OFFICE OF
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COUNTY ENGINEER

JACK C. RAFTER, P.E.
ASSISTANT COUNTY ENGINEER

December 22, 1978

Mrs. Donald E. Austin
1381 Austin Road
Mount Vernon, Washington 98273

Re: Lower Levee - Nookachamps Area

Dear Mrs. Austin:

We are responding to your letter dated December 12, 1978 and our telephone conversation on December 20, 1978 concerning possible backwater effects to the Nookachamps area as a result of the proposed Army Corps of Engineer's Lower Levee Project.

As you know from the public workshop held by the Army Corps of Engineers on the evening of December 20, 1978, some additional backwater would be experienced in the Nookachamps area. The Corps stated this amount to increase from one to two feet in a flood of 100 year frequency. As you also know from the public workshop, considerable concern for this condition was presented by persons from the Nookachamps area. The primary purpose of a public workshop is to obtain this information and concern. We assure you the Skagit County Commissioners, the Skagit County Engineers and the Army Corps of Engineers are responding to this concern.

We will attempt to answer the questions presented in your letter:

1. A Skagit River flood frequency of 100 years is approximately 225,000 c.f.s.

2. A Skagit River flood frequency of 50 years is approximately 200,000 c.f.s.

3. The Skagit River flood of 1951 resulted in a peak discharge of 144,000 c.f.s. At that time conditions on the Skagit River were considerably different than they are today and the river gauge was being read at the Moose Club in Mount Vernon. We now read the river gauge at the Riverside gauge north of Mount Vernon. Had the Riverside gauge been read in 1951 it would have read about 36 5/6 feet. The 1951 flood was rated at about a 20 year frequency.

4. The Skagit River flood of 1975 resulted in a peak discharge of 130,000 c.f.s. The peak gauge reading at Riverside - Mount Vernon, was 35 6/6 feet. The 1975 flood was rated at about a 12 year frequency.

5. We have no gauge reading for 100 and 50 year flood as floods of this magnitude over-top the levees and any gauge reading would be meaningless. We can read the Riverside gauge to about 38 feet. This is a discharge of 150,000 c.f.s. or about a flood of 25 year frequency.

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6. Enclosed please find a chart listing past flood on the Skagit River and the peak discharges as available.

We call your attention to the chart. Note the floods of 1909 and 1921 were approaching 100 year frequency.

In conclusion, we would state the Nookachamps area has a history of flooding from the Skagit River. This flooding occurs at a discharge of quite low frequency. The Nookachamps area is situated so as to make flood protection extremely difficult. We must understand that when reference to a flood of 100 year frequency is made, we are referring to an awesome event of catastropnic consequence. In a flood of 100 year frequency, the Skagit River is discharging large amounts of water at such a rapid rate and force it becomes impossible to predict the results with any certainty except that they will be bad.

It has been the feeling that the effect of a flood of 100 year frequency would be so great the additional backwater caused by the Levee Project would be of small consequence. The lesser flood such as occurred in 1951 and 1975 would backwater into the Nookachamps to a considerably less amount. As stated above, we are proposing a more indepth study of this area to establish as accurately as possible the effect of these lesser floods. This information will be available and acted upon prior to proceeding with the levee project.

We trust we have answered some of your questions. Should we be of further service, please feel free to contact us.

Respectfully,

W. EUGENE SAMPLEY, P. E.
Public Works Director

By: Donald E. Nelson

DONALD E. NELSON
Flood Control Manager

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Encl.