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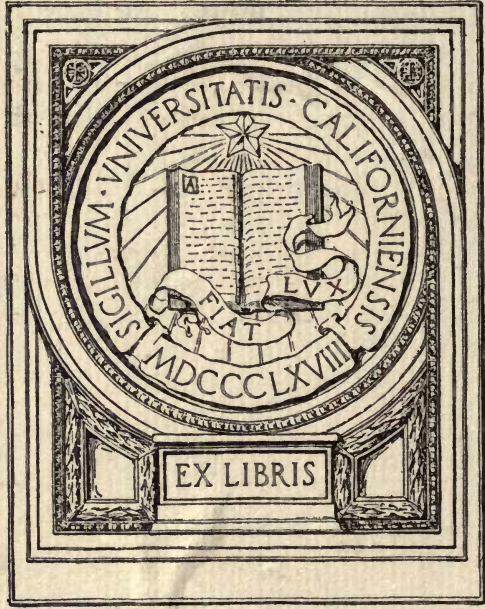


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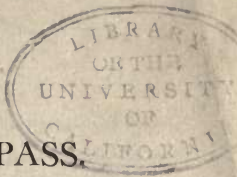
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GIFT OF



Cal. Reclamation Board

GIFT
MAR 30 1917



LOCATION OF THE SUTTER BY-PASS.

The Sutter by-pass, part of the by-pass system of the Sacramento River Flood Control Project, was fixed in the so-called "Eastern" location by order of the State Reclamation Board made March 31, 1913, on the advice of the State Engineering Department, and with approval of the California Debris Commission acting for the Federal Government. Certain interests in Sutter County desired the location changed back to that suggested in the original tentative plans of the California Debris Commission—the so-called "Central" location—and urged Hon. William Kent, congressman from the First District, which includes Sutter County, to secure the change if possible. Mr. Kent commissioned J. H. Dockweiler, consulting engineer of San Francisco, to make an exhaustive examination and report of the relative merits of the two locations. The report was made in May, 1916, and accompanied by a number of maps and documents. The introduction to the report, which contains briefly the general conclusions, is as follows:

SAN FRANCISCO, CAL., May 13, 1916.

Hon. WILLIAM KENT,
Kentfield, California.

DEAR SIR:

In compliance with your request I have investigated the relative merits of the Central and Eastern locations of the Sutter Basin by-pass channel.

I have been over the Sutter Basin country recently, with engineers representing both sides in the controversy.

On April 19th and 20th I held a hearing in Sacramento, at which I had the engineers representing both sides agree to as many points as practicable, thus limiting materially the range of argument for your consideration.

From a thorough study of the whole situation with regard to safety, cost and expediency, I find the evidence strongly in favor of completing the by-pass on the *Eastern location*.

The general plan of flood control of the Sacramento River contemplates a by-pass through the Sutter Basin.

This by-pass will consist of two strong parallel levees, between Marysville Buttes and the Fremont Weir (near Knights Landing), capable of passing a flood 50 per cent greater than that of 1907.

The original Debris Commission plan of flood control followed the trough of the Sutter Basin in what is known as the "Central" location.

The State Reclamation Board, in working out the details of the scheme, decided that by shifting the by-pass to higher ground to the east a safer and more economical location could be obtained.

The board adopted this location—known as the "Eastern" location—and it was approved by the Debris Commission of United States army engineers.

It should be noted here that local variations from the original Debris Commission plan were made on all the by-passes studied; this was to be expected, as the original plan was made without detailed surveys, etc.

The Reclamation Board Act, in effect August 8, 1915, states:

"SECTION 1. The report of the California Debris Commission transmitted to the Speaker of the House of Representatives of the United States by the Secretary of War, on the twenty-seventh day of June, one thousand nine hundred and eleven, with such modifications and amendments, and such additional plans as have been or may hereafter be adopted by the Reclamation Board, is hereby approved as a plan for controlling the flood waters of the Sacramento River." (Appendix "A," page 3.)

Opposition to the Eastern location developed among the residents of Sutter County, culminating in a suit to enjoin the completion of the reclamation of District No. 1500, on the ground that lands not heretofore subject to overflow from the waters of the Sutter Basin, would be damaged by the backing up of these waters caused by the cross levees at the northern end of District No. 1500.

This same objection would have applied if District No. 1500 had been building along the lines of the Central location.

At the hearing you held in Marysville last November, and in sundry correspondence in connection therewith, the arguments for and against the two locations were pretty thoroughly presented.

In the following pages I have considered all the points presented, but the pertinent ones may be briefly summarized as follows:

FOR CENTRAL LOCATION.

FOR EASTERN LOCATION.

A.

The Central location follows the trough of the Basin at about the center of the usual course of the waters; but on account of the presence of a depression below the level of the Fremont Weir, this requires higher levees for about ten miles than required by the Eastern location. The Central location, in other words, makes a drop and rise.

The Eastern location was made particularly to avoid this drop and rise with the idea of keeping the velocity of the current uniform, and at the same time avoid the high levees with their greater chance of saturation. In addition it required only one-third the mileage of levees through the most critical part of the by-pass.

This point favors the Eastern location, but does not necessarily preclude the construction of the Central location; as the higher and longer levees can be made secure by adequate design and construction.

B.

In case of breaks in the levees of the Central location, there would be less land flooded of lands not heretofore subject to overflow from Sutter Basin waters. This is admitted but is considered offset by the fact that there is less likelihood of the breaks occurring on the Eastern location, on account of the lower and shorter levees.

This difference amounts to 13,000 acres of highly cultivated land for the original location and to about half that in case the change were made so as to utilize as much present construction as practicable.

This point favors the Central location, but is only relative—any flood place, within reasonable limits, may be obtained by suitable widening of the by-pass on either location; and if on the Eastern location they should build an additional levee to separate the Feather River floods from the Sacramento, as has to be done for the Central location, there would be practically no difference between the flood areas by either location.

C.

The advocates of the Central location claim that District No. 1500 should not have built on the Eastern location as they warned them that suit would be brought to enjoin the completion of the reclamation of the district. District No. 1500 considers it was justified in going ahead because the Reclamation Board, with full power to do so, has adopted the Eastern location, and would not let them proceed along the lines of the Central location, even if they wished to.

They claim that if the change were made back to the Central location, practically all existing work could be utilized. They have built 19 miles of by-pass levees and if the change were made back to the Central location at this time, it would practically mean the construction of BOTH BY-PASSES as far as District No. 1500 is concerned.

This point, which is an important financial item, strongly favors the Eastern location, and in my opinion *practically decides the matter in favor of the Eastern location.*

All the other arguments, as well as the above, are taken up in detail in the report, with sufficient notes to show their bearing on the general question of whether or not it is expedient at this time to change back to the Central location of the by-pass.

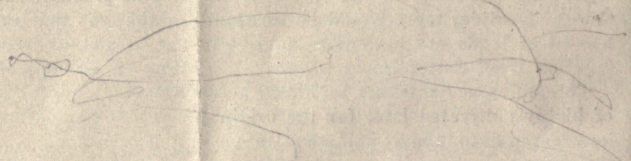
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Respectfully submitted.

(Signed)

J. H. DOCKWEILER,
Consulting Engineer.

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