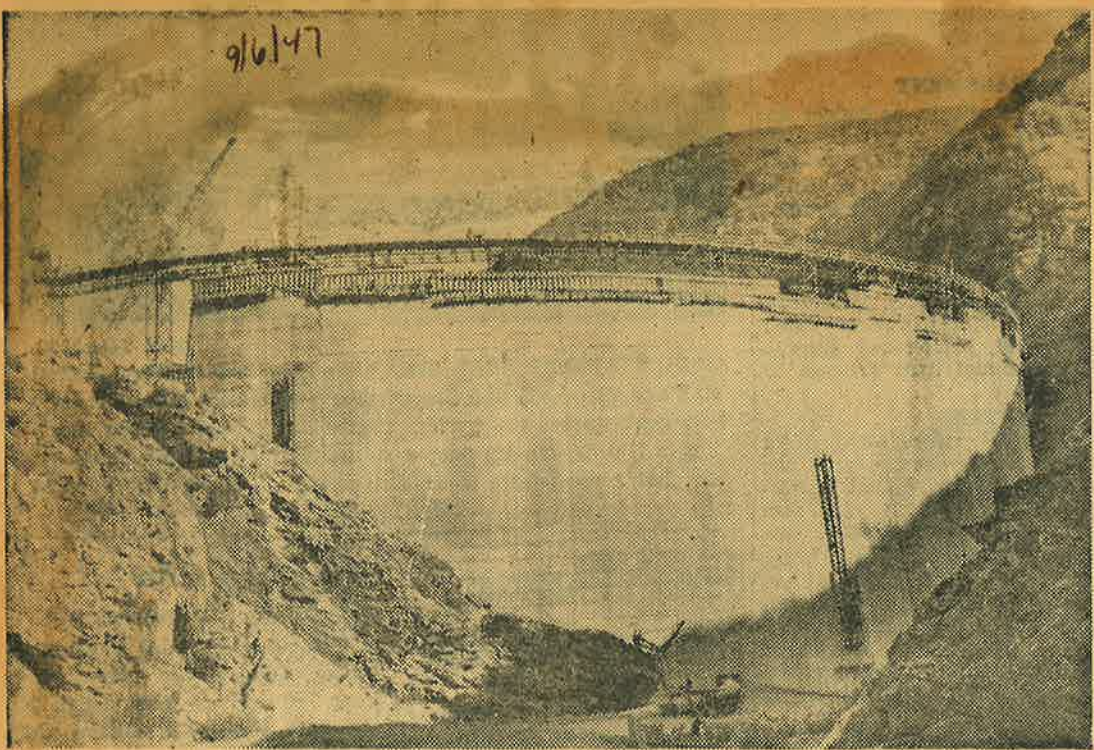


9/6/47



(Star-Free Press Photo)

**UP SHE GOES**—Higher and higher Matilija dam is rising these days as this photograph, taken from a view looking downstream, shows. Six blocks have reached top elevation and many others are just short their last pour. Mass concrete pouring is expected to be finished in about three weeks.

# Six Dam Blocks Finished

## Three Weeks Of Pouring Expected

**SIX** blocks had been completed today on the now rapidly rising Matilija dam, which stretches skyward from the bottom of Matilija canyon. The rest are expected to be completed within three weeks.

From dam officials also came the heartening word that pouring has been approved in the "bear hole" of N block, where this spring a faulty seam of clay material was uncovered, causing consternation, loss of time in concrete pours, added excavation and extra expense. With the form in, the first pour on the "bear hole" was to have been made last night. N block, itself, is at the lowest elevation of any block on the dam proper — 1105 — but the other blocks are going up quickly.

### FINAL POURS

Blocks on which final pours have been made include M, K, I, G, E and C. Nearly completed are D, F, H, J and L. Latest block to be completed was C, on the right abutment, which was topped off yesterday. Workers for Contractors Atkinson Kier Bressi and Bevanda also are well underway pouring into forms on the gravity section of the right abutment. This section is up to an elevation of

Officials say that from now the dam will be able to hold water, should the winter rains decide to start in early. Pouring of mass concrete on the dam proper will be finished in the next few weeks, although work will go more slowly from now on as employees work their way toward the top. Time has to be allowed to let the concrete settle. Construction of the bridge is dependent upon the time taken to finish a portion of the top blocks. Workers have to work their way backward off the dam in pouring the bridge.

### POURING TOTAL

To date, roughly 68,000 cubic yards of concrete have been poured on the dam blocks, with only about 4,700 cubic yards remaining to be poured. Fifteen blocks have been poured on the bottom of the apron, leaving three more to go with an additional one up the slope.

If all goes well, work on the valve house will be started in two to three weeks' time. Work can not be started there at the present time because the valve house will arise on the location which the contractors are now using for their mix plant.

Troubles in obtaining cement seem to be over, for the contractors once again are receiving the cement in railroad gondolas. For a time, no gondolas were available and the contractors had to buy cement in sacks which could be shipped in rail freight cars.

9-26-47

## CONTRACTORS START PIERS FOR BRIDGE

Work has started on the piers for the bridge across Matilija dam, and only a few pours remain to be made in the mass concrete section, Contractors Atkinson Kier Bressi and Bevanda reported today.

Pier work began yesterday. Today, contractors expected to complete the final pour on A block and then on Monday to top off D block. That will leave pours remaining on only N and O blocks and the left gravity section.

Except for the parapet walls, the right gravity section has been completed. On the left gravity section, one pour yet is to be made on R block; forms are being readied for pours on P block, which will be a part of the control house.

A total of 71,500 cubic yards of concrete has gone into the mass concrete section and only 1,500 yards remain to be poured, contractors said.

Pours on the apron are expected to be completed next week.

9-23-47

# Dr. Berkey Gives New Warning On Matilija Project

9/23/47

**F**EAR that Matilija dam will fail if further treatment is neglected to the point that much under seepage is allowed was emphatically and determinedly expressed in a letter from Dr. Charles Berkey, geological consultant, received today by the board of supervisors of the Ventura county flood control district.

Dr. Berkey, who this spring was called in to inspect the

dam site and give his recommendations when faulty material was found under the dam's N block, discussed the safety factor of the dam in a blistering letter answering one issued some time ago by Donald P. Warren, dam engineer. He placed the blame for Matilija's troubles directly on Warren. Warren, in his letter, had made light of Dr. Berkey's recommendations and had even declared that the consultant's advanced age had caused him to rely on hearsay evidence in forming his recommendations.

## BOARD CONCERNED

Supervisors, deeply concerned over Dr. Berkey's new report, not only ordered that the state department of dams and Warren be sent copies of the letter; they authorized a resolution to the dam department asking for a report on what steps were required to be done at the dam as a result of the geological consultant's first report and asked for details of what other steps will be needed and required by the state dam board for safety reasons before the dam, now nearing completion, is finished.

Supervisors, too, asked S. V. Prichard, called in at the request of the grand jury to make an investigation on the whole dam problem, especially in regard to contracts, to make an investigation that would be concerned with the data in Dr. Berkey's new letter and to recommend whether he feels further dam consultant again should be called in by the county.

## BERKEY SURPRISED

Dr. Berkey, expressing surprise at the attitude and tone of Warren's letter, said he had expected that as the work went forward and uncovered better evidence of the early mistakes that there would be a more constructive attitude shown by the engineer. Disappointed that such was not the case, he set about to form a reply to Warren's letter and to give further advice on the dam.

He pointed out that the only salvation for the dam is that the soft material will not be used greatly for support of the structure but he said "if further treat-

ment is neglected to the point of allowing much under seepage, it will fail."

Battering down Warren's contention the dam was so tight there was no seepage, Dr. Berkey declared the exposed rock below the dam showed by its condition that water had circulated through it. He also said he had been informed that there now is seepage around the dam. (The seepage was disclosed while the apron was being excavated).

## RECALLS ST. FRANCIS DAM

Dr. Berkey pointed out that the first indication of danger at St. Francis dam was the slight seepage under the dam. He was there and he saw it. Dr. Berkey said he remarked at the time that he didn't see why the dam, which later failed, didn't go out.

Answering Warren's contention that the engineer had taken no risk, Dr. Berkey remarked: "The plain fact is that a serious risk was taken from the very first step and apparently is not yet through taking."

Warren remarked that core borings were of little or no value in giving additional information and that his opinion had not been altered by construction at the site. To this Dr. Berkey replied that core borings are virtually the only reliable method of discovering conditions at a depth and uncovering conditions without going to the trouble and expense of stripping the whole floor. He said it is thoroughly recognized that covered ground must always be explored to prove actual conditions beneath and is absolutely necessary where a weak zone is evident, as at Matilija.

## FIRM OPINION

"Mr. Warren ought to know better, if not, then he ought not to build dams," wrote the elderly doctor.

Dr. Berkey said the first mistake on the project was failure to see and appreciate indications of deformed rock and changing topographical features; the second was not to test and find out what they meant. That, the doctor said, should have been done before any attempt was made to decide on the type of dam or the design.

"Apparently Mr. Warren was willing to guess at it and guessed wrong," Dr. Berkey declared.

He said four holes would have outlined the major zone of weakness and indicated the character of the rock. He further stated he made this observation after scaling the site sufficiently to determine the condition of the rock.

## Warns Board

9/23/47  
"Undertaking to design and build the dam before it was known just what the foundation was like was the essence of the blunder that was made," he wrote. "The physical nature of the site should have been proved first. No matter how perfect is the design, it will fail if it does not meet the weakness of the local situation."

Dr. Berkey felt a different type of dam and treatment should have been recommended, "much to its improvement and safety and to the people's advantage in cost," if sufficient explanatory work been undertaken at first.

He feels that the damaging feature was that Warren "either didn't appreciate the importance of the weakness found around N and O block or that he was willing to cover up without making an adequate effort to cure the condition."

## AMAZING STATEMENT

The doctor said Warren's feeling that core borings would be too expensive and wouldn't be in the interest of safety or in the economics of sound engineering was the most amazing statement he ever had seen from an engineer. "What in heaven's name is the structure for if not in the interest of safety and economy?" he asked. "Surely it is not wasteful to find out the necessary facts and to make a structure safe. How economical would it be if it went out?"

Describing how a dam, apparently the St. Francis, was put up on a poor foundation and how it went out, Dr. Berkey declared: "I should think that no engineer would want to build another, at least not in the Santa Clara valley."

He said he wouldn't have approved the site nor the type of dam had he been called in at first before the dam had been started.

Via letter, Warren asked the flood control district to pay him fees for engineering services on plans and specifications for Casitas dam and the conduit system, the other parts of the Matilija project. Claiming the fees were long overdue, Warren asked for \$60,592. In the light of all the trouble on Matilija dam and Dr. Berkey's new report, supervisors instead of granting the fees referred the matter to Prichard for his recommendation.

The Ventura (Calif.) County Star-Free Press

## Two-Phase Water Plan Mapped

The new board of directors of the Rancho Ojai Mutual Water company drew up a broad outline of a two-phase water development program at a special meeting last night.

In its first official get-together since the extended stockholders meeting last weekend, the board agreed it faced a two-fold problem. It must take steps to increase the Meiners Oaks water supply in the immediate future, and it also took cognizance of the need to develop a long range program which will meet the needs of the next 10 years.

With his eye cocked on the future, Board President E. F. Steele appointed a three man committee to investigate the possibility of procuring water from zone one when Matilija dam pipe lines have been installed.

"Our first major problem is to develop a reliable source of water," Steele said. "When we have accomplished this, then we must turn our attention to a water storage plant. Meanwhile we will have to make the necessary repairs in our existing lines, but we must always keep in mind that all of our temporary plans must be geared to our long-range program," he added.

Lynn Rains was appointed as chairman of the water committee, and Steele and Secretary-Treasurer Joe Wingate were chosen to serve with him.

In line with the development of this long-range program, Rains stressed the need of enlisting the aid of the stockholders in the solution of the company's problems.

"I believe that one of the former board's mistakes was that it was too self-sufficient," Rains said. "This board should seek the aid and advice of the stockholders, especially those who are conversant with engineering problems."

"I agree 100 percent with Rains' suggestion," Wingate said. "We can solve our problems only if we all work together."

The board agreed that the development of storage facilities would be necessary even if it is possible to get water from zone one. Any definite steps along this line, however, were postponed until the new board members could acquaint themselves with the suggested sites, and the costs of installations.

Rains outlined a four point program for the board which he said he believed would eventually solve the major share of the company's problems. He suggested:

1. Development of an additional water supply.
2. Erection of storage sheds.
3. Installation of water mains in the streets.

Metering the water supply.

For its short range program, the board approved a suggestion to have bids on repair work on the pipelines south of the settling basin resubmitted, and if they showed no increase in cost to empower Robert Anderson to have the repair work begin immediately.

The board also agreed to visit sump well No. 2 to see if it is practical to put it into operation. The well was dug last July, but in the meantime it has sanded up and has not been used.

On a motion by Rains, the company's books will be audited by Stockholder H. R. Howard, Ventura accountant, and he will be asked to analyze the company's office procedures and make suggestions for the elimination of unnecessary expenses.

The board will also make a comprehensive study of the present water rates with an eye toward devising a more practical and equitable rate structure.

The minutes of the last meeting and the new by-laws will be read and discussed at the next regular meeting of the board, Oct. 14.

DATE UNKNOWN  
SEPT 1947+/-

# Board Hears Matilija Report

**S**EVERAL recommendations made by Dr. Charles Berkey and Dr. Tom Bailey, consultants called into the Matilija dam project by the county, are not being followed.

That was what the board of supervisors of the Ventura county flood control board was informed at this morning's meeting. The meeting also saw the contractors on the dam allowed a 30-day extension of time to complete the dam.

Leonard Stump, principal engineer in the county surveyor's office, in a written report told the board that he and Neil Stiver, zone one manager, found after a visit to the dam Sept. 25 that the Donald R. Warren company, dam engineers, have followed most of the suggestions made by the two geological consultants in regard to grouting and the like.

## **NO CORE BORING**

Stump said, however, that nothing has been done by the engineers on core boring. Dr. Berkey had suggested that borings for grout be made with a coring rig to deeper levels than the rest of the series. Stump also reported nothing had been done regarding Dr. Berkey's suggestion that a concrete retaining wall be built back of the outer edge of the spillway apron nor that the channel be lined with concrete from the retaining wall to a distance about 20 feet.

Likewise, nothing has been done about Dr. Bailey's suggestion in regard to seepage. Stump reported Dr. Bailey suggested that dye be placed in a pool of water above the dam to see if, by tracing the color, it could be ascertained whether water was seeping under the dam. Some water seepage was found when excavation on the apron was started.

## **GROUTING INCOMPLETE**

The supervisors were informed that the grouting program is not completed but that a row of grout is being drilled four holes to each block and from 50 to 60 feet in length, extending under the dam the lower end to be about 30 feet below the foundation.

Supervisors ordered that copies of Stump's report be sent to the Warren company and the contractors.

In regard to time extension for completing the dam, John Hallock, representative for the Warren company, suggested Contractors Atkinson Kier Bressi and Bevanda be given additional time. He said the contractors had been delayed by several factors which weren't their fault. The strike of carpenters at the dam this summer, the failure of cement deliveries to come through and the uncertainty when equipment, to be furnished by the county and being manufactured in the east, will arrive have delayed the work, Hallock said.

Supervisors agreed to allow the contractors 30 more days and then to grant additional time if needed. The completion date had been set for Oct. 1. The contractors and Hallock pointed out that the mass concrete is nearly finished; only seven more pours remain to be made.