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Tomorrow Is the Big Day for 2 Irrigation Districts

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Tomorrow is a day of jubilation for farmers of the South San Joaquin and Oakdale irrigation districts.

The Tri-Dam chain of water barriers and powerhouses on the middle fork of the Stanislaus River will be dedicated—a 52 million dollar project conceived, financed, and constructed by the two small districts without government financial aid.

The project, now in partial operation, will be in full swing next year and during the next 50 years will pay for itself through the sale of electric power to the Pacific Gas and Electric Co. at the rate of 2½ million dollars a year. It is this sale of power which backed the revenue bonds sold on the open market to investors.

Fifty years from now the two districts will own the chain of dams and powerhouses, and the revenue from the power will go into treasuries of the districts.

Development of the power was secondary in the minds of the farmers of the district. They wanted water for dry years, and they wanted protection from flood and too much water in years of heavy mountain run-offs. The power development was a means to the end. Now farmers have a water conservation plan paying for itself, and one which will make money for their grandchildren after the turn of the century. It could very well be that when the power revenue starts accruing to the irrigation districts after the bonds are paid off, it will be sufficient to eliminate, or nearly eliminate, the tax levies in the districts.

All this was not accomplished without a struggle and without opposition.

Particularly in the South San Joaquin Irrigation District was there opposition. This came from some of the voters of the district who were not in favor of an alliance with a public utility company; from some who feared the construction would mean liens on their lands with possible disastrous consequences, and from some who were skeptical that their small districts should underake such a vast and costly scheme.

It took education, explanations, and series after series of meetings in both districts to show voters that the plan, though costly, was feasible, practical, and necessary. Voters of both districts gave their overwhelming approval in 1952 after preliminary plans were presented.

Then came the second, and almost fatal obstacle—financing. Because of an uforseen tight money market, the bonds were scheduled to be offered on the market just after interest rates went up. The $40,000,000 estimate rose to $47,000,000, and then to $50,000,000 and finally to $52,000,000.

But persistence, refusal to give up, and the faith of Engineer Bert Goodenough of San Francisco, paid off. Interest rates dropped, new contractor negotiations were worked out, the Legislature extended the completion date, and ground was broken June 17, 1955.

Tomorrow, two years later, on June 15, 1957, the project will be dedicated.

Tri-Dam Interest Bill Is $31,000,000

How much interest are the Oakdale and South San Joaquin Irrigation districts paying for money to assure their farmers of adequate water in dry years and flood protection?

The answer is $31,010,875 over a period of 50 years, and the districts figure it is cheap.

They were afraid they would have to pay more.

The 31 million dollar interest bill is being paid to the successful bidder for the $52,000,000 revenue bonds floated on the stock market to finance the dam and power house construction. The bonds, in two equal issues, one in the name of the Oakdale Irrigation District, were purchased by F. S. Smithers-Solomon Bros. and Hutzler as joint managers and associates, on a bid of approximately 3.05 interest rate.

The actual interest rate, less an $83,000 premium, is 3.041836.

The purchaser's premium pay to the district of $83,000 was $29,000 higher than the next bidder, who offered the same interest rate but only $59,000 premium.

Phillip Cavalero, of Stockton, attorney for the joint districts in the Tri-Dam undertaking, points out the interest rate is less than the U.S. government is paying now on its bonds.

Where is the district getting the money to pay the interest?

From sale of power to the PG&E at the rate of about $2,200,000 per year for 50 years.

DONNELL'S DAM—This is the 290-foot high concrete arch dam at Donnell's Flat, first unit in the chain of three dams and powerhouses on the middle fork of the Stanislaus Rived. Their construction is the biggest project ever undertaken by an irrigation district. In this case, it is a joint venture of the South San Joaquin and Oakdale irrigation districts. Behind this dam lies a reservoir, and downstream is the powerhouse. The site is not easily accessible.

Landmarks Are Lost in Water Storage Plan

Several Tuolumne County landmarks have been erased with the construction of the three dams on the middle fork of the Tuolumne River.

Among the first to go was an engineering marvel of the Gold Rush days—the flume line of the Columbia and Stanislaus Water Co., which once ran from Donnell's Flat to Columbia.

This fell prey to the bulldozers of modern times during construction of eight-mile road cut just above the line of the ditch from Beardsley to the site of Donnell's Dam.

The old flume was constructed 100 years ago.

Next to go was a portion of the Pickering Lumber Company's railroad and one of its section camps.

Both have been relocated by the irrigation districts' contract with the lumber company, under which they purchased 280 acres of land from Pickering for the water storage reservoir at Beardsley.

The relocated railroad now runs across the top of the dam, and the Beardsley Flat Section Camp is re-established just above the reservoir.

The lost landmark that created the greatest uproar was the covered bridge at O'Byrnes Ferry. Its location is under 80 feet of water, and a new span has been erected a few miles from the site of the original structure.

Tulloch Dam Is Irrigation Key

Tulloch, which lies about 45 miles down river from Beardsley is the most important to the districts insofar as storage for irrigation is concerned and provides a stabilization of the river in that it will be used to store any excess water which passes the upper works.

The dam is a concrete gravity type with a gate-controlled spillway on the left abutment; however, most of the water passes through two 114-inch diameter penstocks into the powerhouse, or through two six-inch diameter steel outlet pipes.

Goodwin Dam, which is raised seven feet as part of this job, forms an afterbay to regulate the discharge down river. This is the diversion works for the districts' irrigation system. A considerable improvement in the gate structures is also part of the job.

Donnell's Dam Is Power Source

Donnells, which is the upper dam in this project also is the most important insofar as power production is concerned.

The dam is a concrete arch dam with a gate-controlled overflow spillway on the left abutment; however, most of the water will enter the power tunnel located just upstream from the dam except for water which will be released through a low-level outlet pipe to furnish water for fish life in the river or that which will be wasted over the spillway because of an excessive inflow.

Water is delivered to the powerhouse through a 7.2-mile tunnel and an 81-inch-diamater penstock a half mile long. After it is used there it immediately enters Beardsley Reservoir.

Contractor's Bond Sets U.S. Record

Fifteen surety companies had a part in the construction bond filed to guarantee completion of the Tri-Dam project.

The $31,199,850 bond presented May 31, 1955, by the International Engineering Company, was the largest single performance bond ever filed in the United States.

An additional bond for $15,559,425 was filed covering payment for labor and materials.

SPEAKER — Harvey O. Banks, director of the State Division of Water Resources, will be the principal speaker tomorrow at the dedication of the $52,000,000 Tri-Dam.

STATE OFFICIAL SPEAKER AT DEDICATION

Harvey O. Banks, director of the State Division of Water Resources, will be the principal speaker tomorrow at the Tri-Dam dedication ceremony.

The program is scheduled for 10:30 a.m. at the Beardsley Powerhouse site.

Also on the program will be N. R. Sutherland, president of the Pacific Gas and Electric Co., purchasers of the power output; John Vrieling, chairman of the South San Joaquin Irrigation District board of directors, and Edwin Koster, chairman of the Oakdale Irrigation District directors.

Tri-Dam Photos by Record Lensmen

All pictures of the dams on these pages have been taken by Record photographers Fred Feury and Dave Evans. During the past two years they have presented to Record readers the picture story of the Tri-Dam in its various phases of construction, from the ground-breaking to its completion.

MILLION SPENT FOR TRI-DAM POWER LINES

The Pacific Gas & Electric Co. has expended more than a million dollars constructing Tri-Dam Project power transmission facilities to transmit electricity generated at the project to the San Joaquin Valley area.

In addition, $360,000 has been spent on the Curtis Substation located at Standard City. It was completed in 1954 to provide needed power for the work at the Tri-Dam project.

All lines out of the project feed into a 110,000-volt line, termed a "110 KV line" by the experts.

The line starts at the Donnell's project, extends down past the Beardsley Dam past Sonora and ties into the PG&E's Melones powerhouse. From that point it runs down into the Valley where it ties into the company's Riverbank junction.

It turns north from that point and finally ties into the Bellota Substation where it is distributed to many San Joaquin Valley points.

By contracting to purchase the power output of the Tri-Dam power plants the PG&E made possible the sale of bonds for construction of the irrigation water storage project.

In the early stages of the Tri-Dam construction PG&E installed a 60,000-volt line from the company's Spring Gap powerhouse to supply power for the electrically-operated equipment. When the Tri-Dam projects were completed the 60,000 volt line was converted to the 110,000-volt line which now has been placed in permanent use.

KEY MAN—Clarence Quinley of Oakdale has been one of the key men in the planning of the Tri-Dam. The secretary of the Oakdale Irrigation District, he has also held the position of executive secretary of the Tri-Dam.