

AIR MAIL

30 MAR 1964

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Honorable Henry M. Jackson
United States Senate
Washington, D. C.

Dear Senator Jackson:

This is in further reply to your letter of 24 February concerning correspondence from Miss Edna Breazeale about the Avon Bypass project, and your letter of 4 March transmitting letters from Mr. R. L. Nelson and Mrs. John Swisher about the same subject. My interim replies of 6 and 12 March returned these letters. On 13 March we met with a group from the Mount Vernon and Burlington areas about the matters discussed in these letters. The following persons attended this meeting:

Mr. Norman Dalstead
Mr. Ray Billips
Mr. Warren Good
Mr. C. R. Carter
Miss Edna Breazeale
Mr. John Swisher

We believe the meeting provided an excellent opportunity to exchange information at first hand covering the contents of the letters and to clarify objectives of the protesting group as well as of the Corps of Engineers.

Our replies concerning the questions and statements posed in the letters are set forth below. In Miss Breazeale's letter:

Q. Is the Bypass an accomplished fact with respect to future construction? As Miss Breazeale notes, the Information Bulletin which accompanied the public hearing stated, "The Avon Bypass project is not intended for discussion at the 22 November hearing, but if there are any outstanding comments on this project, they will be heard."

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A. We must acknowledge that the procedures whereby the Corps recommends authorization of a project to the Congress and the procedure whereby a project is funded for preconstruction planning have generated a misunderstanding in the present instance. The levee and channel improvements and the proposed added purposes of fishery development and recreation for the Avon Bypass are new proposals on which we are preparing a report to the Congress. The Avon Bypass project is already authorized (Flood Control Act 1936), but has been inactive because local interests had not been able to furnish assurances that local cooperation requirements could be satisfied. Recent studies of the Skagit River basin have shown that the Avon Bypass has a high degree of merit as part of a basin plan for flood control and water resource development. The District Engineer has prepared a report recommending reactivation of the Avon Bypass project. This report is now under study by the Chief of Engineers. The appropriate local authorities have indicated a willingness to furnish the necessary local cooperation, subject to more detailed investigations which will establish the alignment of the project and determine the actual costs that would be incurred in local interest support of the project. The more detailed studies necessary to finalize the alignment and to establish these costs can only be made in the preconstruction planning stage. We have assured Miss Broezeale and the members of the citizens group attending the meeting in this office on 13 March, that at such time as funds may be provided for a preconstruction planning study of the Bypass, we will carry our studies only to the point necessary to establish this detail, before holding a public hearing on a specific plan of Bypass development. No further work will be undertaken on the project until the citizens of the area have had a full opportunity to express their views, and the responsible local officials have taken a position on whether or not they are prepared to enter into an agreement to undertake the necessary aspects of local cooperation. The chairman of the Board of County Commissioners has gone on record as stating that the residents of the county will be given an opportunity to vote on any tax levy necessary to finance the county's obligation in connection with the Avon Bypass project.

Q. The significance of a petition opposing the Avon Bypass and bearing the signatures of about 1000 persons has not been considered by the Corps of Engineers.

A. At the 10 January hearing, mention was made that such a petition was being circulated and asked that the record be held open for

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its inclusion. Until the time of our 13 March meeting with Miss Breazeale and her group, we had not received any copies of the petition or signatures. At the 13 March meeting, Mr. Dalstead furnished us photostatic copies of a petition bearing approximately 740 signatures. The petition reads as follows:

"We, the undersigned, are opposed to any plans to modify the structure of the Avon Bypass for any purpose other than flood control and are in fact opposed to the Bypass itself because as presented to us it will not provide protection from major floods. The cost of construction and maintenance is beyond Skagit County's means, and the project would endanger a new area to flood hazard and eventual silting up of shallow Padilla Bay."

The significance of the above noted petition should not be minimized. Unfortunately the basic petition contains a number of statements for which there is no factual engineering basis. Very briefly these statements are:

- a. That the Bypass will not provide protection for major floods.
- b. The Bypass will endanger a new area to flood hazard.
- c. The Bypass will cause eventual silting-up of shallow Padilla Bay.

I will go into further detail about each of these matters in my letter. It is unfortunate that so much misinformation has been incorporated in a petition which has had such widespread circulation. Certainly the petition emphasizes the need for a separate public hearing to which we are committed, as I noted in the answer to the preceding question. We also received a petition containing 219 signatures endorsing the Bypass. The sponsors of this petition stated they would be happy to get additional signatures. Obviously, we have reached a point where decision making should be based on more detailed engineering information which can only be developed in preconstruction planning and on presentation of these facts at a public hearing. Miss Breazeale and the citizens group accompanying her to the 13 March meeting in my office, are in agreement with us on this procedure.

- Q. Why have the downstream channel improvements been packaged in with the Bypass on an all or nothing basis?

A. As stated in Miss Breazeale's letter, proponents and opponents of the Bypass all generally agree that they desire flood control in the Skagit River valley. The urban and agricultural lands in the Skagit River valley warrant a high degree of flood protection. The comparatively minor improvements being proposed in the forthcoming Survey Report for downstream levee and channel improvements extend over 18 miles of river channel. These improvements would increase the present minimum channel capacity from about 93,000 c.f.s. to 120,000 c.f.s. This is the limit of improvement of the existing system of channel and dikes that is economically feasible. These improvements would only increase the level of dependable flood protection from the vicinity of Mount Vernon downstream from a frequency of flooding of once in three to ten years to a minimum level upwards of once in seven years. This low-level increase in flood protection, in itself, does not appear sufficient to warrant Federal participation. However, the downstream channel and levee improvements in combination with the Avon Bypass would make it possible to accommodate a 180,000 c.f.s. flow from the downstream limits of Sedro Woolley to the mouth. This increase not only doubles the present minimum channel capacity, but provides two feet of freeboard as compared to one foot used in the estimate of present minimum capacity of 93,000 c.f.s. The 180,000 c.f.s. capacity corresponds to a level of flood protection with a frequency of flooding of once in thirty years. This degree of flood protection is compatible with the nature of the area being protected. These two projects in combination with possible upstream storage could develop an overall level of flood protection of approximately once in one hundred years. Studies of the feasibility of upstream flood storage will extend over the next two to four years as part of the Puget Sound Comprehensive Study. Because the downstream levee and channel improvements and the Bypass are part of a comprehensive plan, and because these measures in themselves will give a high level of flood protection, we have proposed that these measures be considered first, in order to develop a timely plan of flood control for the valley.

Q. Are the hunting and fishing and recreation potentials of the Bypass project being forced on an unwilling local populace?

A. Residents of the area are concerned that a horde of hunters and fishermen would invade the privacy of the area, cause damage and otherwise be objectionable. The Avon Bypass project has sound economic feasibility for flood control alone. The Avon Bypass is a local flood control protection project. The recreation,

fishery and hunting potential are dependent upon the state and county for support and development. From the standpoint of the Federal government, the development of these potentials is entirely permissive and is not a requirement for economic feasibility of the project. If any aspects of the proposed recreational developments are not desired by the state and county bodies concerned with the development, these purposes can be omitted. We would expect that these developments would be implemented on a gradual and controlled basis consistent with the needs of the area. The purpose of the Corps present survey report to Congress on addition of these purposes is primarily to identify the potential and to obtain authorization for Federal participation in the development of these purposes to the extent that such participation is appropriate in the construction and planning of the basic project facilities.

Q. The Bypass will endanger a new area to flood hazard.

A. The basis for this statement is not known. The Bypass would divert flows from the Skagit River to Padilla Bay. Because of the necessity for spoil disposal adjacent to the channel, the levees bordering the channel would be 40 to 100 feet wide. There is no hazard from breaching of these levees. The Bypass project would also include all necessary provisions for interior drainage discharging into the channel.

Q. The Bypass will cause silting-up of shallow Padilla Bay.

A. The Bypass would include provisions for a continuous diversion flow of 100 c.f.s. to prevent stagnation. The diversion flow is less than one per cent of the total flow of Skagit River and much of it would occur during periods when the Skagit River is carrying little, if any, sediment load. With the downstream levee and channel improvements, the Bypass would only be used once in about four years for flood flows. The amount of discharge every four years would vary from perhaps 10,000 c.f.s. to a maximum of 60,000 c.f.s. at 30-year intervals. The duration of this flood discharge would be from 24 to 48 hours. On an engineering basis, neither of the foregoing operations would result in any sedimentation that would affect or even be noticeable in Padilla Bay.

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- Q. Federal and state agencies, such as Game and Fisheries would like to take advantage of the Bypass if it were created. This does not necessarily mean approval of the Bypass itself.
- A. The statement is quite correct. These agencies do not ordinarily make judgments about the feasibility of the flood control aspects of the Corps projects. However, they do evaluate the recreation, fishery and wildlife impact and potential. We rely upon these agencies for the professional evaluation of these benefits necessary for the project. There is no intent to commit them to an evaluation of the necessity of the project for flood control purposes.
- Q. The State Parks & Recreation Commission has not committed itself on the project.
- A. We believe the inclosed letter (Incl. 1), from the Washington State Parks & Recreation Commission indicates a keen interest in development of the recreation potential of the Avon Bypass project.
- Q. The State Department of Highways said that since it had never suffered flood damage it would not bear the cost of necessary road alterations.
- A. Inclosures 2 and 3 are photographs showing evidence of flood damage to highways. Our understanding of the Highway Department's position is that they are limited in extent of participation by statute and by precedent to the costs of reconstruction of State highways above flood levels. They cannot participate in providing any of the general benefits attributable to the flood control aspects of the project.
- Q. Residents of the area are concerned about the possible relationship between the Bypass project and the Padilla Bay development of the Pioneer Oyster Company.
- A. There is absolutely no basis for this allegation. To the best of our knowledge there are no physical connections or underlying purposes relating the Bypass and the Padilla Bay development. Mr. Bailey's inquiries to this office have been in the nature of an interested citizen with an industrial development in which navigation might

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be a feature. He has contacted this office openly and in my previous letter to you of 31 January 1964, we have completely revealed any knowledge that we have with regard to the Padilla Bay development. We believe it unfortunate that this implication has been read into the Corps activities, and we are concerned that it may become an underlying motive in frustrating the development of a sound flood control plan for the Skagit River valley.

With respect to questions in Mr. R. L. Nelson's letter which was furnished as an inclosure to Mrs. Swisher's letter.

Q. Is there broad public support of this project?

A. This question again relates to the matter of petition for and against the project. We are hopeful that a public hearing on the Bypass after completion of initial engineering, as noted in my response to the similar question in Mrs. Brennan's letter, will provide a sound forum for resolving these matters.

Q. The flood of 1907 cannot be compared with a possible flood of today because of less watershed in the mountains. Most of the studies have been based on floods of many years past ignoring the vast improvements of the Skagit River over the years. The river is shaping up nicely and is not about to flood in the devastating proportions implied.

A. The watershed of the Skagit River basin is the same area today as it was in 1907. Since 1907, dams have been constructed on the Baker River and in the upstream reaches of the Skagit River. The dams on the Baker River are single purpose, power-generating projects. The Baker River dams can provide some benefit during minor floods because of draw-down of the upper Baker River Dam reservoir for power-generating purposes. However, in a period of major flooding when draw-down of the reservoir has not been necessary for power-generating purposes, these projects will not provide any downstream flood control benefits. On the upper Skagit River, Ross Dam has a flood storage reservation of 120,000 acre feet. This storage is provided on a regularly scheduled basis during each flood season. This office, working with the Federal Power Commission, has responsibility for monitoring the proper operation of Ross Dam for flood control during the flood season. The reduction in discharge of the Skagit River in the

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Mount Vernon-Burlington area because of upstream storage has been taken into account in all of our studies. The only other changes in the watershed from the 1909 period are a present day greater extent of cut-over forested areas and more urban and agricultural development than existed heretofore. Contrary to Mr. Nelson's conclusion, these factors tend to cause greater floods under today's conditions than under early conditions. Our analysis of flood occurrences is based upon recognized statistical procedures and analyses of flood records extending over a long period of time. The last major flood to occur in the Skagit River basin was in 1951 with a discharge of 150,000 c.f.s. at Seabe Woolley. The next largest floods occurred in 1932 with a discharge of 157,000 c.f.s., and 1921 with a discharge of 210,000 c.f.s. In the period December 1921 to November 1896, there occurred five floods which, even when modified by the effects of present day upstream storage, all exceeded the 1951 flood. The flood history of major streams throughout the United States is replete with examples of flood occurrences with varying short and long time periods between major flooding. As a matter of interest, the U. S. Geological Survey and the Corps of Engineers, working independently, have arrived at about the same determination of flood magnitudes and flood frequencies in the lower Skagit River basin. It is fortunate that there has not been a flood of major proportion in recent years, but this is no basis for assuming that floods of past magnitudes will not recur and will not be exceeded.

Q. For many years the levees have been in the process of being raised and widened both for the ease of maintenance and protection purposes by government sponsored flood control projects. In my opinion, the river is shaping-up nicely and is not about to flood in the devastating proportions implied.

A. Inclosure 5 shows the river adjacent to Mount Vernon area during the 1951 flood. This flood is estimated to have a long time recurrence interval of once in 14 years. As the photos indicate, the flood waters were just at about the top of the limits of existing protection. A rise of another foot would have resulted in extensive flooding and damage in the town of Mount Vernon. We cannot agree with Mr. Nelson that this represents an acceptable level of flood protection for the Skagit River delta area. Following is a quote from testimony of the 10 January '64 public hearing presented by the City Engineer of Mount Vernon in behalf of the Mayor of Mount Vernon.

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"Mount Vernon residents clearly remember the date of Feb. 10, 1951. The record book shows that on this date the Skagit River reached a flood flow peak of 150,000 c.f.s. But to Mount Vernon residents and the City of Mount Vernon's officials, the peak flood flow of 150,000 c.f.s. was of no immediate concern through that long night and the following early morning hours of the next day. What our Mount Vernon officials do remember is that the Skagit River filled their banks completely in Mount Vernon and that the flood crest rose until the water level had completely covered our revetment area and was lapping at the gutter line of Main Street at the Myrtle Street intersection. Another 6 or 9 inches would have required sand-bags to keep the Skagit River from spilling over into our downtown commercial area.

Watching the river crest at flood stage was not all our townspeople had on their minds, however. The City officials had serious problems with their sewer system - as our Park Street sewer main collapsed inside of our protective shut-off gates but outside of the dike and flooded back into the residential area in the Southwest section of our town, lifting manhole covers and flooding streets and homes, until the sewer break could be found and the sewer line sealed off by dumping truck loads of sand bags into a manhole to plug the sewer main.

And at our sewage treatment pumping station, City officials found it impossible to pump the resultant sewage and storm water against the head of the raging Skagit River.

Neither will our store owners soon forget their proprietary efforts as they frantically elevated all of their stock in case the stores and storage rooms should be inundated.

With the memory of this 1951 flood and the 1947 flood of 140,000 c.f.s. fresh in our minds, it is not difficult for the City of Mount Vernon to evaluate its position in regard to this hearing.

The City of Mount Vernon, with full knowledge of what a flood flow of 150,000 c.f.s. means to our city, hereby congratulate the Corps of Engineers for their comprehensive and forward-thinking flood prevention plan."

The amount spent by Federal and non-Federal government agencies for improvement in the Diking Districts in the period 1947 to 1963 is tabulated below:

<u>Federal</u>	<u>State</u>	<u>County</u>	<u>Diking Districts</u>
\$194,000	\$672,000	\$492,000	\$932,000

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All of the Federal monies have gone into emergency repairs of dikes following floods and that have not contributed to overall improvement of the levee system. The State, County and the Diking Districts have together contributed about two million dollars towards improvement of the existing diking system. Significantly the State, the County and 14 of a total of 16 Diking Districts have endorsed the Corps plan for flood control by downstream levee and channel improvement and for construction of the Avon Bypass.

Q. The channel should be widened as well as deepened and have levees pushed back as they are raised.

A. The plan suggested by Mr. Nelson has been studied as an alternative to the Avon Bypass and the downstream levee and channel improvement plan. For such a plan to be successful, the over-bank area of the river would have to be widened. There could not be any appreciable deepening of the river channel because of the high maintenance cost that would be incurred from deposition of the heavy sediment load carried by the Shaght River. This sediment load is estimated at more than 500,000 cubic yards of fine material per year. To achieve the same results as the Bypass and the levee and channel improvement, widening of the river channel downstream from Sedro Woolley would be required to an amount varying between 300 and 600 feet depending upon the channel characteristics. This widening would have to extend over a length of more than 20 miles from the downstream limits of Sedro Woolley to the mouth of the Shaght River. A cost estimate showed that the cost of this widening would be about six to seven million dollars more than the cost of equivalent flood protection with the Bypass and downstream levee and channel improvement. One of the principal reasons for the higher cost of this plan, is that much of the area on both banks of the river is now well developed and any widening involves high relocation and land acquisition costs.

With respect to the letter from Mrs. John Swisher, I believe most of Mrs. Swisher's comments have been answered in the foregoing discussion.

I hope the foregoing information will serve to assure your correspondents that the Corps of Engineers has no intention of attempting to implement a local protection project which is not desired by local interests. Final judgment on the

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desirability of the Avon Bypass as an element of a basin flood control plan should be reserved until such time as detailed design information is available on the cost and the alignment of the project. The Corps of Engineers has no intention of proceeding beyond this point until firm assurances of local support of the project are forthcoming.

Please feel free to make further inquiry if additional clarification is desired or if there are further questions.

Very truly yours,

ERNEST L. PERRY

Colonel, Corps of Engineers
District Engineer

Gedney

Stein

C. C. TEARLETON

Colonel, Corps of Engineers

Colonel, Corps of Engineers

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5 Incl

1. Wash. State Parks ltr dtd

2 Dec 63

2. Fls A-1 & A-2

3. Fls B & C

4. Fls D & E

5. Fls F & G

cc: NPD ATTN: NPDEN-PL (w/incl)

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cc: Skrinde

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