FLOOD CONTROL AND OTHER IMPROVEMENTS
SKAGIT RIVER, WASHINGTON

RECORD OF PUBLIC HEARING
HELD AT MOUNT VERNON, WASHINGTON
8 FEBRUARY 1961

U.S. ARMY ENGINEER DISTRICT, SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON
TESTIMONY RELATING

TO

PUBLIC HEARING AT MOUNT VERNON, WASHINGTON, 8 FEBRUARY 1961

ON

FLOOD CONTROL AND OTHER IMPROVEMENTS IN SKAGIT RIVER BASIN
## CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hearing Notice</td>
<td>ii</td>
</tr>
<tr>
<td>Summary of Public Hearing</td>
<td>1</td>
</tr>
<tr>
<td>Transcript of Proceedings</td>
<td>5</td>
</tr>
<tr>
<td>Persons attending hearing</td>
<td>109</td>
</tr>
<tr>
<td>Correspondence received pertaining to hearing, but not presented orally:</td>
<td></td>
</tr>
<tr>
<td>Exhibit 22 - Statement by City of Mount Vernon</td>
<td>119</td>
</tr>
<tr>
<td>Exhibit 23 - Statement by City of Burlington</td>
<td>121</td>
</tr>
<tr>
<td>Exhibit 24 - Statement by Diking District No. 15</td>
<td>123</td>
</tr>
<tr>
<td>Exhibit 25 - Statement by Drainage District No. 17</td>
<td>124</td>
</tr>
<tr>
<td>Exhibit 26 - Statement by Skagit County Fire Commissioners Association</td>
<td>126</td>
</tr>
<tr>
<td>Exhibit 27 - Statement by Skagit County Strawberry Association</td>
<td>127</td>
</tr>
<tr>
<td>Exhibit 28 - Statement by Skagit Valley Telephone Company</td>
<td>129</td>
</tr>
<tr>
<td>Exhibit 29 - Statement by U.S. Fish and Wildlife Service</td>
<td>131</td>
</tr>
<tr>
<td>Exhibit 30 - Statement by Congressman Jack Westland</td>
<td>133</td>
</tr>
</tbody>
</table>

Note: Unpublished appendix to this report contains written exhibits 1 through 21 which have been read into the record.
NOTICE OF PUBLIC HEARING ON FLOOD CONTROL
SKAGIT RIVER BASIN, WASHINGTON

Pursuant to resolutions adopted 4 January 1960 by the Committee on Public Works of the United States Senate and 9 June 1960 by the Committee on Public Works of the House of Representatives, the District Engineer has been directed to review the reports of the Chief of Engineers on Skagit River, Washington, transmitted to Congress on 14 September 1933, and other reports with a view to determining whether any modification of the recommendations contained therein is desirable at the present time, with particular reference to provision of flood control and allied improvements in the basin.

In order that the required report may fully cover the matter, a Public Hearing will be held in the Skagit County Court House, Mt. Vernon, Washington, on 8 February 1961 at 10 a.m.

All interested parties are invited to be present or represented at the above time and place, including representatives of Federal, State, County and municipal agencies, and those of commercial, industrial, civic, highway, railroad, and flood control interests, and property owners concerned. They will be afforded full opportunity to express their views concerning the character and extent of improvements desired and the need and advisability of its execution. Previous reports considered the need for: (a) channel dredging; (b) diversion into Padilla Bay; (c) dikes at various locations; (d) storage in the Nookachamps Creek area; and (e) several storage and multiple-purpose projects on the main stem and tributaries. Sponsors of improvements are urged to present pertinent factual material bearing upon any plan of improvement desired, and to give detail supporting data. Opposing interests are also urged to state the reasons for their positions. In order to determine the necessity or desirability of the improvements, data covering the following are requested: (a) amount and extent of damages caused by floods since 1950; (b) methods of controlling floods; and (c) nature and extent of local cooperation that can be expected.

Oral statements will be heard but for accuracy of record all important facts and arguments should be submitted in writing, in quadruplicate, as the records of the hearing will be forwarded for consideration by the Secretary of the Army. Written statements may be handed to the undersigned at the hearing or mailed to him beforehand.

Please bring the foregoing to the attention of persons known to you to be interested in the matter.

R. P. Young
Colonel, Corps of Engineers
District Engineer
SUMMARY OF PUBLIC HEARING ON FLOOD CONTROL FOR THE SKAGIT RIVER BASIN, 8 FEBRUARY 1961

A public hearing was held in Mount Vernon, Washington on 8 February 1961. The purpose of this hearing was to obtain the views of interested parties on methods of providing flood protection and allied improvements for the Skagit River Basin. There were about 154 persons in attendance, including interested federal, state and local agencies, landowners, businessmen, sportsmen, and farmers. Oral testimony was presented by 27 persons and 30 written statements were received.

In the opening statement Colonel R. P. Young, Seattle District Engineer, referred to authorizing resolutions by the United States Senate and House of Representatives which directed the Corps of Engineers to review the report of the Chief of Engineers on the Skagit River, House Document No. 187, 73rd Congress, 2nd Session, to determine whether any modifications of the recommendations made in the report are desirable with respect to flood control and allied improvements in the basin. Colonel Young explained that the Corps of Engineers was particularly interested in securing information on the nature and scope of flood control problems and the improvements desired.

Potential flood damages were the subject of several prepared statements presented orally or submitted as exhibits for the record. Values quoted in all instances were in relation to a flood of magnitude equal to that which occurred in 1951 or greater.
Mr. Anton Harms, representing the U.S. Soil Conservation Service, estimated that the land damage as a result of the 1951 flood was about $818,000. He also indicated that a greater flood would have put portions of the croplands out of production as long as five years because of resulting breaches of salt water dikes.

Mr. Harvey Benson, Public Utility Commissioner of Skagit County, and Mr. Archie French, City Manager, City of Anacortes, stated that a flood overtopping levees in the Burlington-Mount Vernon vicinity would probably result in complete disruption of the water distribution systems for the entire western portion of Skagit County, which in turn would force closing down of the major industries in the area.

Mr. Herman Hanson, Superintendent of Public Works for the City of Mount Vernon, submitted exhibit 22, which outlined probable damages for that city in the event of major flooding. Values listed included property damage of $3,600,000, loss of business of $2,400,000, and crash program city costs of $200,000.

Mr. Frank Screws, City Supervisor, City of Burlington, submitted exhibit 23, which outlined existing facilities which could be seriously affected in the event of levees overtopping and flooding Burlington. Some of the more outstanding values are: private real property $10,500,000; municipal real property $225,000; sewer systems $518,000; and personal property $1,700,000.

Mr. Roy F. Magnuson, representing the Washington State Highway Department, outlined some expenses incurred in bringing existing roads up to a sufficient elevation to withstand small floods.

Other groups and associations which presented data on potential flood damages...
included: The Skagit County Dairymen's Association; the Skagit County Agricultural Council; the Skagit County Strawberry Association; the public school systems and several diking and drainage districts.

The principal methods desired for preventing flood damages discussed at the hearing, were by storage reservoirs, levee improvements, river diversion and channel dredging.

a. Storage. Potential storage sites discussed included Faber and Copper Creek on the main stem, lower Sauk, upper Sauk, Suiattle and White Chuck Rivers tributary to the Sauk River; the Cascade on the Cascade River; and other headwater sites. The Washington State Departments of Game and Fisheries opposed the development of upstream storage as a means of flood prevention, with the exception of possibly some headwater sites. This opposition was based on the grounds that development of storage sites would adversely effect rearing and spawning areas for anadromous fish. Development of the Faber Dam site, located near Concrete, Washington, was opposed by the State Departments of Fisheries and Game; the Concrete Herald and other residents of the area. Little support was offered for potential storage sites.

b. Levee improvement. Levee improvement in the delta area with no major increases in existing heights was favored by the State Department of Game, the Skagit County Engineer, and representatives of several diking districts. The possibility of substantially increasing existing levee heights was opposed by the County Engineer and representatives of diking district No. 3 because of the hazard of seepage and blowout conditions through porous foundation materials.
c. Diversion. The authorized Avon Bypass to divert a portion of Skagit River flood water to Padilla Bay was favored by the Washington State Departments of Game and Fisheries and the Skagit County Engineer. The Bypass project was favored by the Departments of Game and Fisheries because it would have no effect on the existing Skagit River fishery resources. There was no opposition to the Avon Bypass expressed at this hearing.

d. Dredging. Widening and deepening of the Skagit River by dredging was favored by the Mount Vernon Chamber of Commerce as a method for flood control. Drainage District No. 17 favored flood control by deepening the South Fork of the Skagit River channel. Much of the support by these interests was on the basis that dredging for flood control would also provide navigation for transport of minerals and lumber products from the upper basin area to the Puget Sound. The Washington State Department of Game opposed dredging in the reach upstream from Mount Vernon on the grounds of adverse effects on spawning and rearing areas for game and anadromous fish. The Game Department did not express any opposition to dredging of the Skagit River downstream from Mount Vernon.

e. Miscellaneous. Other desired improvements for flood control in the lower Skagit River delta included increasing the flood flow area by relocation of the dike on Freshwater Slough, removal of an old Corps of Engineers navigation dam on Freshwater Slough, and removal of brush from the banks of the South Fork, Tom Moore Slough and Freshwater Slough.
IN THE MATTER OF:

UNITED STATES ARMY CORPS OF ENGINEERS

PUBLIC HEARING ON FLOOD CONTROL SKAGIT RIVER BASIN, WASHINGTON

TRANSCRIPT OF PROCEEDINGS

Place: Mt. Vernon, Wn.

Date: Wed., Feb. 8, 1961

Pages: ———
In the matter of:

PUBLIC HEARING ON FLOOD CONTROL,
SKAGIT RIVER BASIN, WASHINGTON

Skagit County Courthouse,
Mount Vernon, Washington,
Wednesday, February 8, 1961.

Pursuant to notice, the above hearing was commenced
at 10:00 o'clock a.m.

BEFORE:

COLONEL R. P. YOUNG, District Engineer
Corps of Engineers
Seattle District
Seattle 4, Washington

The following proceedings were had and testimony
given, to-wit:

CERTIFICATE

This is to certify that the attached proceeding before the United States
Army Corps of Engineers in the above-entitled matter were had as therein
appears, and that this is the original transcript thereof for the files
of the Seattle District Office.

William F. Miller - Official
Reporter

COUNT REPORTER
Seattle, Washington
# Testimony

**Opening Statement by Colonel R. P. Young**

**Statement by:**

<table>
<thead>
<tr>
<th>Name</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr. Archie French</td>
<td>10</td>
</tr>
<tr>
<td>Mr. Eugene Hopkins</td>
<td>12</td>
</tr>
<tr>
<td>Mr. Lowell R. Hughes</td>
<td>17</td>
</tr>
<tr>
<td>Mr. John H. Stevens</td>
<td>18</td>
</tr>
<tr>
<td>Mr. Harvey Benson</td>
<td>21</td>
</tr>
<tr>
<td>Mr. Fred J. Ovenell</td>
<td>23</td>
</tr>
<tr>
<td>Mr. Anton F. Harms</td>
<td>26</td>
</tr>
<tr>
<td>Mr. Floyd Nelson</td>
<td>33</td>
</tr>
<tr>
<td>Mr. Ralph W. Larson</td>
<td>33</td>
</tr>
<tr>
<td>Mr. Jess Knutzen</td>
<td>39</td>
</tr>
<tr>
<td>Mr. Leo E. Sullivan</td>
<td>41</td>
</tr>
<tr>
<td>Mr. Roy F. Magnuson</td>
<td>43</td>
</tr>
<tr>
<td>Mr. Don Bordner</td>
<td>44</td>
</tr>
<tr>
<td>Mr. Daniel Sundquist</td>
<td>45</td>
</tr>
<tr>
<td>Mr. Robert H. Schroeder</td>
<td>47</td>
</tr>
<tr>
<td>Mr. Frank Gilkey</td>
<td>54</td>
</tr>
<tr>
<td>Mr. Lloyd Johnson</td>
<td>58</td>
</tr>
<tr>
<td>Mr. Earl L. Hanson</td>
<td>65</td>
</tr>
<tr>
<td>Mr. George Dines</td>
<td>67</td>
</tr>
<tr>
<td>Mr. Lowell Peterson</td>
<td>69</td>
</tr>
<tr>
<td>Mr. Charles M. Dwelley</td>
<td>73</td>
</tr>
<tr>
<td>Mr. Ralph B. Anderson</td>
<td>77</td>
</tr>
<tr>
<td>Mr. Gregory Hastings</td>
<td>79</td>
</tr>
<tr>
<td>Honorable A. H. Ward</td>
<td>87</td>
</tr>
<tr>
<td>Mr. Jack Gray</td>
<td>90</td>
</tr>
<tr>
<td>Mr. James Wylie</td>
<td>90</td>
</tr>
<tr>
<td>Mr. Alvin B. Harris</td>
<td>93</td>
</tr>
<tr>
<td>Mr. Norman Mason</td>
<td>99</td>
</tr>
<tr>
<td>Mr. Edwin M. Barben</td>
<td>102</td>
</tr>
<tr>
<td>Mr. Lloyd H. Johnson</td>
<td>103</td>
</tr>
<tr>
<td>Congressman Jack Westland, letter</td>
<td>105</td>
</tr>
</tbody>
</table>

**Closing Statement by Colonel R. P. Young**

107
Ladies and gentlemen, we are here today because the
Public Works Committee of the United States Senate adopted a
resolution on the 4th of January, 1960, the Public Works
Committee of the House of Representatives adopted a similar
resolution on the 9th of June, 1960, directing that the Corps
of Engineers review the report of the Chief of Engineers on
the Skagit River which was transmitted to Congress on the 14th
of September, 1933, and other reports subsequently submitted,
with a view to determining whether any modification of the
recommendations made in those reports should be changed at
this time. I'd like to read you the resolution that was
passed since this is the legal basis for the study that will
be undertaken:

"Resolved by the Committee on Public Works
of the United States Senate and the House
of Representatives, That the Board of
Engineers for Rivers and Harbors be, and is
hereby requested to review the report on
Skagit River, Washington, published as House
Document numbered 187, 73rd Congress, 2nd
Session, and other reports, with a view to
determining whether any modification of the
recommendations contained therein is desirable at the present time, with particular reference to provision of flood control and allied improvements in the basin."

Now, this study directed by Congress to determine if flood control improvements on the Skagit River should be made at this time has been assigned to the Seattle District.

The purpose of our being here today in this public hearing is to learn as much as we can of your needs, desires and problems prior to undertaking this study. We want to have a frank and open discussion of all the views that might be presented here, both pro and con. We'd like to know if people oppose things as well as if they are in favor of them.

I am particularly interested in securing information on the nature and scope of the flood control improvements desired; the problems and difficulties encountered under the present conditions, and the proposed developments which would utilize the desired improvements that you would suggest. We'd like to obtain basic data for determining the dollar value of benefits that would accrue from any flood control improvements undertaken; and the extent of monetary or other cooperation that local interests can and are willing to provide for the proposed improvements. Many of the flood control projects undertaken do require local participation, a local sponsor, and we would like to have an indication of who might
be the sponsor and the extent to which they would consider supporting a flood control project.

Now, in giving your testimony today, I would like to get all of the testimony at the hearing unless you have some good reason for having to submit the data at a later date. But I would like to have it presented here so that all the people who are in attendance will know the view that have been entered into the record.

Now, in presenting testimony it may be that some of you will have a substantial amount of testimony in some detail or a very long letter. In that case, in the interest of not extending the meeting an unreasonable length, I'd appreciate having you brief down the contents of the letter which you are submitting to me in writing, give a brief synopsis of what is in the letter. If the testimony is not unusually long, feel free to read the letter verbatim.

I have received several letters in my office already and in the event testimony is not given which is contained in those letters, I will read them at a later time.

We have given out attendance cards, we want to have a complete record of who is in attendance. If you have not filled out a card, I would appreciate your doing it before you leave and be sure that we have it as a matter of record. On those cards there is a block to indicate whether or not you want to give testimony today. We are using those cards which
were marked "yes" to establish the people who we will call upon to speak.

I'd like to introduce at this time myself. I'm Colonel Young. I am the District Engineer of the Seattle District. I have with me four members of my staff; Mr. Joseph Buswell is here at the front and the other engineers are Mr. Pete Denny, Mr. Norman Arno and Mr. William Randall. These are all engineers involved, that will be directly involved, in the flood control study that we will undertake as soon as we hear the views and testimony expressed at this hearing.

We are recording all of the proceedings of the hearing verbatim. To assist the court reporter taking down the testimony, I'd like anyone who is speaking to come forward, stand in the vicinity of the court reporter so that I can hear him and so that the court reporter can hear him and so that those people assembled can hear him. If you don't have a voice that can carry, the loud speaker system is on and we will use it. When you come forward, please state your name and occupation and whom you represent.

The first speaker I would like to call upon is Mr. Archie French.

STATEMENT OF MR. ARCHIE FRENCH

MR. FRENCH: Colonel Young, gentlemen: My name is Archie French. I am city manager, representing the City of
Anacortes. My report concerns the difficulties that the City could expect to encounter in the event of a flood in the vicinity of Avon, which is the location of our water treatment plant and our water supply, which at the present time consists of rainy wells along the Skagit River, plus a supplemental supply taken directly from the River and filtered at our filter plant near Avon.

The total capacity of this plant is 20 million gallons per day of which the City of Anacortes uses 2 million gallons per day and the remainder is furnished to industries in the vicinity and the City of LaConner and the Naval Air Station at Whidbey Island.

The industries include Texaco Refinery, Shell Refinery, Coos Bay Pulp Company and other fishing industries in the City.

The City is presently under contract to furnish the complete water supply to all of these installations.

In the event of a flood of sufficient magnitude to overflow the levee at this point near Avon, our water system would be completely out of operation. That means that these industries would have no source of water supply, and I am told by their representatives that it would result in a shut-down of all the industries.

Extensive studies have been made for other possible sources of supply and these studies have indicated that there...
is no other source that would be economically feasible to
develop. Thank you.

COL. YOUNG: Mr. French, let me ask you a question.

When did you develop your -- when was this water supply
system completed?

MR. FRENCH: This supply system was completed in
1958.

COL. YOUNG: What was the previous source of supply,
of water supply, for Anacortes and industry in the area?

MR. FRENCH: This particular system to supply water
to this extent was completed in 1958. Immediately prior to
that, possibly some ten years, the River itself was the
source of supply, the Skagit River itself. And then prior to
that, the source was the lakes on Fidalgo Island. However,
the capacity of those lakes is only about 10% of what our
consumption is today.

COL. YOUNG: Thank you, Mr. French.

Next, I'd like to call on Mr. Eugene Hopkins.

STATEMENT OF MR. EUGENE HOPKINS (Refer to exhibit 2
in unpublished appendix)

Mr. Hopkins: I am Gene Hopkins, manager of the
Mount Vernon Chamber of Commerce. The problem of flood control
in this Skagit River Basin has come before this department on
numerous occasions in the past. There have been various
degrees of action to alleviate the threat with, of course,
equally varying results. At no time has there been a complete
solution from these actions. We are petitioning at this
time for a full, thorough study to flood control in this
Skagit River Basin, with the result that probably something
can be done in line with the economic feasibility.

Historically, this second largest river system in
the State of Washington has changed from a calm, meandering
stream to a raging torrent with little or no notice. As the
watershed becomes more denuded from logging operations,
these natural barriers to flooding that have existed in the
past become less and less a control factor.

In the past ten years, there has been relatively
mild weather with a fairly level flow of the river. The
losses from flood even during this time to inhabitants of the
Skagit Valley have been up in the hundreds of thousands of
dollars. Homes have been damaged during this time, crops lost,
payrolls reduced as a result of crop losses, runs of fish
were seriously depleted from spring and fall run-offs, and
the threat of floods is a serious psychological factor in
industrial growth of the community.

The greatest damage, possibly, would result in the
City of Mount Vernon if it were flooded. This nearly occurred
in 1951. Sand bags, three tiers high, lay on the main street
to prevent flooding. A conservative estimate at that time
placed the possible or the potential damage at something in
the neighborhood of two million dollars. This, of course,
would include damage to buildings, merchandise, utilities
and loss of business to the community.

Diking districts have spent upward to a million
dollars on dike constructions and repairs and revetments.
During the same period, the county and the state have
participated to a tune of some $500,000.

These efforts to control the river represent a
direct cost to our taxpaying community of something approxi-
mating $1,500,000. The results have been commendable, but
by no means total. Some diking districts are heavily in debt
to furnish the protection necessary to these rapidly growing
communities. As the demands of general growth increase, so
also does the cost factor to a point that an unendurable
burden is placed on the shoulders of the population of the
county.

This should be ample evidence of the fact that
the citizens of the community, the taxpaying community, have
put in $1,500,000 to try to control it, to try to help them-
selves. But due to the tremendous expenditure required for
complete flood control, we are going to need help; there is
no question about that.

Now, in this notice of hearing that the Corps of
Engineers sent out on January 6, 1961, there were several
possible answers suggested. We do not feel qualified to say
that any one solution is the total answer. We expect the
Engineers to provide this, they are the experts. We come here relying on your good judgment to furnish us with the relief from this menace that has been stifling the economic growth of the entire Basin.

It would, however, be unreasonable to appear here without some definite preference. The record will bear us out that the Mount Vernon Chamber of Commerce has frequently and emphatically suggested that a thorough dredging of the Skagit River would go far toward a solution to this problem. The silt built up at the mouth of the river continues at an alarming rate. The removal of these obstructions east to Concrete, Washington would do much to provide for free passage of water into Puget Sound.

There would be also another result: The removal of these obstructions would allow for an unrestricted use of this vital waterway for shallow draft barging of various materials to markets in a fashion that these communities had enjoyed prior to the big silt build-ups. The economic benefit of this unrestricted movement of river traffic is immeasurable, particularly when it is pointed out at this time that there is such a favorable differential between water freight rates and those of land-bound vehicles.

The proposal concerning the multi-purpose dams on the main stem or the tributaries is probably the most attractive of all. The greatest degree of protection exists
here from floods, either from the project I suggested or the multiple projects. The resulting economic benefits are equally attractive, particularly when further examination reveals a potential, tremendous need for processed water as our communities grow.

We should not, however, lose sight of the primary benefit that we are looking for: Flood Control.

Now, in direct answer to your question regarding the degree of local participation, we must point out the most striking evidence of our willingness is the amounts of money that have been spent by our Diking Districts and our County Commissioners and our State Government to control these problems.

We are vitally interested here in Mount Vernon and in this community. I am privileged to report this as spokesman of the largest business community in Skagit County, that we will support any program that will furnish an appreciable degree of flood control to this Skagit River Basin. We ask that the problem be approached objectively, never losing sight of the important point; that the threat of flood and the actual floods themselves are a creeping paralysis that threatens the economic lifeblood and the growth of the entire Skagit River Basin.

COL. YOUNG: Thank you, Mr. Hopkins. Let me ask you before you leave: Who would be the logical sponsor of the
project, the group who would work with the Corps of Engineers
and the Federal Government in carrying out the responsibilities
that local interests will have in this, if a project is
authorized, and in assisting the study?

MR. HOPKINS: I would imagine you are going to hear
further from the Skagit County Development Association. Of
course, the chambers of commerce, that is, speaking for the
Mount Vernon Chamber of Commerce, we are tremendously inter-
ested and we would give you whatever support and whatever
assistance we can. And, of course, in the final analysis,
when it comes to the money-raising, the taxing, ordinarily
the County Commissioners, of which I know there are two here,
we are dumping the load on their shoulders, when it gets to
taxes.

COL. YOUNG: All right. Thank you, Mr. Hopkins.

MR. HOPKINS: Thank you.

COL. YOUNG: Next, I would like to call on Mr.
Lowell R. Hughes.

STATEMENT OF MR. LOWELL R. HUGHES

Mr. Hughes: My name is Lowell R. Hughes, address
Route 6, Mount Vernon. I represent just myself; I mean, I am
a private citizen, a farmer.

I have been interested in the study to be conducted
by the Army Engineers and my statement really is in the form of
We have had different solutions offered to the Valley here in past study; for instance, the Avon cut-off and the Faber dam, both of which seemed to be not feasible, economically. And I have wondered if, in this new study, if we will have a study of the upper parts of the Rivers, upstream on the Swat tle and on the Sauk, with an idea in mind of maybe a series of small dams that we could finance would help to alleviate our problem by holding back a little here and a little there and keeping the peaks of the different branches of the Skagit from hitting at the same time at Concrete. And I am just asking if this study will be far enough upstream to where we might find sites where something like that could be done. That is my question.

COL. YOUNG: Thank you, Mr. Hughes. I'll answer your question for you: Yes, we'll make a thorough study of all possible flood control projects, upstream and downstream.

MR. HUGHES: Thank you.

COL. YOUNG: Next, I would like to call on Mr. John H. Stevens.

STATEMENT OF MR. JOHN H. STEVENS  
(Refer to exhibit 3 in unpublished appendix)

MR. STEVENS: I am John H. Stevens, superintendent of Burlington-Edison School District No. 100.

My testimony is not particularly in favor of or in
opposition to any part of the flood control but is a report on the potential losses to the taxpayers who are the actual owners of the school district property in our District.

Summarizing rather quickly the school buildings and the equipment therein, that part of it which is insurable value according to our School District insurance agent is currently $2,466,859.35. To this should be added the current project on which we opened bids January 30th of this year for an additional building, the West View Elementary School, the cost of which will be $142,500.00 and the equipping of which we estimate as an additional $10,000.00.

These are buildings and equipment relatively fixed which could not be removed from the pathway of the flood.

In addition, we have a fleet of school buses and other vehicles, the total valuation of which in original acquisition cost $160,000.00, and current depreciated value estimated at about $53,000.00.

The other factor that is a potential expense and loss to the taxpayers in Burlington-Edison School District would be that in lost revenues and the on-going operating costs of operating our School District. This is a little complex. If we are closed for flood or other reason, we may make up the time; but if we do, we have certain employees whose salaries would naturally be extended. We have certain fixed operating expenses.
The current budget for Burlington-Edison School District this year is $817,500.00. This is money which can be thought of in several ways, but basically, this is a cost which spread over the entire year actually goes to educate the youngsters for 180 days out of the year. If you divide $800,000.00 of that, leaving some to be considered the odd part of it for projects that are improvements and that sort of thing, take an $800,000.00 figure, divide it by 180, the daily operating costs are $4,444.44. Or if you take the 36 weeks of school and think of them as seven-day weeks, you would have 252 days and the cost would still be $3,178.57. And these costs would go on during the school year, whether we have classes in operation or not. This is in addition to the potential loss of building in case of flood.

In the matter of the buildings, you probably could exclude from that valuation a bus shed located in Alger which is above most potential flood levels, its valuation $5,100.00. And we have a television translator station located on Burlington Hill. The valuation there of that equipment is $6,800.00, and it is above any flood level. The only possible damage there would be a prolonged power shut-off which might result in damage to the electronic equipment because of no heat and consequent moisture damage.

COL. YOUNG: Thank you, Mr. Stevens.

Next, I would like to call on Mr. Harvey Benson.
STATEMENT OF MR. HARVEY BENSON (Refer to exhibit 4 in unpublished appendix)

MR. BENSON: My name is Harvey Benson. I am a Public Utility Commissioner of Skagit County.

Our Public Utility District operates and serves some 7500 domestic, commercial and industrial customers in Central Skagit County. Included are the residents of Mount Vernon, Burlington, Sedro-Woolley and the rural areas stretching from La Conner to Samish Island and eastward to an area north of Northern State Hospital. The service area comprises approximately 75 square miles within the flood plain which is served by nearly 200 miles of water lines.

The total depreciated plant value is approximately 3 million dollars, of which 1-1/4 million is located in the flood plain of the Skagit River.

At the present time, half of the total gallonage needed to meet the system's requirements is supplied from gravity sources, the transmission of which passes through the flood plain. Present programming will, in 1962, provide additional transmission facilities which will pass also through the flood plain, at which time approximately 90% of the system's normal needs will be supplied from gravity.

All of the District's stand-by facilities, except the river pumping plant, are also located in the flood plain. These consist of the 5-million gallon per day Ranney Well at the Northwest Mount Vernon city limits and the 1-million
gallon per day well in southeast Sedro-Woolley.

The February 1951 flood was not considered to be of seriously damaging proportions, yet the over-flowing waters in the Sterling area washed out our main 14-inch transmission line that served Burlington and Mount Vernon, interrupting that service. I might say that that break in the river was very extensive but it only took out a very small portion of our line and we were able to get it back into service within about 24 hours. But had it taken out a greater section of line which could have easily happened, even with that same amount of flood waters, it could have been serious because I don't think we would have enough of that type of pipe in our inventory to get immediately onto the job, it would require some, probably, 36 to 48 hours before we could get it back into service. That would have meant something like 1,500 people that would have been out of water during that period of time. It isn't a very healthy thing from our point of view, we have the responsibility of seeing that the people get their water, it is our job to do it, and not be able to protect ourselves from this type of a situation.

I think I've just about covered all of the pertinent things in this written report and included in it, of course, is a map of the flood plain and also the area that's served and it shows our water lines. And you have copies of those reports. Here is an extra one if you would like to have
COL. YOUNG: Thank you, Mr. Benson.

Next, I would like to call on Mr. Fred J. Ovenell.

STATEMENT OF MR. FRED J. OVENELL

MR. OVENELL: Col. Young, ladies and gentlemen:
Mr. Hopkins made some remarks with respect to the possible future need for an additional water supply here in this area; and I have a few statements to make that may help to complement his statements in respect to that.

Mr. Benson has commented on the damages that would result to the District’s water facilities as a result of a major flood. So, I am going to confine my remarks to this other phase, with just a few personal comments.

My name is Fred J. Ovenell, manager of the Skagit County Public Utility District, serving the water needs of some 7500 customers in and around the principal cities in this Valley. I am also a member of the Water Resources Advisory Committee to the Washington State Legislative Council’s Subcommittee on Natural Resources.

Ten years ago, I served with the Special Water Committee of the North Puget Sound Council which studied the historical and projected water requirements of this area.

A life-time resident of the area, I have personally witnessed the devastating effects of the major floods, most
severe of which occurred forty or fifty years ago.

With the extensive developments and improvements which have taken place in our valley since then, I shudder to think of the havoc which a full-scale flood would cause today.

It is our hope that a comprehensive study of the basin will be made to ascertain what methods of flood control are feasible at this time. No alternative which has any possibility of achieving a favorable cost-benefit ratio should be omitted from this study.

From previous studies, it is assumed that consideration will be given to the practicability of storing flood waters. Such a project would need to be multi-purpose to be feasible.

It has been suggested that some idea of the potential need for water for municipal and industrial purposes would be helpful to the Corps of Army Engineers. In my written submitted statement I have attached two graphs. The first graph attached serves to illustrate the rate of growth expected in the United States, the Pacific Northwest and the State of Washington. These, incidentally, were developed by a special committee set up by the Water Resources Advisory Committee here in the State and are not my own figures, but they have been carefully arrived at by reviewing information submitted to the Senate Select Committee and other groups here in the recent past.
This graph, however, does not reflect industrial usage which is thought to possibly triple in the next twenty years.

The second graph shows the trend in water use established in our county during the past decade. It includes industrial utilization. I might say here that the combined usage here in the county, when we were making this study along in 1950 and 1951 for the North Puget Sound Council, the peak usages then were about in the neighborhood of 9 million gallons per day.

Mr. French who was here previously indicated that their peak usage was in the vicinity of 20 million gallons per day, and the peak usage of the Public Utility District is now about 10 million gallons per day. So, you can see that actually the total peak water usage here by the two principal water utilities in the county have approximately tripled in the last ten years.

The above-mentioned graphs are based on historical information. There are many who believe they are too conservative as a basis for forecasting.

In 1900 the country used 40 billion gallons per day. Current usage is 240 billion per day. United States Geological Survey Engineers estimate 600 billion gallons per day will be needed 1980.

Since many areas of the country are finding it
increasingly difficult and expensive to augment their water supplies, it is likely that heavy water-using industries will be compelled in the future to locate where water is more readily available.

If, as a result of a multi-purpose development, suitable water supplies could be had at sufficient elevation, the two sizeable distributors in the area, the City of Anacortes and the Public Utility District, could work out the problems of transmission to the load centers whenever a reasonable demand developed.

COL. YOUNG: Thank you, Mr. Ovenell.

Next, I would like to call Mr. Anton F. Harms.

(Refer to Exhibit 6 in unpublished appendix)

STATEMENT OF MR. ANTON F. HARMS

MR. HARMS: My name is Anton F. Harms. I am presently the Work Unit Conservationist with the Soil Conservation Service of the United States Department of Agriculture here in Mount Vernon.

My work primarily is in Skagit County and in doing things that in the opinion of the Skagit Soil Conservation District Supervisors are important. And I might say I am appearing here at the request of Floyd Nelson who is presently Chairman of the Board of Supervisors of the Skagit District, and my remarks or the things I have written will be transmitted to you through him. Briefly, those things are this:
In the first place I might say that the Skagit District has been in operation here since 1942. Now, during the years since 1942, we have had, to my knowledge, eight or more floods which inundated substantial areas of our Skagit County farmlands. Those floods occurred in January, February, May, October and November. I mention this because when the flood occurs has a lot to do with the damage to the crops with which farmers are concerned. A flood during the dormant growing season is not as serious as one in May which might inundate a field of strawberries that are all ready to be harvested.

The floods in November of '49 and February of '51 and in October of 1955 broke through the dikes and inundated substantial areas of the lower Skagit delta. None of these floods, however, approached the volume of the 1909 and 1921 floods.

Then I have made a particular record of the 1951 flood which is during this past ten years in which you are particularly interested; and I find that losses were involved in the following categories:

1. There was serious erosion of top soil.
2. Deposition of coarse sand over otherwise high quality farmland.
3. Logging debris was deposited on the land.
4. There was substantial damage to established
drainage systems.

5. There was loss of farm production.

6. Damage to farmsteads and residential property.

7. Damage to livestock through death or lost production.

8. Damage to feed supplies; and, of course,

9. Damage to communications, roads, power, telephone, and so forth.

At the conclusion of this 1951, February 1951 flood, our technicians estimated that the land damage was $818,000.00 or thereabouts, and I have a copy of a breakdown on that which I will include in this report.

Following and during the flood, I documented some of the types of damage photographically and made a report in May of '51. This photographic report -- and I am having additional copies of that reproduced to be included and I think it shows, for instance, the water line out and loss to farm buildings, and other types of losses which will be discussed by others at this meeting.

Now, in some of the possible effects of a major flood which would top present Skagit River dikes would be the following, from the standpoint of agriculture particularly:

1. There would be damage to existing tile and open ditch drainage systems. Roughly I calculated that we presently have 165 miles or more of open ditches which make up the major
portion of our drainage system on our Skagit and Samish Flats. Now, these would vary in value from perhaps 30 cents a linear foot for a small farm ditch to $5.00 or more per linear foot on some of our larger district drainage canals.

Then, existing tile under-drainage would largely become ineffective as open ditch outlets became filled with sand and debris.

2. Major tidegate outlet structures to salt water would likely be destroyed as flood waters approached salt water. We experienced that in '51 as the outlet structure on Fir Island was completely washed out.

3. Salt water dikes would be broken by flood waters, permitting inundation of land by salt water during periods of high water. Land damaged by salt water inundation would require one to five or more years for restoration to full crop production.

4. Damage to farm buildings, especially to modern Grade A dairy set-ups, would be higher than in former floods because of mechanization, modern milking parlors and so forth.

5. Farm and urban residence losses would be high because of preponderance of modern one-story, low-level homes. We only need look west of Mount Vernon to recognize that as a probability.

6. Land damage caused by extensive sand deposition and channeling from erosion of top soil would permanently
reduce land value.

7. Livestock losses through death and/or loss of production could be expected to be extremely high. Inability to milk a high-producing dairy cow for 24 hours or more could result in disabling her for future milk production. Damage to stored livestock feed, including hay and silage, could be large.

8. Loss of crop production for one or more years on many thousands of acres could be expected. Extent of loss would depend on the time of year when the flood occurred.

9. Loss of processing crops would affect payrolls in all communities of the county and would also affect ability of processors to meet their commitments.

Another problem which has been of concern to the District since its formation in 1942 has been that of river bank erosion. This is largely in the areas above the Great Northern bridge and for the most part, remedial measures to this erosion have been too costly for individual farmers to meet. County and State Flood Control Funds have provided limited assistance in controlling river bank erosion.

A substantial part of the revetment work which was installed above Sedro-Woolley in the 1930's, I think, under the direction of the Corps and with WPA or other types of public works assistance has gone out.

As an indication of the extent of some of the

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channel changes, we use in connection with our work, aerial photos and we have flights covering the major areas of the Skagit and Skagit Delta for 1941, 1947 and 1956. Now, these show substantial channel changes with actual soil losses to the river during that fifteen-year period. We haven't computed the areage exactly but those photos do give us an indication of what is happening.

The other thing that we have observed is that small stream tributaries to the Skagit are contributing substantial amounts of sand, gravel and logging debris during periods of heavy rainfall. This small stream erosion is most severe on recently logged, non-restocked, steeply sloping areas. Substantial amounts of the finer materials from such stream erosion are carried downstream, contributing to the siltation problem at and near the mouth of the Skagit. This siltation creates an additional outlet problem for drainage districts.

Within the last four years, five of the drainage districts in Skagit County have installed pumps to supplement the gravity systems which they have been using for decades. Part of the reason for that was because of siltation of outlet in the bay.

Other considerations which I think are important: If dredging is considered as a partial solution to the flooding problem, studies should be made as to the desirability of bank revetment to reduce river bank erosion. Farmers,
individually, and through their drainage and diking districts, spend large sums for protecting their land and improving their drainage. A major flood would place an undue burden on these farmers.

Farmers have received some assistance through cost-sharing payments under the ACP program of the U. S. Department of Agriculture. I am sure that the farmers here who have carried on their drainage for the most part have used that assistance. Checking with the county office we find that something over $150,000.00 in cost-sharing funds have been spent through ACP here in the past ten years; and farmers, of course, have spent substantially more than that.

Then I have also included with this report, a photographic report which includes some 42 photos; and we have been talking mostly in Skagit County, but I note this '51 flood damage extends down to Stanwood because the Skagit waters did get down into Stanwood and a portion of Snohomish County. And that, of course, could very easily happen again. Damage also extends to the area between Concrete and Rockport and those are documented in connection with these pictures, and we plan to have copies of these in sufficient numbers to include with this report.

While I am here, there is also a statement by the Chairman of the Board of Supervisors, Mr. Floyd Nelson, and he has asked that I submit that with this, and I think it
would speak for itself.

COL. YOUNG: Thank you, Mr. Harms.

Mr. Nelson, do you still care to speak at this time? I have you listed on a card and if you wish to give testimony, why, you may give it now.

STATEMENT OF MR. FLOYD NELSON

MR. NELSON: My name is Floyd Nelson and I am a farmer on the LaConner flats, and I am Chairman of the Board of Supervisors of the Skagit Soil Conservation District. I think that Tony Harms has covered pretty well what I was supposed to state; and I think that is all I have to say.

COL. YOUNG: Thank you very much, Mr. Nelson. Mr. Ralph W. Larson. (Refer to exhibit 7 in unpublished appendix.)

STATEMENT OF RALPH W. LARSON

Mr. Larson: Colonel Young, ladies and gentlemen:
My name is Ralph W. Larson. I am a Fishery Management Coordinator with the Washington Department of Game. I am here speaking on behalf of Mr. John Biggs, our Director, who had a previous commitment and could not attend this hearing. The Department of Game is vitally interested, of course, in any plans for flood control that we may have in the Skagit River Basin. This basin is an extremely important
producer of game fish, game animals and game birds. Any proposed project that would affect these fish and wildlife resources adversely would also affect the economy of the Skagit River Basin, since this resource is an important contributor to the financial well-being of the area. This Department realizes, of course the need for flood control on many of our larger river systems, but we feel that the effect on our fish and game resources should be considered in the planning of these particular projects.

The Skagit River and its tributaries are the most important producers of winter-run steelhead in the entire State of Washington. The Skagit River itself has been the number one producer of winter steelhead for seven out of the last thirteen years, the number two producer for four of these years, and number three for two. No other stream in the State can equal this record.

The Skagit River system has produced a catch of as high as 23,000 winter-run steelhead in one season. The total number of steelhead produced by this river system in the past thirteen years represents 11.4% of the total production of the State, of which there are 140 streams which are open for steelhead fishing. It is obvious then, that this Skagit River system is extremely important.

In addition to being an excellent winter-run steelhead producers, the Skagit River system produces some
summer-run steelhead, dolly varden, and whitefish, and has
an excellent population of sea-run cutthroat.

The Skagit system provides an extensive contribution
to the game fish resources of the State and, therefore,
contributes significantly to the recreational and economic as
values of this area/well as the entire State of Washington.
Fishermen from all parts of the United States travel to this
area to fish for steelhead. Twelve professional guides from
the Skagit Basin furnish guide service to many of these
fishermen. The fishermen stay at the local motels and hotels,
eat at your local restaurants, buy gasoline at the local
stations, and spend money for fishing tackle. Local fisher-
men buy their fishing tackle, gas, boats and motors here.

A report entitled "An Evaluation of Wildlife
Resources in the State of Washington" by Robert F. Wallace,
who is a Professor of Economics at Washington State University,
reported that expenditures made by sport fishermen averaged
$116.00 each in 1954. All of these expenditures, therefore,
influence the economy of this area. These monies assume even
greater importance when it is realized that they are spent
during the winter months which is the inactive period for
tourism. The Department feels, therefore, that any flood
control projects proposed should not be developed at the
expense of the game fish resources.

The Skagit River Basin produces a significant
contribution to the area and the State from its game animal
and game bird populations. The Basin has good populations
of both deer and game birds. Migratory waterfowl are also found
in abundance in the lower reaches of the Basin. Certain types
of flood control projects could prove detrimental to this
resource also.

Certain solutions have been proposed in the past to
eliminate the flood control problems of the Skagit River.
Proposals have been made for channel dredging, your dike
improvements, flood water by-pass channels, and storage projects
on the main river and tributaries.

Channel dredging to Mount Vernon and dike improve-
ment proposals, if conducted under certain restrictions, would
cause minimal damages to the game fish and wildlife resources
of this area. Proposals to dredge upstream as far as Concrete
would cause damage to spawning areas utilized by anadromous game
fish and also would reduce the fishing areas utilized by
those in pursuit of these fish.

The proposed Avon-by-pass need not cause damages to
the fish and wildlife resources of the area. The possibility
of some fish being stranded in the by-pass after a high flow
has passed through the channel does exist, however, and some
type of salvage operation would probably be required after each
use.

Storage projects have also been discussed as possible
methods for controlling floods on the Skagit River and its
tributaries and they cause this Department grave concern.
Generally, any storage project constructed on the main Skagit
River would result in severe losses to the anadromous game
fish populations. Projects proposed for tributary streams
would also cause losses, the severity of which would be
determined by the location of the project, the actual project.

Some storage projects have already been proposed and
a brief discussion of each is made in this statement.
First, we have the Faber dam site. The construction
of a dam at the Faber site would virtually eliminate the
anadromous game fish populations of the Skagit River System.
This project would inundate the majority of the spawning and
rearing area. Upstream habitat remaining after construction
of the dam would be useless, since fish passage problems at
dams of the height proposed at Faber have not been solved.
This Department is, therefore, strongly opposed to the
construction of any dam at the Faber site.

Second, we have the lower Sauk River site. The
construction of a dam at this site would cause serious damage
to anadromous game fish and game animals. The Sauk River is
the most important anadromous gamefish producer of the tri-
butaries to the Skagit River. Any dam in the lower Sauk River
would eliminate habitat area for these gamefish. The degree
of loss that would be sustained would be dependent upon the
height of the structure. Fish passage can be successfully provided at low dams, however, the problem, as I mentioned before, has not been resolved at high dams. In either case, damage to the fisheries resources would result and some type of artificial means of maintaining the existing runs would have to be undertaken to compensate for the elimination of the spawning and rearing areas.

The game animal and game bird populations of the area would suffer with the construction of any dam at the lower site. Development of adjacent areas for additional habitat to accommodate the displaced game animals and game birds would have to be provided.

The Upper Sauk River site is another one under consideration. The same problems that are found at the lower site would be true at the upper Sauk River site. The project would jeopardize or eliminate the populations of anadromous game fish that utilize the area above the dam; the degree of damage, of course, being determined by the height of the dam. The numbers of fish, game animals and game birds affected would be less than at the lower site, but the problem of maintaining the fish and wildlife populations is still present.

The Cascade site: This project would affect the anadromous game fish and the wildlife populations utilizing the Cascade River area. The numbers of fish and various species of wildlife affected would be less than at either of
the Sauk River sites, however. Some means of maintaining the existing fish and game populations would have to be undertaken if this project were constructed.

The Washington Department of Game, after carefully analyzing the proposed methods of flood control for the Skagit River Basin, would desire to offer no objections to the dredging of the Skagit River to Mount Vernon, improvement of dikes, or the Avon-by-pass. We would object most strenuously to the proposed dams at Faber and on the lower Sauk River. The dams at the Upper Sauk River site and the Cascade River site would cause substantial fish and wildlife losses, but would not be as damaging. We would also be quite concerned with the channel dredging to Concrete.

COL. YOUNG: Thank you, Mr. Larson.

Mr. Jess Knutzen.

(Refer to exhibit 8 in unpublished appendix)

STATEMENT OF MR. JESS KNUTZEN

MR. KNUTSON: I am Jess Knutzen, farmer and life-long resident of this area. I am also one of the Soil Conservation District Supervisors, a member of the County ASC Office, Drainage Commissioner in my district in which I live. I speak to you, however, today as President of the Skagit County Farmers Council. Many of the things that I would have to say have been repeated here today, however.
I believe that since last survey has been made, land and building values have continued to rise at a rapid pace. Cropping systems have changed from a grass and cereal system to greater emphasis towards high cost-high value crops; crops such as strawberries, cucumbers, broccoli, cauliflower, carrots, potatoes, processing peas and others.

Because of these changes in our cropping system, much more of the land in the flood plain does not presently have winter cover. Because of this, should we have a serious flood, we would, of course, run into a far greater erosion problem than has existed prior to this time.

The many miles of open and closed drainage ditches have been constructed in the past number of years. In our own particular drainage district, we have spent a considerable sum of money on cleaning out and making repairs that would be seriously damaged in case of high water or flooding.

Of course, many residents and businesses and industrial facilities have been constructed within the flood plain in recent years. These facilities, of course, would experience a great loss from any flood.

It is also our opinion that because of the frequency of flooding in some of the areas in the county, and the threats of floods in other parts of our county, our county is not presently experiencing the growth that it should and could have. Farmers, for instance, in some areas are not planting...
high value crops because of the threat of floods; and many businesses and industries are a little reluctant to build in our flood plain. This becomes especially important when we realize that we are in a high unemployment area.

We could mention the effects on transportation, sanitation and some of these other things, but they have been pretty well covered.

In conclusion, we believe that eventually, if not now, changes in our area will dictate that adequate flood control be provided for. It is our opinion that any delay would only complicate a sound choice as to the methods used and the cost of such structures.

COL. YOUNG: Thank you, Mr. Knutson.

Mr. Leo E. Sullivan.

(Refer to exhibit 9 on unpublished appendix)

STATEMENT OF MR. LEO E. SULLIVAN

MR. SULLIVAN: My name is Leo Sullivan and I represent the Skagit County Development Association.

The extreme necessity to expand our payrolls has caused the Skagit County Development Association to put forth every effort to attract industry into the Skagit Valley. On learning of the potentials and the many untapped resources of the Skagit River Basin, various industries have investigated site possibilities but were forced to look elsewhere when they discovered that a flood might occur. One industry in
particular asked for a site at least ten feet above flood stage. Such a site within reasonable distance to utilities and the necessary transportation facilities was not to be found. One possible site selected met all requirements to a high degree but did not come up to the ten-foot flood requirement.

The Skagit River, our State's second largest, flows through one of our nation's richest agricultural valleys and its tributaries possess many rich resources; but in this growth period the future economy of the Skagit Valley rests entirely on controlling our river.

If it is at all feasible to work in with any flood control program, we are very much interested in having the Skagit River dredged for six-foot shallow draft barge from the City of Concrete to the Sound. This would not only help many of our local industries, but it would also attract many other industries to our valley. We have at this time two companies making mineral explorations that are very desirous for water transportation. One of the companies would export their materials to foreign ports and they could be highly competitive if they could apply water rates at or near the source of their operation.

In our continuous efforts to strengthen the economy of our valley, we find our greatest potential rests in the development of the Skagit River. We urge your help and
support for a flood control program that would be feasible
and practical to the extent that it not damage too many of the
fine things we now possess.

COL. YOUNG: Thank you, Mr. Sullivan.

Mr. Roy F. Magnuson.

STATEMENT OF MR. ROY F. MAGNUSON

MR. MAGNUSON: Col. Young, I am Roy Magnuson,
representing the State Highway Department out of Seattle.

I just have a very brief statement to make. The
Highway Department, of course, is extremely interested in any
possible flood control project on the Skagit that could prove
financially feasible. We want to make the services of our
office available to the Corps in developing all costs of
present highways and highways to be constructed in the near
future.

As a matter of possible interest, we have developed
a few costs on two recently constructed sections of highway
to indicate the extra expense the people of the State of
Washington have had to go to in order to bring these highways
up out of minor flood stages.

On the short section of highway from Conway Junction
to Hickock Road, there was an additional $200,000.00 expended
to bring the scale up above minor flood stage. This, of
course, would not bring it up out of the elevation of the 1951
flood.

Also, on the short section of Howey Road to Sedro Woolley, on Highway 1-A, there is a matter of $200,000.00 some odd dollars in there above and beyond what would have had to been expended if we could have been assured of no flooding in the Skagit River.

Now, in working with your Department on this study as well as on your study of the Snoqualmie, Snohomish and Skykomish River Valleys, we would like to have you designate some person from your office we could work with in order to develop these figures and in a manner which you can work with.

COL. YOUNG: Thank you for the offer, Mr. Magnuson.

We will designate someone, the project engineer, to work directly with you. I am sure those figures and your assistance will be of great help to us.

MR. MAGNUSON: Thank you.

Next, Mr. Don Bordner.

(Refer to exhibit 10 in unpublished appendix)

STATEMENT OF MR. DON BORDNER

MR. BORDNER: My name is Don Bordner. I am President of the Skagit County Flood Control Council. I had just a statement -- or read a telegram here from Mr. Fred Martin who wanted it placed on the record. It says:

"Mr. Don Bordner, Chairman of the Skagit County Flood Control Council:
"Deeply regret the press of legislative matters prevents my attending the flood control hearing. The proposal to build flood control dam at Faber is positively ridiculous; to inundate and wipe out the entire upper Skagit Valley is so preposterous that I am amazed it should receive any consideration whatsoever. Flood control dams on Seuk, Suattle, Whitechuck and Cascade Rivers would have much merit. Suggest we explore the possibility of making the proposed City Light Dam at Copper Creek a dual-purpose power and flood control project. I feel sure that the dredging of the river to make it navigable for shallow draft vessels and barges would have much flood control value.

/s/ Fred J. Martin, Senator 40th District.

COL. YOUNG: Thank you, Mr. Bordner.

Next, Mr. Daniel Sundquist.

STATEMENT OF MR. DANIEL SUNDOQUIST (Refer to exhibit 11, 12 in unpublished appendix)

MR. SUNDOQUIST: I am Daniel Sundquist. I represent Dike District No. 3. I wish to submit a brief.

Briefly, it contains -- Dike District No. 3 is generally that described as that dike district from Mount

45,
Vernon to the Fisher Slough below Conway. It contains about 7500 acres.

During the last ten years we have done considerable dike improvement and rock revetment work. We have spent in the last ten years $439,000.00; and we have a dike that is adequate against a normal river. However, I don't think it is adequate for an unusual river height.

I would like to point out that I don't think it is advisable to continue to increase the height of our dikes, due to the underlying nature of the ground - sandy or porous material under the dikes.

I would like to point out a condition that exists in the vicinity of Conway down to and below Fisher Slough. I refer to that in my report as Steamboat Slough which probably could be called the mainstem of the south fork below Conway.

During the past ten years to fifteen years, it seems as though the river level at Fisher Slough has become increasingly higher compared to the river levels at Mount Vernon under the same conditions. I think this is due to the silting in of the lower river and Skagit Bay; and also I think it is due to the fact there have been some dams placed in the tributaries of Steamboat Slough.

I think something could be done there to relieve this situation because it has been getting increasingly worse each year. And, certainly, we endorse a thorough study of the
Skagit to the end that we get a practical solution.

Our Dike District is certainly willing to cooperate the best we can.

That is about all that I have to report on that, sir.

COL. YOUNG: Thank you, Mr. Sundquist.

MR. SUNDQUIST: With your permission, I would like to also present a brief from the Skagit County Dairymen's Association.

I am President of the Board of Directors and in this brief I point out that dairying in the Skagit Valley has changed a great deal in the past ten years. It has become more of a specialized business on the farms, which has required a larger investment in equipment and facilities for handling and hauling. In the event of a major flooding of the area, it almost becomes impossible to handle milk today like we do in tank trucks. And, certainly, we endorse a study of the river be made and some practical solution.

COL. YOUNG: Thank you, Mr. Sundquist.

Next, Mr. Bert Beeks.

(Refer to exhibit 13 in unpublished appendix)

STATEMENT OF ROBERT H. SCHROEDER

MR. SCHROEDER: Col. Young, fellow taxpayers, ladies and gentlemen: My name is Bob Schroeder. In this calling of Mr. Beeks, I have all the papers on this, I have presented our briefs, they are in.
I am one of the Dike District Commissioners of Dike District No. 12, and I am the Secretary of same. I would like to give you a little of the history of Dike District No. 12.

In 1881, private dikes established as the first river protection located a distance of from five to six miles west of Skagit River in Sections 8, 17; 20, 29, 32, Twp. 34, Range 3. This was not successful because some of the property owners refused to pay their share of the costs. Those were dikes that were built at that time before there was any organization of diking districts. The reason it wasn't successful is there was no way of making your neighbor pay his share of the cost.

Then in 1895, the State law for the first time permitted formation of diking districts. Dike District No. 12 was built along the Skagit River beginning at Wiles Slouth just south of Avon, on the west side of the river, to Burlington, through Sections 4 and 5, Twp. 34, Range 3, following the high ground to connect with the Great Northern Railroad southeast of Burlington on Section 33, Twp. 35, Range 4; thence following the railroad grade to Sterling Dam.

Now, at that time, that was the extent, that was our first dike or second dike after the 1881 and then to 1895. Then in 1955, a new section of dike in the immediate vicinity of southeast Burlington was relocated. In order to give the
property north and east of this new area protection, it is going to be necessary to go on up the river to Sedro Woolley and Minkler Lake. The dike has been raised an over-all height of two feet for a distance of approximately nine miles. As they continue to build restrictions into the river below us, narrowing the stream flow, it will be necessary to raise the height of the dike.

In that area there are vast sewer installations along the river in recent years and they need protection not now available. The new Highway #99 will hold water in a pocket which will flood Burlington and all the area above it. They have choked off Gauge Slough with the new highway there and the water can't be released fast enough to leave it out.

The Board is of the opinion that the local people would be willing to contribute dollars towards a feasible project to eliminate any dangers from flood.

Now, in the period from 1950 to 1960, the District has had nineteen projects in which the State and the county participated with the District. In the meantime, I have found another one that was before those, making it twenty. Out of these projects, the total cost of $242,038.67, the State participated in that to the extent of $94,646.00 and the County, $34,495.00 and the District, $111,845.00.

Now, in the ten-year -- in ten-year periods from 1915 to 1919 is the last oldest records we have been able to
find out at that time, and the District spent that year
$37,597.00. From 1920 to 1929, $89,522.00. 1930 to 1939,
$72,765.00. From 1940 to 1949, $33,218.00 and from 1950 to
1959 of the District's own money, they spent $254,597.00
which was more money in that ten-year period than there was
in the preceding 35 years.

In the State's participation, the county participation
from 1950 -- total over-all period, they spent $616,841.00.
Our assessed valuation from 1917 to 1918 was $110,000.
In 1950, it had crawled up to $554,642.00. In 1959 we had
a valuation of $4,348,345.00.

Now, that may require a little explanation. When we
moved the dikes the last time up in the Burlington area, the
City of Burlington was annexed to the District; and when we
revamped our tax rolls, we found that we had several thousand
acres that had never been on the tax rolls that were already
in the District. Why they had been omitted, I don't know.

Now, we still have -- the Dike District protects --
we have better than 6,500 acres enjoying protection from Dike
District No. 12 without compensation to the District, includ-
ing the town of La Conner, approximately an over-all value in
excess of a million dollars which is about a fourth of the
valuation that is being protected by Dike District No. 12.

In Dike District No. 12 at the present time on our
tax rolls, there is about 18,400 acres.
I have here a few notes of the La Conner Community Development Study of 1956 sponsored by the University of Washington:

Investigation of the Skagit River flood problem is one problem upon which farmers and townspeople alike in our area can find a common ground. We have all lived with our Skagit River a long time and have often become complacent about the very real flood danger which exists. In some small way may this report help to show how our area must work to protect itself from the threat which does exist.

The development of this area has always depended upon diking and drainage which are to this day constant problems, since most of the flats are reclaimed from tule and tidelands. At first, each settler with the help of his neighbor built and repaired his own dikes using shovel and wheelbarrow. Despite the productivity of the Skagit Flats, farming on the flats was not without risks. In 1882, six feet of flood water inundated the land, damaging crops, and broke the dikes. But in spite of such setbacks, the Flats prospered during the next few years.

Again, during several consecutive years, flood ravaged the Flats. In 1886 the Skagit River overflowed and froze; and in 1887 a late spring freshet damaged crops. From 1892 to 1894 disastrous floods and high tides covered the land with great loss of both crops and stock. Times were
indeed hard and most of the farms were heavily mortgaged when
in November of 1896 still another flood occurred.

In periods of high water the Skagit would overflow
its banks, sending a flood of muddy water down over the
Flats, inundating farms and softening privately made earthen
dikes along the sloughs, as well as Padilla Bay on the north
and Skagit Bay at the south end. Repeated losses of
property and destruction of dikes happened so often that public
opinion was aroused and appropriations secured to begin
protective diking along the Skagit. An early attempt to
organize diking districts was unsuccessful because some owners
refused to pay their share of the costs.

Creating of State Diking Districts: The districts
were started by groups which petitioned the County Commissioners
for the formation of a diking district. The County Commissi-
oners acted only as an agent to see that the district was
legally set up. A board of commissioners was elected, the
organization was completed, and a tax levied. The diking
district, commissioners have complete authority and control
to see that the work is done, mainly by contract, since the
district seldom owns any equipment. Construction and mainten-
ance costs are met by assessments and collected by the county.

The engineers have established intervals at which
time we may expect the various floods. We may expect a 1951
type of flood of approximately 145,000 second feet at Mount
Vernon, about once every sixteen years.

The 1909 flood of 195,000 second feet at Mount Vernon we may expect every 50 years, and the 1949 size crest, 112,000 second feet, every six or seven years. It is the opinion of former Skagit County engineers, and the Corps of Engineers that it is the 1909 flood crest that we should prepare for. In other words, river diking and control work should be based on an assumption that such an amount of water must be handled.

In 1909, 1917 and 1921 floods all caused considerable damage in the Skagit Flats area. There were breaks in the River dikes at Avon and near the Harmony School and flooding over almost the whole area. There were also very serious breaks by flood waters into Swinomish Channel at several places with loss of farm land and crops from the salt water coming in. La Conner and Burlington proper were flooded.

More recent changes: If the 1909 crest size is what we must prepare for, it is vital that the community find out if in fact it is prepared. Since over 35 years have past since a flood approaching this size has been experienced, we might expect certain changes in conditions to help or handicap our ability to meet such a crest.

The considerable dam system on the headwaters of the Skagit is one of these changes. Another important factor affecting our area is the efforts of those who live farther up
the Skagit River to avoid flood damage by increasing their protection. Burlington, Sedro Woolley, and other areas up river have grown enormously and have been looking to Skagit River control work. The net effect of this up-river work to us who are on the lower Skagit is that we must be prepared to handle more water than ever before, allowing dam protection of 10%.

Further, a flood in our area would be economically more serious and cause greater damage to property and danger to life than before. Population has grown and more businesses and homes would be damaged. Most new buildings in our area are built close to the ground without flood threat consideration. If flooding occurs, the water will have to build up to greater depths before the inevitable break-out to the Channel or Bay occurs.

COL. YOUNG: Thank you, Mr. Schroeder.

Next, Mr. Frank Gilkey.

(Refer to exhibit 14 in unpublished appendix)

MR. GILKEY: Colonel Young, gentlemen, ladies: I am County Engineer, as most of you know, of Skagit County and I have seen the Skagit River through a great many years. In fact, I remember the flood of 1897. And I have seen the floods and have been more closely connected with the floods since 1909. In 1917 I was with the County Engineer's office,
and in 1921, in both those floods and I saw the effect of then, which were bigger floods than we have had since that period.

You have had records pretty much in the past when you made your survey here a few years ago in regard to the river. But there has been quite a change in the industrial line in Skagit County since our major survey. We have all these industries that have come in here such as the oil companies. There have been the natural gas pipe lines put through our county, the trans-mountain pipe lines which are a crude oil going to our refineries; the Puget Sound Power & Light Company -- I don't know whether they will make a statement here today or not -- they have spent a tremendous amount of money in Skagit County in the last few years in industrial development.

The cities here, particularly Burlington and Mount Vernon, have spent hundreds of thousands of dollars here, I suppose well over a million dollars, in putting in sewer systems and so forth in the past ten years.

Now, in case of a flood, if it were to come into either of these cities here, you could practically say your sewer systems are ruined because you would have to clean those out. It would be quite a job. I don't think in many cases they would just have to be new transmission lines put in for sewage and so forth.
Our county roads, we have built better roads and up to higher standards in the last ten years. The State Highway has come in with a new highway which Mr. Magnuson spoke about through the State, through our county here. And those roads would all suffer considerably, I think, from any major flooding because they have built our roads up higher to get away from the sub-water levels, and in order to preserve our oiled surfaces to better extent.

Now, one thing I might mention and that is the sedimentation on the south fork of the Skagit River. The old south fork -- there were two channels down there, Steamboat Channel they called one in the early days, and the other one was called Tom Moore's Slough. They were the natural outlets to the Skagit River in the early days. In fact, the Corps of Engineers, through an Act of Congress, spent a considerable sum of money to keep traffic, to keep river traffic in the channels down there in years gone by. However, that traffic has ceased to exist and no upkeep or anything has been done or money spent to keep those channels open, and those channels have filled up.

I made a trip down there last year and on an eight-foot tide which was based on the tides at Seattle, Seattle tides -- our tides differ, as you know, in the different localities between Port Townsend and Seattle. On an eight-foot tide in Seattle, we got stuck with a boat that drew about
three feet of water coming up Steamboat Channel, trying to get up to Conway from down from the mouth of the River.

That is, we came in on one of the side sloughs down there and in coming up through, I believe just below Milltown, and coming up the river we actually touched bottom there and couldn't get through on an eight-foot tide with a boat that had a draft of three feet. So, you can see what the sedimentation of that river is -- what's taking place in sedimentation.

Now, I would like to -- I wanted to make these few statements here. I think we have -- I would say this on behalf of a delegation that we have from up the river. They have consulted me and mistakenly here, I figured this hearing would carry on over the noon period, or that is, beyond the noon period; and I asked them to be down here at 1:00 o'clock p.m. to present their case. That is a delegation from Concrete and up the river. I called them this morning and asked them to try to get down here sooner. Whether any of them got here or not, I'm not sure yet. But anyway, on behalf of those people up there, they are very much opposed. I can state this: The whole up-river country, from Concrete up, as I have found it, are very much opposed to any high dams in the Skagit River, particularly in the Skagit. They don't oppose, as Fred Martin stated in his wire here, they are not opposed probably
to going on the Sauk, some branches of the Sauk River, or
the upper reaches of the Sauk, or the Suiattle or the Cascade
River, to try to find some protection against a crest flood.
But they are very much opposed to putting in a multi-purpose
dam or to build a totally flood protective dam on the Skagit
River, presumably in thinking at the Faber site.

Now, they will probably be here, I see one of their
delегations here now; they will probably make that statement
themselves. I would like to have Mr. Johnson follow me, if
you would, because he is going to give the statement for us
that we have made particularly for our office.

COL. YOUNG: Thank you, Mr. Gilkey.
Mr. Lloyd Johnson?

STATEMENT OF MR. LLOYD JOHNSON

Mr. JOHNSON: I am Lloyd Johnson, Secretary-
Treasurer of the Skagit County Flood Control Council, and
Associate County Engineer and sometimes acting as flood
coordinator. I have made this report in general as the Skagit
County Engineer's view of the entire flood aspect, and I
would like to give you some of the details of the report.

A considerable change has taken place in Skagit
County during the last ten years.

Several large industries have moved in. The City of
Anacortes has installed a large water system which you have
heard about which supplies the Naval Air Station and various
industries. This system is subject to flooding with great
direct loss as well as huge indirect losses.

All of the utilities in Skagit County have made vast
expansions.

Skagit County's agriculture has come through a great
change, as has been stated previously; new crops have been
introduced; the investment of each farmer is now much greater.
The concentration of modern farming, together with mechanical
means introduced to perform these tasks, have made it next to
impossible to handle the cattle, fowl, crops and so forth as
previously done, during floods.

A flooding of the flood plain of the Skagit River
would incur direct and indirect losses to Fidalgo Island,
Whidbey Island, into Snohomish County and south through to
Stanwood.

Should the twelve-year weather cycle of 1909 to 1921
repeat itself, we would have three major floods with such
magnitude that even with the help of our present dams, the
floods would over-top all our diking systems.

Just briefly, in expenditures, in 1960, the Dike
District people taxed themselves and spent $124,496.00. Skagit
County had a river improvement budget of $59,000.00, and the
State of Washington contributed $33,000.00, of matching funds.
The total expenditure to date that I can find of all
these parties is $4,296,737.00 and this item does not include
Diking District expenditures before 1915 or the private
expenditures which were very vast.

In food damages, the sum of $111,330.00 was spent on
dike repairs in 1951. Skagit County Road Department spent
$40,000.00 in road repairs in the delta area in 1951. Skagit
County suffered damages of $79,500.00 to bridges in 1951 the
1951 flood.

In 1955, the Diking District spent $18,000.00,
Skagit County $1,000.00, the State of Washington $31,704.00.

Now, my expenses, of course, are concerned only with
dikes and roads and not farming expenses and losses which were
previously given.

The flood in 1959 was not very expensive for the
local people because the Corps, through their Public Law 99
replaced the dikes that were generally knocked out.

There appears to be a general feeling among the
people in our area that the diking system from the Great
Northern Railway bridge on to Mount Vernon should be built on
a uniform basis, that is, the weak areas should be strengthened,
and the narrow and close areas widened. There seems to be
a general preference not to increase the capacity of the river
channel to any extent. In other words, we have protection for
about 135,000 today. They feel that increasing that system
to 200,000 or some large amount would not be the practical
way to do it. They are not closing the door on it but there is a reluctance to accept that method of increased capacity.

Regarding the mouth of the south fork of the Skagit River: Mr. Gilkey touched on this problem but we, the Skagit County Flood Control Council, in cooperation with Mr. Veatch's office, are in process of establishing accurate river profiles on the Skagit River from the Great Northern Railway bridge to the mouths. We plan to get discharge information on the south fork of the Skagit River, which we will subtract from the discharge of the Skagit River at Riverside; this will establish the discharge of the North Fork of the Skagit River.

We also expect to take temporary discharge readings of Fresh Water Slough to get the distribution between the Fresh Water Slough and the south fork of the Skagit River below Fresh Water Slough.

The delta area of the south fork of the Skagit River has had a great deposit of sediment build-up in the last fifteen years, which now retards the flow of flood waters into the bay. The flood waters now want to run west from the south fork of the Skagit River and from the mouth of Fresh Water Slough, which is the shortest distance to deep water. We believe some of the troubles now existing at the mouth of the south fork can be traced to the previous work done by the Corps of Engineers in behalf of Navigation interests.
Our suggestion for the remedy consists of moving back the dike on the left bank of Fresh Water Slough, on the property of the Washington State Game Farm. The Game Department people have tentatively agreed to this plan and are very receptive to our suggestion.

A complete study of the area, with our discharge measurements and water profile, is needed to determine the position of this prospective new dike. This new dike could be constructed very economically if built at the proper season of the year.

We believe the removal of the dam on Fresh Water Slough, which was previously built by the Army Engineers, should be included in this project or at least considered, as this dam has a partial by-pass at its left end. The large amount of brush on the banks of the south fork, the Tom Moore Slough and Fresh Water Slough should be completely removed in this project. If this isn't in the realm of the Corps of Engineers, I am sure the local people will cooperate to that extent.

There have been many suggestions on the free flow of water of the north fork of the Skagit River, such as dredging and cutting a channel direct to deep water from the main channel.

It is our opinion that a good solution to this problem is to have a flood water flow channel direct from the
channel of the north fork of the Skagit River to deep water. This channel to be of a permanent design and constructed so that it will carry adequate flood waters, allowing it to flush itself with each high water. The channel will then still be the navigation channel. To make this plan more successful, the river restrictions just below Phil Summers boat house would have to be removed.

   Uniform capacity of the river channel. We believe the people prefer a diking system as above described, together with upstream storage or a by-pass that will give the maximum protection obtainable to the people of Skagit County within the limits of Federal possibilities.

According to the Corps of Engineer's 1952 report, a twenty-year frequency flood has a magnitude beyond the capacity of our diking system. If a flood of the 1909 or 1921 magnitude should occur, we would suffer great damage. The City of Burlington, West Mount Vernon and Riverside are unquestionably subject to a flood of this stage. The damages and possibility of loss of lives are very great. The complete operation of Skagit County, as well as Stanwood and the Whidbey Island Naval Station, would be brought to a stand-still without fire protection or access. The health problem would be terrific, sewers would be completely put out and so forth.

The 1952 report of the Skagit River by the Corps of
Engineers gave a cost benefit ratio of 1.19 for the Upper
Baker Dam. This dam was not approved for construction because
of the objections of the Fisheries.

This dam has now been constructed by private
interests for power use only, with no provision for flood
control other than voluntary efforts. There is no guarantee
of protection for the valley people, which this dam should
have contained.

Fishing interests have not stopped the construction
of the dam but the benefits originally proposed are not now
present for the people of Skagit County.

We hope that this lesson will not be duplicated on
other possible dam sites for flood control.

Our fathers and grandfathers built for floods,
provided a place for cattle, fowl and provisions above the
flood waters. Floods were then more or less expected. Now
a major flood would be a thing of great disaster. The sooner
we get our Skagit River under control, the better off we
will be and the least possible damage will occur in case of
flood conditions. Construction costs have continually
increased and shall most likely continue to increase.

We believe our people are willing to tax themselves
to provide their share of any feasible project. As one of
our Dike Commissioners stated, he would like to see this
problem solved in this generation rather than pass it on to
his son to solve.

This new "Proposed Flood Control Act", I believe it is now House Bill 30 before the Legislature, would give us the means by which it is possible to bond ourselves to secure the local participation funds.

We believe the people are willing to work with the Corps of Engineers in permanently controlling the Skagit River.

Time is of the essence for this control; and we hope a disaster is not necessary to secure our needed project.

COL. YOUNG: Thank you, Mr. Johnson.

Next, Mr. Earl L. Hanson.

(Refer to exhibits 15 and 16 unpublished appendix)

STATEMENT OF MR. EARL L. HANSON

MR. HANSON: I am Earl Hanson, Secretary of Dike District No. 17. I have prepared a short history of our District.

In the year of 1907, the farmers of the area north of Mount Vernon, to Riverside Ferry, and from the hill east of the Great Northern Railway to the Avon bend, formed this district to hold the Skagit River within bounds.

There were a number of floods prior to 1915 that did break the dike, and since that time there have been two floods in the area, those in the year of 1917 and 1921.

The first of these two breaks in the dike was on the Finstad place, located one mile west of the bridge. This
in turn caused the water to overflow the dike near Mount Vernon, washing out a large section of dike as it returned to the river. The cost of the dike repair at this time was $31,399.00.

On December 13, 1921, the high river broke through on the Cornish place one-fourth mile west of the bridge, with the water returning to the river in the same way as in the previous flood. The cost of this dike repair was $32,040.00.

The high water of 1934 caused a dike repair in the amount of $4,232.00.

Ten years ago this week the river was at flood stage, and the water topped our dike on the Clarence Hanson farm, in the north section of the District. With sand bags and the help of many people from near and far the dike was saved.

This river prompted a survey of the dike system, resulting in the raising of the dike to a uniform height, which in some instances -- the total dike is now eighteen inches above the 1951 level. The expenditures in this past ten years is $109,764.00.

We still have plans for more work within the District in the way of rock revetment, and we feel that we can hold the river if it doesn't get above the 1951 -- much above the 1951 level which was 147,000 cubic second feet of water.

It is my opinion that any high dam on the upper
Skagit in the neighborhood of the Faber Ferry would be not to our best interests.

It would appear to me that smaller dams on the smaller tributaries would be of more value and less cost.

That concludes my report for the District.

I also have a report from the Mount Vernon School System which was submitted by Mr. Wendell T. Phipps, our Superintendent, which I will submit to you now.

COL. YOUNG: Thank you, Mr. Hanson.

Next, Mr. George Dines.

(Refer to exhibit 17 in unpublished appendix)

STATEMENT BY MR. GEORGE DINES

MR. DINES: Colonel Young, ladies and gentlemen:

My name is George Dines. I am a Commissioner of Dike District No. 20, and the few remarks that I am making here today just pertain to Dike and Drainage Improvement District No. 20.

This District is located east and north of the Great Northern Bridge to the mouth of the Nookachamps Creek. The size of our district is approximately 650 acres. We have dikes of approximately one-half mile of main dike balance or high banks with a low dike along the Nookachamp Creek.

Our drainage ditch is one main ditch serving the district with flood gates under our main dike close to the Great Northern Bridge.
The problems: Number one, our dikes are built on sandy soil. Our dikes are not high enough to keep out water over 20-foot flood stage.

When the district is covered with water in 24-foot floods, it takes too long for water to get out as rate of flow in ditch is too slow.

Too much pressure on dikes when flood waters in Skagit River drops with a six to a ten-foot difference between the height of the water in the river and water inside the dikes.

I might explain that, in the case of high water there when the district is flooded, the river at some times will drop as much as a ten-foot difference in the river than the water behind the dike.

During real high water of 25-foot, too much backing up is caused by restricted flow at point of the Great Northern bridge. A difference of four foot has been noted between water on the east side of the bridge compared to the west side.

Recommendations:

1. Dikes be raised to take care of 25-foot flood on Skagit River at an estimated cost of $20,000.00.

2. A spillway be built in low spot of district to either let water in or out as desired. Our only desire is to keep out spring freshets. Cost of spillway is approximately $25,000.00.
History: Over the past twenty years we have had five major breaks in our dikes. Estimated repair cost is approximately $50,000.00.

Just a few remarks on the Nookachamps as a storage basin during flood waters.

1. If such a plan is adopted, a spillway for District No. 20 would be a "must."

2. The present land holders with homes and barns on the lowlands should be assisted to move to higher ground.

Thank you.

COL. YOUNG: Thank you, Mr. Dines.

Mr. A. B. Wisen.

(No response)

COL. YOUNG: Mr. Kenneth E. Sullivan.

MR. SULLIVAN: My ideas have already been covered pretty well.

COL. YOUNG: Mr. Peterson.

(Refer to exhibit 18 in unpublished appendix)

STATEMENT OF LOWELL PETERSON

MR. PETERSON: Thank you. My name is Lowell Peterson from Concrete, Washington.

We held an open, public meeting at the Concrete City Hall on the 3rd of February regarding the proposed Faber Dam and Skagit River flood control.

Our meeting was called to order by the Chairman,
Charles Dwelley, who reported that hundreds of feet of drilling had been done at the proposed Faber site without finding bed rock suitable for dam site.

Mr. Dwelley stated the issue at hand is whether or not the residents of the upper Skagit wish to support the Faber project; or as alternates the raising of dikes in the lower valley or consider dams on the Sauk and Cascade Rivers. The possibility of dredging may also be effective as flood control measures.

Carl Lindall, resident of Marblemount, expressed his opinion in favor of the Cascade and Sauk Dams.

Open discussion was held on whether or not adequate roads would be provided to further the construction of the North Cross-state Highway.

Ray Stidham of Route 1, Concrete, stated that in his opinion adequate roads would be provided to link the present highway to the upper Skagit and the North Cross-state Route.

Alvin Harris of Concrete stated that in his opinion the Faber Dam would be impracticable for flood control and favored construction of dams on Skagit River tributaries and further by dredging of the Skagit.

Mr. Ray Stidham, Route 1, Concrete, stated that the Federal Power Commission required that certain head be maintained on power dams, and if the dam was constructed for
power, it would limit the flood control potential.

Mr. Otto Peterson of Marblemount spoke in favor of Faber Dam as second choice to dams on the Cascade and Sauk Rivers.

Robert Whipple, Route 1, Concrete, favored construction of the Faber Dam as he feels that the benefits to the lower valley would be greater than any harm to the upper valley.

There was also a discussion on the land that would be flooded on the basis of reforestation.

Maurice Barber from Concrete stated that he felt forestry harvest would be hindered if adequate roads were not built to replace those that would be flooded.

Herb Larsen of Route 1, Concrete, stated additional roads would be necessary to gain availability to the upper Skagit and to the timber resources.

The Fisheries aspect was openly discussed. Chairman Dwelley said that the steelhead run would be seriously affected, as well as a large portion of the food fish now spawning in the Skagit and its tributaries.

Mr. Whipple, Route 1, Concrete, asked if possibly the dredging would not suffice as sufficient flood control measure.

Mervyn Peterson from Marblemount favored a dam on the Cascade River, as adequate.
Mr. Maurice Barber stated that the flood in January of 1961 brought a tremendous volume of rainfall with no feasible damage to the lower valley and he felt that the present flood control was adequate.

Mr. Dwelley stated that dikes on the lower river were settling and in need of raising to control future flooding.

Mr. Otto Peterson stated that flood conditions of the last flood in January could have been much worse if there had been more snow on the watersheds.

Alex Yeager of Route 1, Concrete, concurred with Mr. Peterson and stated that our snow conditions on our local watersheds were below normal at the time of our last flood.

Ray Stidham favored the Faber Dam construction if the dam was for a public power project.

Open discussion followed which favored dredging of the Skagit which would benefit the valley by providing water transportation of minerals, logs and other resources contained in the upper Skagit.

All forty-five residents of the upper Skagit Valley who were present at this meeting favored the dredging project.

The meeting was closed by Chairman Dwelley.

COL. YOUNG: Thank you, Mr. Peterson.

Mr. Dwelley, would you care to testify, also?
STATEMENT OF MR. CHARLES M. DWELLEY

MR. DWELLEY: I am Charles Dwelley, editor of the CONCRETE HERALD, and these remarks I am going to make are partly from the meeting we had up there, and partly of my own opinion. So, I would prefer that they go in as comments made by myself, rather than the meeting.

As editor of the upper Skagit Valley newspaper for the past thirty years, I feel that I have a great stake in the development of the Skagit River, both for flood control and for better use of the river for navigation.

Reviewing the various projects suggested by the U.S. Army Engineers as possible flood control restoratives, the earth dam at Faber is one that should be avoided until all other possible avenues have been used. My personal reasons for speaking against this dam are that such a dam would have too many disadvantages to the upper valley, the county and the state to be considered as a possible solution to the present problems.

First, flooding of the upper valley permanently to prevent flooding of a small area in the lower valley at very infrequent intervals seems a bit fantastic. Due to the five dams now on the Baker and Skagit Rivers, control of high water in the Skagit has almost eliminated the flood threats we used to know. Now, only a freak condition brings abnormally high water. This water could be adequately handled by dredging in the lower valley at a fraction of the cost of
the Faber Dam.

Secondly, the steelhead and salmon runs in the Skagit would be seriously threatened by a dam at Faber as a great portion of the spawning is done above this point. Our experience with fish ladders and so forth has been that the best have been none too good and the runs are bound to suffer.

Third, the Northwest section of the State has been working for many years to effect a cross-mountain highway from the Skagit to Methow Valleys. This highway is now on its way to completion. Flooding of the upper Skagit valley, I think, would end for all time this important asset to the economy of this corner of the State.

Fourth, the upper valley area is a storehouse of untapped mineral resources, still uncut timber and much unlimited recreation areas. In the past few years, new roads and bridges have been opening up this area and property once believed of no value is now being eagerly sought. Land values will rise swiftly from now on -- to the benefit of the county and the State tax rolls.

Fifth, this is a home for hundreds of people who love the scenic valley and would not want to see it destroyed without an assurance that benefit would be gained that would many times overshadow the losses suffered. The Faber Dam cannot promise these gains.
Other suggested projects on the Army Engineers report could be of more benefit while not having the objections of the main river dam. A dam on the Cascade River would control this presently uncontrolled stream. A site has been chosen for a number of years, but unfortunately it is uneconomical for power due to the small storage area. For power, water and flood control, perhaps, this could be overcome.

The dam on the Sauk River also has flood control possibilities far beyond the Faber site as it is the real problem of Skagit flooding. There is no control on the Sauk, or on the Suiattle River which joins it. Silt from the Suiattle provides a great share of the mud and sand that fills the lower river. Control on this stream would be a final step on control of all streams of any size which flow into the main Skagit.

On navigation possibilities, as far as a program of dredging that would permit navigation on the Skagit as far as Concrete, you will find little opposition in the upper valley. In the upper valley this plan has received nothing but enthusiasm as our problems are always linked with transportation.

Barging on the Skagit as a regular commercial route for materials would provide outlet for cement, lime rock, talc, silica, lumber and wood products, coal and iron, chrome, olivine, lead, silver and all other types of minerals to be
found in quantity in the upper valley.

    Up to the present time most of this material has been awaiting access roads which are now just beginning to tap the sources. By opening the river to economical water transportation, these materials become valuable commercially. I believe that once water transportation to salt water is attained, there will be a great boom in employment in the upper valley, with the resultant boom for the economy of the county and of the State.

    The upper Skagit Valley is admittedly undeveloped at this time. It is just beginning to reach its potential as a new source of wealth for the county. Due to this, I strongly urge that the program on the Skagit River be tuned to the development of the Skagit area by forward-looking projects that will not tend to retard in any way the bright future for the eastern end of Skagit County.

    I believe the flood control problem can be met with vigor by use of several proposed methods. I strongly believe that the Feber Dam would defeat in the end the very purpose for which it was suggested--betterment of Skagit County as a whole.

    Thank you.

    COL. YOUNG: Thank you, Mr. Dwelley.

    Mr. Ralph B. Anderson.
STATEMENT OF MR. RALPH B. ANDERSON

MR. ANDERSON: Colonel Young, ladies and gentlemen:

My name is Ralph B. Anderson representing the State Department of Fisheries. I will read to you a letter which has been signed by the Director, Milo Moore, of our Department.

The Skagit River system is considered the most valuable tributary of the Puget Sound area in sustaining and supporting commercial and sport fishing. The most important of the salmon from this river are the spring and summer run chinook salmon. The Skagit River supports reproduction of about one-half of this total run entering Puget Sound.

In addition, this river is highly important for the reproduction of pink, silver and chum salmon. We are presenting evidence to support this statement.

The proposed plans of previous Corps' studies for Flood Control on the Skagit River have been observed and then related to their effects on the fishery of the stream. The proposals of control for floods have been mainly the construction of dams. The locations proposed would have very serious and devastating effects on our fishery resources of the river and thus on the entire Puget Sound fishery. Nearly 65% of the spring chinook salmon spawning area is located on the main stem of the Skagit and in tributaries above the proposed Faber dam site. A multiple purpose dam at this location would
nearly obliterate this run, as well as the silvers and other species utilizing the upstream spawning beds.

Consideration has been made of the other dam site locations--Cascade, Lower Sauk, Upper Sauk and Copper Creek. It is found that various proportions of spawning area loss would be involved to the extent of seriously endangering any continuing value of this resource to the area.

One method of flood control proposed has been the Avon by-pass or overflow channel, downstream. This Department wishes to emphasize the importance of this proposal as a preventative to lower stream flood damages and save the important reproduction of spawning areas upstream from being inundated and obliterated by dams and reservoirs. As a second recommendation, it is urged that other dam sites be investigated higher on the head waters of the various tributaries of the Skagit system, which could be utilized to retain high run-off waters without loss of salmon spawning areas.

This is signed by Milo Moore, the Department of Fisheries Director.

I would like also to add that the Department would not have any great objection to dredging the lower river channel from the mouth up to possibly the -- approximately the area here in Mount Vernon.

This might be another part of the solution to the
problem. Thank you.

COL. YOUNG: Thank you, Mr. Anderson.

Mr. Gregory Hastings.

STATEMENT OF MR. GREGORY HASTINGS

MR. HASTINGS: Colonel Young, ladies and gentlemen:

I am Supervisor, Division of Flood Control, Department of Conservation, Gregory Hastings.

In the past, Colonel Young, at our other hearings, of which I have been a partner in crime, I think at all times, I have reiterated and rather set forth the position the State has had and wishes to pursue regarding flood control, and within the realm of our Department’s full responsibility to the development of the resources of the State.

In preface to the 1961 Legislature which is now in session, and as a result of your fine help and push, I might say, personally, and as Colonel of the District Office, I have proposed a drastic change in flood control policy within the State of Washington; a springboard, may I say, to the future solution to these problems that we have not, I believe, attempted an accomplishment so far under our present program, with our present resources, and the use of those resources toward that end.

It is not going well with the Legislature and, of course, I expected that. Anybody suggesting a change or
modification of what we have been doing for seventeen years, it's going to be met with objections.

I believe understanding of what our problem really is, as a result of your hearings and reviews of your reports, will enlighten the unenlightened such that they will join the camp that I am trying to set up. Failure to set up the camp does not dim the view of those here in this Valley who I know share these views; but we must go forward, as you put, Colonel Young, in a letter to me a long time ago. Flood control is new, let's look at it that way, and we have not been looking at it that way.

The State of Washington since 1943, by legislative action, Chapter 86.26 Revised Code of Washington, is able to participate with local municipal corporations in flood control problems as pertaining to the maintenance of work structures that protect against floods.

As you know, and some of you do not know, and I know that the Legislatures did not know, the State under this policy may not/construction, assist in it, or any betterments therefrom. We may only maintain that which exists today. We may restore something that's destroyed. But we may not make it better. Therein lies our full weakness.

To help you and to move forward into a flood control program that is required to accomplish these objects that we find fault with today and that is why we have the hearing
The Federal Government by the 1935 Act permits the Corps to do construction and to do betterments along with their emergency restoration. So must the State, in its assistance to its people.

We are doing without adequate flood control at this time, ladies and gentlemen. I merely posed a question today in public hearing for you to think on because your support is required eventually. We are doing without adequate flood control. Is it worth it, the effort to prevent those damages?

Since 1943, and under this participation policy, the State has had and has pursued, within its ability financially, we have expended $858,563.00 in Skagit County. That happens to be the greatest user of our State Flood Control Funds, Skagit County. The basic reason, and it's a simple one: There's been more local money made available here to which it drew that State money. We match money, we don't put out funds freely or by ourselves, it's a matching proposition. And the matching arrangement of those that are making money available locally then requires the State's actions to generally come along in respect of those that are making it available will get the help. This exemplifies the forefront that Skagit County's people have taken over the many years in flood control maintenance and improvement of their levee system.
This $858,000.00 represents a round 15% of our total State expenditures since 1943, which amounts to $5,630,000.00.

What can the State do for the people today and forward? We can continue, pending availability of funds out of the Legislature, our maintenance policy with you; to the end of what now exists and to possibly achieve what the Colonel and his men may find and which we will eventually, as a community, subscribe to. Our maintenance of those works we will try, and I believe the program is sustaining.

As you know, the appropriations bi-annually range from as little as $100,000.00 to as much as two million dollars, depending upon how bad things were the last time the Legislature met.

We suffered historic floods on the Green and on the Snohomish since the Legislature met last time. They are now meeting with these in mind. Yet that affair and those consequences seem dimmed already in these thirteen short months. They are thinking of other things, schools and old-age retirement and old-age compensation. Things that--well, schools--they are talking in the neighborhood of four hundred million dollars. There is little concern for talk of flood control at this State level of a million dollars.

We have asked for this next bi-ennium an appropriation--our budget request from the Department was for a million and
a half dollars of maintenance funds.

When the Director of Budget and his staff finally prepared the Governor's message which was read into the two Houses, it was cut to $850,000.00, period.

I had asked for a staff of seven new engineers to assist you, the Colonel, and all of us in a program of assuming the position of State leadership which you have asked in many instances, collectively -- I speak of you as all counties -- and to toe the line the way the Corps and the Federal Government's other agencies have found fault with us by our failure to assume the position of leadership in flood control -- someone to look to, both at your level and at his level, with the District Corps of Engineers' Office.

We felt that a minimum staff of this complement of men could achieve this object in a preliminary way, to embark upon a study of needs which has not been done since 1935 and needs re-doing, which the Corps does not do, except by project authorization. And then as a result of those needs studies being current, where are our problems, what do they involve physically, what are their financial import, what are the sum damages that they are causing us to suffer? Then, it is worth it to correct that thing? We merely would pose the question. You people would decide the answer to that. But I think you are entitled to have the question developed.
Then in a couple of years, next Legislature, present a preliminary report to the Legislature; propose a tentative plan of flood control for the State. There is not now one available.

My staff, which is me, singly, a single man cannot develop such a scheme and carry out and promote such a program. You grin—it is ridiculous—right.

It is further ridiculous for a single-man staff to handle the money that's been handled in these seventeen years. As Director Cole said innocently a while back, "we've been lucky, business of the smallest nature and magnitude would not tolerate such administrative procedure with the funds that are involved." Again, it's ridiculous.

I am only your counsel and technical consultant. I must present to you a problem. I am using the Colonel's hearing as a springboard, yes, but he's concerned with this too. Because the State's failure to be in such a position and to have a staff that you people can look to for the full counsel I think you are entitled to, and for coordination of Mr. Gilkey's office here at this level, to be possible. You're entitled to the facts; you may make up your mind, these are the facts.

One more point: In this report to the Legislature which I am now having printed by the State Printer and which will be available, I disclose from the Corps' help, that in
the last twenty-five years, we have suffered an average annual damage of 4.2 million dollars. During the twenty-five-year period we, collectively, Corps, State, County, District, we have collectively expended 49 million dollars.

Except for about 17 million of Corps funds expended on permanent works, the remaining funds did not earn us any accrued project benefit or values.

We did not raise the level of flood protection with that remaining 32 million dollars.

That average annual expenditure amounts to about 1.9 million dollars. Yet, at the same time we are losing 4.2 million dollars in damages. Something doesn't work out right, does it?

That's the thing I mean to show you and to bring up. What we have spent hasn't done us the good that I think we thought it would do.

I believe that under comprehensive planning and programming, that roughly two million of annual expenditures we now are spending could possibly do the job. We don't know. I think we ought to find out in this county and State-wise.

The biggest point now, ladies and gentlemen, of what the State has to offer is, I think, your support of Senate Bill 262 sponsored by Senator Bargreen of Snohomish County. It proposes amending our present policy law, adding
the words "construction and betterment" to the word "maintenance." That takes us off the hook and permits us to fully engage as a full partner with the Corps and with the county and with the districts. It is our greatest single weakness. This amendment, I think, merits your consideration and support. It's to your advantage. It permits us to fully engage as a working partner. We are not able to do that now.

Our other point of which assistance is possible, whether or not House Bill 30 is material-lloyd in its execution in the two Houses. There now remains and exists a flood control district law that essentially accomplishes the same thing on a smaller scale possibly.

I organized those districts as your supervisor and we are talking and have talked for five years now on the fruit of combination of the sixteen diking districts into one master flood control district. We stand ready to assist you and to meet this call and to otherwise cause these things to come to pass within our ability of the staff, the time and our budgeted funds.

Thank you kindly.

COL. YOUNG: Thank you, Mr. Hastings.

Ladies and gentlemen, we have a number of speakers left which I do not think we can cover in a reasonable length of time. We will adjourn 55 minutes for lunch.

The hearing will recess until 1:30 o'clock p.m.
AFTERNOON SESSION

(1:30 o'clock p.m.)

COL. YOUNG: The hearing is now in order. I would like to call on Judge A. H. Ward as the first speaker of this afternoon's session.

STATEMENT OF HONORABLE A. H. WARD

HON. WARD: Colonel Young: You may wonder what a judge knows about dam sites. I was in the Corps of Engineers, Colonel Young, when I was in World War I, and I was a very low-ranking officer, however, about as low as they get.

I was chairman of a committee which made a study of these problems back about 1935 and 1936 when the Corps of Engineers was making their last survey; and I have been living in the Nooksachamps area for the past seven or eight years and I don't think anybody here has a closer speaking acquaintance with floods than I do.

The study which the Corps of Engineers completed along about 1935 or 1936 I recall recommended the construction of the Avon cut-off. From the engineering standpoint, the project seemed very feasible and a good solution to the problem. Economically, it presented some problems because they had a cost-sharing program. I have forgotten what percentage of the costs they wanted Skagit County to meet; but the amount was such that it seemed to be impossible to cooperate on the
program at that time.

Now, I have had some experience with condemnation actions since I have been judge. I know what the experts testify this good farmland that this cut-off would take has been worth. I know what the juries would allow for the condemnation of those good farms.

For the land alone, you could expect $1,000.00 an acre. The project, as I recall, was for a channel of about a mile wide. Now, that would be $640,000.00 a square mile for the land alone. The improvements would run it up close to a million dollars a square mile.

If Skagit County is expected to make any substantial participation in a project as costly as that, you can see that's it even more impossible now than it was back in 1935.

Now, several references have been made to the advisability of increasing the height of the dikes. There has been only one speaker that has really, in my opinion, voiced the problem with respect to increasing the height of the dikes, and that's Mr. Sundquist, who has lived with the problem and knows whereof he speaks.

It isn't a problem of building the dikes higher, that's easy enough; but what are you going to do with the sand base on which these dikes are constructed?

These people who live down in the Fir area know what happens when you get high water. It just simply blows
out underneath the dike.

The proposal to build the dikes higher and solve the problem in that manner is, in my opinion, a snare and a delusion. At the present time there are a lot of people who are building residences out west of Mount Vernon on that low ground; and if we have a flood, the same as we had in 1909, any engineer will tell you that the dikes, no matter how high you build them, are not going to hold. People will live with a false sense of security if you build the dikes higher. There will be more residences built out there in that area which will be courting trouble.

Several have mentioned dredging; that's an engineering problem. The economic aspect of that is not only the cost of the dredging but the question of how quickly the dredging will fill up. I am not engineer enough to even express an opinion on that.

A study which could be made, however, is near Sedro-Woolley where Highway 99-A was just recently constructed. There, they took out hundreds of thousands of cubic yards of gravel out of the river bed. It would be interesting to see how long it takes to fill up that excavation that was made there.

That's all I'm going to say. Thank you.

COL. YOUNG: Thank you, judge. Your remarks were very interesting.
Mr. Oliver M. Salisbury.

STATEMENT OF MR. JACK GRAY

MR. GRAY: My name is Jack Gray and I live in Arlington but I am building roads for the Sauk River Development Company and the lower Sauk River.

Mr. Salisbury could not testify so he asked me if I would state his position for him.

The Sauk River Development Company has several hundred acres on the lower Sauk River, both sides of the river and just this side of the Government bridge. And then plan on having, oh, approximately 1500 cabin sites available in the near future. They've already got one plat partially constructed.

Their position is just about, oh, the same as the Fisheries Department and the Editor of the Concrete newspaper. But the only thing they would be opposed to would be a high dam at the Faber site, in the Faber area. Thank you.

COL. YOUNG: Thank you, Mr. Gray.

Mr. Lawrence J. Hornbeck. Is he in the audience?

(No response)

COL. YOUNG: Mr. James Wylie.

(Refer to exhibit 21 in unpublished appendix)

STATEMENT OF MR. JAMES WYLIE

MR. WYLIE: Colonel Young, ladies and gentlemen:
My name is James Wylie and I am representing the Skagit County Unit of the Washington State Dairymen's Federation. The Dairymen's Federation is a commodity group organized to work in the best interests of the dairy farmer; and surely, flood control is in the best interests of the dairy farmer.

In commenting on the written report which has been turned in, it is not the purpose of this report to list total damages and things of that nature as it affects the dairymen, but more or less to illustrate how flooding affects the farmer as an individual.

I think that a good many of my neighbors and other dairymen along the Skagit River could write quite an interesting book on life on the dairy farm when the dike breaks. And as a small boy, I could testify to the fact that this old story that Santa Claus comes by a sleigh all the time is not true; I've seen him come by boat.

But seriously though, dairymen whose farms lie in areas subject to flooding of the Skagit River have real reason to fear a rampaging river. They know what has happened to them in past floods and are more fearful of what could happen to them in a really large flood at present, or some time in the near future.

Dairy farming has changed considerably since the 1951 flood. Milk is held in tanks, herds have expanded, cows are
milked in parlors or milking barns and practically all herds are housed in sheds. This means that herds that were housed in the barn in past floods would have to be moved, resulting in a major upset in production and management practices. Dairymen whose herds are trained for parlor milking would face a real problem if they were forced to move out and not be able to find similar facilities available to handle their herds.

Flooding to the individual dairyman can be damaging and costly. During the '51 flood herds in the Nookachamps area had to be moved and some animals were reported drowned. In the Conway area herds were forced to move to higher ground. On Fir Island, one herd lost several animals from drowning. Another herd was caught in the fast rising water and was unable to be moved. It was three days before the water dropped low enough so the cows could be milked. The animals were in water all this time.

I might comment on that. You might say, well, why, don't these dairymen move those cattle when there is a threat of flood damage? That's not always so simple. You don't know where the break is going to be and when the break occurs, it depends on where your farm is located. You might have ten minutes or fifteen minutes; or you might have seven or eight hours. It just depends on where the dike breaks.

Another Fir Island dairyman whose farm was directly in the flow of the flooding water from the Dry Slough break
spent $15,000.00 getting his land back in production. This amount does not include loss in milk production and other inconveniences, as well as taxes required to repair the dikes.

Other farms next to breaks in the dikes had similar experiences.

The October 1955 flood at Lundeens on Fir Island, while not a large flood and did not force any herds to be moved, did interfere with picking up of the milk, lowered production and caused crop damage to at least two farms that did not have their potatoes and corn harvested. The crops were a total loss. A high river in the Spring in the Nookachamps area could cause damage to pastures and new seedings.

So, in the difficulties that can occur to the dairyman, he is vitally interested in flood control. Thank you.

COL. YOUNG: Thank you, Mr. Wylie.

Mr. Alvin B. Harris.

STATEMENT OF MR. ALVIN B. HARRIS

MR. HARRIS: I am Alvin B. Harris, speaking for myself in the upper Skagit River. I am not representing any organization except for my own interests and the interests of our upper Skagit. I have a hundred acres under this dam, partly in reforestation, and partly in agricultural land.

What I would like to point out here, I haven't heard too much yet of what this high dam will cover in the
Skagit, the upper Skagit. It is estimated that there are 35,000 acres to be covered; and if you figure that in square miles, there is 50 square miles, approximately 50 square miles of water from the height of the dam which I understand is to be possibly 150 feet of water out to its edges.

Now, this is mostly flat land. Approximately 35% is suitable for agriculture. The rest, another great percentage is under reforestation. We have a big piece of country belonging to the State Forestry up the Suattle and the Sauk Rivers, that is under approximately 15 to 20 years of growth of a new stand of timber; all up the eastern side of the River as far as Marblemount, approximately.

Those two alone, compared with the Fisheries, and you have their report, and the other prospects.

Now, what I am interested in is partly the reforestation and agricultural developments. Now, folks that have never been up there or have just gone through on the highway don't see much. These agricultural places are some places back where you can't see them at all from the highway; otherwise, you might see just a little bit. But there are several large cattle ranches in there. The Darigold has got a large tank truck running clear almost to Marblemount. They have run pick-up trucks for 30 years in there for dairy products.

This is partly the reason why I am against this high...
I'm for all the flood control we can get. And I believe that with these dams that we have now, there has been two high dams cut into the watershed in the last year which is this side of the last flood that you had.

There are minerals that are in the upper Skagit that are waiting for some form of mine-to-market roads and cheap transportation to get them down because it is almost impossible to truck them to Tacoma or wherever the smelters are by truck and to come out.

In this bottom land, we have bonded and taxed ourselves for bridges and highways -- one is going past my place right now, under construction. There is a $260,000.00 bridge being built at Rockport and another has just been completed on the Sauk River. There will be five of these steel bridges that will be covered with water; and all these highways that we have been trying for 30 to 40 years to get up there.

Now, you can go from Mount Vernon to Marblemount right now. It isn't all finished but you can go through on the south Skagit without ever crossing the river.

There are developments in there, potentials -- as this man before me has said about these developments in housing and along the Skagit River or along the Sauk River up there, they have been in there for the last two years buying property, mostly for recreation and for tourist.
facilities. These are all part of what will be covered by this lake. And for my part, I believe that the place to stop the flood waters is not on the main stem of the river, but right in the head waters.

City Light has prospects of another dam at Cooper Creek and there is the Cascade with a dam site. There are one or two laid out on the Sauk and its tributaries, and those will be in the canyons, the canyons are natural water reservoirs.

And there are other aspects that I have thought since considerable on this has come up that haven't been mentioned here; but according to the War Department and Civil Service -- wait a minute -- well, anyway --. It's a known fact that one of the main, or one of the factors against the German mainland was when the United States Air Force bombed two big dams out of the river valleys and practically washed them into the ocean. Now, some people say it can't happen here. Why can't it happen here as well as somewhere else? Because this long dam, approximately a mile long and with possibly 150 feet of water behind it, 50 square miles of water at the rate of 50 foot average deep turned loose all at once, there would be no dike this side of the ocean that would hold it, and I think the majority of the people will go with it. That is what I mean by Civil Defense. Nobody has suggested that here now. Some people may think -- I don't want to be
what you'd call a war monger or anything else; but I believe that these are facts which we should consider in this high dam, or long dam -- not necessarily so high, but long.

Practically the eastern part of the county could be under water and I believe that we can control this flood system by the head waters. What we put in the main stream I don't think will solve the problem.

As far as the commerce of the river is concerned, there used to be commerce on the old Skagit River in the early days. Many of those pioneers up there brought all their lumber and all their provisions, their machinery and their everything on the Skagit River before there was anything other than a pack trail up there. Now she's short, she hasn't been taken care of. There are snags and old booms and old boats and everything else just blocking up the river and it can be dredged out.

There is one company in Concrete that has proposed to start the commerce on the river if they can get cooperation from the rest of the people along the river. And there are many industries that could set up along the edge of this river and start commerce on the river. The same thing would bring more revenue. There is another factor in the fact that I believe that before too long, it's been established by statistics, that by the year 2000, we are going to have to have every foot of flatland we have for residences, for people to
live on. And if we cover up our flat country, we just aren't going to have a place for them. And after winters like we've had back East this year, in the next year there will be thousands of people come out here because they get our reports back there that we've had 60 degree weather here in February; they haven't got it there by any means, and they're coming out here. I came from the East myself, you might say I was one of them. But that was years ago before -- I seen the old Skagit River up into Burlington and since then, which has been changed.

And after Century 21, there is another facet of thought. After that, there will be a lot more people come out here and as the industries come, the people will come with them.

I do believe that if we can control this river -- sure, I'm in favor of control, all we can get without taking the potential of what we have got away. I thank you.

COL. YOUNG: Thank you, Mr. Harris.

Mr. Victor B. Sowdin.

MR. SOWDIN: I think my speech is well-covered through the Fish and Game Department.

COL. YOUNG: Mr. Otto F. Peterson.

MR. PETERSON: My thoughts have been covered with the Concrete report.

COL. YOUNG: Thank you, Mr. Peterson.
Mr. Tandy A. Wilbur, or Wilbur A. Tandy?

AUDIENCE: He has left.

COL. YOUNG: Thank you. Wilbur is his last name.

Mr. Jacob Coops.

(No response)

COL. YOUNG: Hatty Belpour.

(No response)

COL. YOUNG: Mr. Addy Palmer.

(No response)

COL. YOUNG: Mr. Norman Mason.

STATEMENT OF MR. NORMAN MASON

MR. MASON: Colonel Young, ladies and gentlemen:

I am Norman Mason of Sedro-Woolley speaking principally for myself, unless it would be for the group of farmers whose farms lie along what is known as the Skiyou Slough.

I own a tract of land lying along the river, north of the river, some 264 acres about four miles east of Sedro Woolley. That is, it was 264 acres, some of it’s now that silt filling up the mouth of the river.

I would like to say just a few words in the matter of flood control on the upper river in the Third Commissioner’s District. The Third Commissioner’s District has a different situation than No. One and No. Two. It is that we have no
diking districts up there. If that's where control is
especially needed; that's where the beginnings of the flood
damage are. That is where we have to depend on county, State
and Federal aid to protect ourselves under the present way
the set-up is.

I would like to call attention just briefly to one
particular area, a revetment that lies along my place that
was started years ago first by the WPA, the Federal
Government, the State and the county. It runs or did run
about a half a mile along the bank of the river at the spot
where the Skiyou Slough comes back closest to the river.
That was a rock revetment that was developed and built at a
good deal of cost over a long period of time and it has been
maintained that way.

For instance, according to a letter I have here
from the Governor -- and I think he got his figures from Mr.
Hastings -- between October 1951 and November 1957, the State
spent on that half-mile revetment the amount of $3,257.87, and
the county matched that with $8,189.00.

But since 1957, there has been nothing done to hold
that revetment and it's 70% gone. That's conservative; 70%
gone. And the rest is going out some, and every time we
have high water, this makes a dangerous situation because of
the peculiar way that the river flows there and the peculiar
running of the -- what's known as the Skiyou Slough which comes
out of the river about a mile above there and then runs back
to within 150 feet of the river and then turns around and
leaves the river and runs down toward Sedro Woolley, about
half way to Sedro Woolley, when it goes back to the river.
The purpose of that revetment was to protect the river from
going into the slough and flooding the farm area down below
it, below at that place where it comes closest to the river.
That danger is very strong at the present time.

This is just calling attention to one small area
and I know that this is an over-all picture that you want to
get of the whole flood situation. But I think that that
should be taken into consideration by the Army Engineers
and, possibly, they can assist the county and the State in
saving that revetment before it's all gone, and eliminating
some of the danger at that particular place.

There has been quite a few ideas about what can be
done in the upper river valley. They all, of course, have
some merit. The dredging situation has a special merit.

The matter of flood control by dams is something
that I think personally should be taken a long look at before
it's used too extensively.

I might say that I am Civil Defense Chairman of
the Sedro Woolley Post of Veterans of Foreign Wars and we are
interested in the dangers that the gentleman just preceding
me brought up of the bombing of those high dams up there and
the flooding of the whole valley therefrom.

Certainly, if I was an enemy Army officer, Army engineer wanting to do specific damage, I couldn't figure out a better way to do it than through bombing Ross Dam and cutting off light and power from the City of Seattle and thereby the Boeing Airplane Company; and we know what would happen if such a thing as that would happen.

So, the matter of high dams, I think, is something that should be given a long look at.

I believe that would conclude what observations I might have and I thank you very much for your time.

COL. YOUNG: Thank you, Mr. Mason.

Mr. William E. Jimment or Jimmer?

(No response)

COL. YOUNG: Mr. Donald Hanson?

(No response)

COL. YOUNG: Mr. Edwin M. Barben.

STATEMENT OF EDWIN M. BARBEN

MR. BARBEN: My name is Edwin M. Barben and I am from the Day Creek area.

I have lived in this area some 40 years and my observations from farming, fish, wildlife and in general, I think that we know, we all know, that our troubles are caused by mismanagement in a lot of logging operations done by large
corporations. They allowed the area to be logged off too thoroughly into the stream beds that caused them to fill in, and that's our problem that we're meeting today, some 25 years of mis-management.

These corporations were given land grants in Alaska and I hope they have better luck than we did for development.

No one said anything about the river bed in general. We've got a lot of river here that nobody -- nobody has ever mentioned the bottom of that river; and I think that the thought in my mind, from up river and down river standpoints, if we could take this and put it up on the banks and do some channel straightening and fill in some of these sloughs --.

At the present time, there are three rivers going by my place today, at Day Creek, and I think that's a poor situation to be proud of. Also the river is meeting itself in many places.

Anyone who has looked over the area from the if mountains, I would say the Army Engineers took one trip up on that mountain and looked down on it and just said, "Now, what can we do with this?", we would have quite a problem.

I have made some notes but it's been covered in other ways. I don't know -- I'm looking at it from a fish standpoint. I am sure that there are men in our group here with the same interest. I have seen the salmon pond covered up in the Day Creek area, as well as Feeney Creek and up -- no doubt if I was to have gone there, I would have found the
same thing there. It's covered up with three foot of slate rock or debris and I can't see that any one of us, when we've got kids that we would like to see catch some of the fish that we have caught --. In my area, I've seen 7,000 fish in one hole waiting to go up to spawn and we don't find that today. In fact, we can't find any. They send men out to check these fish and you don't find any to check.

Well, I think it's high time that people, publicwise, I think that cities and towns should all cooperate in developing this thing so that we get something done with straightening this river or along that line to do the best we can to salvage what we have left.

For me to say what to do, I just feel that to meet with the present deal, we have to go in and straighten and dredge that river and it will have to be done in one year because if you don't, anything that you might do in the upper river or the lower river will be thrown away, the same as it has been in the past.

That probably covers some of the things that I had in mind, anyhow.

COL. YOUNG: Thank you, Mr. Barben.

Mr. George H. MacIntyre.

(NO response)

COL. YOUNG: Mr. Melvin Stackland.

MR. STACKLAND: I believe Judge Ward covered pretty
much what I had in mind.

COL. YOUNG: Thank you, Mr. Stackland.

Mr. Lloyd H. Johnson.

STATEMENT OF MR. LLOYD H. JOHNSON

MR. JOHNSON: I'd like to publicly apologize to Puget Sound Power & Light for any misconception I had created in my previous statement.

Certainly, Puget Sound Power & Light have a reputation for being very cooperative with all of the people in the area and, especially, concerning flood control in our last instance.

I would like to change my statement concerning their dams so that there would be no misunderstanding.

I would like the statement to now read, in my written testimony as well as my oral, that this dam, referring to the upper Baker Dam, has been constructed by private interests mainly for power use but is operated in direction from the Seattle District, Corps of Engineers to provide replacement of natural storage and to provide other multi-uses such as water supply, fish and recreation.

Because a major source of the flood waters is below the existing dam, occasionally the flood benefits will be very, very small beyond the replacement factor.

I would like to further explain that by saying that
they are voluntarily doing much beyond that but in our comprehensive plan, we can make no material allowance, and that is what I intended in the previous statement but it may have given a misconception.

COL. YOUNG: Thank you, Mr. Johnson.

That concludes the cards on which the individuals indicated they would like to speak. Is there anyone who did not fill out their card in that manner who would now like to give testimony?

(No response)

COL. YOUNG: I have a letter here (refer to exhibit 30). I mentioned to you I received a few letters prior to the hearing. The letters I had have been covered by direct testimony except a letter from Congressman Jack Westland who has written saying he is very sorry that he cannot be here in person to testify.

His letter refers to the floods that we had last year or in 1959 and the seriousness of them and noted the cost of repair.

Mr. Westland points out the very significant increase in development in the county and in the Skagit River Valley over the past ten years; and states that he is strongly in favor of a flood control project and he feels that it should have a favorable benefit-cost ratio in view of the increased development that has taken place.

Congressman Westland's letter will be placed in the

106
At this time, I would like to briefly mention the Corps of Engineers' position in the study.

As I pointed out when we began the hearing, Congress has given us money to initiate a study this year. It will not be completed this year, however, because the funds were not all provided and studies of this nature take time, more time than just a year.

The studies that we will make will be comprehensive in the valley. We will study every feasible means that you have mentioned here and that we, ourselves, can develop for providing flood control, either total flood control or partial flood control.

In preparing these studies, we are acting, in fact, as a consulting engineer for the Congress of the United States which has directed us to make the study and to report back to them on the results of the study.

There are two aspects of the study that we undertake:

First is an economic study to determine what the benefits -- well, what are the damages in the area due to flooding and from that we can determine normally the benefits that would accrue to you having proper flood control. And we make an engineering and cost study to determine what would be feasible flood control structures, what would be the cost of those structures. So, on the one hand we are determining
what the benefits would be; on the other hand, what the costs would be.

If the benefits exceed the costs, Congress has normally supported the project and stated that the Federal Government would participate.

Where the report indicates that the cost of any flood protection exceeds the benefit of the protection, Congress has not, as a normal rule, authorized Federal participation.

Now, many of you have given testimony here today which will be of great assistance to us in our work. In some instances you probably have not given testimony in the detail perhaps that we wanted, but it has given us a lead as to information of the type that's available and who might have it. We undoubtedly will be back making contact with those of you who did testify today, asking you to give us further assistance.

I want to state that I appreciate very much the very great interest that has been shown here in the hearing and in the work that has gone into preparing the testimony and the presentation of it. It will be of marked assistance to us.

If there is no one else who desires to testify at this time, I hereby declare the hearing closed.

(Hearing adjourned at 2:15 o'clock p.m.)
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109
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111
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<td>Keller, Robert D.</td>
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<td>Mgr., Port of Anacortes</td>
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<td>Koffel, T. W.</td>
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<td>Koops, Jacob</td>
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<td>Bus. owner - City Lyman</td>
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<td>LaMay, Wallace E.</td>
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<tr>
<td>Larson, Ralph W.</td>
<td>600 N. Capitol Way, Olympia, Wash.</td>
<td>Dept. of Game, Fishery Management</td>
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<td>Lee, H. B.</td>
<td>Rt. 6, Mt. Vernon, Wash.</td>
<td>Farmer, Dike Dist #13</td>
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<tr>
<td>Lee, Nolan H.</td>
<td>Rt. 3, Box 365, Mt. Vernon, Wash.</td>
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113
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<td>Lindall, Dorothy L.</td>
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<td>Housewife</td>
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<td>Lindamood, John L.</td>
<td>Rt. 2 Mt. Vernon, Wash.</td>
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<tr>
<td>Loft, Andrew B.</td>
<td>114 S. 5th Mt. Vernon, Wash.</td>
<td>Local Manager PSP&amp;L</td>
</tr>
<tr>
<td>Loop, Angus L.</td>
<td>833 Nelson Sedro Woolley, Wash.</td>
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<td>Loop, Wesley J.</td>
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<td>Lund, Lewis D.</td>
<td>1149 Toledo, Bellingham, Wash.</td>
<td>Fish Biologist Dept. of Game</td>
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<td>MacGregor, Charles S.</td>
<td>1918 22d St. Anacortes, Wash.</td>
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<td>Magnuson, Roy F.</td>
<td>6431 Corson Ave Seattle, Wash.</td>
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<td>Mason, Nestor</td>
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<td>516 Northern Sedro Woolley, Wash.</td>
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<td>Mawe, Carl A.</td>
<td>1206 Madison Park Dr. Mt. Vernon, Wash.</td>
<td>Title Ins. Skagit-Is: Title Company</td>
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<td>Miller, Gladys Pope</td>
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<td>Texaco Refinery</td>
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<td>Miller, James H.</td>
<td>P. O. Box 622 Anacortes, Wash.</td>
<td>Fisherman, Swinomish Indian Senate</td>
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<td>Mitchell, Dewey R.</td>
<td>LaConner, Wash.</td>
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<td>Nelson, Floyd</td>
<td>Rt. 1 Mt. Vernon, Wash.</td>
<td>Supervisor S. C. D.</td>
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<tr>
<td>Nelson, Grant C.</td>
<td>Rt. 3 Mt. Vernon, Wash.</td>
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<td>Nelson, Pete</td>
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<tr>
<td>O'Leary, Mike D.</td>
<td>Box 196 LeConner, Wash.</td>
<td>Dispatcher Dunlap Towing Co.</td>
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<td>Olson, Harry M.</td>
<td>Rockport, Wash.</td>
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<td>Olson, Martin J.</td>
<td>Rt. 3, Box 58 Mt. Vernon, Wash.</td>
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<td>Olson, William L.</td>
<td>Rt. 3 Mt. Vernon, Wash.</td>
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<td>Ovenell, Fred J.</td>
<td>313 Kincaid St. Mt. Vernon, Wash.</td>
<td>Manager Skagit Co. PUD</td>
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<td>Parker, Maynard</td>
<td>808 N. 15th St. Mt. Vernon, Wash.</td>
<td>Engineer SCS</td>
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<td>Peabody, Dwight V.</td>
<td>Rt. 6 Mt. Vernon, Wash.</td>
<td>Weed Specialist, NW Wash. Experiment Station</td>
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<td>Peterson, Lowell M.</td>
<td>Concrete, Washington</td>
<td>Oil Distributor</td>
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<td>Peterson, Otto F.</td>
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<td>Gas &amp; Oil Dist. Peterson Motors</td>
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<td>Petter, John</td>
<td>Rt. 4, Box 299 Mt. Vernon, Wash.</td>
<td>Dairy Farmer Dike Dist #20</td>
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<td>Phipps, W. T.</td>
<td>1229 Cleveland Mt. Vernon, Wash.</td>
<td>School Administrator</td>
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<td>Rader, Harold P.</td>
<td>214 N. Cherry Blvd, Burlington, Wash.</td>
<td>Civil Engineer</td>
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<td>Reedy, Robert</td>
<td>Rt. 6, Box 279H Mt. Vernon, Wash.</td>
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<td>Reid, Thomas H.</td>
<td>1015 - 3d Ave. Seattle, Wash.</td>
<td>Elec Engr City of Seattle</td>
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<td>Rentz, Alan B.</td>
<td>North 2d St. Mt. Vernon, Wash.</td>
<td>Reporter Skagit Valley Herald</td>
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<td>Richards, Scott O.</td>
<td>2517 Commercial Anacortes, Wash.</td>
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<td>Salisbury, Oliver M.</td>
<td>23720 -110th Pl. W. Edmonds, Wash.</td>
<td>Real Estate Broker, Sec. of Sauk R. Development Co., Inc.</td>
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<td>Schmidt, James W.</td>
<td>5019 - 73d Pl. N.E. Marysville, Wash.</td>
<td>Trainmaster Northern Pacific</td>
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<td>Schroeder, Robert H.</td>
<td>Rt. 6, Box 98A Mt. Vernon, Wash.</td>
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<td>Screws, Frank M.</td>
<td>City Hall Burlington, Wash.</td>
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<td>Shields, Cal</td>
<td>210 S. 15th Mt. Vernon, Wash.</td>
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<td>Smith, Louis A.</td>
<td>P. O. Box 700 Anacortes, Wash.</td>
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<td>Stafford, Glen E.</td>
<td>Box 463 Concrete, Wash.</td>
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<td>Stockley, Clint E.</td>
<td>P. O. Box 177 LaConner, Wash.</td>
<td>Biologist, State Fisheries Dept.</td>
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<td>Sullivan, Kenneth E.</td>
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<td>Retail Lumberman</td>
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<td>Van Valkenburg, J. Robert</td>
<td>Rt. 4, Box 124 Mt. Vernon, Wash.</td>
<td>Fire Commissioner</td>
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<td>Vanderzicht, John R.</td>
<td>Director, Washington State Parks 522 S. Franklin St. Olympia, Wash.</td>
<td>Wash. State Parks</td>
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<td>Ward, A. H.</td>
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<td>Waugh, R. E.</td>
<td>1520 - 2d Mt. Vernon, Wash.</td>
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<td>Whiting, Clyde B.</td>
<td>Rt. 3, Box 278 Mt. Vernon, Wash.</td>
<td>Dept. of Agriculture</td>
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<td>Wilbur, Tandy A.</td>
<td>P. O. Box 277 LaConner, Wash.</td>
<td>Mgr., Swinomish Tribal Community</td>
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117
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<td>Williams, R. Walter</td>
<td>10609 N.E. 9th</td>
<td>Fisheries Biologist</td>
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<td>Young, Zell A.</td>
<td>P. O. Box 433</td>
<td>Welder, Skagit Co.</td>
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Approx. 600 houses out of 1750 in flood plain area

600 homes - averaged $9000.00 = $5,400,000.00

We have a $8,500,000.00 evaluation of which approximately $4,250,000.00 probably
represents the evaluation in the flood danger area -

Skagit County is assessed at 19% instead of 50% true value -

Actual value becomes by this formula

\[ \frac{4,250,000.00}{0.19} = 22,400,000.00 \]

(1) Home damage — cleanup — disinfection — refinishing — reflooring (if hardwood floors) — settlements — furniture replacement —

600 homes @ $2000.00 = $1,200,000.00

(Much of this work can of course be accomplished by the individual home owner — but the cost of reparation, nuisance & inconvenience is there nevertheless)

(2) Downtown Damages —

1,400,000 sq. ft. commercial gross floor areas in entire city doing a

$30,000,000.00/yr. retail sales approx. $22.00/sq. ft./year or $2.00/sq. ft./month

Graham Co. surveyed our CB to have 945,473 sq. ft. — total city 1,389,358

Assume 1,200,000 sq/ ft / in flood plain area

A. Monthly loss of business only

Approx ... 1,200,000 sq ft. x $2.00 = $2,400,000.00

B. Physical

Repairs to Flood Damage — clean-up, disinfection, refinishing, loss of inventory, loss of furnishings, display counters & furniture

Est. @ 10% perhaps of actual

Commercial values $22,400,000.00 = $2,240,000.00

Probably could be either too conservative or not sufficiently realistic depending on warning time — and duration of flood — BUT CLEAN-UP HERE BECOMES A PROBLEM NOT INDIVIDUALLY COPED WITH BY OWNER — Needs help — will cost.

C. City of Mount Vernon Plant

1. Street Clean-up — routine nuisance — probably need some assistance —

will probably not all be given gratuitously — but negligible. Plenty of

Nuisance — No Costs.
2. Sewer Damages -

Pump Stations

(a) If all pump stations were submersed - rewiring motors - cleaning up - and reconditioning plants only - - - would probably run from an est. $25,000.00 min. to a $1,000,000.00 of conceivable replacement cost - - - - - - - $25,000.00 min.

(b) Sewer Mains

Aside from the problem of disinfection - sewage being everywhere - the costs here could be as simple as no sewer line damage except for silt and disinfection -

The silt problem alone - is not negligible - and we could perhaps assume - 10 days per mile for 3 man crew, one truck & proper sewer cleaning equipment -

Assume total of 10 miles of sewers in flood area -

10 miles x 10 days @ $150.00/day - - - - - - - $150,000.00 min.

This is minimum costs - assuming no pipe line reconstruction.

In summary, the probable realistic losses to Mount Vernon might be considered as follows:

Private Property Damage - - - - - - - - - - - $3,600,000.00
Loss of Business - - - - - - - - - - - - - - - $2,400,000.00
Crash Program City Costs - - - - - - - - - - - $200,000.00

City of Mount Vernon
Dept. of Public Works
Herman J. Harrison, Dept.
City of Burlington
Burlington, Washington

February 7, 1961

District Engineer
U. S. Army Corps of Engineers
1519 South Alaskan Way
Seattle 4, Washington

Dear Sir:

In response to requests contained in your notice of January 6, 1961, concerning flood control in the Skagit River Basin, a study has been made relative to the City of Burlington. The study reveals that no appreciable permanent damage has been sustained by the City of Burlington since 1950, the period covered by your request. However, records reveal that the City sewage system has been temporarily incapacitated at times when the river height reached approximately 20 feet at Mount Vernon. At approximately this height the river closes the outflow gates, and no sewage can escape until the river has receded. This situation stagnates sewage within the City and endangers health and property.

Predicted effects upon the populace, industry, business, real estate and utilities, in case the river is not contained within its banks, pose a much more serious problem, deserving a timely solution, and actual accomplishment of remedial action.

A relief map of Burlington shows approximately equal elevations throughout the City, therefore, the Skagit, when out of its banks in this area, would almost completely inundate the City, with resultant loss of, or serious detrimental effects upon, the following:

- Municipal real property: $225,000
- Municipal pay roll (annual): $88,000
- Streets: $180,000
- Sewer Systems: $518,000
- Equipment: $60,000
- Private real property: $10,500,000
- Personal property: $1,700,000
- Industry—covered by separate reports
- Water, gas, electric and telephone utilities covered by separate reports.

The industrial and business pay roll within the City has not been computed, however, it has been determined that business and industry in Burlington serves a substantial surrounding area. The magnitude of the retail establishment in Burlington per capita is comparable to that of larger cities in the area with large regional draw of shoppers.

No specific recommendations can be made by the City of Burlington concerning the relative merits of the various methods of controlling floods in the Skagit Basin.
Basin. However, it is believed that sufficient control, by dams, spillways or
dikes should be provided to eliminate apprehension on the part of prospective
industry, business or individuals, which might contemplate establishment in
Burlington, or surrounding Basin area.

There appears to be a general attitude of willingness to provide local
cooperation in flood control measures, particularly in the case of residents and
business men who have acquainted themselves with potential dangers associated with
extreme conditions, such as 50 year and 200 year floods. However, the magnitude
of specific and detailed local financial support will not be known until the
problem is officially submitted to the populace for their determination. The
results of such determination will depend largely upon education of the Voters
in this matter. The City Administration will actively participate in such a
program.

Very truly yours,

Frank Screws
City Supervisor
DIKE DISTRICT NO 15
SKAGIT COUNTY WASHINGTON
February 6, 1961

R. P. Young
Colonel, Corps of Engineers
District Engineer

Dear Sir:

This is a report of costs of repairs and maintenance. We have spent $38,453.35 on our dikes from 1952 through 1959 rebuilding rock rip rap. Without state and county help we could not have done all of this work.

There is only 800 acres in our district. After the floods of 1949 and 1951 we had to levy 200 mills dike tax to pay our expenses from the floods.

We deeply feel something should be done to ease the flood threat on the Skagit river.

Commissioners
Dike District No. 15

[Signatures]

Exhibit 24
BEFORE THE U. S. ARMY ENGINEERS CORPS
Skagit River Basin Hearing
February 8th, 1961
Mount Vernon, Washington

SUMMARY OF DRAINAGE DISTRICT #17 of SKAGIT COUNTY, WASHINGTON

[Page of Date Dist No. 2]

Gentlemen:

Drainage District #17 is a municipal corporation of Skagit County, Washington organized under the laws of the State of Washington. This district is a distinct organization from Skagit County and is governed by three elected commissioners.

The purpose for which the district was organized was to construct, maintain and operate ditches and drainage facilities in lower Skagit County easterly from and along the Skagit River and South of Mount Vernon, Washington.

The district encompasses approximately 4,680 acres of extremely fertile farm land and a portion of South Mount Vernon and Conway in the County. Various county roads cross from and run parallel with U. S. Highway 99 which crosses the district from Northerly to Southerly.

In the original construction Drainage District #17 had direct outlets into the South Fork of the Skagit River at Conway, Washington, and by gravity into the South Fork through the river dike by boxes and gates against high water and tides. The cost of drainage by this method was of course minimal.

Subsequently the river bottom became filled with sediment and it became impossible to drain in this fashion. Pumps were installed which while expensive, aided the water disposition. However, pumps within the range which could operate without confiscatory costs could only handle a portion of the water necessary. Lands suffered, crops were ruined, highways were flooded and even homes were flooded and the general economy of the district was endangered. Seeking escape the
district was bonded to build the so called "Salt-water Ditch", with gates at the salt water end—which ditch extended southerly in the North portion of Stanwood Bay.

Relief in the district was immediate. No more yearly floodings (except breaks in from the river on one or two occasions) and no more pumping costs. The district land could be drained and crops produced commensurate with the fertile lands capacity to produce.

Gradually again silt and deposits from the Skagit and Snohomish rivers have invaded the drainage and capacity of the salt water outlet. The district again must assist the drainage with pumps and the continued expense of this operation and cleaning operations again has raised the district operating costs, is affecting the production of the lands in the district and harming the individual income and affecting the general economy.

Dredging the South Fork and permitting again gravity drainage at Conway, Washington would eliminate water and flooding. Dredging would also relieve the pressure of waters backing up from the salt water gates.

The Board feels that relief to the district would save the general economy of the district and estimated loss of from $25,000.00 to $50,000.00 per year due to reduced production, increased costs and would enhance the value of district property probably many times.

DRAINAGE DISTRICT NO. 17 of Skagit County, Washington

By

Secretary
Skagit County Flood Control

February 8, 1961

Gentlemen:

The rural Fire Departments of the lower Skagit Valley have always realized the threat to the lives and property of the people living in the shadows of the Skagit River. We have been one of the first to organize manpower and equipment in time of high water and threat of flood.

The volunteer manpower in our rural Fire Departments pride themselves in their record of life saving and lack of property loss due to fire, and hereby go on record as asking for permanent flood control on the Skagit River to complete another phase in freedom from disaster.

The six Fire Districts that have part or all of their area in the lowlands of the Skagit Valley and are susceptible to flooding, have equipment and facilities valued in excess of $240,000.00. We therefore feel justified in asking for adequate protection for our citizens that we ourselves are unable to provide.

Respectfully yours,

Robert Van Valkenburg

President, Skagit County Fire Commissioners Ass'n.
Dear Sir;

I have been asked by the Board of Directors of the Skagit County Strawberry Association to submit the following report to you regarding the value of the Strawberry crop in Skagit County.

The greatest part of the berry industry in the county is centered around Burlington with sizable acreages also in the Mt. Vernon and Fir Island areas. Nearly all fields are subject to flooding by the Skagit River.

There are eighty odd strawberry growers in Skagit County growing a total of 1200 acres of berries at this time. Each acre of berries represents an initial investment of approximately $500.00. This includes a cover crop before planting, land rent for two years since this is the length of time it is necessary to bring a field up to the time of first production, plants, all insecticides, fertilizers, land preparation, cultivation, herbicides, and hand hoeing. Thus the total initial investment for growing the crop is 1200 acres at $500.00 per acre or $600,000.

A survey of the members of the board of directors of the berry association revealed that each grower had about $700.00 per acre additional investment in equipment. This includes tractors, trucks, dusters, sprayers, cultivators, and all other items such as hoes that are necessary to the berry crop. We feel that this is true of all growers in the area. This is the cost of these items when purchased or the amount they would cost if replaced. Thus the cost of replacing the machinery used by the farmers in the growing of these 1200 acres of strawberries would be $840,000.

Many strawberry growers operate labor camps for their pickers to live in during the berry harvest. The local sanitarian lists 42 labor camps in Skagit County. These camps consist of small one and two room cabins which are especially vulnerable to destruction by flooding. We believe there are about 1300 individual units in these 42 camps. The cost of replacing these units so that they would pass the re-
requirements of the Standards of the State Board of Health would be about $500.00 per unit. This includes furnishings. Thus the cost of replacing these camps if destroyed by flood would be about $700,000. These figures could be verified by the Skagit County Sanitarian.

Should the Strawberry industry be completely destroyed as a result of a major flood it would thusly require a total investment of $1,700.00 per acre or $2,140,000 to replace the total 1200 acres and 12 labor camps. There would also be a great loss to the county with regard to processors and all people who work in the berry industry.

The gross value paid to the farmer for the strawberries harvested in 1960 was approximately $1,600,000 using a value of 15 cents per pound as the price paid for the berries by the processors. The berry industry has grown a great deal in the past ten years and there is every reason that it will continue to grow.

All of the values stated in this letter can be verified by Mr. Clyde Whitinger, Skagit County Horticultural Inspector, and Dr. Martin Carstens, Director of the Northwestern Washington Experiment Station at Mt. Vernon.

We feel that flood control work on the Skagit River is urgently needed and strongly urge the participation of the Corps of Engineers as the only hope that this work can be effectively done.

Respectfully submitted,

James H. Hulbert Jr.
Route # 1
Mt. Vernon, Wash.
February 7, 1961

Colonel R. P. Young
District Engineer
United States Corp of Engineers
Seattle, Washington

Dear Colonel Young;

The Skagit Valley Telephone Company's serving area is all of Skagit County excluding the area West of the Swinomish Channel and the area inside the city limits, as that boundary existed in 1933, of Burlington, Mount Vernon and Sedro Woolley, Washington. The Skagit Valley Telephone Co. provides dial exchange, mobile radio-telephone, and toll service in its serving area through a network of wire, wire carrier, cable and micro wave supported by poles or towers on the edge of most State, County City and private roadways in Skagit County. Service is provided 8610 subscribers from the following exchanges:

10 Alger 184
9 Big Lake 226
3 Burlington 1174
5 Concrete 478
7 Conway 432
4 Edison 437
4 La Conner 545
5 Lyman-Hamilton 417
11 Marblemount 114
1 Mount Vernon 3001
2 Sedro Woolley 1602

The greater portion of our Company's serving area is included in the flood control district under study and consideration. In the event of flooding, any wires or telephone communications equipment becoming covered with water, telephone service would be interrupted. Prolonged coverage of water causes the telecommunications equipment to become permanently disabled. Poles can withstand some high water but combined with rushing water, drift and wind it would be a short time and they would be loosened which would cause the supported wires and cables to break and tangle. The hazard of power lines dropping and tangling would cause considerable danger to telephone workmen and any emergency work would have to be postponed during a flood condition.

The Skagit Valley Telephone Company investment in telephone lines and equipment would virtually be destroyed in the event of a serious flood. The people residing in the flood control district area would be without service during the flood period and many weeks, even months after the disaster.
Colonel R. P. Young  
United States Corp of Engineer  
Seattle, Washington  
(continued)

A public utility such as ours is willing to do anything within its power and financial limitations to provide continuity of service regardless of situation. We commend your staff and the leaders in our County for conducting a study to advert any flood disaster.

Very truly yours,

[Signature]

Robert A. Ringman  
General Manager

RAR/hg
January 27, 1961

Colonel R. P. Young, District Engineer
Seattle District, Corps of Engineers
1519 South Alaskan Way
Seattle 4, Washington

My dear Colonel Young:

Thank you for notifying us of your proposed public hearing on flood control for Skagit River basin, Washington, to be held on February 8, 1961 at Skagit County Court House, Mt. Vernon, Washington. In this connection we request that this letter be entered into the hearing record.

The conservation and administration of the nation's fish and wildlife resources are the partnership responsibility of the state conservation agencies and the U.S. Fish and Wildlife Service through our Bureau and the Bureau of Commercial Fisheries. Under the Fish and Wildlife Coordination Act, the U.S. Fish and Wildlife Service and state conservation agencies have a legal obligation to review proposed water development projects and to ascertain effects such projects would have on fish and wildlife. In meeting this obligation, investigations are made to determine project effects on fish and wildlife and to recommend measures for protection, development, and improvement of the resources in connection with project development.

Skagit River is the most valuable tributary of Puget Sound from both a commercial and sport fishing standpoint. No other stream in Northwestern Washington produces as many fish. It supports runs of chinook, coho, sockeye, pink, and chum salmon and steelhead, sea-run cutthroat, and Dolly Varden trout. In addition to being the top ranking steelhead fishing stream in the State of Washington, the Skagit is famous for angling for resident cutthroat and rainbow trout, spring chinook and coho salmon, and sea-run cutthroat.

Wildlife resources of the basin include black-tailed deer, elk, black bears, ruffed and blue grouse, ring-necked pheasants, California quails, minks, muskrats, and beavers. Waterfowl utilization in the basin is relatively heavy and large harvests of ducks and geese occur.
Until definite plans are proposed for flood-control projects, our Bureau cannot effectively estimate their effects on fish and wildlife. We can only point to the tremendous value of the fish and wildlife resources of the Skagit River basin and to the necessity for minimizing losses to these resources.

If it is determined desirable to undertake water development plans for Skagit River basin, our Bureau in cooperation with the Washington Departments of Fisheries and Game is prepared to work with you and your staff so that conservation and possibly development of the above-described fish and wildlife resources can be achieved.

Sincerely yours,

[Signature]

Regional Supervisor
River Basin Studies
Dear Colonel Young:

I wish it were possible for me to appear in person at the public hearings February 8 in Skagit County Court House relative to the problems of flood control in the Skagit Valley. However, this letter will present the reasons why I support a comprehensive flood control program. I request that this letter be included in the record of the hearing.

As you are well aware there have been ten major floods on the Skagit River since 1896. There also have been floods of lesser magnitude but which in the aggregate has caused extensive damage.

During 1959 residents of the Skagit River Valley suffered three floods, the worst in November. If my memory serves me correctly the Corps of Engineers spent $68,000 in emergency funds just to repair levee breaks. In addition the Corps contributed funds to correct the washout near the mouth of Jackman Creek. Large sums were spent by the Forest Service to repair forest roads and bridges.

Former studies for the purposes of flood control have not produced the favorable benefit-to-cost ratio which is necessary to assure federal participation in meeting this continued problem. I firmly believe that the increase in property values, the expansion of the economy, the growth of the population and the extensive improvements in utilities and communications in this area, since the last survey, has changed the situation so that a favorable benefit-to-cost ratio exists. It is interesting to note the total Skagit County evaluation has increased from $19,009,385 in 1940 to $66,341,695 in 1960. Approximately one half of this evaluation lies in the Skagit River flood plane.

The residents of the Valley have indicated a willingness to cooperate in developing a practical and comprehensive flood control system. Diking districts in the area spend more than $100,000 annually to keep levees in a proper state of affairs. During the past six years Skagit County has spent more than $450,000 on river improvements.

I want to thank the Corps of Engineers for its cooperation in trying to find solutions to the many flood control problems of my District and, I appreciate this opportunity to express my views concerning flood control on the Skagit Rivers.
If there is any way in which I can be of assistance in this problem concerning the Skagit River flood control survey, let me know.

Sincerely yours,

Jack Westland
Member of Congress

JW/mb