

STATE OF CALIFORNIA
Department of Public Works

LOS ANGELES

January 19, 1953

ADDRESS REPLY TO
DIVISION OF WATER RESOURCES
803 CALIFORNIA STATE BLDG.
LOS ANGELES 12

Mr. Ed Fletcher
1020 9th Avenue
San Diego, California

Dear Ed:

Your letter of January 19, 1953, enclosing information on your wells in El Cajon Valley, has been received. The information which you furnished supplements that which we have already obtained. It is unfortunate that more data concerning water levels, mineral quality of water, and exact quantities of water pumped from each well were not kept. Such information, if available from the beginning on each of your wells, might have provided valuable clues as to the origin of the well waters and the dependability of the supply. Without this information it is almost impossible to predict the source of the water supply to your wells.

From records of water levels taken when one or more of your wells was pumping, there is an indication that pumping at one well affects the water level in other wells. Since it is generally conceded that the water supply to these wells is through fractures in deep granitics, such a relationship might well be expected. It is noted that the pumping capacity for each one of your wells has been determined separately; that is to say, that when the pump test was made on a given well, no other wells were pumping at the same time. Pump tests made in this manner will give the maximum capacity for a given well but if several wells are pumping from a given aquifer or are deriving water from a common fracture zone in the granitics, it is very possible for the pumping in one well to affect the water level and therefore, the capacity of another well. There are indications, therefore, that the total capacity of your four wells may not be equal to the sum of the capacities determined one well at a time. If you are interested in the total yields to be obtained from your four wells the safe and conservative approach would be to ascertain this yield while all wells are producing. Since such a test or series of tests would be considerably beyond the scope of our report on El Cajon Valley, it is suggested that the power company may be willing either to conduct such a test or assist in making a test. In the event you decide such a combined test is desirable and necessary to ascertain the total safe yield of your four wells, this Division would be glad to cooperate to the extent of making water level measurements in an attempt to ascertain the effect of such pumping on nearby wells. In all of our work in El Cajon Valley, the La Mesa, Lemon Grove, and Spring Valley Irrigation District has been very cooperative and possibly they would be glad to cooperate or assist in any pump test which you make.

The well log on your well No. 4 indicates the well to be 8 inches in diameter but I understand that a deeper portion of the well is three inches. Can you advise how deep the eight-inch section is or at what point the three-inch diameter well begins?

Mr. Ed Fletcher

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January 19, 1953

Concerning the Linda Vista Mesa wells, we have written to Paul Beermann to ascertain the source of his information. If this source is a State Agency, we can naturally secure the data at the source.

Again I wish to thank you for your interest and cooperation in furnishing this Division with your information. I am sorry we do not have sufficient historical data or sufficient time to make further exploratory tests to ascertain the exact source of the water supply for your deep wells. Please keep me advised if you decide to make a combined pump test on all of your wells.

Very Truly yours,

A. D. EDMONSTON, STATE ENGINEER

By Max Bookman
Max Bookman
Engineer-in-Charge
Southern California Office

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March 18, 1953

Colonel Ed Fletcher
1020 9th Street
San Diego 1, California

Dear Colonel Ed:

It was my feeling after your visit to my office that we had not satisfactorily covered the results of our studies in El Cajon Valley and I, therefore, will try to convey these facts to you in this letter.

Unfortunately during your visit our discussions digressed to speculative theories of ground water geology, and we all realize that geology is not an exact science and there is much to be learned yet of our underground water resources.

Results of the pump tests which you conducted in February have been plotted and studied. These test results may be summarized as follows. During the period of the test the maximum combined rate of pumping from all wells was 600 gallons per minute at 8:30 a.m. February 6. At this pumping rate, drawdown at Well No. 1 was 33 feet; at Well No. 2, 98 feet; at Well No. 3, 88 feet; and at Well No. 4, 127 feet. The combined pumping from three of your wells also influenced other wells to the east. The Clark well showed a 12-foot drawdown, Thurman Brothers well a 3-foot drawdown, and Dahl well approximately .5 foot drawdown. During the period, February 2 to 16, a total of 9.4 acre-feet of water was pumped. At the end of this period, the static water levels in each one of your wells was lower than at the beginning of the test. At Well No. 1, this difference was $3\frac{1}{2}$ feet; at Well No. 2, $2\frac{1}{2}$ feet; at Well No. 3, 1 foot; and at Well No. 4, 3.7 feet. If these values are averaged, the mean loss in head is approximately $2\frac{1}{2}$ feet.

The results so far obtained from the tests and observations made on your wells and others in El Cajon Valley do not point to any definite conclusions. However, there are several reasonable indications or assumptions which can be drawn from the results to date. First, all of your wells are interconnected and the pumping from any one well will influence or depress the water level in other wells. There is interconnection between your wells and the Clark well, and to a minor extent, the Thurman Brothers and Dahl wells. The drawdown per unit of water pumped in each of the wells is relatively large (specific capacity is low) indicating a limited transmissibility in the aquifer. This coupled with the fact that there was

Colonel Ed Fletcher

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March 18, 1953

a considerable delay in time before the Clark well was affected by pumping would indicate that there is a considerable pressure loss in the aquifer in transmitting water. Such a pressure loss would indicate that the fissures or cracks in the granitics through which water is supplied to your wells are limited in size and capacity. The fact that all wells failed to return to their original static levels even after nine days of recovery would indicate that a portion of the water pumped during the test was supplied from ground water storage and was, therefore, supplied to the wells at a rate greater than the replenishment of the aquifer. If this assumption is subsequently proved correct, it would mean that further exploitation of the aquifer into which wells are drilled would not necessarily produce a greater supply of water, and also, if further exploitation were made, it might result in ever increasing drawdowns with decreasing discharges. In other words, if the results of the test are interpreted as a lowering of the water levels in your wells then the rate of pumping during the test was greater than the recharge to the aquifer and further exploitation of the aquifer by additional wells or deeper wells would not be warranted.

A careful study has been made of the mineral analyses of water pumped from your wells but this method of approach does not provide any good clues. It is noted that the chloride ion content in Well No. 1 increased 30 parts per million from September, 1952, to February 1953. Water quality in this well is very similar to the mineral quality of water in the Sears well. It is also noted that the mineral character of the water from Well No. 3 has changed from sodium chloride type water in 1951 to a sodium-calcium chloride type water in 1953. The analysis of water from Well No. 3 taken February 3, 1953, showed 18 parts per million of nitrate, a constituent not present in previous samples analyzed. Water pumped at the Clark well is sodium-calcium chloride in type having more than 100 parts per million nitrates. The water analyses show a slight tendency towards increased mineralization and change of character which could be attributed to a mixing of shallow ground water from the valley with waters in the deeper granitics. These changes in quality are too small to have real meaning but they serve to emphasize the importance of periodic checks on the mineral quality of your well waters.

In our report on ground water occurrence and quality in El Cajon Valley, it is our intention to take cognizance of your deep wells in the fractured granitics but no positive statements can be made indicating the source of supply to these wells. It is considered possible that a portion of the supply to these wells may be from the adjacent alluvial areas on the east and it is also possible that a portion of the recharge to these wells is derived from sources in highlands both within and adjacent to the El Cajon drainage area.

(Regardless of the source of the water to your wells, it is evident that there is a certain yield of good water which in San Diego County is of considerable value. It is fortunate that men like Colonel

Colonel Ed Fletcher

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March 18, 1953

Ed Fletcher are so vitally interested in preserving the quantity and quality of this water supply. In this connection it is recommended that complete and detailed records be maintained for each of your wells. These records should include water production, water levels, and a log of the pumping time on each of the wells. As a further assurance that the water quality is maintained, it is also suggested that periodic samples be taken from each of the wells for mineral analysis. The Division of Water Resources will be glad to make a mineral analysis of such samples on an annual basis as part of our State-wide surveillance of ground water quality.

I wish to again thank you for taking the time to discuss this subject with us and for your keen interest in a subject vital to all people in the southwest and am enclosing, as promised, a print of the water levels at wells affected by the test.

Very truly yours,

A. D. EDMONSTON, STATE ENGINEER

By Max Bookman
Max Bookman,
Engineer-in-Charge
Southern California Office

Enc.

Col. Ed: The print of water levels will follow.
max

A. D. EDMONSTON, STATE ENGINEER
CHIEF OF DIVISION

EARL WARREN
GOVERNOR OF CALIFORNIA

FRANK B. DURKEE
DIRECTOR

STATE OF CALIFORNIA
Department of Public Works

LOS ANGELES

ADDRESS REPLY TO
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LOS ANGELES 12

May 8, 1953

Colonel Ed Fletcher
1020 9th Avenue
San Diego 1, California

Dear Colonel Ed:

Thank you for your letter of May 7 giving me the background of the attitude of the Chamber of Commerce on the Feather River Project.

The same day Mr. Edmonston spoke to your Rotary Club, he met with the Chamber of Commerce Water Committee and discussed the Feather River Project. Mr. Klaus explained that the City had delayed their support on the Feather River Project until the bond issue on the second barrel was passed and Sutherland Dam under construction. He made it clear, however, that San Diego was now interested in getting back of the Feather River Project and expedited the completion of plans so that construction could be started at an early date.

Attached for your information is a copy of my letter of April 9 to Arnold Klaus regarding the creation of the San Diego Feather River Project Committee. Although you claimed to be too old and feeble to take part on this committee, I feel sure from the twinkle in your eye that you could accomplish more than any of the rest on the whole committee in working towards this objective.

I have not heard of any further activity regarding the formation of this committee so it may be that the people in San Diego are still not interested enough to become active in working towards accomplishment of the Feather River Project.

The contribution which you have already made is certainly appreciated and I wish to again thank you for your efforts.

With best personal regards,

Very truly yours,

Max Bookman
Max Bookman,
Engineer-in-Charge
Southern California Office

Enc.

cc: Mr. A. D. Edmonston,
State Engineer

C O P Y

April 9, 1953

Mr. Arnold Klaus, Assistant Manager
San Diego Chamber of Commerce
San Diego 1, California

Dear Mr. Klaus:

This is in reply to your request and Mr. Phillips' request to Mr. Edmonston for suggestions regarding the creation of your San Diego Feather River Project Committee.

It is my personal view that such a committee should be representative of the entire area and include major water interests. The following agencies should be represented:

1. County Board of Supervisors
2. City of San Diego
3. City of Coronado
4. City of Oceanside
5. San Diego County Water Authority
6. Fallbrook Public Utility District
7. South Bay Irrigation District
8. San Dieguito Irrigation District
9. Santa Fe Irrigation District
10. La Mesa, Lemon Grove and Spring Valley Irrigation District
11. San Ysidro Irrigation District
12. El Cajon Farm Bureau Center
13. Escondido Farm Bureau Center
14. Ramona Farm Bureau Center
15. Upper San Luis Rey Soil Conservation District
16. Julian Soil Conservation District
17. Escondido Soil Conservation District

There has been no approach to anyone in San Diego County to determine their interest in serving on such a committee. However, attached is a list of names of people who might be interested.

Kindly feel free to call upon this office for any further assistance.

Yours very truly,

A.D. EDMONSTON, STATE ENGINEER

By Max Bookman
Max Bookman
Engineer-in-Charge
Southern California Office

cc: Mr. Ralph J. Phillips
Mr. A. D. Edmonston

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REPRESENTATIVES OF SAN DIEGO WATER INTERESTS

Jack C. Adams, Pala, Upper San Luis Rey Soil Conservation District.
S. P. Archer, El Cajon Farm Bureau Center
D. M. Bakewell, Santa Fe Irrigation District
Paul Beermann, City of San Diego Water Department
C. G. Buchler, San Ysidro Irrigation District
Hon. John D. Butler, Mayor of San Diego
Edwin S. Buler, Escondido Farm Bureau Center
Ray Coyle, President, Board of Directors, South Bay Irrigation District
George Cromwell, Vista Irrigation District
Fred H. Farmer, Julian, Julian Soil Conservation District
Ed Fletcher, Ed Fletcher Company
Ramon Foster, Ramona
Hon. L. M. Harmon, Mayor of Coronado
Fred A. Heilbron, San Diego County Water Authority
Dean E. Howell, County Board of Supervisors
F. S. Jacobson, San Dieguito Irrigation District
Arnold Klaus, Assistant Manager, San Diego Chamber of Commerce
E. C. Moore, San Diego Farm Advisor
Dean F. Palmer, County Agricultural Commission
Ralph J. Phillips, Water Committee, San Diego Chamber of Commerce
A. F. Poulter, California Water and Telephone Company
M. J. Shelton, La Mesa, Lemon Grove and Spring Valley Irrigation District
Arnold Sinkler, Route 3, Box 1155, Vista
W. E. Stewart, President, Tia Juana Valley County Water District, Nestor
Robert A. Weese Oceanside Water Superintendent
George Yackey, Fallbrook Utility District

A. D. EDMONSTON, STATE ENGINEER
CHIEF OF DIVISION

EARL WARREN
GOVERNOR OF CALIFORNIA

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ADDRESS REPLY TO
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May 26, 1953

Colonel Ed Fletcher
1020 9th Avenue
San Diego 1, California

Dear Colonel Ed:

Your letter of May 19 regarding your talk on water at Carlsbad has been received.

I believe that it is important to try and impress people with the need for water. Many of our newcomers do not appreciate the importance of water supplies here in the southern part of the State. California population in 1920 was about 3 1/2 million and most of the State's people at that time knew something of local water supplies. Now the State has a population of eleven million and a large percentage of the State's residents know very little about the State's water problems.

In the material I sent you previously I pointed out the significance of recent reports by the U. S. Census Bureau and what it means in terms of new water here.

As for the San Luis Rey and Santa Margarita Rivers, I am sure your own knowledge of the situation is sufficient and will hold the interest of any audience.

The Santa Margarita and San Luis Rey Rivers have a water supply at present of 30,000 acre-feet. This does not include any water from Henshaw which is utilized outside the drainage basin. This local supply with about 5000 acre-feet of Colorado River water now supplies 22,500 acres of irrigated lands and 3,100 acres of urban development. This compares to ultimate irrigable acreage of 262,900 and estimated urban development of 46,600 acres of land.

The Bonsall Reservoir if constructed might yield about 9,000 acre-feet. On the Santa Margarita the Vail Reservoir will yield about 8,000 acre-feet and De Luz Dam would provide about 26,000 acre-feet. If it is assumed that an amount of 15,000 acre-feet of Colorado River water becomes available in addition to the above new reservoirs, there will be provided 53,000 acre-feet. Even so the need for Feather River water over and above this amount would be 395,000 acre-feet ultimately for full development. That gives you an idea of the magnitude of water needed in the San Luis Rey and Santa Margarita River areas.

Colonel Ed Fletcher

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May 26, 1953

Regardless of the division of Colorado River water, there is a rapidly growing market for Feather River water and the project should be built as fast as possible. It will require the support of the Metropolitan Water District to put the Feather River Project into the construction stage because they control a large percentage of assessed valuation and votes in the area. However, they should soon realize that they, too, will require this supplemental supply and should, therefore, give it their full support.

Very truly yours,

A. D. EDMONSTON, STATE ENGINEER

By Max Bookman
Max Bookman,
Engineer-in-Charge
Southern California Office

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PRESENT PLANNING ON THE FEATHER RIVER PROJECT

by Max Bookman,
Engineer-in-Charge
Southern California Office
State Division of Water Resources

Statement Presented
Before the San Diego Section
American Society of Civil Engineers
San Diego, California
December 15, 1953

Mr. Chairman and Members of the San Diego Section:

It is a privilege and a pleasure to meet with the San Diego Section and tell you about the plans and progress being made on the Feather River Project. The subject of water supplies is one of particular importance to this area and you might be interested in hearing that the Los Angeles Section has sponsored the formation of a technical group on hydraulics of which I happen to be Chairman.

Throughout California's colorful history, from the Gold Rush days of '49 until today when California is the second largest in population in the nation, water supply developments have had difficulty in keeping pace with the ever increasing needs. Yes, we can look back with pride on our record of engineering achievements - on our many dams and reservoirs and on such constructed projects like those in the southland such as the Owens River Aqueduct, the Colorado River Aqueduct, the All American Canal, San Francisco's Hetch Hetchy Aqueduct, the Mokelumne Aqueduct of the East Bay Municipal Water District, and the many constructed features of the great Central Valley Project. Yet it has been found in many cases that the completion of these projects only meant a renewed quest for more water a short time thereafter.

Even those who recognize the importance of keeping pace with the water requirements, far in advance of future needs, have at times underestimated the situation. Here in the southland, it is reported that in 1905 many of the

Los Angeles water leaders scoffed at the need for bringing in additional water supplies and claimed that the Los Angeles River was sufficient to supply the city's needs for the next 50 years. The effects of the drought which followed 1905 changed these opinions and Los Angeles undertook the construction of the Owens River Aqueduct which was completed in 1913. When the Owens River Aqueduct water first arrived it provided a supply five times as great as that previously available and at first it presented a problem of what to do with the surplus waters. This problem, however, was short-lived because within a period of ten years this same area found it necessary to seek still another supply of water and turned towards the Colorado River where a vastly greater supply of water existed. Now history is repeating itself only 12 years after the completion of the Colorado River Aqueduct and only a few years following the completion of some of the major units of the Central Valley Project, California again finds itself in the throes of preparing plans for its next great water development - the Feather River Project.

San Diego being conscious of its rather precarious water supplies and having a long history of success and failure in developing them, planned well for the future. These plans which were made back in the 20's and even before then, were based on the assumption that San Diego with its salubrious climate would attract from year to year a certain number of citizens who would retire here and live a life of leisure in one of the most benign places in the world.

These plans were based on the historic growth of San Diego County. It had been thus from the time of the Spanish padres until 1940. Then in 1941 came Pearl Harbor. The world was at war. San Diego (the most removed point in the western United States from the Japanese attack) became a focal point for military endeavor. You are all much more familiar than I with what happened in the period 1941 to 1945. But from a water standpoint this expansion posed important and difficult problems. Your water supplies were overdrawn upon far beyond their safe

yield. The first barrel of the San Diego aqueduct bringing Colorado River water into San Diego County late in 1947, met the emergency and solved the County water problem in part. Sutherland Dam, now under construction, will help. The second barrel of the aqueduct, under construction and scheduled for completion soon, will just about balance San Diego County's present needs with her water supplies if allocated and distributed in accord with the needs. We foresee a great future for San Diego. Future growth will depend on the availability of additional water supplies.

Many people, particularly in this end of the State who have never even heard about the Feather River, might want to know the reasons and the background responsible for this new proposal. An important milestone in the history of our water development occurred in 1945 when the Legislature created the State Water Resources Board and two years later directed that Board to make a resurvey of the State's water resources, its water needs, and to formulate a State-wide plan for further development and conservation of our water resources. It soon became evident early in these studies that there was an immediate need for further water control and conservation in certain parts of our state. In the Sacramento Valley protection is needed against the destruction of floods. Even though the Sacramento River has been partly controlled by the construction of Shasta Dam in its upper reaches and by the Sacramento River Flood Control Project in its lower reaches, there still remain the uncontrolled floods of the Feather River which have caused in the past and will again result in many millions of dollars of damage and loss of life until it can be brought under control. Furthermore, the recent drought focused attention on the urgent need for supplemental water in the central and southern portion of the State.

Even though ravaged by numerous floods the Feather River Service Area itself is in need of supplemental water during periods of drought. In the

San Francisco Bay Area, the Santa Clara and Alameda areas are in need of more water. Although the east side of the San Joaquin Valley has been provided with a water supply through the recently completed portion of the Central Valley Project there still remain many thousands of acres of excellent agricultural lands on the west side of the San Joaquin Valley in need of supplemental water. Much of this acreage has been put into irrigation in recent years to help provide the food and fiber necessary for the people of this state but the ground waters which are being used for this development are rapidly being depleted.

In the southern portion of the state many of the ground water basins are heavily overdrawn, some to the extent of threatening contamination and permanent impairment by sea-water intrusion. In some of these areas Colorado River water is being rapidly put to use to overcome these deficiencies. Still other areas in the southland have not yet found a solution to their water problems. Within the South Coastal Area, the State's studies found the total water requirement to satisfy present uses is about 2 million acre-feet a year whereas the total supplies available including our full rights to the waters of the Colorado River and the imported supplies from the Owens River Aqueduct total 2.6 million acre-feet a year on a safe yield basis. Ultimate water requirements will require a supply more than twice the volume of all of our existing local and imported sources of supplies. These facts together with the rapid rate of growth of population and industry, which we are still experiencing, point to the need for immediate planning for the development of the next imported supply for this area.

Let us look at the present situation in San Diego County. As a result of the State-wide Water Resources Investigation which the Division is conducting under the direction of the State Water Resources Board, I have some preliminary figures on the County. They are still subject to refinement and revision. However, they may be of interest to you.

In these investigations for the Board a determination is being made of the present water utilization and ultimate requirements not only for San Diego County but for the State as a whole. Our studies show that the present water requirements for irrigation and urban use in this County are about 200,000 acre-feet annually.

The safe yield of presently developed local supplies will provide about 100,000 acre-feet per season, including Sutherland Reservoir now under construction. In addition to this, the San Diego aqueduct with both barrels constructed will bring into San Diego County from the Colorado River, after making an allowance for losses, slightly more than 100,000 acre-feet. If the aqueduct is used to full capacity throughout the year, these supplies are adequate for present use, but provide no surplus for future increases. However, these supplies are out of balance in regard to their availability and areas of need.

During the war and continuing to the present time in some areas, the safe yield of the developed water supplies were overdrawn. This was made possible by a succession of abnormally wet years during the war period. Such overdrafts will be possible in the future only if San Diego should be blessed with more than the usual number of years of above average runoff.

Estimates have been made by the Division of Water Resources of the probable future water requirements of the County based upon land use and population. In making these estimates the entire area of the County has been classified as to future use as follows: urban, 200,000 acres; agricultural, 600,000 acres; and habitable area in addition to urban and agricultural areas, 1,400,000 acres, exclusive of about 500,000 acres in the National Forest; or a total of 2,700,000 acres for the entire County.

The presently irrigated area is 65,000 acres, or about one-tenth of the 600,000 acres of suitable lands which might ultimately be irrigated if adequate water supplies were available. Of this, 80,000 acres lie on the desert side of the

County. Of the potentially habitable area about 950,000 acres lie below an elevation of 3,000 feet and 450,000 acres above 3,000 feet in elevation. It is assumed in our studies that of the latter area, one-third of the total would be utilized mainly for seasonal habitation or for recreation purposes. It is further assumed that the remaining area below 3,000 feet in elevation, or two-thirds of the total, would be inhabited throughout the year. Of these potentially habitable areas, about one-half lie on the eastern or desert side of the mountains of San Diego County, and would be suitable for habitation only if an imported water supply were provided. The density of population in the area above 3,000 feet in elevation would be substantially less than in the areas classified as suitable for urban or agricultural use, and the water requirements would necessarily be correspondingly less.

The cultural surveys of the Division of Water Resources have been combined with population growth trends for the entire State in making our estimates of future populations. There are various ways of estimating populations. Following the trend of growth in this County between 1940 and 1950, you would have a population of 1,500,000 in 1980. The trend between 1920 and 1940, if followed, would give you a population of about 800,000 in 1980. The median would be about 1,000,000 by that year. Even if all local water supplies were developed, they would not be capable of serving many areas in need of supplemental water. To serve such areas, imported water will be required. Provided that no additional local supplies will have been developed, it is estimated that an imported supply of 140,000 acre-feet per year will be required by 1980 to serve a population of 1,000,000.

If water is to be provided for all of the irrigable land in San Diego County and for probable future urban use, both in the metropolitan area, and in the surrounding country, ultimate annual water requirements for the County will be

about 1,200,000 acre-feet. This will require an additional imported supply of nearly 900,000 acre-feet annually over and above San Diego's rights to Colorado River water, and over and above all of the water which could be developed from local supplies. More than 200,000 acre-feet annually would be required for the desert side of the County.

Now, it is very difficult to remember odd figures, but in San Diego's case it is fairly easy. You have 200,000 acre-feet of present supplies either developed or under construction. You need 1,000,000 acre-feet of new water from somewhere to meet your ultimate needs.

Where can the southern portion of the State look towards securing this next supplemental water supply. The only major river to the east, the Colorado River, is already overallocated and we are now involved in litigation attempting to protect our share of these waters. It is of utmost importance that California's right in the Colorado River be defended and preserved through these actions. Eliminating any further possible diversions from the Colorado, it becomes apparent that the nearest source of additional water to this deficient area is in the Sacramento-San Joaquin Delta through which large quantities of water at times still waste into the ocean through the Golden Gate of San Francisco. This is the situation that the State faces in attempting to evolve a feasible plan which would take care of the flood control problems and water supply deficiencies described.

The State's studies showed that in a comparison of the ultimate water requirements of the several areas with the available water supplies that the North Coast and Central Coast areas, and the Sacramento River Basin have water supplies in excess of their probable ultimate needs. It is evident, therefore, that in any plan for the development and utilization of the water resources of the State, water must be transferred from the areas of surplus supply to areas of

deficiency. The areas from which these surpluses must come are the Sacramento River Basin, and the North Coast, where many reservoir sites feasible of development from engineering and geologic standpoints exist.

At this point let me emphasize that in these studies and investigations, first and prime consideration is being given to the formulation of plans for the development and utilization of water supplies adequate in amount to meet present and ultimate requirements of the areas of origin of such waters before a determination is made of the amounts of surplus waters available for possible exportation to areas of deficient water supply. These are excess flood and waste waters. Therefore, the operation of the plan will not infringe upon established water rights or uses in the area of origin. The objective of the plan is to control these flood waters and not only firm the present water supplies so that any deficiencies in the area will be met, but also reserve adequate waters for its ultimate development.

The State has maintained that any plan developed for transporting water from areas of surplus to those of deficiency should in no way interfere with the operation of existing water systems. The water is to be delivered to existing distribution agencies or where they are nonexistent, agencies can be formed to take over the distribution of the supplemental water. There is no intention of duplication of distribution systems. The supply from the California Water Plan will not be substitutional; it will be supplemental.

The largest unregulated stream in the Sacramento River Basin is the Feather River, with a drainage area of 3,610 square miles above the dam site near Oroville and a mean annual natural runoff of over 4,000,000 acre-feet. A 3,500,000 acre-foot reservoir at the Oroville site could be expected to supply water for all requirements of a local service area and still be able to provide sufficient releases to supplement surplus waters in the Sacramento-San Joaquin

Delta to permit a constant diversion of 3,930 second-feet or 2,845,000 acre-feet annually from that area. The plan of utilizing the Sacramento-San Joaquin Delta as the source of supply and point of diversion has many advantages. The point of diversion is below all riparian owners and users of water in the basin above the Delta and, therefore, is not subject to objection by such owners. The Delta channels are recipient of all the flood flows and return waters from an area of about 50,000 square miles. Water developed in any part of the Sacramento or San Joaquin River basins could find its way by gravity to the Delta and the same is true of surplus water that would be transferred from the North Coastal area to the Sacramento River Basin.

Additional advantages of the plan are that the conduit to the San Joaquin Valley and southern California would traverse in large part undeveloped terrain, would not interfere with the operation of existing water supply systems, would not involve any exchange of waters, and would be located in a position to furnish by gravity from the conduit additional water supplies to existing systems and to new areas capable of development and in need of water. It is feasible of construction from both engineering and geological standpoints, capable of development to serve supplemental water supplies to meet the ultimate needs of the west and southern sides of the upper San Joaquin Valley, the South Coastal area and the desert areas in Los Angeles, San Bernardino, and Riverside Counties.

Taking these factors into consideration, the Division of Water Resources has developed a logical and workable plan for bringing water to areas of deficient water supply in Santa Clara and Alameda Counties, west side of San Joaquin Valley, and southern California. It is the Feather River Project and is the first concrete proposal made as a direct result of our State-wide studies.

The Feather River Project was submitted to and approved by the Legislature at its 1951 session. The Act authorizes the Water Project Authority of

the State of California to construct the project. Units of the project or portions of them may be constructed by the Authority and maintained as the Authority may determine, separate and apart from any or all other units of the Central Valley Project.

Provision is made in the Act for financing the project through the issuance and sale of revenue bonds and the receipt of contributions from other sources in aid of the project.

This multi-purpose project is designed to provide greatly needed flood protection to a highly developed area along the Feather River having an estimated marked value of \$340,000,000; provide a firm water supply of 970,000 acre-feet annually for 322,000 acres adjacent to that River; develop 1,750,000,000 kilowatt hours of electric energy annually; and make available for exportation from the Sacramento-San Joaquin Delta a firm supply of 2,845,000 acre-feet of water annually, of which amount 945,000 acre-feet would be delivered to the west side of the San Joaquin Valley, 127,000 acre-feet would be delivered to Alameda and Santa Clara Counties, and 1,773,000 acre-feet annually would be delivered into areas south of the Tehachapi Mountains. The electric energy generated at the two dams (storage and afterbay) on the Feather River would be transmitted to a substation near Tracy in San Joaquin County.

From an engineering standpoint, no great difficulties are foreseen in the construction of the Feather River Project. It involves the construction of a large dam and power plant on the Feather River about five miles above Oroville, together with an afterbay dam and power plant a few miles downstream. The Feather and Sacramento Rivers would be used for transportation of the excess water from the Oroville Dam to the San Joaquin Delta.

The San Joaquin Valley Unit of the Feather River Project would divert water from Italian Slough, a tributary channel of the Old River channel of the

San Joaquin River. The canal is being designed for a capacity of 6,000 second-feet at the intake. A pumping plant would raise the water from near sea level to elevation 228 feet.

The canal would parallel the Delta-Mendota Canal of the Central Valley Project to San Luis Creek where a second pumping plant would lift the water to elevation 410 feet. The canal would follow on grade contour along the west side of the San Joaquin Valley passing near Huron and Kettleman City and easterly of the Lost Hills to the Buena Vista Hills where another pumping plant would lift the water to elevation 500 feet. The canal with a capacity of 3,500 second-feet would then continue to the southern end of the San Joaquin Valley to Wheeler Ridge where two pumping plants would raise the water to the 1,500 feet elevation. The canal would then extend along the south side of Wheeler Ridge and continue on grade contour to Pastoria Creek, about 5 miles east of Grapevine.

The Southern California Unit of the Feather River Project would start with a pump lift at Pastoria Creek which would raise the water to an elevation of 3,357 feet at the portal of the first of two tunnels through the Tehachapi Mountains to Quail Lake, 10 miles east of Gorman on U. S. Highway 99. From here a conduit of canals and tunnels on grade contour generally following the ridge of mountains between the desert and the coast would extend to Barrett Reservoir in San Diego County. Total length of this system from the Delta would be approximately 570 miles long.

Each of the six main pumping plants would consist of an initial installation of eight units. Working capacity of Plants I and II would be 3,780 second-feet, 2,800 second-feet at Plant III near Buena Vista Hills, and 2,520 second-feet near Wheeler Ridge at Plants IV and V and at Pastoria Creek Plant VI.

Water for the San Francisco Bay Unit would be diverted from the main canal at a point about 1.5 miles from the first pumping plant, at which point a single lift would raise the water to an elevation of about 720 feet. The water

would be conveyed through the Coast Range in a tunnel 7,000 feet in length into the Livermore Valley. Studies are being made of conduits which would carry the water to terminal storage reservoirs to serve areas in Alameda and Santa Clara Counties.

All features of the project have been constructed on a greater or lesser scale in other projects. It involves no new engineering principles.

The estimated cost of the project on the basis of 1951 prices is \$1,270,387,000. All of which leads to the inevitable and very important subject of financing. Before any firm plan of financing the entire project, or even portions of it, can be developed, a great deal of additional ground work must be done. To accomplish this the Legislature of 1952 appropriated \$800,000 and an additional \$750,000 again in 1953, for investigations, surveys and designs. Active work with reference to the project was initiated in the fall of 1952 so that there has been a period of one year of study. I would like to tell you what is being done in connection with these studies.

Under the direction of the Water Project Authority, an application has been filed with the Federal Power Commission for a license to construct, operate and maintain dams, reservoirs, power houses, transmission lines or other project works necessary for the development of the Feather River Project.

Designs are in preparation for the Oroville Dam and Power Plant, Oroville Afterbay Dam and Power Plant, and the transmission system from Oroville Power Plant to the terminal substation near Bethany in Contra Costa County. Revisions have been made in the original plan for the Oroville Dam and Power Plant as presented in the Division's "Feasibility Report May, 1951". The spillway and flood control outlet section, previously located at about the center of the main concrete dam across the channel of the Feather River, has been moved to a combined spillway and flood control outlet structure located in a saddle on the right

abutment. This structure would be joined to the main dam by a section of earth-filled dike. The power house previously located on the left abutment at the downstream toe of the dam has been relocated directly across the channel of the river below the main dam. Based on these revisions in design, a new cost estimate has been completed of the Oroville Dam and Power Plant, Oroville Afterbay Dam and Power Plant, and the electric transmission system to load center near Bethany.

During the fiscal year 1952-53, an exploration program was completed for the Oroville dam site which included a total length of 1,627 feet of diamond drill holes, seven of which were located on each abutment of the dam site. There were also completed two exploration tunnels, one on each abutment for a total length of 1,800 feet. A geological report has been prepared and accepted by the consulting board of engineers on this exploration work. A recent conference with the consulting board of engineers was held with relation to the exploration work, and a program was laid out for the fiscal year 1953-54. In accordance with this program, contracts have now been executed for the construction of 500 feet of drifts in the existing tunnels, and for drilling five test holes near the river channel, each to be about 200 feet in depth.

A service agreement has been executed between the Division of Water Resources and the Division of Highways for the making of paper location and cost estimates along the proposed route of State Highway Sign Route 24 for the portion of the highway that would be affected by the construction of the Oroville Reservoir. The agreement also provides for the preparation of preliminary designs and cost estimates of the combination railroad and highway bridge across the West Branch of the Feather River and highway bridge across the Feather River near Oroville.

A service agreement has been executed between the Western Pacific Railroad Company and the Division which provides for the Company making a preliminary

report, including a general plan of the projected alignment, recondensed profile, and a detailed estimate of cost of construction for relocating the Western Pacific Railroad around the Oroville Reservoir.

Appraisal of property along the San Joaquin Valley-Southern California Diversion is under way. A draft of report of appraisal of lands and improvements that would be flooded by Oroville Reservoir has been reviewed by a consulting engineer and revisions are being made.

Designs are in preparation for the 570-mile conduit and the appurtenant structures involved for the San Joaquin Valley-Southern California Diversion conduit. The report on the Feather River Project in 1951 included 16 pumping plants to lift the water from about sea level in the Delta to an elevation of 3,375 feet across the Tehachapi Mountains. Since the date of the first report, Professor Hollander, of the California Institute of Technology, who is one of the foremost designers of pumps having been connected with design of the pumps for the Grand Coulee Project and the Colorado River Aqueduct, was employed as a Consultant. The first step of this investigation was to determine the most economical number of pumping plants. It was concluded after a study that for the low head pumping plants with lifts up to 300 feet a single plant for the full lift as compared to several plants with partial lifts was more economical as it leads to materially lowered first cost and operational expense. Thus the original 16 plants have been tentatively decreased to six pumping plants. Pumping Plant No. VI will be located at the foot of the Tehachapi Mountains where a flow of 2,500 second-feet is to be lifted a height of over 1,800 feet in elevation. This plant is to have eight triple units each unit consisting of a supply pump and two booster pumps connected in series. This solution was selected as the most practical even though it brought about some novel pumping plant problems than were ever attempted before. One of the primary assumptions made in these studies was that

the pumps under consideration would have to be 90 per cent efficient or better. This premise was adopted due to the magnitude of the power cost for lifting the large quantities of water to such high elevations. This work is now sufficiently advanced to permit detailing of the pumping plant equipment and the writing of specifications. Work is in progress on the design of the discharge lines at the six pumping plants.

Topographic mapping of the 570 mile conduit route from the Sacramento-San Joaquin Delta to San Diego County is about 70 per cent complete and the remainder in progress. Mapping of about 420 miles of the route is being accomplished under contract. The balance of the line is being mapped and the canal located on the ground by a survey party for the reach between Los Banos in Merced County and Buena Vista Hills in Kern County.

The Byron-Jackson Pump Company, through a service agreement with the Division of Water Resources, has been retained for the preparation of the design and specifications for the pumps for the six pumping plants proposed for the San Joaquin Valley-Southern California Diversion.

Reconnaissance type geological mapping surveys along the route of 10 miles of tunnel between Pastoria Creek and Quail Lake on the San Joaquin Valley-Southern California conduit are being made. A reconnaissance type geological mapping survey will also be made of an alternate tunnel route involving a 26 mile long tunnel which would deliver water to southern California at approximately the 1,500-foot level on Castaic Creek on the west side of the San Gabriel Mountain Range.

Studies under this program have also been under way on problems of regulatory storage and main lateral routes for delivering water to existing or proposed water service agencies south of the Tehachapi Mountains. This work is being conducted from a field office established at San Bernardino. Preliminary

studies in the Ventura, Antelope Valley, and Mojave River areas are nearing completion and will now be extended into the coastal area. As mentioned above, there is no intention of duplicating or competing with existing water distribution agencies. Instead it is planned to distribute water from the project through local agencies such as the Metropolitan Water District of Southern California, County Water Districts, Conservation Districts, Irrigation Districts, or other types of water service organizations.

Thus the engineering plans are being advanced so they will be ready in a period of about 18 months so that the people of this State can decide whether or not to initiate and finance the project. Means of financing the project still remain to be found. The estimated first cost is about \$1,270,000,000. The major portion of the cost of the Feather River Project is proposed to be financed by revenue bonds, but it had been assumed that the State will finance the cost of rights-of-way and relocation of utilities as it does on Federal flood control projects. If the Legislature is serious about the State building the Feather River Project, it could well consider earmarking funds on the order of \$25,000,000 a year against the day when it will be called upon to finance the State's share in the project.

The cost of this project sounds like a lot of money and it is. I should like to point out, however, that between 1942 and 1952 it cost us \$161,865,000 for our state prisons and corrective institutions alone. In the same period we spent \$306,813,000 on mental hygiene. In the same period - the last ten years - we spent \$6,280,000,000 on our first five items of government - education, social welfare, highways, institutions and prisons - while we were spending only \$60,000,000 on all water activities in the State. That is less than one per cent for water. Water supply is a vital necessity of life and we must find means of meeting our water requirements. It is well to remember that the State's studies

show the need not only for the Feather River Project but many other such projects within the foreseeable future. Construction should be started within the next two years on the Oroville Dam and the portion of the conduit on the west side of the San Joaquin Valley. The initiative rests with the people. Will they accept this challenge?

[BOOKMAN, MR]
CSM

A. D. EDMONSTON, STATE ENGINEER
CHIEF OF DIVISION

GOODWIN J. KNIGHT
GOVERNOR OF CALIFORNIA

FRANK B. DURKEE
DIRECTOR

STATE OF CALIFORNIA
Department of Public Works
LOS ANGELES

ADDRESS REPLY TO
DIVISION OF WATER RESOURCES
803 CALIFORNIA STATE BLDG.
217 WEST FIRST STREET
LOS ANGELES 12

March 2, 1954

Colonel Ed Fletcher
1020 9th Street
San Diego 1, California

Dear Colonel Ed:

Thank you for your kind letters of March 1st, 1954. Enclosed are eight more copies of my San Diego speech.

You suggest that it would be preferable to bring in the Feather River water across the Tehachapis at about 1500 feet in elevation so that it can flow through the present two barrels of the San Diego Aqueduct. Our office is now studying the engineering feasibility of a low level tunnel at about 1500 feet elevation.

Our geologists have completed mapping the higher tunnel (elevation 3300 feet) and a few exploration holes and a shaft are to be drilled. Also, at the present time, our geologists are mapping the low level tunnel (elevation 1500 feet).

The low level tunnel ~~under~~ construction would be 26 miles in length from a portal at the mouth of Pastoria Creek to a point in Castaic Canyon.

This tunnel would cross six fault lines; namely, Pastoria Thrust, Garlock, German, San Andreas, Liebre, and Clearwater. Two of these faults, the San Andreas and the Garlock, are the most active in the State of California. To date, we have located and measured over 160 springs in the vicinity of the tunnel line. You have no doubt read about the extreme difficulties that are being encountered in the construction of the Tecolote Tunnel in Santa Barbara County. In that tunnel, it has been found that the rise in temperature of the water issuing from the south portal heading has a direct relationship to the depth of tunnel cover, and as you know, work has been stopped for a considerable length of time in view of the extreme temperatures encountered. The maximum depth of tunnel ^{cover} on the Tecolote Tunnel is about 2200 feet; whereas, the maximum depth of tunnel cover of a low line through the Tehachapis at 1500 feet elevation, would be 3,350 feet.

In connection with the studies of the tunnels through the Tehachapi Mountains, the State has employed a consulting board of engineers consisting of Ole Singstad, one of the most noted tunnel experts from New York, Raymond Hill from Los Angeles, and Dr. Louderbach from the University of California. This consulting board has reviewed the geology in the vicinity of the tunnels

Colonel Ed Fletcher

-2-

March 2, 1954

and has made an inspection of the site. We have requested that they answer three questions:

1. Is it engineeringly feasible to construct the tunnel 26 miles in length?
2. What will be the cost of such a tunnel?
3. How long will it take to construct?

On the basis of construction of the Tecolote Tunnel, it may take as long as 13 years if similar problems are encountered.

After we have the answers to these questions, we will make an economic analysis of these alternate plans. This analysis will take into consideration the possibility of power recovery for all water which will be used below 1500 feet in elevation south of the Tehachapi Mountains.

As far as the people in San Diego County are concerned, there is another point to consider. If Feather River water is brought in at the 1500 feet level and not lifted to the 3300 feet elevation as now planned, the point of delivery will be to the northern part of the South Coastal Area. In such a case, the Metropolitan Water District may decide to shift the entire use of Colorado River water to the south or San Diego County. According to the comments in your letter you would not be in favor of such a plan. The report which we hope to complete by January, 1955, should have all the facts and make it possible for the people of California to decide whether or not they wish to proceed with the financing and construction of this project.

I hope this explanation will help to clarify your understanding of our present studies, and I will be pleased to keep you informed of further developments which are now beginning to take place at an accelerated rate.

With best personal regards.

Very truly yours,

A. D. EDMONSTON, STATE ENGINEER

By Max Bookman
Max Bookman,
Engineer-in-Charge
Southern California Office

Enc.

A. D. EDMONSTON, STATE ENGINEER
CHIEF OF DIVISION

GOODWIN J. KNIGHT
GOVERNOR OF CALIFORNIA

FRANK B. DURKEE
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STATE OF CALIFORNIA
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ADDRESS REPLY TO
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217 WEST FIRST STREET
LOS ANGELES 12

May 19, 1954

Colonel Ed Fletcher
1020 9th Street
San Diego 1, California

Dear Colonel Ed:

By this time, I suppose you have completely relaxed and are enjoying your trip and that the subject of San Diego's water supply has been put aside at least for the moment.

Since you left there have been considerable eruptions and rumblings within the Metropolitan Water District Board of Directors. They resented very much the meeting Mr. Edmonston and I had with you people in San Diego County. They evidently have taken the attitude that the State Engineer has no business even talking about water within the southern California area.

I was informed they held a special meeting, after hearing Mr. Heilbron's report of Mr. Edmonston's visit to San Diego County, to consider the Feather River Project. At this meeting, the first thought was how they could publicly denounce and kill the Feather River Project. They also talked about possibilities of getting a new State Engineer and a replacement for myself. However, there were a few people of sound mind at the meeting who prevailed on the idea that the Metropolitan Board of Directors ought to learn what the Feather River Project was all about before taking such an action. They, therefore, requested Mr. Diemer to secure copies of the Feather River Report for each of the Board of Directors.

Mr. Edmonston has also received a letter from Mr. Jensen, Chairman of the Metropolitan Water District Board, explaining why that District opposed appropriations for the project at the last legislative session. Mr. Jensen stated that the M.W.D. Board was not yet ready to support the project until the existing studies by the State showed that it was financially feasible, that southern California would have a definite share of the water, and that the major tax burden would not be thrown on the southern part of the State.

By the way, at this meeting I understand your name was mentioned as a supporter of the Feather River Project with the claim that you possibly owned many of the lands in the desert area that could be served by the Feather River Project.

Colonel Ed Fletcher

-2-

May 19, 1954

I believe these things that are going on in southern California are for the best since at least people are getting stirred up enough to take an interest and learn what the situation is all about. The next step is to secure their support instead of their opposition.

I wish to take this opportunity to congratulate you on your editorial in the San Diego Union. It was very well written and I am sure will help get more people acquainted with the problem. A number of articles have been appearing on the Feather River Project. The May issue of the "Aztec Engineer" of San Diego College printed an article which I wrote entitled "More Water to San Diego". Another article appeared in the Basalt Steel Pipe magazine which was very good.

You might be interested to learn that there is considerable litigation in the offing in the San Luis Rey River area. We are informed that an over all adjudication of the water rights is expected to be filed through the courts for the entire San Luis Rey River system.

We also have been requested to make a study by the City of San Diego on the water supply below Sutherland Dam. This would be an extension of the studies we made and published in Bulletin 55.

I trust you are having good weather on your trip and that you are getting a lot of nice pictures to show us on your return. A friend of ours just returned from a year and a half trip in Europe and showed us some wonderful slides of the Switzerland Alps and other parts of Europe.

I hope you are in the best of health, and with best personal regards, I remain

Sincerely yours,

Max Beermann

A. D. EDMONSTON, STATE ENGINEER
CHIEF OF DIVISION

GOODWIN J. KNIGHT
GOVERNOR OF CALIFORNIA

FRAZEE B. DURKEE
DIRECTOR

STATE OF CALIFORNIA
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ADDRESS REPLY TO
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803 CALIFORNIA STATE BLDG.
217 WEST FIRST STREET
LOS ANGELES 12
MA 6-1819, EXT. 600

August 13, 1954

Colonel Ed Fletcher
1020 9th Street
San Diego 1, California

Dear Colonel Ed:

On return from my vacation, I found your letter waiting for me and thank you very much for your kind remarks. We had an excellent trip on our vacation and saw a lot of beautiful country. Our tour took us up through Oregon and Washington to Victoria and Vancouver. We took in many side trips including the Columbia River and the national parks. We saw enough Christmas trees to last us for a long time.

Now, to get down to important matters, I believe that good progress is being made on the Feather River Project but that there are still many hurdles to overcome. Success in accomplishing the project will require the combined efforts of not only the water interests in southern California, including the Metropolitan Water District, but also a cooperative effort of all water interests along the line including San Joaquin Valley and the San Francisco Bay area.

A matter has come up now which will require the support of all those interested in the project. A copy of Mr. Edmonston's letter of June 12 to Paul Beermann is attached. At a meeting of the Water Project Authority on June 29th, the State Engineer recommended that the procedure outlined in said letter be followed. Attached is a copy of the resolution adopted by the Water Project Authority on June 29.

The action of the Water Project Authority has resulted in telegrams and letters of protest from the areas of origin upstream from the Oroville Dam. Copies of these letters and telegrams are also attached for your information. You will also find a copy of a letter written by Mr. Edmonston on July 16 in reply to these protests. I believe it is clear from Mr. Edmonston's letter of July 16 that the water needs of the area of origin will be fully protected and that the Feather River Project will not endanger their water supplies.

The Water Project Authority has scheduled a meeting in Sacramento on August 31 at 10 a.m. in the Public Works Building. It is expected that representatives of those who have protested the action by the

Colonel Ed Fletcher

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August 13, 1954

Water Project Authority will appear and request the Water Project Authority to rescind its resolution of June 29. For this reason, it would appear proper that any other interests in the state who are concerned with the Feather River Project should appear and express their views in this matter. Letters or resolutions to the Water Project Authority from local agencies and the counties would also be helpful.

The decision of whether or not to rescind its action taken on June 29th by the Water Project Authority will have an important bearing on the question of whether or not the Feather River Project will be constructed. Others in San Diego County, including Paul Beermann and Ralph Phillips, are advised of this situation.

Out
Thank you for your kind invitation. I hardly believe that my wife and I will be able to take any more vacation since she has many things she would like to get done before school starts and she goes back to teaching. However, if you think it would be helpful for me to speak at one of the clubs in San Diego, I would be glad to do so if they will extend the invitation by letter.

I trust this letter will find you and yours in the best of health.

With best personal regards,

Sincerely yours,

Max Bookman

Enc.

March 24, 1955

Mr. Max Bookman, Engineer in Charge
Division of Water Resources
803 California State Building
Los Angeles 12, California

Dear Max:

Thanks for your letter of March 22 and the information therein contained. It is just what I wanted. I also got some dope from Paul Beermann and I have a letter from O. W. Campbell. They are with you 100%.

Sincerely yours,

Ed Fletcher

EF:rmc

April 5, 1955

Mr. Max Bookman, Engineer in Charge
Division of Water Resources
803 California State Building
Los Angeles 12, California

Dear Max:

Enclosed find articles from this morning's Union that are explanatory. The High-Binders were here. I hope you are satisfied with our results, and it will be a pleasure to cooperate in every way I can. I wish you had been here to take a drink of Feather River water with me. I hope you like this method of publicity which I arranged this afternoon. It will get public attention and a good laugh. It was a great stunt whether you had anything to do with it or not.

Sincerely yours,

Ed Fletcher

EF:rmc

Enc.

cc: A. D. Edmonston

April 7, 1955

Mr. Max Bookman, Engineer in Charge
Division of Water Resources
803 California State Building
Los Angeles 12, California

Dear Max:

I invited friend Edmonston to come down here and speak to the Hi-Hatters luncheon club. They are a strong organization at the San Diego Club. I will have some city officials, and I would not be surprised if there is a delegation from Oroville coming down, too. We have set aside May 27 for the noon meeting. This is a Friday and I hope he can take a day off.

What we need is publicity and more publicity as we have a fight on our hands on this water question. It looks as if the governor is publicly backing the San Luis and Trinity River projects. Can they be tied together with the Feather River?

Sincerely yours,

Ed Fletcher

EF:rmc

April 19, 1955

Mr. Max Bookman, Engineer in Charge
Division of Water Resources
803 California State Building
Los Angeles 12, California

Dear Max:

The enclosed is explanatory. Let me have your reaction, too.

Sincerely yours,

Ed Fletcher

EF:rmc

Enc.

April 27, 1955

Mr. Max Bookman, Engineer in Charge
Division of Water Resources
803 California State Building
Los Angeles 12, California

Dear Max:

Enclosed find copy of letter to Edmonston, also clipping from Tribune of
April 22. In confidence, what is your reaction?

Kindest regards,

Ed Fletcher

EF:rmc

Enc.

May 3, 1955

Mr. Max Bookman, Engineer in Charge
Division of Water Resources
803 California State Building
Los Angeles 12, California

Dear Max:

Enclosed find article in Tribune of May 2, "Antelope Valley Holds Feather
River Hopes".

Sincerely yours,

Ed Fletcher

EF:rmc

Enc.

May 3, 1955

Mr. Max Bookman, Engineer in Charge
Division of Water Resources
803 California State Building
Los Angeles 12, California

Dear Max:

Enclosed find copy of letter with clippings, all for your information.

Sincerely yours,

Ed Fletcher

EF:rmc

Enc.

Farm Hope Keyed To Feather River

EVENING TRIBUNE
SAN DIEGO, CALIFORNIA
Tuesday, May 3, 1935

Future Held Dependent On Project

EDITOR'S NOTE—San Diego, hit by a record drought and facing a curtailment of Colorado River water apportionment, is being threatened by a serious water shortage. This is the fifth in a series analyzing the problem and exploring one possible solution — the proposed Feather River Project.

By FLOYD McCracken

California's growing preoccupation with problems relating to water are reflected in most communities along the 740-mile route of the proposed Feather River Project.

San Diego, at the southern end of the route, is believed to have water in sight for 20 years. In this belief it is leaning upon the Colorado River.

But much of Kern County has nothing to lean upon, unless it be hope. Kern is at the southern end of fertile San Joaquin Valley, a region capable of drinking up millions of acre-feet of water. It does that now and still is short of its needs.

Typical Case Cited

Take the problems of Thomas L. Jamieson, a farmer whose land lies just below Wheeler Ridge.

Jamieson, with his father and brother, acquired 1,000 acres of raw land there five years ago. It had been used chiefly for sheep pasture in spring. The rest of the year it lay brown and seared.

The Jamiesons drilled two wells, going down 1,200 feet. Good water rose in the wells to a level where pumping was feasible. Eight hundred acres were broken out. Crops were good and profits made the venture appear rosy.

Three years ago the water level began a 70-foot nose dive. The Jamieson pumps now lift irrigation water 540 feet, and the land takes three acre-feet of water each year.

Water Bill \$43,200

On this basis it costs the Jamiesons \$54 a year, for each acre of land under cultivation. The farm's annual water bill is \$43,200.

The land is in cotton, grain,



DESPERATE FARMER—Thomas L. Jamieson, Kern County farmer, fixes worn pump and wonders how long his deep wells will continue to produce water at a price he can afford.

area of deep soil. A cesspool dug down 50 feet does not pass through the alluvial deposit. Almost no rain falls in the area.

Feather River water planned to pass across the valley at the lower edge of the Jamieson farm. The estimated ditch-side cost to the farmer there is \$9 an acre-foot, the state engineer's report shows. A reasonable estimate of production from this land is \$200 an acre. That amounts to \$160,000 a year, and this will be lost to the state's economy if the farm is abandoned.

The Jamiesons are not alone in this predicament. There are thousands of acres along Highway 166 between Mettler and Maricopa that share this plight, though some of the land is secure under a ditch coming

Feather River Aid Agency To Be Formed

An organization to work with the new California Feather River Project Association will be formed at 3:30 p.m. tomorrow in the Chamber of Commerce auditorium.

Officers of county municipalities and water agencies have been invited to join the group in a study of Feather River water development.

The organization was proposed at a Chamber of Commerce directors meeting April 20 by William H. Jennings, counsel for the San Di-

good and profits made the venture appear rosy.

Three years ago the water level began a 70-foot nose dive.

The Jamieson pumps now lift irrigation water 540 feet, and the land takes three acre-feet of water each year.

Water Bill \$43,200

On this basis it costs the Jamiesons \$54 a year, for each acre of land under cultivation. The farm's annual water bill is \$43,200.

The land is in cotton, grain, melons, and spinach. The farm supports 65 head of cattle at this time as a means of diversification. If cotton fails to produce as expected, cattle profits may keep the banker happy.

If conditions remain as they are, the Jamiesons could make the farm go. But they aren't fooling themselves.

"With our water level falling, we are absolutely desperate," Thomas Jamieson admits. "We believe we can last five years, but if water doesn't come by the end of that period we face disaster."

The Jamieson farm is in an

WHO, WHEN, WHERE

San Diego Dachshund Club—Tomorrow, 7 p.m., Community Center, Highland Ave. and Landis St. Speaker, Roland Muller, "Show Handling Instructions."

North Park Lions Club—Tomorrow noon, 3927 Utah St. Citizenship Day program.

Old San Diego Kiwanis Club—Tomorrow, 12:10 p.m., 4016 Wallace St. Speaker, Dan Turner, Kiwanis division lieutenant governor.

Silvergate Cat Club—Tomorrow, 8 p.m., 6242 Thorn St. Program.

Christian Business Men's Committee—Tomorrow noon, Armed Services YMCA. Speaker, Dr. William D. Livingstone, pastor, First Presbyterian Church.

Harbor Kiwanis Club—Tomorrow noon, 1955 Julian Ave. Program.

San Diego Realty Board—Tomorrow noon, U. S. Grant Hotel. Speaker, George R. Cox, president, La Mesa Realty Board. Topic, "Down-to-Earth Selling."

Foothills Officers Club—Tonight, 7, 7828 Broadway, Lemon Grove. Electrical demonstration by Carleton Barker, San Diego Gas & Electric Co.

Alcoholics Anonymous—Tomorrow, 8:15 p.m., 3909 Centre St. Open meeting.

Townsend Club 20—Tomorrow, 7:45 p.m., 1520 2nd Ave. Program.

side cost to the farmer there is \$9 an acre-foot, the state engineer's report shows. A reasonable estimate of production from this land is \$200 an acre. That amounts to \$160,000 a year, and this will be lost to the state's economy if the farm is abandoned.

The Jamiesons are not alone in this predicament. There are thousands of acres along Highway 166 between Mettler and Maricopa that share this plight, though some of the land is secure under a ditch coming from the east side of the valley.

Some Top Kern River

Here and there in the San Joaquin Valley appear ditches running full of clear Sierra Nevada water. These ditches attest the foresight of pioneer farmers who settled the region. They had to have water.

Wells such as are operated there today were unthought of. So they built ditches to use Kern River water, and they acquired water rights. At least one of these ditches traverses the valley to serve the Buttonwillow area. Farmers "under" these ditches are the envy of their less fortunate neighbors.

Even the east side of the valley, right at the foot of the mountains which produce the water, is in trouble. There farmers are spending \$40,000 to drill a well to 3,000 feet, and another \$25,000 for pumping equipment.

There, But Costly

Water rises in the wells to around 400 to 500 feet, but it takes a lot of farming to pay for the wells and the power to lift the water. This area is not on the route of the proposed Feather River aqueduct, though there is no geographical reason why Feather River water could not be delivered there.

Is there much of the San Joaquin area that faces these conditions? Assemblyman Francis C. Lindsay said in San Diego recently that at least 550,000 acres now being farmed there face disaster if water is not made available.

Tomorrow we'll move on to Buttonwillow.

Corns

CALLUSES — BUNIONS — SORE TOES

NERVE-DEEP RELIEF!



Pain Stops FAST!
Never before anything like it!

No waiting! Super-Soft Dr. Scholl's Zinc-pads stop pain at its source... remove corns and calluses

the new California Feather River Project Association will be formed at 3:30 p.m. tomorrow in the Chamber of Commerce auditorium.

Officers of county municipalities and water agencies have been invited to join the group in a study of Feather River water development.

The organization was proposed at a Chamber of Commerce directors meeting April 20 by William H. Jennings, counsel for the San Diego County Water Authority.

City Councilman George Kerrigan, a director of the statewide organization, said its purposes were to study and spread information in favor of the project.

May 5, 1955

Mr. Max Bookman, Engineer in Charge
Division of Water Resources
803 California State Building
Los Angeles 12, California

Dear Max:

Enclosed find copy of article in paper of May 3 that is explanatory.

I attended the Chamber of Commerce meeting yesterday and we held an organization meeting. Enclosed find article in today's Tribune. I am also enclosing a copy of organizational by-laws. In principal everything is o.k. but everything was cut and dried and typewritten in advance of the meeting. The attorney who prepared the papers is a director of the San Diego County Water Company. Fred Hailbron issued a statement and asked that it be put in the record, copy of which is herewith enclosed. What do you think of it? It will be interesting to see what develops and whether the Metropolitan Water District crowd will get control or not. I am keeping an open mind.

Enclosed find copy of letter that I got from Arnold Klaus today that will be of interest.

Sincerely yours,

Ed Fletcher

EF:rmc

Enc.

May 12, 1955

Mr. Max Bookman, Engineer in Charge
Division of Water Resources
803 California State Building
Los Angeles 12, California

Dear Max:

Enclosed find the Trinity River article, also Jack Cooper's article.

What do you think of them?

Sincerely yours,

Ed Fletcher

EF:rmc

Enc. I am also enclosing article from Tribune of May 12 and article about action taken by the City Council yesterday that are explanatory.

A. D. EDMONSTON, STATE ENGINEER
CHIEF OF DIVISION

GOODWIN J. KNIGHT
GOVERNOR OF CALIFORNIA

FRANK B. DURKEE
DIRECTOR

STATE OF CALIFORNIA
Department of Public Works
LOS ANGELES

ADDRESS REPLY TO
DIVISION OF WATER RESOURCES
803 CALIFORNIA STATE BLDG.
217 WEST FIRST STREET
LOS ANGELES 12
MA 6-1819, EXT. 600

May 17, 1955

Colonel Ed Fletcher
1020 - 9th Street
San Diego 1, California

Dear Colonel Ed:

Thank you for your letter of May 12 and the newspaper articles enclosed.

It is my opinion that the series of articles being written by Jack Cooper is an excellent presentation of the problem concerning the Trinity and San Luis Project as it affects the Feather River Project. I agree with Mr. Cooper's presentation and I believe that he is one of the few people who fully understands the situation.

If the State of California could secure a saving to its taxpayers by having the Federal Government construct the California Water Project, and if there were no strings attached to such a plan, it would have my full approval. This is not the case.

As explained in Mr. Cooper's articles, the Federal Government has already undertaken a volume of work which will take a long period of time to complete at the rate of appropriations we can get from Washington. The Feather River Project must be built promptly and cannot await the time and delays in the hope of getting additional federal funds.

Confusion resulting from the proposals being made by the Federal Government which conflict with the Feather River Project, is damaging to California in securing the accomplishment of its water plan. The Feather River Project is the only project being considered which will result in material benefit in relieving our critical water shortages throughout the State. Further delays in constructing this project should not be tolerated.

The series of articles which have been written by Mr. McCracken regarding the Feather River Project are most commendable. If these articles could be circulated throughout southern California and read by the public, they would do a great deal of good.

Colonel Ed Fletcher

-2-

May 17, 1955

It is hoped that this letter finds you in the best of health and we will look forward to seeing you again on May 27.

Very truly yours,

A. D. EDMONSTON, STATE ENGINEER

By Max Bookman
Max Bookman
Engineer-in-Charge
Southern California Office

May 17, 1955

Mr. Max Bookman, Engineer in Charge
Division of Water Resources
803 California State Building
Los Angeles 12, California

Dear Max:

Enclosed find clipping from Union of May 16, written by Jack Cooper, showing that the Metropolitan Water District chief engineer says the cost of Colorado River water is \$121 an acre foot. Do you believe this is authentic?

I am also sending you a clipping from the Tribune of May 14 for your information.

Sincerely yours,

Ed Fletcher

EF:RAM

Enc.

May 31, 1955

Mr. Max Bookman
Division of Water Resources
803 California State Building
Los Angeles, California

My dear Max:

Enclosed find clippings that will be of interest. All the weekly newspapers in the county will copy.

I did enjoy meeting you again, and Shelton of the La Mesa District said Edmonston's presentation was the best he had heard yet.

Kindest regards.

Yours sincerely

EF M

May 31, 1955

Mr. Max Bookman, Engineer in Charge
Division of Water Resources
803 California State Building
Los Angeles 12, California

Dear Max:

I am enclosing copy of letter of May 26 from Mr. Shelton that I thought might be of interest. What is your reaction? Should I write Morris or not? I don't want to be under any obligation to him.

I was mighty glad to have you come down. You both made a splendid impression on the businessmen of San Diego and city and county officials. If there is anything on earth I can do to cooperate, don't hesitate to call on me.

Kindest regards,

Ed Fletcher

EF:rmc

Enc.

C
O
P
Y

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
Los Angeles

June 7, 1955

Colonel Ed Fletcher
1020 Ninth Street
San Diego 1, California

Dear Colonel Ed:

On my recent trip to San Diego you requested that I advise you of the current water situation in San Diego County and of the effect of continuance of the current drought on the water needs of San Diego County.

On June 1st, 1955, the municipal reservoirs of the City of San Diego were about 21.3 per cent full having about 91,000 acre-feet of water in storage. Using the rates of water demand predicted for the future by the San Diego County Water Authority in their present and potential service area, considering the present amount of water in storage reservoirs supplying this service area, and assuming both barrels of the San Diego Aqueduct operating at full capacity or at a rate of 195 second-feet, it appears that if the drought were to continue with the ensuing years having the climatic characteristics of drought periods of history, then available water supplies in the San Diego County would be inadequate to meet demands thereon in from two to four years. If drought conditions were to continue thereafter with storage reserves depleted and with negligible local inflow, only about two-thirds of the water needs of the service area of the San Diego County Water Authority could be met from the aqueduct supply.

On the other hand, with occurrence of the most favorable climatic conditions, as manifest by the extended sequences of wet years such as have occurred historically, it appears that the water supplies available to the service area of the San Diego County Water Authority would be sufficient to meet demands thereon for 12 to 15 years hence or until about 1967 or 1970. However, if with the occurrence of such favorable conditions, importation of Colorado River water were reduced after years of heavy local runoff, then the date when supply would be equaled by demand would be advanced several years.

If "average" water supply conditions for the next few years were assumed recognizing, of course, the improbability of such an occurrence, then it appears there would be sufficient water to supply anticipated demands for possibly seven to nine years.

As you can see from the foregoing, the water supply situation in San Diego County is critical and steps should be taken now to assure the continuance of an adequate water supply to provide for the over-growing needs of the county. The only source of supplemental water presently available is Colorado River water through the Metropolitan Water District aqueduct. If the

Colonel Ed Fletcher

- 2 -

June 7, 1955

Metropolitan Water District can assure San Diego County that they will provide water for a third barrel of the aqueduct, perhaps San Diego County can secure financing for construction of the third barrel similar to that which was used to construct the second barrel of the aqueduct. Perhaps when the Feather River Project is constructed it can serve Feather River water through the third barrel of the aqueduct if the people so desire.

I hope this provides the information you desire. A copy is being forwarded to our Sacramento office. If I can be of any further assistance to you please advise. Due to your efforts, ability, and personality, the San Diego meeting was a great success. Thank you again for the many courtesies extended to me.

Best personal regards.

Very truly yours,

A. D. EDMONSTON, STATE ENGINEER

By s. Max Bookman
Max Bookman
Engineer-in-Charge
Southern California Office

cc: Mr. A. D. Edmonston
Mr. D. O. Powell

A. D. EDMONSTON, STATE ENGINEER
CHIEF OF DIVISION

GOODWIN J. KNIGHT
GOVERNOR OF CALIFORNIA

FRANK B. DURKE
DIRECTOR

STATE OF CALIFORNIA
Department of Public Works
LOS ANGELES

ADDRESS REPLY TO
DIVISION OF WATER RESOURCES
803 CALIFORNIA STATE BLDG.
217 WEST FIRST STREET
LOS ANGELES 12
MA 8-1818, EXT. 800

June 20, 1955

Colonel Ed Fletcher
1020 - 9th Street
San Diego 1, California

Dear Colonel Ed:

In accordance with your letter of May 31st and Mr. Shelton's letter to you, enclosed is a copy of a talk presented by Mr. Morris on May 25th on the Trinity-San Luis Project. I believe this is a very fine statement and clearly presents the importance of the San Luis Reservoir to the people of southern California.

In regard to the invitation extended to you to appear at the San Fernando meeting, I regret to inform you that I am not acquainted with that group or its objectives. There have been local arguments in that area with the Los Angeles Department of Water and Power. It would be desirable not to involve the Feather River Project with any local political or competing projects. The Feather River Project should always be considered as a supplemental supply and not a substitutional supply.

I have been informed that our office is being invited to attend this meeting and that Assemblyman Patrick McGee is also to be present. This assemblyman did not act too favorably toward the State Engineer's office during this last session. Confidentially, this is about all I can tell you about the meeting.

With best personal regards.

Very truly yours,

A. D. EDMONSTON, STATE ENGINEER

By Max Bookman
Max Bookman
Engineer-in-Charge
Southern California Office

Enc.

THE TRINITY - SAN LUIS PROJECT
AND HOW IT WOULD AFFECT THE FEATHER RIVER PROJECT

By Samuel B. Morris, General Manager & Chief Engineer
Department of Water and Power, City of Los Angeles

Presented at a meeting of the
Southern California Council, State Chamber of Commerce,
Statler Hotel, Los Angeles, May 25, 1955

There has been much public interest and a great deal of discussion in Sacramento, in Washington and in the press concerning the San Luis reservoir. The Federal government proposes to make partial utilization of the San Luis reservoir site as an addition to the government's plan for the Trinity River project. The State of California contemplates using the San Luis reservoir as an essential part of the development and operation of the Feather River project.

It is important to keep in mind that more than half of the population, industry and wealth of California is vitally concerned in the development of a sound, economic program for bringing Feather River water southerly from its area of origin. At the conclusion of this talk I believe you will understand why the San Luis reservoir should be incorporated as a part of the state's Feather River Project proposal.

Preceding me on this program, Mr. Diemer has discussed the Feather River Project and what it means to California; and Mr. Cooper has discussed the counties of origin problem and how it best can be solved. Accordingly, I shall presume you have a good understanding of the Feather River Project and the necessary solution of the "water of counties of origin" problem, both of which are vital to the future of Southern California south of the Tehachapi.

I should like now to point out why the San Luis site is so

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important to the Feather River project.

The Feather River Project contemplates construction of San Luis Reservoir, about 12 miles west of Los Banos, to store 2,000,000 acre-feet of water. That is twice the storage capacity proposed by the Bureau of Reclamation. All of the 496,000 acres of farmland in San Joaquin Valley proposed to be served by the Bureau would be served by the State's greater project, which in addition would irrigate large areas in western Kings and Kern counties.

The Feather River Project, already incorporated in the state water plan, would pump water from the Old River in the delta near Tracy. There is normally excess water in the delta during winter months at which non-irrigation time there is excess increased capacity in the Tracy pumping plant and Delta Mendota Canal, as well as in the planned intake pumping plant and canal of the Feather River Aqueduct.

All of these works, pumping plants, San Luis Reservoir and canals will be an economic part of the Feather River Aqueduct extending into southern California.

It would be a great economic loss to the State if the Federal government should usurp the San Luis Reservoir for its half capacity project to irrigate only half the lands in the west side of San Joaquin Valley, providing no irrigation in Kern County and no water for southern California.

State Engineer Edmonston has reported that the San Luis Reservoir is vital to the Feather River Project. It is for those reasons that California, especially southern California and the San Joaquin Valley, must make absolutely certain that no adverse use be made of the San Luis Reservoir which would prevent its full utilization as an essential part of the Feather River Project.

Would the Trinity-San Luis Project have that effect?

What is its status today?

The Trinity River diversion project contemplates a diversion to the Sacramento River of the waters of the Trinity River, a tributary of the Klamath River. Its drainage area lies in the north coast area.

The principal purpose of the project is to provide additional irrigation and water supply for the Sacramento Canals unit and other units of the Central Valley Project. The Trinity River diversion contemplates the construction of the 450-foot high Trinity Dam to store 2,500,000 acre-feet of water, and other dams, diversion tunnels, and power plants by which the water of the Trinity River would be stored and regulated and surplus waters diverted through the power plants having a total head of 1,578 feet, into the Sacramento River above the Keswick Dam.

In the 20-year period of analysis, from 1921 to 1941 inclusive, the amount of Trinity River water diverted would have been a minimum of 480,000 acre-feet to a maximum of 1,019,000 acre-feet and would average about 704,000 acre-feet per annum. By coordination with other features of the Central Valley Project and by utilizing natural stream flows in Central Valley, about 1,190,000 acre-feet of water can be made available annually to meet irrigation diversion demands of which 665,000 acre-feet would be required for the 205,400 acres comprising the Sacramento Canals unit in the upper Sacramento Valley.

The Trinity diversion will add 233,000 kilowatts of hydro-electric generating capacity to the Central Valley system and will produce 1,067,000,000 kilowatthours annually. The estimated cost of

the Trinity River Project as of January 1954 is \$219,067,000.

Former Secretary of the Interior, Oscar Chapman, authorized its construction shortly before leaving office. It has not been authorized by the Congress and funds for its construction have not been appropriated. The State Engineer, in reviewing the report of the Secretary of the Interior, recommended in his testimony before the House Committee on Interior and Insular Affairs on April 16, 1954, at Redding, California, as follows:

That the project of Trinity Diversion, only be constructed at the earliest practicable date provided that (a) adequate reservation be made of water for present and future beneficial uses at Trinity River watershed; (b) adequate reservation of water be made for present and future beneficial uses for irrigation and other purposes at Shasta and Tehama Counties and on the Sacramento Valley floor before any water developed by the project is exported out of the Sacramento River Basin; and (c) proper charges for water and power be established to render the project financially feasible.

From this statement it is clear that the Trinity diversion project is not opposed within the state from official sources. The opposition is centered on attempts to tie the San Luis Unit to the Trinity and make a combined Trinity-San Luis Project where no valid engineering or economic basis for such a tie-in has been officially reported.

The San Luis project, as a unit of the Federal Trinity Project, contemplates the construction of a dam on San Luis Creek to create a reservoir with capacity of 1,000,000 acre-feet. Water would be pumped during the winter months into this reservoir from the Delta Mendota Canal of the Central Valley Project, which has

surplus unused capacity in the off-irrigation season. It would provide 1,267,000 acre-feet of water annually to irrigate 496,000 acres on the west side of the San Joaquin Valley, primarily in Fresno County.

The estimated Federal cost of the San Luis Project is \$229,053,000 and the non-Federal cost \$170,067,000, making a total estimated cost of \$399,120,000.

In its repayment analysis the Bureau of Reclamation has set a tentative price of \$7.50 per acre-foot for water delivered canal side. The Bureau in its report proposes to begin initial service of water in 1965.

The only connection between the Trinity Project and the San Luis Project is that hydroelectric power from the Trinity Project may be furnished for pumping water into the San Luis Reservoir. The Bureau of Reclamation has indicated that under Reclamation Law the Trinity Project facilities, to the extent they are utilized for furnishing power for pumping on Bureau of Reclamation Projects, would be interest free.

First known as the San Luis-West Side Project, the project was described in the proposed report of the Secretary of the Interior entitled "Comprehensive Plan for Water Resources Development in the Central Valley Basin, California", dated February 6, 1948. The project was refused approval by the President in a letter to the Secretary of the Interior dated August 15, 1949, because of lack of information of engineering and economic feasibility. In August 1954 a report on the San Luis Project was prepared by the Regional Director of the U.S. Bureau of Reclamation, Sacramento, and submitted to the State Engineer

for comment. The State Engineer has commented upon this report. The Regional Director of the Bureau of Reclamation has not yet, however, submitted his report to the Commissioner of Reclamation following the comments of the State Engineer and other interested state agencies. Further, the Secretary of the Interior has not yet reported on the project and submitted same to the State of California for its official view and recommendations as required by the provisions of the Flood Control Act of 1944.

Studies made by the Division of Water Resources show that there would be adequate surplus water in the Sacramento-San Joaquin Delta with Shasta and Folsom Reservoirs in operation, and without the Trinity River Project, to supply the water required for the San Luis Project lands. This same surplus water has been filed upon for use by the Feather River Project. With that project it would be supplemented by releases from Oroville Reservoir to make about 4,000,000 acre-feet of water available for use under the Feather River Project as compared to 1,267,000 acre-feet made available by the San Luis Project as part of the Trinity River Project.

Bills now pending before Congress provide for the authorization of the Trinity River Project with no reference to the San Luis Project. Hearings have been held before the House Committee on Interior and Insular Affairs on the Trinity River Project only. Separate bills have been introduced providing for the San Luis unit. No hearings have been held on these bills and presumably no hearings will be held until the Secretary of the Interior has reported on the San Luis unit in accordance with the 1944 Flood Control Act.

With extreme lowering of ground water due to heavy irrigation pumping on the west side of the San Joaquin Valley in Fresno,

Kings and Kern Counties, it is fully understandable that there should be such urgent demand for the San Luis Project by irrigators in Fresno County and by irrigators in Kings and Kern Counties for the Feather River Project. As presently planned, no lands in Kern County would benefit by the San Luis Project but they would benefit by the Feather River Project.

The Feather River Project as previously noted would pump water from both the Delta Mendota Canal and the Feather River Canal into the San Luis Reservoir of 2,000,000 acre-feet capacity, or twice that proposed by the Bureau of Reclamation. The larger reservoir would provide regulation for 1,840,000 acre-feet of water to be supplied to the western side of San Joaquin Valley in Fresno, Kings and Kern counties and 1,800,000 acre-feet for Southern California south of the Tehachapi.

This greater utilization of the San Luis reservoir site, which would provide direct benefits for a majority of the state's people, industry and irrigation, must be protected. The large landowners of Fresno County, principal proponents for the San Luis addition to the Trinity Project, are in desperate need of additional water supply and claim that the San Luis project can be constructed by the Federal government more quickly than Feather River Project water can be brought to them by the State. This may be more argumentative than factual. The facts are that the Department of Interior has not yet issued its formal report on the San Luis Unit and has not submitted it to the State under the 1944 Flood Control Act requirement. While there are bills pending in Congress, it would appear that these bills to authorize the San Luis Unit must await the Secretary's report and the State's comments with hearings before the committees of the Senate and the House before the project can be properly authorized.

Experience in construction of the Central Valley Project indicates that annual Federal appropriation for construction of reclamation projects in California are of the order of \$30,000,000 per year. The estimated Federal appropriation needed for the Trinity-San Luis Project is \$448,120,000. There are additional large expenditures required for the presently authorized units of the Central Valley Project and other Bureau of Reclamation projects in California. If \$30,000,000 was applied each year to the Trinity-San Luis Project alone, it would require 15 years to construct it, and farmers would have a long wait for water.

The Feather River Project was authorized by the State Legislature in 1951. Some \$2½ million already has been expended in surveys and studies and additional surveys and studies must be completed before funds are provided for its construction. It is certain, however, that the Oroville Reservoir and the San Luis Reservoir will be essential elements in its construction. The two reservoir sites should be immediately acquired by the State and necessary funds appropriated at this session of the State Legislature to provide for such acquisition and to provide for the continued surveys and studies of most economic routes.

At the recent Assembly Hearings on Water Problems, April 28-30, a number of papers were presented both in support of the Trinity-San Luis Project and the Feather River Project. To express a unified position of Southern California interests regarding these projects a 5-item policy statement was drafted by representatives of The Metropolitan Water District of Southern California and the Los Angeles Department of Water and Power and copies furnished to members of the State Legislature and the press. This policy statement was later ratified by the Board of Directors of The Metropolitan Water

District and by the Board of Water and Power Commissioners of the City of Los Angeles. It is as follows:

I

That provision be made for the determination of the respective rights to the use of water in the areas in which such water originates and in areas to which water in excess of the requirements of such areas of origin may be exported. To accomplish this purpose a constitutional amendment setting up appropriate administrative procedure is recommended.

II

That further studies of the plans and routes for the Feather River Project be made; that adequate appropriations be made for that purpose and further that an adequate amount thereof be specifically allocated for investigation and determination of the best and most economic coastal route.

III

That a board of outstanding and independent engineers be established to report on all phases of the Project and that adequate appropriations therefor be authorized.

IV

That sites for the Oroville Reservoir and the San Luis Reservoir be acquired by the State and that the necessary appropriations for such acquisitions be made.

V

That (other than for the acquisition of said reservoir sites) no money be appropriated for rights of way, development or construction of the Project until the respective rights to the use of water of such areas in which the water originates and areas to which the water may be exported shall have been determined.

It is important to note that the California Legislative Session will be over next month, while this session of the Congress continues until December 31, 1956. Therefore there is hazard that a bill unacceptable to a majority of the people of California may

be adopted by the Congress. Should the San Luis unit be authorized as a part of the Trinity-San Luis Project by the Federal government, it is imperative that adequate language be written into this bill to protect the use of the San Luis Reservoir by the State's Feather River Project in behalf of a majority of the citizens of California. Such language should be spelled out in adequate detail so that a definite physical plan is drafted, and subject to approval of the State Engineer, under which the San Luis Reservoir may be utilized to maximum capacity by both projects and the pumping plants and canals be so located and designed as to give the greatest economy in construction and operation. Provision should be made for the San Luis Reservoir and canals to be taken over for State operation in connection with the Feather River Project.

However, the best assurance the people of California could have that their interests will be fully protected is for the State to retain jurisdiction over the San Luis Reservoir site.

The need for Feather River water is well established. There is common agreement on these points: (1) with full use of all of The Metropolitan Water District's right to Colorado River of 1,212,000 acre-feet, (2) full use by the City of Los Angeles of its 323,000 acre-foot capacity of the Los Angeles aqueduct from Owens Valley and Mono Basin, and (3) maximum conservation of local water, both surface and underground, the coastal area of Southern California still must have additional water supplies. The only differences of opinion are how soon. A thumbnail sketch of the situation is as follows:

Water service from the Colorado River aqueduct began in 1941. In the 13 years since then, demand has developed until by

1954, 300,000 acre-feet, or one-fourth of the capacity of the Colorado River, is being utilized. During the same 13 years there has developed over-draft on ground water basins on the coastal plain of southern California, southerly of Los Angeles, of 300,000 acre-feet per annum. In other words, if the Colorado River aqueduct were furnishing every demand and the ground water basins were not being overdrawn, 600,000 acre-feet, or one-half the capacity of the aqueduct, would be required now, only 13 years after its initial use.

Should the phenomenal growth of this area of southern California continue for the next 13 years as it has during the last 13, it would appear that the full flow of the Colorado River aqueduct of The Metropolitan Water District, under its contract with the United States government for 1,212,000 acre-feet of water of the Colorado River, would be required in the short time of another 13 years. Others have expressed the view that additional water from the north will not be required for as long as 25 years, but there is no disagreement that water from the north must be secured and that the Feather River Project offers the most feasible and practical solution.

It is the duty of the management of a public water utility serving water for municipal purposes to furnish a full water supply for the largest population likely to develop and to do so during the driest years of record.

The Feather River Project is of supreme importance in water-short areas in the counties of Alameda, Santa Clara, and San Benito, and the west side of the San Joaquin Valley in Fresno, Kings, and Kern Counties. The Feather River Project also includes important developments within the Feather River drainage area itself

and irrigation in the service area lying between Oroville and Sacramento.

Realizing the need for new water supplies, the Feather River Project Association has been established as a non-profit association by citizens of the State of California interested in the conservation and economic development and utilization of the water and power resources of this State. Mr. Raymond A. Leonard, Attorney-at-Law of Oroville, has been elected temporary President.

Its articles provide: The objectives and purposes of the Feather River Project Association are as follows: To engage in study and research and to collect and disseminate information among the people and public agencies of the State of California, their representatives in the State Legislature and in Congress, of the urgent need for flood control and the conservation and development of the water and power resources of the State, all in furtherance of The California Water Plan and, in particular, the initial unit of that Plan known and designated as the "Feather River Project".

It is the hope of this organization, which is representative of all of the service areas of the Feather River Project from the counties of origin of the Feather River to San Diego County, that it may be of service in acquainting the people of areas of water surplus and areas of deficiency with each others' respective problems, and mutually to work for a solution that is in the best interest of the people of California.

It must be remembered that southern California would be left "high and dry" so far as economic development of new water supplies from the Feather River is concerned if the Federal

government should usurp control of the San Luis Reservoir site.

Such a move would create serious problems.

The Federal plan would cost \$448,120,000 but would not bring one drop of water to southern California. Therefore no feature of that project should be permitted to interfere with the State's orderly plan for the Feather River project, which is absolutely dependent for its economic success upon State use and control of the San Luis Reservoir. To assure that success the State should purchase sites now for the two key reservoirs at San Luis and Oroville. Under state operation and control, the San Luis Reservoir would perform a much greater public service than under the inadequate, half-size Federal scheme.

#####

July 8, 1955

Mr. Max Bookman, Engineer in Charge
Division of Water Resources
803 California State Building
Los Angeles 12, California

Friend Max:

Answering yours of June 20 which I find on my desk on my return from a 3 weeks eastern trip, the information is just what I want.

As regards the San Fernando meeting, I have no invitation to the meeting except verbally and have no thought of going unless I know all about it and it meets with your approval.

Regarding Morris' article, I wish to read it over carefully and you will hear from me later.

Enclosed find letter of June 14 from Paul Beermann that may be of interest.

Kindest regards.

Sincerely yours,

Ed Fletcher

EF:rmc

Enc.

July 15, 1955

Mr. Max Bookman, Engineer in Charge
Division of Water Resources
803 California State Building
Los Angeles 12, California

Dear Max:

In confidence I am sending you a copy of letter from Congressman
Hubert Scudder that is explanatory and I thought it might be of in-
terest. Kindest regards.

Sincerely yours,

Ed Fletcher

EF:rmc

Enc.

September 29, 1955

Mr. Max Bookman, Engineer in Charge
Division of Water Resources
803 California State Building
Los Angeles 12, California

Dear Max:

Enclosed find copy of letter to Mr. Edmonston for your information.

Was glad to have a few minutes with you the other day. Please give me more
time the next trip and let me show you around a bit. Bring your wife down,
too, and I will send you home with a mess of rainbow trout.

Kindest regards,

Ed Fletcher

EF:rmc

Enc.

Ed Fletcher Papers

1870-1955

MSS.81

Box: 2 Folder: 25

General Correspondence - Bookman, Max



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