H. O. WALBERG, COUNTY ROAD ENGINEER

SKAGIT COUNTY

STATE OF WASHINGTON

MOUNT VERNON

January 7, 1950

NRS 600.911(Skagit & River)9

E. C. Itschner
Colonel, Corps of Engineers
District Engineer
4735 E. Marginal Way
Seattle 4, Washington.

Dear Sir:

In response to your letter of Jan. 5, 1950, we are submitting the following information:

(1) Maps showing the Drainage and Diking Districts in Skagit County.

(2) A graph of guage height readings, plotted against time, of the recent flood of the Skagit River, which reached a crest Nov. 28, 1949.

In explanation of the above-mentioned graph, the following statements will answer the several questions asked in your letter of inquiry. The guage readings referred to are readings on the automatic guage-height recorder operated by the United States Geological Survey, located on the bridge over the Skagit River between Mount Vernon and Burlington. As indicated on the graph, the readings on this guage are in feet above U.S. C.S. Mean Sea Level Datum. The readings from the Burlington Bridge and the Dalles were taken from prints made off the original tapes taken from the automatic recorders by the U.S.C.S. and sent us by Mr. Fred M. Veatch, at our request.

1. At point "A" on the graph, guage height 25.0, water from the Skagit River begins backing up into the Nookachamps Creek area between Mount Vernon and Sedro Woolley. Since this area is not diked off, the lower lying farms begin to suffer at this point. However, in the case of a rapidly rising river, this flooding affords a considerable degree of protection to the lower Skagit Valley by absorbing a large amount of the increasing flow. This is evidenced by a flattening-off of the graph lines for Burlington and Mount Vernon, and this effect becomes even more pronounced at point "B", since by this time several thousand acres of the Nookachamps Valley is under water.

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Further evidence of this "safety valve" action is found by examining the peak discharges at the different points. At the crest Sunday Noon at the Dalles, the discharge was approximately 158,000 second feet, whereas the maximum discharge at the

Burlington Bridge, shown at Point "C", was about 112,000 second feet, indicating that the extent of the retention of the Nookachamps area is quite an important factor in determining the maximum stage of the river in the Mount Vernon area.

2. Point B, guage height 29.0 is cause for alarm throughout the entire lower Skagit Valley, since, as was previously pointed out, considerable farm land is already under water, and therefore, any prolonged high runoff would be felt increasingly in the low lands.

3. At point "C", the peak of the Nov. 27-28 flood, considerable damage either was done or was impending. The town of Hamilton was under 2 to 4 feet of water. The other towns in the valley, Mount Vernon, Sedro Woolley, Burlington and Lyman were not inundated but at least one, Burlington was seriously threatened. The highway between Clear Lake and Sedro Woolley, S.S.H. 1-A, was cut off in at least two places by high water, and the Burlington-Sedro Woolley highway was under about 8" of water in the Southwest quarter of Section 27 T. 35 N.R.4 E.W.M. The water was about 3.0 feet below the top of the dike East of Burlington on Fairhaven St., and was about 1.5 feet below the top of the dike Northeasterly of Burlington. The dikes at Mount Vernon were about 1.5 or 2 feet above the peak at most places, with weak spots developing near Avon.

Below Mount Vernon the story is fairly well known. Some breaks occurred in dikes, and in most other spots there were only inches of free board remaining. Only constant vigilance and heavy sand-bagging by large crews of men prevented more serious breaks.

I trust that this information will be of some help in making an over-all study of the Skagit River valley. It is all quite reliable, being a composite of information furnished by the U.S. Geological Survey, and of first-hand observations by personnel of the office of the Skagit County Engineer.

Please feel free to call upon this office for any other help which may be within our scope.

In closing, we would also be very grateful to receive from your office any pertinent facts which might supplement our own studies of the Skagit.

Yours very truly,

P 000545

H. O. WALBERG,
County Road Engineer
By Wm. R. Whitnall
Wm. R. Whitnall, Designer.

WRW:MM
CC: Fred M. Veatch