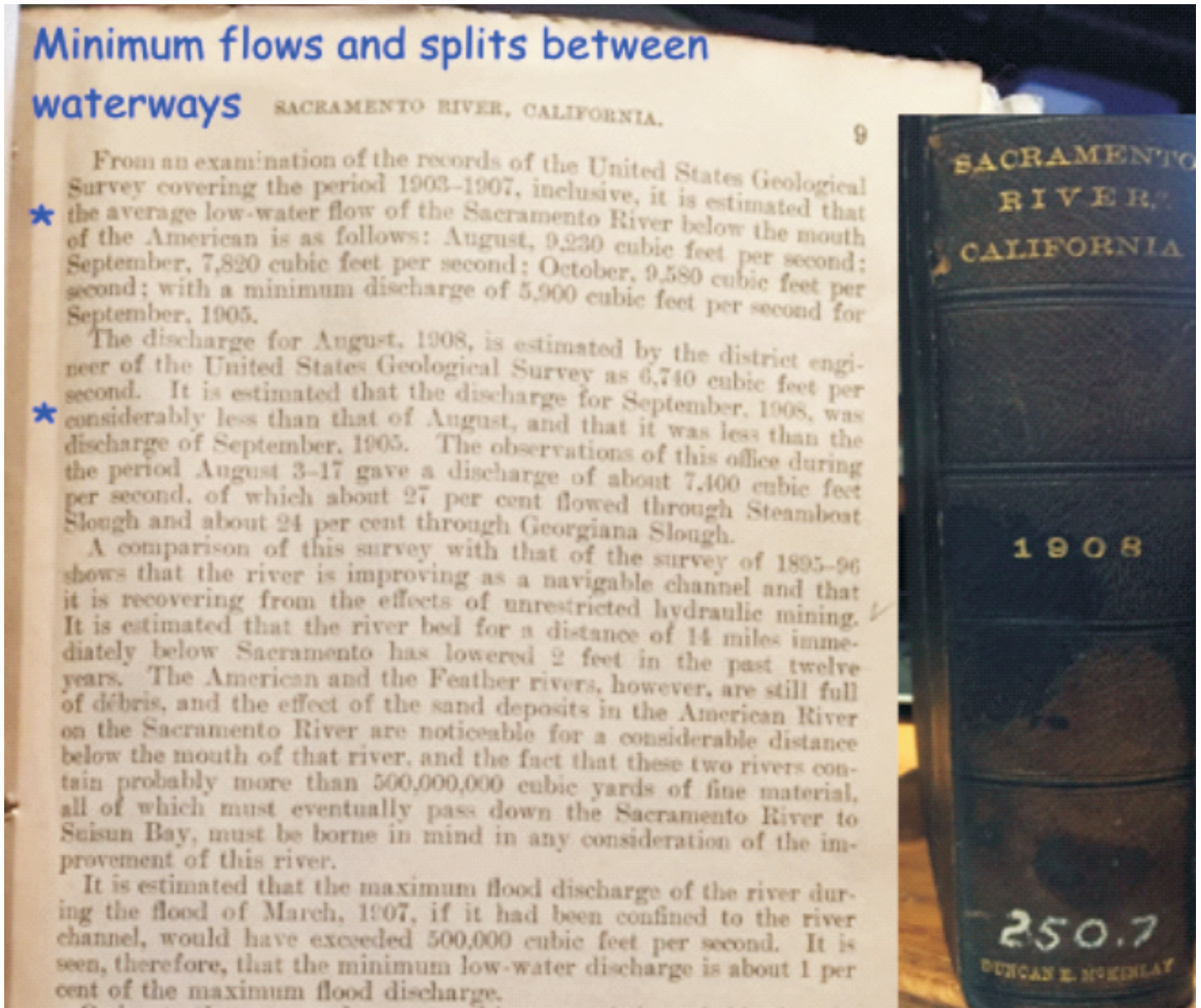


1908 Sacramento River, California official survey for US Congress and report of findings compiled by USGS from 1903-1907: At the driest time of year of a dry year, the minimum Sacramento River constant “average low water” outflow is more than 7,400 cfs, with 27% flow into Steamboat Slough (1,998) and 24% through Georgiana Slough.

Alternate flow observation: 7,377 cfs at Courtland, with 1,802 cfs split between Steamboat and Sutter Sloughs.

(Note that fresh water < 1 ppt for the entire reach of the Sacramento River)



Book of maps is available for view upon request by contacting N. Suard, Esq.

All maps and descriptions were also professionally scanned and uploaded to the following locations for easy access to viewers:

<https://archive.org/details/MapsCADelta> (Sacramento River and Steamboat Slough)

<https://archive.org/search.php?query=1908%20san%20joaquin%20river%20survey>



Minimum  
flows

On account of extensive deposits which formed in the river between Sacramento and Freeport after the survey of this portion had been made, the river was re-sounded at the low stage between these points.

A comparison made by plating the two sets of soundings extending over the 13½ miles of river below Sacramento show that between May and September, while the river at Sacramento fell from a stage of 16 feet to a stage of 5½ feet on the Sacramento gauge, a fill of over 3,000,000 cubic yards occurred.

Comparisons with older surveys show that the general present tendency of the river at this place is to lower its bed so that this shoaling must be due to a temporary arrest of the movement of the enormous quantity of material being carried down from the mouth of the American River, and it will doubtless be moved on again during the next flood season.

The survey of the Sacramento River from the mouth of the Feather to the mouth of the American, made by the California Inbris Commission, is incorporated with this.

Up to this date the field mapping of the survey has not been quite completed, and considerable work remains to be done to complete the tracings. Soundings in all parts of the river on which any deepening will be required to procure a 15-foot channel to Sacramento have been charted and use made of them in preparing the estimates of quantities for the several specified projects given below.

*River discharge measurements.*—Current meter observations were made at a station located a short distance above Courtland, between which point and the mouth of the American River there are neither tributaries nor outlet sloughs; also at two stations at Walnut Grove, one on the main river and one on Georgiana Slough. At each of these stations there is a considerable tide, and although no upstream current was observed, there was between tides a slack-water period of about forty minutes. This considerably complicated the discharge measurements and necessitated observations extending over several complete tidal cycles. These observations were all taken between August 3 and 17, when the stage of the river at Sacramento ranged from elevation 9.1 to 9.4 (6.0 to 6.3 on the gauge). The several sets of observations agreed very closely. The mean results were: At Courtland, mean discharge, 7,377 cubic feet per second; at Walnut Grove, mean discharge, Old River, 3,605 cubic feet per second; at Walnut Grove (Georgiana Slough), mean discharge, 1,970 cubic feet per second. This would leave for the flow of Steamboat and Sutter sloughs (not measured), 1,802 cubic feet per second.

While the above is not quite the minimum discharge for this season, it is probably less than the minimum discharge for the average season.

There has been no opportunity to obtain a maximum discharge measurement this year. The flood of March, 1907, was much greater than any previously recorded flood. The measurements of flow made by the United States Geological Survey on the upper Sacramento and many of its tributaries indicate a total discharge of 554,700 cubic feet per second. This estimate is from unofficial figures published in a paper in "Proceedings American Society of Civil Engineers." A large part of this passed through Yolo Basin and Cache Slough, and there were many breaks in the levees through which the water escaped from the river itself.