

LOW MAXIMUM STAGE OF THE ANNUAL RISE IN THE COLUMBIA RIVER IN 1926

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In the published Summary of the Season's Snowfall<sup>1</sup> for the winter of 1925-26 in the Pacific Northwest, Mr. E. L. Wells of the Weather Bureau Office at Portland, Ore., comments as follows:

The winter over the entire Columbia River drainage basin was unusually mild. Precipitation was everywhere deficient, and much more than the usual proportion of precipitation was rain. Snow, having fallen at moderate temperature, was generally well packed at the close of March, but was not drifted as much as usual. . . . The soil under the snow was generally unfrozen, and in condition to absorb moisture rapidly. . . . Over the drainage basin much country which is ordinarily snow covered at this date was bare. . . .

A conspicuous effect of this precipitation deficiency and the super-normal temperature of the winter months was the moderateness of the annual summer rise in the Columbia River. At all stations equipped with Weather Bureau river gages, the summer maximum stages were the lowest of record. Comparative data for these stations are given below:

Station	Summer maximum this year	Previous lowest summer maximum	Previous high- est maximum
Marcus, Wash.	19.8	27.5 in 1919	44.7 in 1894
Umatilla, Ore.	11.9	13.6 in 1915	34.5 in 1894
Celilo, Ore.	8.9	10.5 in 1915	23.4 in 1894
The Dalles, Ore.	17.1	20.8 in 1915	59.4 in 1894
Cascade Locks, Ore.	12.9	14.7 in 1889	49.7 in 1894
Vancouver, Wash.	9.9	12.6 in 1915	34.4 in 1894
Portland, Ore.	9.7	10.0 in 1889	33.0 in 1894

<sup>1</sup> Climatological Summary for March, 1926.

In a report on the results of the low water, Mr. Wells states that

The greatest loss . . . was not felt in the vicinity of Portland, but in Idaho, and to a less degree in eastern Oregon and eastern Washington, where water from the tributaries of the Columbia is extensively used for irrigation. In many of these tributaries there was not sufficient water for the needs of the crops grown by irrigation, and some crop loss resulted. The greatest loss was probably in the yield of alfalfa. The loss was somewhat lessened by the planting of short-season crops, which would mature before the water shortage became acute, and was further lessened by co-operation between various projects, and between users within the projects, in the use of water where and when it was most needed.

Along the lower reaches of the Columbia the absence of high water was an advantage; almost no farm land was flooded; no moving of live stock was necessary; no merchandise was injured or even threatened.

Absence of high water obviated the necessity for extensive dredging of the channel of the Columbia. After every material flood in the Columbia it is necessary to dredge out bars which have shoaled during the flood and are therefore obstructions to navigation. Little shoaling occurred this year.

Moving of log rafts on the lower Columbia is difficult during high water, because of the current. No difficulty was experienced this season.