵¹

Reclamation turned water into Milner-Gooding Canal to test and prime it, heavy water losses immediately became apparent. Reclamation discovered large cracks in the unlined rock section of the canal. Workers removed the loose rock, filled the section with straw and dirt, and puddled the section with mud, significantly reducing losses. M. P. Corak completed enlarging a section of the South Side Canal in April 1930. Enrollees from a Civilian Conservation Corps (CCC) camp at Minidoka Dam worked on enlarging more of the main South Side Canal in 1936.⁵²

Destruction of power lines became a problem in the 1940s. Someone shot down a power line in October 1944, damaging equipment in the Heyburn Substation. In December, Secretary of the Interior, Harold L. Ickes, approved a \$100 reward for information leading to the apprehension and conviction of anyone destroying insulators on power lines. Reclamation cleared a potential rockslide from the area of the Milner-Gooding Canal in 1947, by force

50. Reclamation, *Project History, Minidoka Project, 1912*, 49, 51-2; Reclamation, *Project History, Minidoka Project, 1915*, 61, 333; Reclamation, *Project History, Minidoka Project, 1916*, 32.

51. Reclamation, *Project History, Minidoka Project, 1914*, 33-5, 42-3.

52. Reclamation, *Project History, Minidoka Project, 1930*, 55, 72; Reclamation, *Project History, 1936*, 39; John Dooley, former Project Manager, Minidoka Project, information received 6 June 1995.

account. Work began in 1948, on a betterment program for the canal.⁵³

Reclamation experienced no serious problems with any permanent dam structures on the Minidoka Project, but incidents raised questions about the dams' safety. At approximately midnight on March 12-13, 1928, one of the worst tragedies in California history struck as the St. Francis Dam, in the Los Angeles aqueduct system, failed. Water from the St. Francis Reservoir swept through the Santa Clara River Valley killing between 385 and 420 people. Though the Los Angeles Department of Water and Power built and maintained the dam (Reclamation had no involvement in the project), its failure had repercussions in the Minidoka Project. Because of the disaster, Secretary of the Interior Hubert Work appointed A. J. Wiley, a Reclamation engineer, and Major John S. Butler of the U.S. Army Corps of Engineers to inspect the dams on the Minidoka Project.⁵⁴

The inspection reports proved favorable, but gave suggestions on maintaining the safe operations of Minidoka and Jackson Lake Dams. Major Butler submitted an inspection report July 20, 1928, recommending repairs to the spillway, abutments, and north dike of Jackson Lake Dam to ensure its safety. Wiley and D. C. Henny, another Reclamation engineer, recommended precautions against the effects of spillway discharge, wave action, seepage, and too much storage in an August 4 1928 report. Wiley reported Minidoka Dam safe as long as water did not overtop the structure. Butler suggested water at Minidoka Dam be lowered during the winter months.⁵⁵

Reclamation awarded Morrison-Knudsen a contract to shore up Jackson Lake Dam. The company placed large rocks below the dam while putting medium sized rocks in the dike and

53. Bureau of Reclamation, *Project History, The Minidoka Project, 1947*, RG 115, 18; Bureau of Reclamation, *Project History, The Minidoka Project, 1948*, RG 115, 15.

54. Charles F. Outland, *Man-Made Disaster: The Story of St. Francis Dam, Its Place in Southern California's Water System, Its Failure, and the Tragedy in the Santa Clara River Valley, March 12-13, 1928* (Glendale CA: Arthur H. Clark Co., 1977), 81-2, 97, 254; Reclamation, *Project History, Minidoka Project, 1928*, 70.

55. Reclamation, *Project History, Minidoka Project, 1928*, 23-4.

fills. Morrison-Knudsen used small rocks for riprap. In 1929, Jackson Lake Dam received 1,000 to 1,500 cubic yards of rock on the south side embankment. Morrison-Knudsen laid 1,000 yards of large rocks below the spillway, to prevent erosion of the river bed by the spillway's discharge, and another 5,000 yards on the north dike. Workers placed concrete in the river bed to protect the rocks below the spillway. Jackson Lake Dam received the same kind of rehabilitation in 1948, when Reclamation placed rock for rip rap on the dam. Reclamation restricted the water elevation of Jackson Lake to 6,760 from 6,769 in the 1970s, until the dam was rebuilt in the 1980s, to protect the dam from liquefaction caused by earthquakes.⁵⁶

In the early 1980s, Reclamation dismantled Jackson Lake Dam, and completed rebuilding it in 1989. Reclamation completely replaced the foundation using a technique called dynamic compaction, and installed a grout curtain below the foundation. The combination water release structure/bridge was also replaced. The modifications allowed Jackson Lake Reservoir to be filled to capacity without restriction. In addition, Reclamation established several successful wildlife wetland areas in the Jackson Lake region.⁵⁷

Post construction work on Minidoka Dam amounted largely to some repairs and additions. Reclamation installed a sixth generating unit in the Minidoka Powerplant by force account in 1927. Two years later cracks appeared in the spillway of Minidoka Dam. Reclamation repaired the work by force account. Workers drilled a series of holes through the concrete into solid rock or undamaged concrete. They grouted steel bars into the holes for reinforcement. Reclamation awarded contracts in 1940, to construct a seventh generating unit in

56. Reclamation, *Project History, Minidoka Project, 1928*, 74-5; Reclamation, *Project History, 1929*, 62; Reclamation, *Project History, Minidoka Project, 1948*, 20; Water and Power Resources, *Project Data*, 646; John Dooley, 6 June 1995.

57. John Dooley, 6 June 1995.

the Minidoka Powerplant. Construction of the unit finished in spring 1942.⁵⁸

Construction of a new Minidoka Powerplant began in the early 1990s. Reclamation retired the original five generators from service on September 5, 1995, and retained them and associated sections of the powerplant to convert to a museum of early water and power development. The remaining two generators, numbers six and seven faced rehabilitation and upgrading. At the time Reclamation retired the generators, two new generators were under construction and scheduled for completion in 1997. The new generators had a combined capacity of twenty megawatts, nearly three times the power output of the original five. Reclamation built a new powerplant control house, control structure, and replaced the spillway radial gates in 1990-91. The new radial gates were salvaged from the spillway structure of Teton Dam which failed in 1976.⁵⁹

Walcott Park, at Minidoka Dam received a complete renovation, which finished in 1994. The refurbished structures included a new boat ramp, park shelters, and restrooms. The renovation added a new overnight camping area and a new sewage treatment facility for Minidoka Dam and Walcott Park.⁶⁰

American Falls Dam saw continued maintenance needs following its completion. Seepage appeared below the dam during the spring of 1928, due to clogged blind drains. Reclamation opened the drains and re-laid them with rock for several hundred feet. Most of the seepage disappeared by the end of the year. In 1929, concrete in the spillway below the radial gates showed signs of erosion. Reclamation closed the gates from September 30 to October 9,

58. Reclamation *Project History, Minidoka Project, 1927*, 44; Reclamation, *Project History, Minidoka Project, 1929*, 67-8; Bureau of Reclamation, *Annual Project History, The Minidoka Project, 1940*, RG 115, 63; Bureau of Reclamation, *Annual Project History, The Minidoka Project, 1942*, RG 115, 50.

59. John Dooley, 6 June 1995; John Keys III, Regional Director of the Pacific Northwest Region, to Office of the Commissioner of Bureau of Reclamation, "PN Region Weekly Highlights," 13 September 1995.

60. John Dooley, 6 June 1995.

while placing concrete in the eroded sections.⁶¹

Reclamation repaired the dam penstocks in 1941, when it discovered water seeping through the stop logs at an estimated rate of fifty cubic feet per second. Workers sealed the leaks with a blanket of gravel and cinders. They replaced the penstock caps to repair the penstocks after stopping the seepage.⁶²

By the early 1970s, American Falls Dam began showing increasing signs of deterioration due to concrete alkali reaction. This condition, a reaction between the cement and aggregates caused the concrete to expand and deteriorate. Reclamation and the American Falls Reservoir District No. 2 reached an agreement in 1973, to replace the dam through private funds. Congress approved the agreement, and President Richard M. Nixon signed it into law that December. Construction preparations for the new dam began in 1974, and in 1977, Reclamation breached the old American Falls Dam, and began storing water behind the new dam. Workers finished most of the new American Falls Dam in 1978.⁶³

Old American Falls Dam faced one more challenge before being breached to make way for the new dam. On June 5, 1976, the newly built Teton Dam collapsed as its reservoir filled. The water rushing out of the reservoir threatened the venerable American Falls Dam which lay downstream. In an effort to save American Falls Dam, and the string of dams farther down on the Snake River, Reclamation opened the outlet works full bore to empty American Falls Reservoir. In *Cadillac Desert*, Marc Reisner said in order to empty the reservoir, the old dam needed to release "more water than it ever had before," in preparation to receive more water at

61. Reclamation, *Project History, Minidoka Project, 1928*, 69-70; Reclamation, *Project History, Minidoka Project, 1929*, 60.

62. Bureau of Reclamation, *Annual Project History, The Minidoka Project, 1936*, RG 115, 42; Reclamation, *Project History, Minidoka Project, 1941*, 78.

63. Reclamation, *Project History, Minidoka Project, 1974*, 4; Bureau of Reclamation, *Annual Project History, The Minidoka Project, 1980*, RG 115, 96, 98-9; John Dooley, 6 June 1995.

one time than ever before.⁶⁴ Water poured out of the outlet works in the desperate effort to empty the reservoir. The reservoir began filling with the flood waters on the morning of June 7, but did not overflow the spillway.⁶⁵

American Falls Reservoir continually suffered erosion along its shoreline. Reclamation and land holders in American Falls laid miles of riprap, using wasted basalt from the surrounding area, to control the erosion problem. The program has achieved success. Like Jackson Lake Reservoir, wetland areas have been developed around American Falls.⁶⁶

Island Park Dam received attention to its foundation, outlet structure, abutments, and the spillway around 1980. Originally Grassy Lake Dam had a needle valve outlet work. Because Reclamation determined the needle valves were unsafe, they replaced Grassy Lake Dam's outlet with a clam shell gate valve in 1991. It was the first such structure constructed, proved successful.⁶⁷

The whims of nature often caused problems with Minidoka's water supply. In 1930, heavy snow in the Project area indicated possible flood conditions for the year. Reclamation lowered American Falls Reservoir to handle flood conditions that might occur. The expected floods never appeared resulting in a lack of water because the reservoir did not fill completely for the irrigation season. Mother Nature had played a joke on the Minidoka Project Manager.⁶⁸

In 1934, water usage proved extremely high for the irrigation season. Near the end of September, Lake Walcott, American Falls Reservoir, and Jackson Lake reached drastically low storage levels. Lake Walcott had 10,430 acre-feet, Jackson Lake had 5,500 acre-feet, and

64. Marc Reisner, *Cadillac Desert: The American West and Its Disappearing Water* (New York: Viking, 1986), 416-8, 421; Stephen G. Wade, "The First Days," *Reclamation Era* Autumn 1976, 12.

65. Reisner, *Cadillac Desert*, 422; Wade, "The First Days," 12.

66. John Dooley, 6 June 1995.

67. John Dooley, 6 June 1995.

68. Reclamation, *Project History, 1930*, 77.

massive American Falls Reservoir only held 29,120 acre-feet of water at the end of the month. Nineteen hundred and sixty proved another dry year for the Minidoka Project. The withdrawal of water from American Falls Reservoir commenced April 23. By September 30 combined usable storage of the Project reservoir system totaled 527,000 acre-feet or 13 percent of the total capacity. Reclamation constructed the Palisades Project in the 1950s to alleviate some of the water shortages.⁶⁹

If the Minidoka Project seemed to suffer a lack of water at times for some people, for others it could appear to have too much. Insufficient or nonexistent drainage often caused problems for farmers on the Project. Some found sections of their land underwater for several years. Reclamation dug drainage ditches to alleviate the problem. Canal seepage created ponds in low lying areas. Soon the ponds became swamps, and bordering lands turned white with alkali. Rising ground water ruined old wells as they became polluted with stagnant water. Animals became trapped in quicksand created when the water from canals mixed with the surrounding sandy soil.⁷⁰

Reclamation made preparations for guarding structures on the Project even before the United States officially entered World War II. Reclamation posted guards at Minidoka and American Falls Dams in September 1941. After the declaration of war Reclamation restricted access to all structures on the Project. Before World War II residents often took walks on the Minidoka Dam spillway bridge. With the coming of war, Reclamation ended the practice, and never reopened the bridge to the public. The government organized all guards on the Minidoka Project as auxiliary Military Police in 1943. Reclamation stopped posting guards at Project

69. Reclamation, *Project History, Minidoka Project, 1934*, 10-1; Bureau of Reclamation, *Annual Project History, The Minidoka Project, 1961*, RG 115, 59; John Dooley, former Project Manager of the Minidoka Project, information received 6 June 1995.

70. Alvin C. Holmes, *Swedish Homesteaders in Idaho: On the Minidoka Irrigation Project, Minidoka County Idaho* (Twin Falls ID: Ace Printing, 1976), 59-62.

structures in March 1944, as the threat of sabotage decreased.⁷¹

World War II brought new construction to the Minidoka Project, but only part of it dealt with irrigation and agriculture. After looking for a possible site for a relocation center for Japanese-Americans removed from the West Coast in 1942, the War Relocation Authority (WRA) selected an area on the Snake River Slope of the Gooding Division. Morrison-Knudsen Company constructed the camp. On September 15, the last of 10,000 internees arrived at the Hunt, Idaho camp. In accordance with an agreement between Reclamation and the WRA, internees worked on building part of a lateral system near the camp in return for delivery of irrigation water to the camp.⁷²

The agreement between the WRA and Secretary of the Interior Harold Ickes specified the WRA would supervise the camp. In return for occupying the land the WRA supplied internee labor for maintenance and repair work on the Milner-Gooding Canal. Reclamation employees directly supervised all internee work on the canal. The WRA agreed to develop the surrounding land to be agriculturally productive for the future after the internees left.⁷³

During 1943, Japanese-American internees worked on Milner-Gooding Canal, laterals, and gaging stations. By the end of 1943 the population of the Hunt declined to about 8,500. At the end of 1944, 6,950 Japanese-Americans resided at the relocation camp. Women, children, and elderly Japanese-Americans comprised most of the resident population at Hunt by that time. The Minidoka Project took control of the vacant relocation camp on February 10, 1946.⁷⁴

71. Minidoka County News, *The Minidoka Story*, 11; Reclamation, *Project History, Minidoka Project, 1941*, 13; Reclamation, *Project History, Minidoka Project, 1942*, 49-56; Reclamation, *Project History, Minidoka Project, 1943*, 10; Reclamation, *Project History, Minidoka Project, 1944*, 7.

72. Bureau of Reclamation, *Annual Project History, The Minidoka Project, 1942*, RG 115, 20, 24.

73. *Ibid.*, 33.

74. Bureau of Reclamation, *Annual Project History, The Minidoka Project, 1943*, RG 115, 10-2, 43; Bureau of Reclamation, *Annual Project History, The Minidoka Project, 1944*, RG 115, 26; Reclamation, *Project History, Minidoka Project, 1974*, 83.

The War Department established a prisoner of war camp in 1943, near Paul, Idaho. The Army accepted the camp from Reclamation and Morrison-Knudsen with a flag raising ceremony on October 27, attended by approximately 350 people. The camp received no prisoners by the end of the year so the Army deactivated it. The War Department reactivated the camp in May 1944, and filled it to its 3,000 prisoner capacity with Italians and Germans. After the harvest season, the War Department replaced the German prisoners with Russians, probably Cossacks and expatriate Russians allied with the Nazis, or Russians pressed into service in the German "Ost" battalions, captured in Normandy, France. The War Department closed the POW camp on October 1, 1946.⁷⁵

Settlement of the Project

The Minidoka Project and growth remained synonymous for several decades. Population grew in conjunction with the Project's size as Reclamation added more land and structures to it. Early in its history, the Minidoka Project was small. Minidoka irrigated an estimated 15,000 acres on 474 farms in 1907. In 1909, the total acreage reached 39,900 on 1,169 farms. In 1915, the population on farms on the North Side Gravity Division numbered 3,862 while 1,600 people live in towns on the division, while on the South Side Pumping Division 621 farms contained 2,586 people with a total town population of 2,550.⁷⁶

Many immigrants settled the Minidoka Project. Most came from Europe. These included Swedes, English, Danes, Germans, Austrians, Italians, Russians, Dutch, Greeks, and Portuguese. Canadians, Australians, and Japanese accounted for other residents on the Project.

In addition to new settlers, the Minidoka Project brought new towns to the area. The Project

75. Reclamation, *Project History, Minidoka Project, 1943*, 13, 22; Reclamation, *Project History, Minidoka Project, 1944*, 27; Reclamation, *Project History, Minidoka Project, 1980*, 89.

76. Bureau of Reclamation, *Annual Project History, The Minidoka Project, Operations and Maintenance Report, 1910*, RG 115, 1; Bureau of Reclamation, *Annual Project History, The Minidoka Project, Operations and Maintenance Report, 1915*, RG 115, 18-9.

helped create the towns of Rupert and Heyburn. Scherrer, later called Acequia, opened for settlement in 1915.⁷⁷

Populations continued increasing through the 1910s into the 1920s. By 1928, 8,420 people lived on Project farms while another 8,595 lived in towns as the urban population overtook the farm population in the early 1920s. The farm population fell a significant 1,378 to 7,042 in 1929. The town population remained the same as in 1928. Irrigated acreage reached 107,200 in 1930.⁷⁸

During the 1930s and the Great Depression, the Minidoka Project's town populations and irrigated acreage decreased. Irrigation reached 103,953 acres in 1936. Project towns only had 7,775 inhabitants compared to the 1920s peak of nearly 9,000. Project farm populations, however, increased to 8,418. When Reclamation began adding figures from the Gooding Division after its addition to the Minidoka Project in 1937, it considerably increased the number of acres irrigated on the Project. The entire Project irrigated 167,794 acres. The population on the Project, with the inclusion of the Gooding Division, numbered 11,335 on farms and an estimated 11,040 in Project towns.⁷⁹

The transfer of the Fremont-Madison Division from the Upper Snake River Project to the Minidoka Project in 1940, added even more acreage and population. The Project irrigated 249,018 acres in 1941. Population increased to 16,748 on Project farms and 18,500 in the towns. Nineteen hundred and fifty showed an increase in the towns' population to 35,050. Nearly 300,000 acres received irrigation water during the year, and the Project contained 5,784 farms.

77. Reclamation, *Project History, Minidoka Project, 1912*, 37; Reclamation, *Project History, 1914*, 307-8; Reclamation, *Project History, 1916*, 209.

78. Reclamation, *Project History, Minidoka Project, 1928*, 82; Reclamation, *Project History, Minidoka Project, 1929*, 69; Reclamation, *Project History, Minidoka Project, 1930*, 87.

79. Reclamation, *Project History, Minidoka Project, 1936*, 50; Reclamation, *Project History, Minidoka Project, 1937*, 48; Reclamation, *Project History, Minidoka Project, 1938*, 56.

By 1957, Minidoka Project irrigated over one million acres after the North Side Pumping Division became part of the Project. During the 1960s, the Project's population remained steady around 62,000 people. By 1974, the population nearly doubled to 123,875. After 1980, the Project population totaled over 200,000. From the 1950s to the mid 1980s, the Minidoka Project steadily irrigated between one million and 1.1 million acres of Idaho land.⁸⁰

Unlike many Reclamation projects, the Minidoka Project began before the formation of any official water users' associations. Residents of the Project moved quickly in organizing water users' associations. Inhabitants of the South Side Division created the South Side Minidoka Water Users' Association in 1908. North Side farmers established the Minidoka Irrigation District. On December 2, 1916, the Department of Interior entered an agreement with the Minidoka Irrigation District turning control of the North Division over to the water users. The South Side Minidoka Water Users' Association became the Burley Irrigation District. In March 1926, the irrigation district finalized a contract with the Interior Department to assume operation of the South Division.⁸¹

American Falls Reservoir District No. 2 arose in the 1930s, out of the Milner-Gooding Division addition of the Minidoka Project. The Fremont-Madison Irrigation District became part of the project with Grassy Lake, Island Park, Cascade Creek, and Cross Cut Dams, and the latter two dams' appurtenant canals. The A & B Irrigation District formed in the North Side Pumping Division. A & B gained operation and maintenance control of the division in 1966, the last

80. Reclamation, *Project History, 1941*, 114, 208-11; Bureau of Reclamation, *Annual Project History, The Minidoka Project, 1950*, RG 115, 185, 195, 201, 207; Bureau of Reclamation, *Annual Project History, The Minidoka Project, 1957*, RG 115, 263. Bureau of Reclamation, *Annual Project History, The Minidoka Project, 1962*, RG 115, 295; Bureau of Reclamation, *Annual Project History, The Minidoka Project, 1968*, RG 115, 348; Reclamation, *Project History, 1974*, Appendix; Bureau of Reclamation, *Annual Project History, The Minidoka Project, 1981*, RG 115, 404; Bureau of Reclamation, *Annual Project History, The Minidoka Project, 1985*, RG 115, 213-4.

81. Reclamation, *Project History, Minidoka Project, 1912*, 44; Reclamation, *Project History, Minidoka Project, 1914*, 321; Reclamation, *Project History, Minidoka Project, 1916*, 1; Reclamation, *Project History, Minidoka Project, 1926*, 37.

district to control its division. The Minidoka Project sold water to thirty-three private firms as well as the different irrigation districts.⁸²

During World War II, the U.S. Government involved Japanese-American internees in agriculture on the Minidoka Project. The Farm Security Administration leased the old CCC camp, BR-56, at Paul to house Japanese-American workers during summer and fall of 1942. The FSA turned the camp over to the Army in November. The government intended for internees at Hunt to clear and plant 1,000 acres for food usage at the relocation camp. Their arrival in Idaho coincided with the year's harvest, so local farmers secured the services of the internees to alleviate the labor shortage caused by the war. Importation of farm laborers into Idaho often occurred in World War II. In April 1943, the government moved 148 Japanese-Americans from Manzanar, California, to Paul as farm labor. The next month 100 farm workers from Mexico arrived in Burley.⁸³

Hunt Relocation Camp aided Reclamation in settling the Minidoka Project in the post war years. Reclamation assumed responsibility for the Hunt camp after the war, as it did with the camps at Heart Mountain, Wyoming, and Tulelake, California. Reclamation developed a policy of using the facilities of the former camps to aid in the Veterans' Resettlement Program. Reclamation set aside buildings and equipment to provide World War II veterans with a start on the Project if they decided to settle there. Reclamation gave some of the surplus equipment to nonprofit organizations including school districts, churches, public agencies, and others.⁸⁴

Uses of Project Water

82. Reclamation, *Project History, Minidoka Project, 1939*, 34-5, 124-6; Reclamation, *Project History, Minidoka Project, 1942*, 40; Reclamation, *Project History, Minidoka, 1968*, 4.

83. Reclamation, *Project History, Minidoka Project, 1942*, 20, 24; Reclamation, *Project History, Minidoka Project, 1943*, 11.

84. Reclamation, *Project History, Minidoka Project, 1947*, 45; Carl J. Thye, "The Bureau Reclaims Its Own," *Reclamation Era*, April 1947, 90-1.

The Minidoka Project irrigated an important agricultural base in southern Idaho. Agriculture grew in the area as the Project grew. Early in the Project grains constituted the majority of crops. Farmers raised more than three times as much alfalfa as any one of the grains, but the Project devoted many acres to wheat and oats as well. Pasture land covered many acres of the Project. Over 1,800 acres of Minidoka Project lands grew potatoes. Project farms grew apples, barley, beans, sugar beets, corn, hay, onions, pears, peas, prunes, and rye in various lesser amounts.⁸⁵

Sugar beets quickly became a major crop on the Project as entrepreneurs considered the possibility of building a sugar factory in the area. Experts employed by the Utah-Idaho Sugar Company claimed that sections of the Minidoka Project were very favorable to sugar beet growth. Amalgamated Sugar Company built a sugar factory in Burley. Private business also built a flour mill in the city. In the 1910s potatoes proved extremely productive in the area, and potatoes became the most valuable crop on the Project during the 1920s.⁸⁶

The Minidoka Project also supported a thriving livestock industry. T. S. Bell, a Project farmer sold eight Panama ram lambs for \$100 a head, the highest price ever received in the United States at the time. Dairy products constituted a large part of the Project's livestock production. The production and sale of butterfat. Fowls, sheep, dairy cattle, horses, and hogs comprised most of the livestock on Project lands.⁸⁷

Reclamation created the Minidoka Project for the purpose of irrigation, recreational

85. Reclamation, *Project History, Minidoka Project, 1941*, 72-4.

86. Reclamation, *Project History, Operation and Maintenance, Minidoka Project, 1915*, 11, 20-3; Bureau of Reclamation, *Annual Project History, The Minidoka Project, 1917*, RG 115, 269; Bureau of Reclamation, *Annual Project History, The Minidoka Project, 1919*, RG 115, 273; Reclamation, *Project History, Minidoka Project, 1925*, 50.

87. "News of the Month," *Reclamation Era*, January 1942, 21; Reclamation, *Project History, Minidoka Project, 1928*, 85, 88; Reclamation, *Project History, Minidoka Project, 1932*, 136-7; Reclamation, *Project History, Minidoka Project, 1939*, 58.

activities associated with the Project were fortunate byproducts. As early as 1936, Reclamation planted nearly an acre of shade trees in front of American Falls Dam for the benefit of visitors to the site. American Falls Reservoir provided facilities for boating, swimming, and picnics. Island Park Reservoir and Jackson Lake served as boating sites, and, although not often mentioned, fishing is important. Many people in the area of Minidoka County frequented Minidoka Dam and Lake Walcott for boating and picnics.⁸⁸

In 1961, the Minidoka Project provided another type of recreation in an odd tourist attraction. American Falls Reservoir did not fill before the irrigation season of 1961. As water releases lowered the reservoir, exposing the streets and sidewalks of the old section of town. Curious onlookers roamed the old roadways of the usually inundated section of American Falls.⁸⁹

The Minidoka Project generated electricity for a variety of purposes. The Idaho Power Company generated much of its power through water on Reclamation projects and Minidoka powerplants supplied some of the company's power. Reclamation discontinued use of its thirty-three kilovolt transmission line between American Falls and Cottrell, Idaho and dismantled its American Falls Powerplant in 1940. The power line, established when American Falls Dam was built, supplied power to dam. After Reclamation discontinued the line's use, the Idaho Power Company transmitted electricity to American Falls Dam. Reclamation's power stations directly supplied numerous cities and private power companies. Most of the electricity generated at the Minidoka Dam powerplant ran the pumping stations on the South Side Pumping Division.⁹⁰

88. Minidoka County News, *The Minidoka Story*, 11; Reclamation, *Project History, Minidoka Project, 1930*, 77; Reclamation, *Project History, Minidoka Project, 1974*, 7, 9-11.

89. Bureau of Reclamation, *Annual Project History, The Minidoka Project, 1961, Pt. 2*, RG 115, 211.

90. Reclamation, *Project History, Minidoka Project, 1912*, 63; Bureau of Reclamation, *Annual Project History, The Minidoka Project, 1918*, RG 115, 5; Reclamation, *Project History, Minidoka Project, 1919*, 259-66; Reclamation, *Project History, Minidoka Project, 1940*, 10, 42, 86.

Conclusion

The Minidoka Project encompasses and irrigates a large part of Southern Idaho. Settlement of the area greatly increased over the decades, as did the Project itself. Reclamation continually added structures and land to the Project, and often incorporated land and structures from other projects into Minidoka. Reclamation placed the Michaud Flat Project, the Palisades Project, and the Little Wood River Project under the administrative control of Minidoka Project offices, although the land and structures remained separate from the Minidoka Project.⁹¹

On the Project, Reclamation cooperated with the War Relocation Authority in the establishment of one of the now controversial internment camps for Japanese and Japanese-American citizens during World War II. The internees survived and successfully managed some agriculture around the Hunt camp. In addition internee labor eased the labor shortages of Project farmers. Over 1,000 Japanese-American men from Hunt served in World War II; 28 died in action, 76 received wounds and two were listed as missing. On August 18, 1979, Hunt Relocation Camp was listed on the National Register of Historic Places.⁹²

Overall the Minidoka Project now irrigates over one million acres of productive land. It produces potatoes, sugar beets, dry beans, sweet corn, field grains, and alfalfa hay. Irrigated pasture land supports a large livestock industry, consisting primarily of beef and dairy cattle. During the 1980s, the total value of Minidoka Project's crop production exceeded an average of \$200 million each year. In the 1990s, crop values grew to over \$500 million annually.⁹³

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91. Reclamation, *Annual Project History, The Minidoka Project, 1960*, RG 115, 3.

92. Reclamation, *Project History, Minidoka Project, 1944*, 26; Reclamation, *Project History, Minidoka Project, 1980*, 100.

93. Water and Power Resources, *Project Data*, 644-5; John Dooley. 6 June 1995.

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