

Acknowledgements:

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Doug, Paul, and Jon Phillips at the Strawberry Bay Marina complex.
Argyle/Strawberry history – Jay, Barney, and Bill Argyle
Various "old timers" who were gracious enough to share their knowledge.

Footnote:

As a youngster I helped my parents, Carlos and Margaret Gardner of Spanish Fork, build our cabin at the old Camp Strawberry in 1949. The nearest available water was at the spring, (by Charlie Madsen's store), and hauled to the cabin in 10 gallon milk cans. There were no power lines in the camp, and the only improved road in the valley was US highway 40. Wet weather would occasionally render the roads into the reservoir impassable. My grandfather, Matt Argyle of Spanish Fork, (shown in earlier photos), was a part of the construction crew that built the dam, dike, and diversion tunnel. After he retired, we spent a great deal of time at our cabin, fishing, hunting, and riding around the valley. He would point out various landmarks and tell me of their significance and the role they played in the development of the reservoir. Occasionally, there would be some of his friends and relatives staying with us, some of them had also been a part of the original construction, and they enjoyed reminiscing and sharing their experiences and stories. After hearing their stories many times over I told my grandfather that someday I was going to write it all down, he said it would be a great idea, but to remind everyone that the construction was accomplished before vehicles and modern equipment. So all travel and hauling was done with horses, and digging and earthmoving was done with dynamite and shovels. Since a portion of this history was acquired many years ago directly from those who were actually a part of it, I realized there would eventually become a time when it would be lost if not preserved and shared.

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<<<<<<< In their memory >>>>>>>

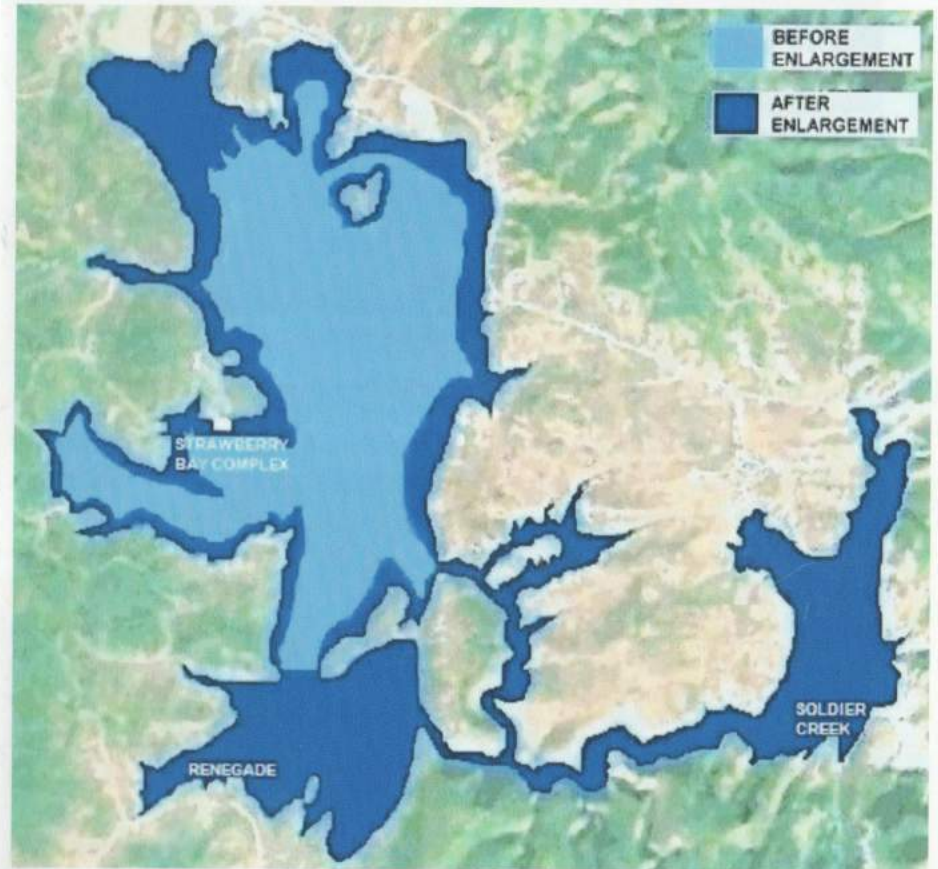
Don Gardner



Not for sale

STRAWBERRY

FROM THE BEGINNING - 1901



Strawberry Valley is a rich, green, high mountain valley with a river running through it, where early trappers and hunters found abundant wildlife including beaver, bear, elk and deer. Ranchers and farmers utilized its vast vegetation resources to graze their livestock during the summer months.



9th Cavalry Detachment at the Strawberry Valley encampment - 1888



Hyrum Argyle hunting party in Horse creek - 1895



Cattle herds in Strawberry Valley - 1897

THE BEGINNING



Strawberry Valley prior to dam construction - 1906

While on a camping trip in 1901, Utah state Senator Henry Gardner and John S. Lewis of Spanish Fork determined that a reservoir in the Strawberry valley combined with a diversion tunnel through the Wasatch Divide, could divert water from the Colorado river basin into the Bonneville basin to develop irrigable lands in the lower Utah valley, and in 1902 petitioned the Bureau of Reclamation to perform a project feasibility study. The board of engineers began the study, and on October 2, 1905 determined that the project was feasible, but delayed any further action until two important issues could be resolved;

- 1) The Bureau required that enough acreage be secured for irrigation to reimburse the cost of the construction.
- 2) Since some of the proposed reservoir area occupied land belonging to the Uintah Indian Reservation, it necessitated Congress to remove it from the Reservation lands and turn it over to the Bureau for development.

Both issues were eventually resolved, and in December of 1905, the Department of the Interior approved the project under the provisions of the Reclamation act of 1902, construction was authorized to begin on March 6, 1906.

The Bureau of Reclamation sought local bids for construction of the project, but when none were received, the labor was performed by Bureau work crews, the pay was \$4 per man, per day.



Strawberry Project Bureau of Reclamation office - 1906

THE DIVERSION TUNNEL

The largest and most difficult engineering feat, a 19,000-foot long, concrete-lined tunnel from the reservoir bed to the head of the Diamond Fork of the Spanish Fork River began in August of 1906. Though the efficiency of the Bureau-furnished Adams electric rock drills proved to be less than expected, excavation continued throughout the winter of 1906-07, but on July 20, 1907, work was discontinued due to lack of funds. During the shutdown, a study was conducted which revealed that the use of compressed air drills utilizing hydro-electric power would greatly improve the efficiency of the excavation.

Work crews were re-assigned to construction of the Upper Spanish Fork power plant and power canal.



Setting forms for concrete in the Power Canal - 1908



Lining the Power Canal with concrete - 1908



Power Canal Flume - 1908



Delivering the Turbine to the Powerhouse - 1908



Power System to provide power for the compressed air drills-1908

The power plant was completed on January 10, 1909. In September of 1908, a crew was sent to the West Portal to build a substation capable of furnishing the necessary power for compressed air drills. Work at the West Portal resumed in December of 1908 using the inefficient Adams drills, but throughout the spring of 1909, with Hydro-electric power available, work was conducted by crews working around the clock using 3-1/4 inch Sullivan Air Rock drills. Crews resumed excavation at the East Portal in October of 1911, and switched to the Sullivan drills in November.

Since water permeated sandstone was encountered, large amounts of water seeped into the tunnel, and being on a downward angle east to west, crews at the east portal were forced to continually pump water out of the forward end in order to continue the excavation. Prior to completion, it was reported that water was seeping into the tunnel at a rate of 7 cu. feet per second.

The Bureau furnished water repellent clothing to the workers, but due to the conditions inside the tunnel, it did very little good. They would usually be thoroughly soaked within an hour of the beginning of their shifts, so they opted to wear wool clothing since wool maintains a certain insulation quality even when wet.

Drilling crews from the east and west ends of the tunnel finally broke through at 7AM on June 20, 1912. The survey work proved excellent, the two tunnel shafts that were joined to complete the 19,091 foot long tunnel were only slightly more than two inches off. Crews continued lining the tunnel with concrete until completion in December of 1912.

While construction of the diversion tunnel was in progress, a lateral was dredged from the valley floor to the East Portal intake to supply the irrigation water.



Setting forms for concrete in the Lateral - 1908



Forming the Lateral - 1908

During the winter of 1908-09, 300 inches of snow fell on Camp Quinton, (the West Portal camp), which severely limited operations. As a result, the Bureau established a commissary, a small mercantile store, a boarding house, and an infirmary. A doctor stayed at the camp at all times. The Bureau also established branches of these operations in the camps at the East Portal and Strawberry dam.



West Portal camp (Camp Quinton) - 1908



West Portal Weir & Machine Shop - 1908



Workers at the East Portal entrance of the tunnel - 1909



Workers at the West Portal entrance of the tunnel - 1909



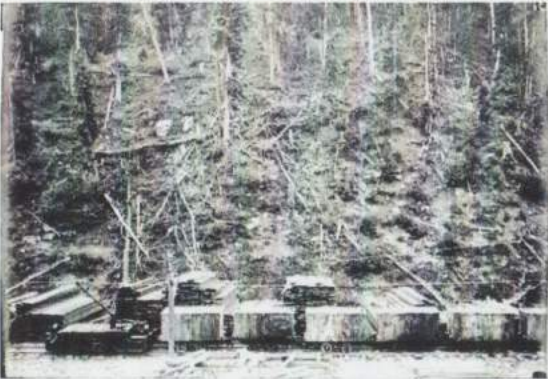
Heading crew inside the Tunnel - 1909



Heading crew loading a Muck car - 1909



Workers inside the tunnel - 1909



Muck car train at the West Portal - 1909



Strawberry Tunnel looking toward the portal 1200 feet away - 1910



Worker inspecting the Tunnel ventilator duct - 1911



Completed section of the Lateral toward the tunnel entrance - 1911

When completed, the tunnel was 3.6 miles long, 7 feet wide and 9 feet high with an arched ceiling, and had a capacity of 600 cubic feet per second.



Water first flowed out of the Tunnel on September 13, 1913

THE DAM

Construction of the dam did not begin until June of 1911. The project engineers delayed its start until they were convinced the diversion tunnel segment of the project was going to be successful.



Dam site prior to construction - 1910



Engineer inspecting proposed dam site - 1910



Machinery being transported to the construction site - 1911



Stripping the Dam site - 1911



Workers at the Dam - 1911



Early Dam construction - 1911



Dam Cutoff Trench - 1911

Workers excavated the Corewall trench throughout the rest of that year but it was not completed until December 11th. Crews poured the concrete for the Corewall up to the elevation of the river bed before cold weather forced work to stop, the entire camp was shut down.



Digging the Corewall Trench - 1911



Setting forms for the concrete Corewall - 1911

Work resumed in the spring of 1912 and on July 14th, the project engineer, James Lytel, closed the sluiceway to begin filling the reservoir, which would eventually contain some 283,000 acre feet of water in its 8400 acre surface area. The spillway was completed in September of 1913, crews dug 8100 cubic feet of rock and material out of the spillway section, located on the north side of the dam, and constructed a 64 foot reinforced concrete bridge across the spillway.



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