

15 MAR 1963

NPSEN-PR-R

Mr. Lloyd Johnson  
Acting County Road Engineer  
County Courthouse  
Mount Vernon, Washington

Dear Mr. Johnson:

In response to your recent oral request to our Mr. Skrinde on flood damages that have occurred in the Skagit River basin, the following flood damage data are furnished for your use:

Major floods on the Skagit River have been:

<u>Year</u>	<u>Discharge at Sedro Wooley - cfs</u>
1815	400,000 estimated
1909	220,000
1917	195,000
1921	210,000
1932	147,000
1951	145,000

In 1951, the levees failed at districts 5 and 13 and were overtopped above Burlington. Water levels were within inches of the top on the remaining levees. Only the relatively short duration of high flows allowed flood fighters to hold back water which would have inundated the whole valley. An appraisal after the flood revealed \$1,300,000 of physical damage exclusive of weed seed damage, fertilizer leaching, reduced crop returns, and future crop losses. Under present conditions this damage would have been \$2,500,000. Damage four times this amount could have resulted if flood duration had been longer or if levees had not held.

The flood of 1909 caused damages conservatively estimated at \$1,500,000 at the 1909 prices and conditions. It ruined many farms,

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destroyed several hundred head of horses and sheep, and washed out many dikes and drainage ditches. The Great Northern Railway embankment between Mount Vernon and Burlington was washed out, and serious damage done to the State highway. That part of Mount Vernon west of the river was entirely flooded. The flood of 1917 caused a loss of about \$500,000. It destroyed the rights-of-way of the Great Northern Railway and of the Pacific Northwest Traction Company between Mount Vernon and Burlington, seriously interrupting the communication of the region for two weeks. The dikes in the area also suffered extensive damages.

The February 1932 flood caused tangible damages of over \$600,000 at the 1932 prices and conditions. According to the Skagit County agricultural agent at the time, the damages to farm land and crops was more than \$500,000. Many acres of valuable land were inundated by the flood waters. The flood destroyed crops, wrecked farm buildings and fences, and damaged the lands by erosion and by deposition of snags, debris, and sand. This estimate does not include damages to farm buildings or intangible losses such as loss of trade because of disruption of business and the crippling of transportation and communication. Additional damages of the 1932 flood was \$46,000 to railroad embankment and bridges, \$36,000 to public roads and bridges, and \$14,000 to existing river dikes.

The 1921 flood damaged lands and crops, roads, bridges, dikes and ditches, and the logging industry. Records from this flood are meager. A recurrence of the 1921 flood with a discharge of 210,000 c.f.s. would mean that the valley would be completely inundated with both river and salt water levees severely damaged or destroyed and with damage to crops, buildings, transportation systems reaching disaster proportions, with damage amounting to as much as \$18,000,000.

We hope this information will be useful to you.

Sincerely yours,

G. B. HUNT,  
ASST. CHIEF, ENGINEERING DIVISION

SKRINDE *RAS*

WILLS *RW*

GULLIDGE *GD*

HOPKINS

STEINER *ST*

ED P&R BR