

Owyhee Project

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The Owyhee Project

The Owyhee Project irrigates land in eastern Oregon and western Idaho. The project received its name from the Owyhee River which is the main water source. The project also derives some of its water from the Snake River. The source of the Owyhee name is unusual because it means, and is pronounced the same as Hawaii. According to tradition, a group of Hawaiian trappers, working for the Hudson Bay Company, named the area Hawaii in the early nineteenth century. Later scouts, trappers, Indians, and settlers picked the name up, but spelled it phonetically. This resulted in the Owyhee spelling.¹

In a more dramatic version of the name's origin, Donald MacKenzie, a partner in Montreal's Northwest Fur Company led a mixed group of trappers into the Boise Valley in 1818. MacKenzie's group consisted of French Canadians, refugee Iroquois from New York, and various others. Part of the group consisted of natives of the Sandwich Islands, present day Hawaii, called Owyhees. Upon reaching the Boise Valley MacKenzie's group broke up for the winter months. The Iroquois remained in the valley, the Owyhees left to explore the area to the Southwest, and the rest of the group went their separate ways. MacKenzie and the others returned to the rendezvous point in Boise Valley but the Owyhees failed to return and were never found. Ever since the area they set out to explore has been called the "Owyhee" country.²

Project Location

Located in the Reclamation's Pacific Northwest Region, the Owyhee Project operates in the extreme eastern portion of Oregon and the southwest section of Idaho. Owyhee Dam, the Owyhee River, and all of North Canal and most of South Canal are located in Malheur County Oregon. South Canal, in the Succor Creek Division, extends through Malheur County to Owyhee County, Idaho. Communities in the project area include Adrian, Nyssa, Ontario, and Vale in Oregon, and Homedale, Marsing, Payette, and Weiser in Idaho.

1. Department of the Interior, Bureau of Reclamation, *Project History, The Owyhee Project, 1927*, Record Group no. 115, box 127, 9.

2. Merle W. Wells, "The Owyhee Country," in *Owyhee County Gleamings*, ed. Wilma Louise Statham (Boise: Idaho Genealogical Society and Idaho Historical Society, 1964), IV.

Historic Setting

Reclamation considered building the Owyhee Project for 25 years prior to beginning construction. While Reclamation studied the project the area became agriculturally productive in fruit, alfalfa, and livestock as private business capitalized on the area's potential. Private concerns constructed numerous small irrigation projects in the area, but the inaccessibility of promising dam sites dissuaded serious attempts at a larger scale project. Thus the area remained undeveloped long after Reclamation and others realized the project's feasibility.³

Reclamation began investigating the Owyhee Project in 1903-05, surveying irrigable lands and possible reservoir sites at Duncan's Ferry and Red Butte. Development of irrigation in nearby Jordan Valley may have influenced the selection of these dam sites for study at the time. Reclamation's initial investigations ended during the winter of 1905-06. Then in 1909 the so-called "Hole-in-the-Ground" dam site received consideration for a diversion dam.⁴

1909 seemed a popular year for reports about the irrigation possibilities offered by the Owyhee Project. Reclamation engineer C.H. Paul offered a plan to irrigate 80,000 acres using a gravity diversion dam at the "Hole-in-the-Ground" site. A Reclamation report, simply titled the Malheur Report, recommended irrigating Dead Ox Flat and land west of Ontario with water from the Malheur River. The Malheur Report proposed selecting one of either Harper or Warm Springs as reservoir sites. Arnold and Company of Chicago investigated the Owyhee Project as a private venture for the Boise-Owyhee Company.⁵

As Reclamation continued considering various alternatives, water users in the Owyhee area worked toward irrigating their land. The most notable of these efforts were pumping plants diverting water from the Snake River to irrigate farmland. One of these, the Gem Pumping Plant, was built in 1912-13. The ultimate project area had eight pumping districts at one time or another. The high cost of power for the pumping plants influenced the districts to enter into

3. Reclamation, *Project History*, 1927, 9.

4. *Ibid.*, 10, 12.

5. *Ibid.*, 12.

contracts with Reclamation for the construction of the Owyhee Project.⁶

Project Authorization

Reports and investigations continued until the project received approval. Two Reclamation engineers, John T. Whistler and G. Stubblefield advocated an arched concrete masonry dam at Duncan's Ferry. Whistler collaborated with John H. Lewis, Oregon's State Engineer, on a 1916 report involving the United States and the state of Oregon. The United States and Oregon each contributed \$5000 to the "Oregon Cooperative Work."⁷ This report advocated a project irrigating 23,000 acres. Reclamation engineer C. C. Fisher's report suggested an earth and rock fill dam with a concrete corewall in the Owyhee Canyon site.⁸

Reclamation engineers continued investigating possible reservoir sites in the Owyhee Project area. A report by J. B. Bond, one of the Reclamation engineers, in 1921 gave six options for the Owyhee Project. Of the six, Plan "E" found the most acceptance. It recommended a 270 foot high storage dam with a 620,000 acre-foot capacity at Duncan's Ferry. Bond's report recommended a 265 feet high diversion dam be located at the "Hole-in-the-Ground" site. With the adjacent canals and laterals, the report claimed the project could irrigate 132,200 acres. J. B. Bond's 1924 report introduced Plan "G" into the arena. Plan "G" promoted the idea of having one dam, serving as both a storage and diversion facility, at the "Hole-in-the-Ground" site. The new plan offered centralization of construction, reduction of seepage and evaporation losses, and simplification of operations and maintenance. Plan "G" retained the canal system of the previous plan.⁹

After the reports were finished the Owyhee Project received authorization by an act of Congress on December 5, 1924. President Calvin Coolidge gave his approval for the project October 12, 1926, following a recommendation from Secretary of the Interior, Hubert Work. Reclamation considered making the Owyhee Project part of the Malheur Project (later the Vale

6. Reclamation, *Project History, The Owyhee Project, 1934*, Record Group no. 115, Box 127, 2. *Project History, The Owyhee Project, 1963-64*, Record Group no. 115, Box 10, 38.

7. Reclamation, *Project History, 1934*, 13-4.

8. *Ibid.*, 14, 15.

9. *Ibid.*, 17-20.

Project), but Owyhee became a separate project.¹⁰

Construction History

Reclamation started laying out a permanent construction camp for the Owyhee dam site in April, 1927. Workers fenced the area and planted trees on the site. The camp's water supply, sewer system, dwellings, and administrative buildings were 90 percent completed by January 1, 1928. In addition Reclamation improved the road between Nyssa, Oregon and the dam site received improvements to make it more accessible.¹¹

General Construction Company of Seattle contracted to construct of the Owyhee Railroad needed to carry construction material to the Owyhee Dam site. The railroad broke away from the Dunaway Siding of the Homedale Branch of the Oregon Short Line five miles southwest of Nyssa. Construction began on the 24 mile rail line in January, 1928, and the first train reached the dam site on October 24.¹²

General Construction also received the contract to build Owyhee Dam. Work began July 14, 1928, on the inlet portal of the diversion and spillway tunnel. Muck from the tunnel was set along the foot of the west cliff to form a railroad grade. Workers started excavating the spillway shaft August 18, 1928. They holed through on October 23. After the shaft was dug through workers enlarged it to a diameter twenty two and one half feet at the bottom and sixty feet at the top. Crews broke through the diversion portion of the tunnel, and commenced enlarging it on October 6.¹³

Workers finished enlarging the tunnel and shaft on January 2, 1929, but they did not finish trimming until April. Concrete lining of the diversion tunnel was completed July 28. Work crews diverted the Owyhee River through the tunnel on August 7, to begin the initial stages of dam construction. Work began on the cofferdams upstream and downstream from the dam site immediately following diversion of the river. After diverting Owyhee River, General

10. Reclamation, *Project History, 1927*, 12, 15, 25. "President Coolidge Approves Owyhee Project Construction," *New Reclamation Era*, November 1926, 186.

11. Reclamation, *Project History, 1927*, 33.

12. Reclamation, *Project History, The Owyhee Project, 1928*, Record Group no. 115, Box 127, 26.

13. *Ibid.*, 13, 49.

Construction quickly began excavating the dam site. By the end of 1929, work crews excavated the entire area for the base of the dam down to bedrock.¹⁴

General Construction faced several problems with the location of the dam site. The isolated location caused problems with supplying electricity to the site. To supply power to the Owyhee Dam site, Reclamation entered into a 1930 contract with the Idaho Power Company for transmission of electricity from the Black Canyon Powerplant. Another problem was that the site lay directly over a fault line. To offer greater protection for the dam General Construction excavated into the fault and filled it with concrete to the level of the base of the dam. This effort occupied workers for most of 1930. During the same year workers laid the concrete around portions the lower galleries of the dam.¹⁵

During the winter of 1930-31 General Construction stopped work for 53 days because of cold weather. Work resumed on February 23, 1931. Work crews began placing concrete around the sluice gates and outlet conduits on February 27. Excavation commenced for the base of the dam and the end approaches as concrete placement continued. Workers began the reinforced concrete house for the needle valves in July. The valve structure and its accompanying trash rack were complete in September in time for concrete placement up to the gallery floor.¹⁶

During the winter, General Construction placed 5 x 6 foot hydraulically operated penstock gates with a steel conduit for possible connection to a powerplant in the future. To protect the concrete from the cold weather, workers placed the concrete at 50 degrees Fahrenheit and protected it with canvas. The concrete was kept heated with coke burning salamanders. Workers cured the concrete by continuously spraying the exposed faces. During the year lining of the spillway shaft began, and General Construction breached both cofferdams. General Construction halted work for the winter on November 23 seven months ahead of schedule with 91 percent of the work accomplished.¹⁷

Reclamation designated Owyhee Dam a testing site to determine the effects of

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14. Reclamation, *Project History, The Owyhee Project, 1929*, Record Group no. 115, Box 127, 43, 47, 49.
 15. Reclamation, *Project History, The Owyhee Project, 1930*, Record Group no. 115, Box 127, 22, 26, 29, 30.
 16. Reclamation, *Project History, The Owyhee Project, 1931*, Record Group no. 115, Box 127, 32-3.
 17. *Ibid.*, 32, 39, 47, 51, 55.

temperature changes on mass concrete. Reclamation intended to use the results in the construction of Hoover Dam. During construction Reclamation conducted tests to determine the rate concrete could be cooled by circulating water through pipes imbedded in the concrete. Normally curing concrete generated as much as 64 degree temperatures. Reclamation engineers determined that cooling the concrete during curing prevented the concrete from cracking. In addition, grouting the contraction joints in the concrete was desirable for concrete strength. When the concrete's temperature rose the concrete would expand and compress the joints. Workers laid one mile of one inch pipe in seven horizontal loops placed four feet apart vertically. The temperature of the concrete dropped 37.6 degrees, from 118.4 to an average of 80.8 degrees, in 17 days.¹⁸

Workers installed the ring gate during January and February of 1932 to completion. Laborers poured the last concrete on the dam May 28, and finished the dam in July. Once General Construction completed the dam they had to plug the diversion tunnel, which carried the water around the dam during construction. Work crews constructed a cofferdam to divert the river away from the diversion tunnel, and it took six days to pumping the remaining water out of the tunnel. Placement of the concrete tunnel plug commenced August 30 and finished September 16.¹⁹

Dedication ceremonies for Owyhee Dam took place on July 17, 1932. The Union Pacific Railroad Company loaned Reclamation 15 passenger cars to transport visitors from Dunaway to the dam. Approximately 3000 people attended the ceremony. Secretary of the Interior, Ray Lyman Wilbur dedicated the dam, and delivered President Herbert Hoover's dedication address. Speakers at the dedication ceremony included Dr. Elwood Mead, the Commissioner of the Bureau of Reclamation, and C. Benjamin Ross, the Governor of Idaho.²⁰

A concrete arch, Owyhee Dam stood 417 feet high with a crest length of 833 feet. The

18. Reclamation, *Project History*, 42. Department of the Interior, National Park Service, Historic American Engineering Record, *HAER, Owyhee Dam, HAER No. OR-17 Vol. II: Historical and Descriptive Data*, HAER, NPS, Western Regional Office, San Francisco: 1991, 60, 64-5.

19. Reclamation, *Project History, The Owyhee Project, 1932*, Record Group no. 115, Box 127, 40-1, 43, 45.

20. Reclamation, *Project History, 1932*, 40, 56, 58. "Owyhee Dam Completed, Highest in the World," *Reclamation Era*, August 1932, 147.

crest width was 30 feet with a maximum base width of 265 feet. Owyhee Reservoir's capacity was 1.12 million acre-feet and active capacity stood at 715,000 acre-feet. Volume of the dam was 537,500 cubic yards. The reservoir's surface area covered 12,742 acres. The morning glory spillway consisted of a 309 foot vertical shaft and a 760 foot tunnel through the right abutment. At the head of the spillway was the unusual ring gate structure. The hollow ring gate raised a maximum of 12 feet by floating in a chamber. When the water surface rose above the structure it pushed the gate down to increase drainage.²¹

As work proceeded on Owyhee Dam in March, 1930, Reclamation advertised for bids on the main diversion tunnels to carry water to Owyhee Project's canal system. T. E. Connolly Company received the contract for the inlet end of Tunnel #1 while J. F. Shea Company contracted the outlet end. Tunnel #1 diverted water from Owyhee Reservoir to the canal system. J. F. Shea received the contract for the inlet of Tunnel #5 with S. S. Magoffin Company working the outlet end. All the contractors built access road to their respective camp sites and constructed their camps in the spring of 1930. The spring or June start of excavation on the tunnels depended on the contractor.²²

S. S. Magoffin Company started constructing their camp at the outlet of Tunnel #5 On April 8, 1930. Work commenced on the open cut of the outlet before Magoffin received the notice to proceed. Thus excavation of the tunnel proceeded May 24. Magoffin's work progressed well until August 30 when workers struck water. The water flow increased to one and a half second feet by September 2, but decreased to one half a second foot in 30 days. Another water flow struck November 19 dumped over 300 gallons a minute into the tunnel from a four inch seam. The water dried up within a few weeks.²³

All contractors continued their tunnel excavations through 1931. J. F. Shea completed excavation of the outlet end of Tunnel #1 to the midpoint on January 11, 1932 at 10:30 P.M.

21. Department of the Interior, Water and Power Resources Service, *Project Data* (Denver: Government Printing Office, 1981), 736-7. F. A. Banks, "Owyhee Dam Dedication Address," *Reclamation Era*, September 1932, 154-5.

22. Reclamation, *Project History*, 1930, 37-8, 40-1. *Project History*, 1931, 109.

23. Reclamation, *Project History*, 42.

Lining of Shea's portion of the tunnel commenced February 5. Shea's work on the tunnel ended June 1 except for cleanup. The company had finished 99 percent of its contract in only 61 percent of the time required. Shea completed the inlet end of Tunnel #5 with the same alacrity shown on Tunnel #1. The company finished the inlet in February, 1932, 20 months ahead of schedule.²⁴

T. E. Connolly continued excavation on Tunnel #1, and broke through the midway point and the connection to Shea's work on January 20. At the same time cleanup of the bottom 18 inches neared completion, workers prepared to line Connolly's end of the tunnel. Concrete placement started at the end of Shea's lining on May 16. The lining was in place by December 1, 1932. Owyhee Dam fed water to North Canal through the cliffs by Tunnel #1. Tunnel #1 had an diameter of 16.58 feet built in a horseshoe cross section. Diversion capacity of the 3.5 mile long structure was 1840 second feet.²⁵

Working on the outlet end of Tunnel #5, S. S. Magoffin Company dug through an average of 565 feet of material a month between January 1 and October 30, 1932. The latter date marked the completion of Magoffin's excavation. The lining of the outlet of Tunnel #5 commenced on December 15. The lining process continued into spring of 1933, with the final concrete placement occurring May 2. Tunnel #5 diverted water from Tunnel #1 through the mountains to South Canal. A 9.25 foot diameter horseshoe structure and a 9.5 foot diameter circular structure comprised the cross section of Tunnel #5. The tunnel stretched 4.2 miles.²⁶

North Canal constituted a major part of the Owyhee Project, and it contained many siphons, laterals, and tunnels. Reclamation contracted North Canal's expanse over different schedules. Several companies received contracts for the North Canal in early 1932. North Canal included Tunnels #2, #3, and #4. The canal required the tunnels to traverse the steep mountains in the canal's path. Work on the canal began in early 1932. Delays stemmed from cold weather

24. Reclamation, *Project History, 1932*, 63, 68. *Project History, The Owyhee Project, 1933*, Record Group no. 115, Box 127, 41.

25. Reclamation, *Project History, 1932*, 60-1. Water and Power Resources, *Project Data*, 737.

26. Reclamation, *Project History, 1932*, 68. *Project History, 1933*, 43. Water and Power Resources, *Project Data*, 737.

interfering with the contractors. Delays did not prove a problem as some companies finished their contracts well ahead of schedule. The contractors completed structural work on North Canal July 20, 1935. The final schedule of the North Canal was completed 68 days before the deadline of January 10, 1936.²⁷

1933 became a year of administrative changes on the Owyhee Project. F.A. Banks started as the Project Engineer for Owyhee at its beginning. On August 8, 1933 Reclamation transferred Bank to the Grand Coulee Project. On August 23 R. J. Newell became the new Project Engineer for the Owyhee Project.²⁸

Following the completion of Tunnel #5, excavation and construction on South Canal wound up on the back burner as work proceeded on North Canal. Morrison-Knudsen received contracts for many schedules on South Canal after the opening of bids in January, 1935. The contract awarded the company included all schedules on South Canal extending from Tunnel #5. Morrison-Knudsen in turn subcontracted work out to various companies. Morrison-Knudsen finished their contract structural work February 29, 1936. Brent Sturgill Company completed the earth and structural work on their contract October 13. Sturgill's work concluded South Canal to the Snake River. Lack of funds stopped any more contract work on the Succor Creek Division of the Owyhee Project, except for the excavation of one lateral.²⁹

North Canal extended a distance of 61.5 miles, including tunnels and siphons, most of it north of the Owyhee River. The canal handled a capacity of 1190 second feet. The Malheur River Siphon constituted the longest structure on North Canal at 4.3 miles. South Canal did not range as far as its northern counterpart, but it did stretch a respectable 37 miles. South Canal's diversion capacity was 490 second feet.³⁰

After completion of South Canal, Reclamation turned its attention to pumping plants on the Snake River to supplement water from Owyhee Reservoir and existing pumping stations.

27. Reclamation, *Project History*, 1932, 75-80. *Project History*, 1933, 10. *Project History*, 1934, 29, 32, 35, 39, 41, 43, 46-7, 54-9. *Project History*, *The Owyhee Project*, 1935, Record Group no. 115, Box 127, 30, 40.

28. Reclamation, *Project History*, 1933, 10.

29. Reclamation, *Project History*, 1935, 38, 40, 45. *Project History*, *The Owyhee Project*, 1936, Record Group no. 115, Box 128, 24, 39.

30. Water and Power Resources, *Project Data*, 737.

Dead Ox Flat pumping station first arose out of this project. Benjamin H. Sheldon started the contract for construction of the building in 1936. Work on the building finished February 21, 1937. Government forces installed pumps and motors, laid the discharge pipe, and constructed a substation near the pumping plant. George B. Henly Construction Company excavated a trench for the discharge pipe. After completion of this work the plant commenced pumping operations to the middle and high lift canals on May 3, 1937. Dead Ox Pumping Plant replaced four plants operating under the old system, and provided additional water to Slide, Bench, Crystal, and Payette-Oregon Slope Irrigation Districts.³¹

Contract work continued on one pumping plant and began on two more in 1938. Vernon Brothers started construction of the Owyhee Ditch Pumping Plant. The company completed the plant on April 27, 1939. Work proceeded more quickly on the two Succor Creek Pumping Plants. Fife and Company finished Succor Creek Plant #1 April 21, 1938. David A. Richardson completed Succor Creek #2 by the end of 1938, and put the final touches on the work by January 18, 1939. The two Succor Creek plants added Snake River water to the Succor Creek Division of the project.³²

Post Construction History

Seepage plagued Owyhee Dam in the first few years after construction. Work crews started grouting the contraction joints, in the rock abutments, in 1934. Reclamation forces continued grouting the dam through 1935 and 1936 to no avail. Water leaked through the abutments at a rate of 10 to 13 cubic feet per second depending on the height of the water surface. Lack of success with grouting forced Reclamation to turn to other methods for stopping the seepage. Reclamation dumped truckloads of silt at the junction of the dam and its abutments. It was hoped the silt would filter into the cracks and stop the flow of water. Silting the abutments to stem the flow produced no effect either. Grouting continued through most of 1937

31. Reclamation, *Project History, The Owyhee Project, 1937*, Record Group no. 115, Box 128, 33, 41.

32. Reclamation, *Project History, The Owyhee Project, 1938*, Record Group no. 115, Box 128, 38, 43, 46. *Project History, The Owyhee Project, 1939*, Record Group no. 115, Box 128, 33.

until the work finally obtained results and halted on December 1.³³

Reclamation enlisted the aid of the Civilian Conservation Corps (C.C.C.) on the Owyhee Project. In 1937 the C.C.C. enlistees from camp BR-42, near Ontario, Oregon, aided in the rehabilitation of laterals in the Payette-Oregon Slope Irrigation District, one of the smallest districts on the Dead Ox Flat Division. This work included the construction of the Lindsey Siphon and reconstruction of one of the district's main laterals. C.C.C. workers from Camp BR-43, near Nyssa, started removing track from the Owyhee Railroad. By the end of the year they completed stripping the track and started building a highway on the track site.³⁴

Much of the subsequent work done on the Owyhee Project dealt with rehabilitation of aging irrigation systems built by local farmers and private concerns, and incorporated in the project, and frequent breaks occurring in the two main canals. Reclamation forces aided in the rehabilitation of laterals in the Gem Irrigation District, located in the Succor Creek Division of Owyhee County. An unusually severe break in the North Canal left nearly all the lands in the Owyhee Irrigation District without water for almost a month from May 23 to June 20, 1940. Reclamation established a new location for the canal to bypass the break and J. A. Terteling and Sons completed the section by June 17.³⁵

At the same time North Canal suffered its severe break in 1940, Reclamation discovered the pumps in the Owyhee Ditch Company Pumping Plant did not meet efficiency and capacity requirements. Reclamation removed the impellers from the plant and sent them back to the manufacturer for remodeling. When the impellers were returned they proved more satisfactory.³⁶

During 1941 Reclamation and C.C.C. forces continued assisting in rehabilitation efforts during the year. Changes came to the Owyhee Project with the outbreak of World War Two. Reclamation placed armed guards at Owyhee Dam in response to the threat. In 1943 the War Production Board ordered work on Owyhee limited with the advent of the war. The C.C.C., in

33. Reclamation, *Project History*, 1934, 23. *Project History*, 1935, 24. *Project History*, 1936, 25, 27. *Project History*, 1937, 6.

34. Reclamation, *Project History*, 1937, 32. *Project History*, 1938, 29.

35. Reclamation, *Project History*, 1938, 33. *Project History*, *The Owyhee Project*, 1940, Record Group no. 115, Box 128, 2, 34.

36. Reclamation, *Project History*, 1940, 37.

1943, turned Camp BR-42 over to the Farm Security Administration who filled it with Japanese internee farm labor. The war halted any major new construction on the Owyhee Project. Operation and maintenance became the primary object during the war.³⁷

Following World War Two Reclamation did not perform any new construction on the Owyhee Project. Reclamation continued as it had during World War Two with operations and maintenance being the primary concern. Reclamation found plenty to accomplish in that area as project structures, especially those built privately and incorporated into the project, aged. The Gem Pumping Plant burned down in 1961. Reconstruction took place in 1962-63.³⁸

Settlement of the Project

When the Owyhee Project finally obtained approval several irrigation districts already operated in the area. The Owyhee, Gem, Payette-Oregon Slope, Slide, Ontario-Nyssa, Kingman Colony, Crystal, and Bench Irrigation Districts, occupied the project land. Reclamation started contracting with most of the existing irrigation districts between 1926 and 1929. Bench and Crystal Irrigation Districts reached agreements with Reclamation on October 5 and November 28, 1931 respectively. The Owyhee Ditch Company, separate from the Owyhee Irrigation District, entered into a contract with Reclamation for supplemental water only.³⁹

The Slide Irrigation District relied on an expensive pumping plant. High costs caused the abandonment of the facility. Lack of maintenance and vandalism caused the deterioration and eventual destruction of the plant. By 1934 the irrigation system on the Slide Irrigation District no longer functioned. Slide Irrigation District sufficiently rehabilitated and re-entered a contract with Reclamation by 1939.⁴⁰

The Owyhee Irrigation District served lands on all three divisions of the project. Payette-Oregon Slope, Crystal, Bench, and Slide were located on Dead Ox Flat Division. Kingman Colony, Ontario-Nyssa, and Advancement (a district created later) occupied Mitchell Butte

37. Reclamation, *Project History, The Owyhee Project, 1941*, Record Group no. 115, Box 128, IX, 15. *Project History, The Owyhee Project, 1942*, Record Group no. 115, Box 129, 9. *Project History, The Owyhee Project, 1943*, Record Group no. 115, Box 129, IX, 12.

38. Reclamation, *Project History, 1963-64*, 39.

39. Reclamation, *Project History, 1927*, 42, 44-5. *Project History, 1928*, 15. *Project History, 1930*, 16. *Project History, 1931*, 19. *Project History, 1933*, 85. *Project History, 1939*, 18.

40. Reclamation, *Project History, 1934*, 18. *Project History, 1939*, 27.

Division. Gem Irrigation District took up the remainder of Succor Creek Division not occupied by the Owyhee District. Kingman Colony merged with Owyhee Irrigation District in the 1930s. By 1947 water users on Ontario-Nyssa and the old lands Gem controlled their project works. Reclamation turned the rest of the project over to the water users in 1952 and 1954.⁴¹

As available irrigable land on the Vale Project filled up by 1933, the Vale-Owyhee Land Settlement Association turned its attention to the Owyhee Project. Initial settlement proved slow on the Owyhee Project, not really taking off until the late 1930s. Secretary of the Interior, Harold L. Ickes, announced the opening of 33 farm units on Dead Ox Flat and Mitchell Butte Divisions in April, 1937. Only ex-servicemen could apply in the first 90 days of the opening. Even in the depression, each applicant needed \$2000 in cash, farm equipment, or livestock and two years farming experience to qualify for the land. By enacting such qualifications, Reclamation hoped to ensure more success in the development of the project lands. The Department of the Interior announced more land openings the next year. By December, 1939 Reclamation had received a total of 572 applications for 219 plots of land under four opening announcements.⁴²

In 1937 farm population on the project totaled 2383. Nearby towns recorded a combined population of 12,850. By the next year farms gained 900 people while towns increased by 1850. Farm population grew to 5695 by 1940, but the neighboring towns only gained 287 more people. The immediate post-war years had a greater impact on the area. In the peak years of 1946-47 farm population expanded to 7520. Towns on the project recorded a combined 21,250. Towns retained this population through 1948-49 as the farms decreased to a population of 7310 and 6202 in 1948 and 1949 respectively.⁴³

41. Reclamation, *Project History*, 1934, 4. *Project History*, 1938, 118. *Project History*, *The Owyhee Project*, 1947, Record Group no. 115, Box 129, 1. "Owyhee Project Turned Over to Water Users," *Reclamation Era*, February 1952, 45. "Owyhee Project Works Transferred," *Reclamation Era*, August 1954, 71.

42. Reclamation, *Project History*, 1939, 54. "Public Land Opening Owyhee Project, Oregon, Idaho," *Reclamation Era*, April 1937, 88. "Owyhee Public Land Opening," *Reclamation Era*, January 1938, 20. "Owyhee Public Land Opening," *Reclamation Era*, December 1938, 248.

43. Reclamation, *Project History*, 1937, 116. *Project History*, 1938, 164. *Project History*, 1940, 143. *Project History*, *The Owyhee Project*, 1946, Record Group no. 115, Box 129, 166. *Project History*, 1947, 174. *Project History*, *The Owyhee Project*, 1948, Record Group no. 115, Box 130, 110. *Project History*, *The Owyhee Project*, 1949, Record Group no. 115, Box 130, 107.

Farm population dropped to approximately 5600 and towns to 18,701 in 1950-51. Population figures on farms increased to 9417 in the 1960s and stayed between 9000 and 9500 through the 1970s. The jump in farm population could have resulted from the addition of urban, suburban, and industrial lands and people to the figures. Perhaps baby boomers in the area started their own farms. These figures included rural and urban farms as well as commercial and industrial lands. In the 1990 census project towns recorded a combined population of 26,607. While Ontario, Payette, Homedale, and Weiser showed slight to significant increases from their peak populations of 1946-47, other towns exhibited serious declines.⁴⁴

Uses of Project Water

Irrigation was the primary concern of the Owyhee Project. Irrigated acreage steadily increased on the project beginning in the 1930s. Owyhee project irrigated 8609 of 19,621 irrigable acres in 1936. As more of the Owyhee Project's irrigation systems entered operation, farmers put more irrigable lands into production. As a result, by 1939 the project irrigated 73,040 acres. By 1951 over 97,000 acres received irrigation water through the project. In 1965 the Owyhee Project irrigated more than 111,000 acres. Crop values rose from \$253,000 in 1936 to over one million dollars during World War Two. The post-war years yielded an increase to over \$10 million. By the end of the 1960s crop values totaled more than \$23 million. The 1970s crop values peaked than \$50 million. After each increase crop values dropped a small percentage by the end of the decade.⁴⁵

Farmers on the project grew a wide variety of crops. In 1936 sugar beets appeared on their way to becoming a major crop in the area as acreage devoted to them increased from 20.5 to 184. After the outbreak of World War Two beets proved less successful. In 1943 beet acreage dropped 32 percent. This occurred due to labor shortages, cost increase, competition

44. Reclamation, *Project History, The Owyhee Project, 1950*, Record Group no. 115, Box 130, 99. *Project History, The Owyhee Project, 1951*, Record Group no. 115, Box 130, 67. *Project History, 1963-64*, 120. *Project History, The Owyhee Project, 1973-74*, Record Group no. 115, Box 147, 179. *Project History, The Owyhee Project, 1975-76*, Record Group no. 115, Box 147, 148. Department of Commerce, Bureau of the Census, *Twenty First Census of the United States, 1990: Population and Housing*, Bureau of the Census, 1990.

45. Reclamation, *Project History, 1936*, 120. *Project History, 1939*, 101. *Project History, 1940*, 98. *Project History, 1947*, 115. *Project History, 1950*, 14. *Project History, The Owyhee Project, 1965-66*, Record Group no. 115, Box 37, 134, 275. *Project History, 1973-74*, 181. *Project History, 1975-76*, 150.

Table I. Crops and acreage grown on the Owyhee Project in the late 1970s.

<u>Crops</u>	<u>Acres</u>	<u>Crops</u>	<u>Acres</u>	<u>Crops</u>	<u>Acres</u>
Barley	11,958	Spearmint	481	Lettuce seed	357
Corn	4,110	Sugar Beets	6,283	Onion seed	284
Oats	375	Soybeans	15	Pea seed	230
Sorghums	9	Sweet Corn	2,608	Apples	169
Wheat	9,689	Cantaloupes	4	Apricots	2
Alfalfa Hay	22,658	Onions (dry)	7,409	Berries	1
Other Hay	554	Potatoes (early)	402	Cherries	3
Pasture	10,658	(late)	10,060	Peaches	24
Silage	10,223	Alfalfa seed	10,564	Pears	10
Beans	1,241	Clover seed	349	Prunes & Plums	51
Peppermint	699	Corn seed	229	Family Gardens	20

Source: Reclamation, *Project History, The Owyhee Project, 1977*, Record Group no. 115, Box 110, 63.

from crops with less labor requirements, and the fact beets did not rank high on the essential food list. By 1940 the initial stages of World War Two profoundly effected onions as a crop. 1939 yielded a large onion crop, but the high price of burlap bags, inadequate storage facilities, and low prices made them unprofitable. Livestock on the project continued increasing in value in the late 1930s and early 1940s. Livestock on the project in 1936 was valued at \$166,144. This figure increased to \$897,744 in 1939. In the early years of World War Two livestock values reached over \$1.6 million.⁴⁶

Owyhee Reservoir soon became a haven for recreation oriented visitors. James A. (Jim) Davenport, manager of the telephone company at Ontario, and Allen (Buck) Johannesen, reservoir superintendent at Owyhee Dam, decided the reservoir needed a park. Davenport convinced the Pomona Grange to sponsor the project. The Grange responded by planting trees and grass, and supplying garden hose. Davenport succeeded in convincing local Ontario businesses to donate lumber and paint for picnic tables and benches. Students in the manual-training class at Ontario High School put the tables and benches together.⁴⁷

In the meantime Johannesen and his crew at the dam landscaped the park site. They fenced the area, cared for the grass, and built two double-unit stone fireplaces. Upon

46. Reclamation, *Project History, 1936*, 67, 121. *Project History, 1939*, 49, 54. *Project History, 1942*, 22. *Project History, 1943*, 23.

47. Hollis Sanford, "Johannesen Park at Owyhee Dam," *Reclamation Era*, September 1939, 250.

Johannesen's death in 1937, Davenport recommended to the Grange the park be named after Johannesen. The rocky shoreline of the reservoir did not prove conducive to much swimming, but boating and fishing became popular in the area. Johannesen Park was located 43 miles from Ontario and 31 miles from Nyssa.⁴⁸

The Oregon State Game Commission established a 153 acre game farm in 1937 on new project lands southwest of Ontario. The farm mainly raised Mongolian Pheasants. Reclamation stocked Owyhee Reservoir with cutthroat and rainbow trout. James Davenport influenced the further stocking of crappies, bass, perch, and Eastern brook trout. In 1960 an estimated 1000 boats operated on the reservoir.⁴⁹

Conclusion

The Owyhee Project began as a segment of the Malheur Project, but soon took on a life of its own. Owyhee Dam captured the spotlight for a brief moment as the highest dam in the world at the time of completion. It soon lost this distinction to Hoover Dam in the Boulder Canyon Project. Owyhee Dam proved its importance as Reclamation conducted experiments on it that would be used in construction of Hoover Dam. The entire Owyhee Project served to decrease the power expenditures of the existing irrigation districts from pumping massive amounts of water from the Snake River. In addition Owyhee succeeded in irrigating nearly all the irrigable land on the project.

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48. *Ibid.*

49. Reclamation, *Project History, 1937*, 63. "Fish Planted in Owyhee Waters," *Reclamation Era*, May 1940, 154. Sanford, "Johannesen Park," 250. Paul House, "Lake Owyhee: The Sportsman's Oasis," *Reclamation Era*, August 1960, 63.

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