Central Utah Project, Vernal Unit

Table of Contents

Project Location 2
Historical Setting 3
Project Authorization 9
Construction History 12
  Steinaker Dam 15
  Fort Thornburgh Diversion Dam and Steinaker Feeder Canal. 22
  Municipal Supply 24
  Recreation 25
Post Construction History 25
  Grouting Repair 27
  Drainage 29
  Stabilization of Steinaker Dam. 31
Settlement of Project Lands 32
Uses of Project Water 33
Conclusion 34
Bibliography 38
Index 41

tributary Dry Fork Creek originate in the small glacial lakes at the base of March Peak (elevation 12,219 feet).

The project's primary feature is an off stream reservoir in the Steinaker Draw. The area is named after the family which settled the area. During investigations and early project history, the name was rendered "Stanaker," reflecting an error originating on 1906 United States Geological Survey (USGS) maps. USGS perpetuated this error for several years, but in response to petitions from local citizens USGS changed the name to reflect the family spelling of the name, "Steinaker."[2]

Historical Setting

Ages ago, an inland sea teeming with aquatic life covered most of what is now the Uinta Basin. Dinosaurs prowled the tropical swamps. Today, the one-time abode of the dinosaurs has been set aside by the Federal Government as the Dinosaur National Monument where paleontologists pick away to free rock-embedded bones. Rich deposits of coal, gas, oil, and oil shale are found in the area. Two billion tons of small shells and bones—the remains of marine life in the ancient sea—are deposited only 15 miles away in a pile that constitutes one-twentieth of the world's known mineable phosphate reserves.[3]

Archeologists believe that from 10,000 or more years ago, until A.D. 400, the human inhabitants of Utah practiced a single common culture termed the Desert Archaic. Characterized by hunting-gathering, the flexible, highly adaptive lifeway mirrored most of man's worldwide history. However, beginning around A.D. 400 a new unique culture began to emerge throughout most of Utah. The Desert Archaic culture emerged as the people archeologists now refer to as the Fremont blended their historic gathering practices with the new ideas and technologies transmitted across the Southwest from Mexico. Specifically, the Fremont adopted the cultivation

the later summer, before Lincoln acted on Smith's recommendation, Brigham Young sent an expedition into the Uintah Basin to investigate its potential for Mormon settlement. Perhaps unduly influenced by the dry, brown grass of the late summer, the party reported the area to be "one vast contiguity of waste." In 1864 the Utes signed a treaty ceding their traditional lands and agreeing to relocate to the reservation in exchange for just compensation for their lands, agricultural assistance, and education for their children. However, after they moved onto the reservation, the Senate refused to ratify the treaty leaving them without the promised compensation and assistance.[8]

The growth of mining in Western Colorado, and the friction between the Native Americans and miners precipitated the Meeker Massacre in 1877. As a result of the incident, Federal authorities pressured the Colorado Utes to accept a treaty for removal to a reservation. By treaty, the Government moved the White River Utes onto the Uintah Reservation. In January 1881 President Chester A. Arthur issued an executive order creating the Ouray Reservation on adjacent lands for the resettlement of the Uncompahgre Utes. By August, the Uncompahgres had all been moved to their new home. The reservations excluded the Ashley Creek and Brush Creek drainages.[9]

White settlement of the Ashley Valley began in 1873 when Pardon Dodds, an Indian agent from the Uintah-Ouray Indian Agency, established a ranch in Ashley Creek. The first ranches were devoted to livestock which utilized the grazing resources adjacent to the valley. Between 1873 and 1880, a number of livestock men located in Ashley Valley and in 1878, the present town of Jensen was settled by Mormon colonists. Uintah County was organized March 3, 1880. In 1894 officials moved the county seat four miles from Ashley to Vernal.[10]

A number of factors led the settlers of the Ashley Valley to specialize in cattle ranching. A mining boom in Utah led to an increased demand for red meat, and the distance to markets limited the profitability of other farm products. Additionally, the scarce amount of water late in the growing season made these crops difficult to grow. Instead the cattlemen primarily grew additional cattle feed. Pardon Dodds was the first to use Ashley Creek for irrigation, diverting water for his pasture lands. In 1879 a number of farmers united to build the Ashley Central Canal. The three and a half mile canal irrigated 9,000 acres in the Vernal area. Within four years the canal doubled in size and had appropriated one third of the stream flow of Ashley Creek. Settlers created a second canal company later that year to construct the Ashley Upper Canal. The canal soon stretched twelve miles, and the company also claimed one third of the river's flows.[11]

Other canal companies followed, and by 1897 the rights to the entire flow of Ashley Creek had been claimed. In November of that year a district court decree divided the flows between the major canal and ditch companies operating in the valley. The court only slightly reduced the claims of Ashley Upper and Ashley Central Companies. The balance of the water was divided between the Rock Point Canal and smaller Union, Turner, Dodds, Island, Steinaker and Colton Ditches Companies.[12]

These companies utilized the direct flows of Ashley Creek, but they recognized the need for reservoirs to store the spring floods. They investigated the prospects for enlarging several natural high mountain lakes into reservoirs, but their small size and remote location limited these prospects. The new century, and the formation of the Bureau of Reclamation (at that time known as Reclamation Service) brought hopes for needed reservoir storage. In September 1903

Howard S. Reed conducted preliminary surveys of potential dam sites in the Uinta Basin. The following year he conducted a more thorough investigation.

Reed observed that "In no portion of Utah are there better opportunities for agriculture than in the northeastern section, where the Green River flows uninterrupted for many miles through virgin soil, the productiveness of which is well demonstrated on lands bordering the banks of its many affluents."[13]

After his survey, Reed concluded that a dam at the mouth of Ashley Canyon and an offstream site in the Steinaker Draw were the best locations. He noted that a low ridge separated these two sites, which could be used in conjunction to the dam in Ashley Canyon facilitating the diversion of water into Steinaker. [14]

Despite Reed's strong recommendations, Reclamation chose to construct the Strawberry Valley Project as its first in Utah. As a result, Ashley Valley residents began exploring other options to build a storage reservoir at the Steinaker site. In the fall of 1906 the members of the State Land Board and Utah State Engineer Caleb Tanner visited the site and reported favorably on its prospects. The newspaper report of the prospect prompted Howard Reed to write Chief Engineer Fredrick H. Newell.

> I am sorry that the work is not to be done under the auspices of the Reclamation Service for I firmly believe that there existed one of the best small projects that could be found within the arid district and it would have been a fine opportunity for a demonstration of the immense amount of good small projects constructed at little cost, comparatively, would do, especially when situated and surrounded …by people who would endorse any solution of their irrigation problem.[15]

Because of limited funds, the State Land Board chose to fund other projects it deemed of higher priority. The canal companies attempted to increase the water available during the later irrigation season by constructing small storage reservoirs on the upper reaches of the streams in 1917 and 1922. The severe drought which struck Utah and the West in 1934 stimulated the next

attempts to construct reservoir storage. Irrigation companies filed with the Forest Service for permits in 1934. The Ashley Valley Irrigation Company finished construction on the Oaks Park Dam on Brush Creek. It created a reservoir with a capacity of 6,700 acre feet. The company then constructed a transmountain canal to divert the water from Oaks Park Reservoir to Ashley Creek.[16]

Project Authorization

During the same period that local irrigators undertook construction of the Oak Park Reservoir, the Reclamation undertook investigations of potential projects in Utah cooperatively funded by the Utah Water Storage Commission. Reclamation conducted these investigations in conjunction with a survey of potential projects in the Upper Colorado River Basin authorized by the Boulder Canyon Project Act. The Boulder Canyon Adjustment Act of 1939 provided additional funding for the surveys.

A sub-office of Reclamation was established in Vernal in September 1938 to undertake preliminary investigations of Ashley Valley. One of the projects investigated by Reclamation was construction of the long-contemplated dam across Steinaker Draw. This would be the major feature of the Vernal Project which would provide supplemental irrigation to farms in the Ashley Valley. During World War II, Reclamation considered Steinaker Dam a "Food for Victory" Project. The Government, probably the War Production Board, rejected this proposal, recommending instead post-war construction. Subsequently, Reclamation included the Vernal Project in the comprehensive list of projects in the Upper Colorado River Basin, published as part of its report on the river at the conclusion of World War II. Reclamation hoped that Congress would authorize many of the projects in an effort to provide jobs and homes for returning veterans.[17]

At this point, Reclamation conceived the Vernal Project as a stand alone project. However, as planning proceeded on developing a comprehensive scheme for development of the Upper Colorado River Basin after the war, the project became a part of the plans for the CUP. Under the ultimate phase of the CUP, Reclamation planned on diverting into the Strawberry Reservoir the entire flows of all the major streams and rivers draining off the southern face of the Uinta Mountains. This water would then be diverted into the Bonneville Basin for use along the Wasatch Front and central Utah. Steinaker Reservoir would have provided storage and regulation of water delivered from the Green River to replace water diverted at higher elevations to Strawberry.

In 1949, officials at the Region 4 offices in Salt Lake City completed a detailed planning report on an independent Vernal Project. The report outlined the construction of the Steinaker Dam, a feeder canal to divert water from Ashley Creek into the off-stream reservoir, and a new service canal to connect the reservoir to existing canals. In addition to irrigation water, Reclamation now planned on providing municipal water to Vernal and adjacent communities by facilitating an exchange between the city and irrigators using water from Ashley Springs.[18]

Reclamation determined that the project had a cost benefit ratio of three to one, but that it would take irrigators eighty-four years to repay the full costs at an affordable rate. Similar situations throughout the Upper Basin led Regional Director Eugene O. Larson to propose a repayment formula similar to that authorized by the Pick-Sloan plan on the Missouri River. The Pick-Sloan authorization had provided that the sale of hydroelectric power from the large dams could be used to repay a portion of the irrigation projects. The plan became the Colorado River Storage Project (CRSP).

CRSP included plans for several large storage reservoirs on the Colorado and its principal tributaries. The "mainstem" dams would also produce vast quantities of hydroelectric power which Reclamation would sell to offset the costs of numerous "participating [irrigation] projects" throughout the Upper Basin States. The largest project in size and cost was the CUP, but the inclusion of projects to benefit all the Upper Basin States helped build support for the package in Congress. Additionally, the mainstem reservoirs would provide holdover storage to meet the obligations to the Lower Basin States under the Colorado River Compact.[19]

The successful negotiation of the Upper Colorado River Compact in 1948—which divided the Upper Basin's share of the Colorado River on a percentage basis—cleared the way for the introduction of the CRSP. Despite the support for CRSP among the Upper Basin States, the opposition of President Truman, along with congressional politics, and a large price tag, combined to cause strong opposition to the legislation. After the election of President Dwight D. Eisenhower, who supported the CRSP, Utah Senator Arthur V. Watkins reintroduced CRSP in 1952.

A tough political battle ensued. Much of the controversy now centered on the proposed dams within Dinosaur National Monument at Echo Park. Utahns generally strongly supported the Echo Park Dam as it was perceived to be in their best interest and a critical part of the CUP. Despite local support for the Dam, national opposition to the dam at Echo Park continued to sour the debate over CRSP. In addition to the opposition of conservationists to the Echo Park Dam, an array of other interests plotted against the legislation. Efforts to secure passage of the CRSP stretched out over several years.

The turning point came in 1955 when Colorado Congressman Wayne Aspinall, chairman of the House Interior Committee, removed the Echo Park Dam from the House version of CRSP.

Director submitted the completed DPR to Commissioner Wilbur Dexheimer who approved the document on August 2, 1957. A short time later, Acting Secretary of the Interior Fred G. Aandahl gave his approval.[22] With the DPR complete, Reclamation and UWCD began to prepare a repayment contract. After lengthy negotiations, the UWCD Board approved a repayment contract with Reclamation on May 6, 1958. Secretary of the Interior Fred A. Seaton approved and signed the contract in Washington on June 10. Subsequently the UWCD scheduled a special election for voters to approve the contract on July 8. Voters demonstrated extremely high support, overwhelmingly approving the contract with a vote of 1317 to 22. The affirmative vote cleared the way for the official signing of the contract at a special meeting on July 14, 1958. Utah's Fourth Judicial Court validated the contract on November 25, 1958.[23]

During this same period of time, water district officials worked with Utah's Congressional delegation to secure appropriations for the project. Obtaining the necessary appropriations proved to be a daunting challenge. In the wake of the launch of the Soviet satellite "Sputnik," the Bureau of the Budget proposed withholding funds for new Reclamation projects in order to increase spending on a military missile program. Consequently the Bureau of the Budget failed to recommend funds for the Vernal Project in fiscal year 1959. Undaunted, water district officials doubled their efforts. Utah Senator Arthur V. Watkins succeeded in adding funding for the project in the Senate version of the budget bill. After several weeks of conference, the final version included a $1 million appropriation for the Vernal Unit. As mentioned above, Vernal citizens celebrated the news with a massive four mile long parade led by Utah Governor George D. Clyde on August 22, 1958.[24]

The 162 foot (structural height) Steinaker Dam is the main physical feature of the Vernal Unit. Located adjacent to U.S. Highway 191 approximately three and one half miles north of the center of Vernal, the dam enclosed the Steinaker Draw and created an off-stream storage basin. The reservoir stores upwards of 38,000 acre-feet. Reclamation issued two separate contracts for the other principal features of the Vernal Unit. The first contract was for the diversion and conveyance system which delivers water to the off-stream Steinaker Reservoir. The Fort Thornburgh Diversion Dam redirects water from Ashley Creek into the three mile Steinaker Feeder Canal which supplies Ashley Creek water to Steinaker Reservoir. The second contract was for the Steinaker Service Canal. After being released through the six foot outlet works tunnel in the right abutment, the twelve mile canal delivers reservoir water to existing canals in the valley through the Steinaker Service Canal. Additionally, Reclamation issued contracts for three secondary physical features, laterals, drainage, and a municipal waterline. In a few locations, short laterals connect the Steinaker Service Canal to the existing irrigation canals. Following completion of the primary project features, the UWCD and Reclamation officials determined a drainage program would be needed. Finally, Reclamation partnered with the UWCD and the local communities in the construction of a 17.3 mile water line to supply culinary water.[26]

Approximately 1,500 people gathered for the ground breaking ceremony held May 14, 1959. Stores and schools closed and busses transported students to the construction site. Assistant Secretary of the Interior Fred G. Aandahl gave the keynote address. Other local and state officials, including Governor George D. Clyde and Senator Frank Moss, participated in the program as well. The program honored 86 year old local rancher Joe Steinaker whose family