

HISTORICAL RECORD OF THE AVON BY-PASS
PROPOSALS ON THE SKAGIT RIVER

SKAGIT COUNTY, WASHINGTON

1921 THROUGH 2004

By Larry Kunzler
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www.skagitriverhistory.com



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PREFACE

This paper is the sixth in a series of papers that will be prepared regarding issues concerning the history of the Skagit River floods and other issues as well. Ninety eight percent of the verbiage contained herein comes directly from historical newspaper articles gleaned from a project that began in July 2004, when Skagit County Public Information Officer, Dan Berentson, contacted me and asked if I would like to help him review all the old articles of the Skagit Argus. I and my son Josef, jumped at the opportunity. We had barely began the project when we all realized that this was an opportunity to preserve the past for use in the present and future generations of our valley and we expanded the project to include not only the Argus, but the Burlington Journal, the Courier Times and the Skagit Valley Herald.

It was originally planned to just concentrate on flood events themselves, however we quickly realized that this was an opportunity to preserve the written record of the history of our valley on many issues. Three hard copy books have been published and are available in local libraries and from the Skagit County Public Works Department containing the hard copy articles mentioned herein. The individual articles are also accessible by clicking on the PDF versions in this paper as well as the following two web sites: www.skagitriverhistory.com and http://www.skagitcounty.net/Common/Asp/Default.asp?d=PublicWorksSalmonRestoration&c=General&p=HistoricIndex.htm#_ftnref1. Neither Dan nor I benefit in any monetary gain for this project.

I would like to take this opportunity to publicly thank Stedem Wood, publisher of the Skagit Valley Herald for his cooperation on this project as well as Tony Flynn of the Argus and Ruth Richardson of the Courier Times. Local newspapers do not just bring us the day to day news. They are the recorders of history in the making and are without a doubt one of the most important elements in our society. Without them the past could so easily be forgotten.

I would also like to thank the members of my immediate family, my wife Linda of 25 years, and my two sons, Josef (my webmaster) and Jeffery (my PDF master). Having your family's support and understanding on any endeavor you set out on is priceless.

Larry Kunzler





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Executive Summary

The Avon Bypass proposal (a/k/a high water relief channel, diversion channel and Swinhomish Bypass or diversion channel) has been kicking around Skagit County since 1921. (Source: [12/22/21 CT](#)) The first official report on the concept was authored not by government, but by a hydraulic engineer for the GNRR, Robert Herzog in 1922. (Source: [Proposed Flood Control – Skagit River, Robert Herzog, Hydraulic Engineer, GNRR, \(1922\)](#)) In 1935 the Corps of Engineers determined that the construction of the Bypass “was the most feasible method of flood control in Skagit County.” (Source: [8/22/35 Argus](#))

In 1936 Congress authorized construction of the Bypass. The cost at that time was \$4,982,000. (Source: [11/5/36 MVDH](#)) The Bypass concept was in trouble almost from its conception. Local residents opposed the construction and instead wanted the Skagit River dredged. (Source: [Transcript of Public Hearing 3/2/37](#))

However the real reason the project was not approved by local residents was best summed up in a GNRR letter. “The attitude of those present was quite unfavorable for the reason that the local people would be expected to assume an expense amounting to \$1,832,000 set up by the Government as their portion of the cost of this project. It is likely that this matter will be indefinitely postponed.” (Source: [3/10/37 letter to W.P. Kenny, President GNRR](#))

In 1940 the Corps of Engineers authored a report which stated in part:

“. . .the only feasible method of providing flood control for the area downstream from Sedro-Woolley is by the Avon By-Pass, augmented by reservation of top storage in future power reservoirs, but that there is **no possibility that the required local cooperation for the by-pass can be secured at present** and only a remote possibility that any of the proposed power reservoirs. (*Emphasis added.*) (Source: [Report on Survey for Flood Control of Skagit River and Tributaries, 7/30/40](#))

Following the 1951 flood the Corps of Engineers authored an internal report which recommended that the Bypass concept be abandoned for the following reasons:

No work has been done on the project because local interests have not met the terms of local cooperation and a large group of local farmers are opposed to the project. (§ 87. Diversion) *NOTE: The estimated cost of the By-Pass was \$9,600,000 and was designed to carry 110,000 cfs. (Page 37)*

Local interests have taken no action toward providing the required local cooperation for the existing flood diversion project adopted by the 1936 Flood Control Act. Studies made for this report indicate that the degree of protection contemplated by this adopted project can be obtained at less cost by improving the existing levee system, but even this work cannot be economically justified at this time. (§ 106)



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I therefore recommend that the existing project (Avon By-Pass) for flood control of Skagit River, Washington, be abandoned, and that no other project for control of floods be adopted at this time. (*¶108. Recommendation*)

(Source: *Report on Survey for Flood Control of Skagit River and Tributaries, Washington, 2/21/52*)

In August, 1952 the Avon By-Pass was declared “inactive” by the Seattle District. (Source: *8/19/52 letter from Seattle District to North Pacific Division*)

Eight years passed and in 1960 the Corps was approached by local government officials about the possibility of looking at the project again. (Source: *COE Memorandum For Record 1/6/60*) In 1961 the Corps held a public hearing in Mt. Vernon and discussed two proposals, higher levees and the Bypass. The Bypass was favored over higher levees by those in attendance in part because the Department of Game and the Department of Fisheries stated that the proposal would have no impact on fishery resources. (Sources: *Summary of Public Hearing on Flood Control, 2/8/61*, *Record of Public Hearing Held At Mt. Vernon, Wa., 8 Feb 1961*)

By 1962 the cost of the Bypass proposal had soared to \$19,000,000 with a local share contribution of \$4,000,000. (Source: *10/2/62 letter to Division Engineer, North Pacific from Colonel Perry, Seattle District*). Once again it was the cost of the project that would fuel the opposition to the Bypass. (Sources: *8/29/63 Argus*, *COE Memorandum for the Record, Ray Skrinde, 9/17/63*)

The cost of the project seemed to be escalating at every public meeting. By October 1963 the cost had jumped to \$23,202,000 with a local share of \$4,141,000. (Source: *Internal Corp memorandum dated 10/31/63*)

In January 1964 the Corps held another public hearing on the Bypass proposal. All of the local dike districts were in favor of the project with the exception of Dike District 12. A petition in opposition to the project was presented to the Corps signed by 742 local residents. (Sources: *Official Transcript of the Proceedings Before the Corp of Engineers, January 10, 1964, Cascade Reporting Co., COE file #1505-22, Unpublished Appendix (Exhibits 1-23) to Public Hearing 1/10/64*) The valley residents were truly divided over the Bypass concept. (Sources: *1/10/64 SVH*, *1/11/64 SVH*)

Besides the cost the added “recreational benefits” demanded by the U.S. Fish and Wildlife as being part of the project was also fueling opposition to the project. (Sources: *Interim Report of the Bureau of Fisheries and Wildlife, 5/20/64*, *2/25/65 Argus*)

By June of 1966 the cost of the Bypass had risen to \$32,082,000 with a local cost share of \$9,800,000. (Source: *Corp of Engineers MFR dated 6/14/66*) In August 1966 the County Commissioners notified the Corps that they could only come up with \$2,000,000 for the local project and that the local Dike Districts should shoulder the burden to meet the rest of the bill. The Dike Districts didn't see it that way and opposition to the plan was cast in concrete. (Sources: *Corp of Engineers MFR dated 8/13/66*, *Corp of Engineers MFR dated 8/23/66*) In September, 1966 the County, citing “lack of interest in flood control” made it



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official and withdrew their support for the Bypass plan. (Source: [Letter to Colonel Holbrook from County Commissioner Chairman Claude Wilson dated 9/6/66](#))

Thirty four years would pass until the Bypass plan would once again rise from the ashes. Skagit County formed a committee called the Skagit Risk Management Working Group in July 2000. (Sources: *Skagit County Flood Control Committee Minutes 6/5/2000*, <http://skagitvalleyherald.com/articles/2000/09/19/news12041.txt>)

The committee recommended the Swinhomish Diversion Channel which followed for the most part the old Avon Bypass plan. The cost of the project was put at \$225,000,000. In the beginning it appeared that the project was feasible as it even garnered support from the local Tribal community. (Source: <http://skagitvalleyherald.com/articles/2001/07/01/news24112.txt>)

However, once again the old nemesis of cost and local people favoring dredging, would cement opposition to the project.

(Sources: <http://skagitvalleyherald.com/articles/2002/01/01/news26859.txt>,
<http://skagitvalleyherald.com/articles/2002/12/16/news3087.txt>)

By December 2004 it was pretty clear that the diversion channel concept had once again died due to a cost factor which had risen to around \$300,000,000. (Source: <http://skagitvalleyherald.com/articles/2004/03/28/news/news02.txt>)



Early By-Pass Concept Presented By County Commissioner

A County Commissioner was the first to propose a “spillway” which is synonymous with “diversion channel” “relief channel” or “by-pass” concepts.

Closely following the recent flood naturally comes the discussion as to whether such destructive inundations cannot be prevented and what means could be used to accomplish their prevention. Comes now County Commissioner Zig Nelson with a suggestion, which deserves serious consideration, in the opinion of many. Mr. Nelson points out the fact that Sedro-Woolley is protected on account of the Sterling cut-off, which opens a straight course for flood waters past Sedro-Woolley, thus minimizing the danger to this community. Below the cut-off, the waters reaching the big bend in the river this side of Burlington, break out of the banks and continue on the straightest course, as the deep channel east of Burlington clearly shows. Nelson’s plan is to construct an immense spillway starting at the Sterling bend and continuing in as straight a course as possible to deep salt water, which he says is seven miles in a straight line from the bend, while the river meanders some twenty-one miles before emptying in to the Sound. (Source: [12/22/21 CT](#))

First Official Report

The first official report for the concept of a diversion channel was by a hydraulic engineer for the Great Northern Railroad in 1922. His name was Robert Herzog, Assistant Engineer. He authored a report entitled [Proposed Flood Control – Skagit River](#). In his report he stated the following:

Before the dykes and the railroad were built, the country was covered with heavy timber and the floods spread slowly and more or less evenly over the whole area, depositing the silt, which is the cause of the fertility of the lower Skagit Valley. The water receded in the same manner and the land was none the worse for it as long as the buildings were put above high water mark. (Page 4)

A high water relief channel can be built from above bridge #36 (current BNSF Railroad bridge) to Padilla Bay capable of carrying 100,000 (cfs). This will require . . . a velocity of flow of 5 (cfs) or a cross section of 2,000 feet width with a depth of water of 10 feet. Such a high water channel would leave the land within the dykes in the same condition for farming purposes as it is at present but would effectively remove the danger of floods because, as soon as the discharge gets above a maximum of plus or minus 70,000 (cfs) the surplus water will flow into the high water relief channel to Padilla Bay. (Page 5)

As mentioned before, the waters flowing through the breaks in the dyke ahead of bridge #36 flow west to Swinomish Slough and Padilla Bay; they follow the Anacortes Branch of the Great Northern Railway. The relief channel should



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therefore follow approximately the same course, which would call for the relocation of some five miles of railroad. (Page 6)

The present location of bridge #36 is in a very unfavorable position on account of the right angle bend; the high-water mark is dangerously near the bottom chord, should the dykes ahead hold so that a high water mark one or two feet in excess of the present one be reached, the bridge is almost sure to go out. . . (Page 7)

The flood discharge of the Skagit River will increase in magnitude as the years pass, the demand for a solution to the problem cannot be delayed much longer, and all the parties interested should combine for common action. (Page 7)

(Source: [Proposed Flood Control – Skagit River, Robert Herzog, Hydraulic Engineer, GNRR, \(1922\)](#))

The County Commissioners were very much interested in the Herzog Report and a copy of the report was sent to them. (Source: [9/26/22 Letter to Hogeland, Chief Engineer, St. Paul, Minn. From Oscar Bowen, Asst Engineer](#)) The Herzog Report opened some eyes at the upper echelons of the management of the GNRR. For there was “no question that the breaking of the dykes above Bridge #36 is what has saved this bridge from being carried out by floods similar to those of December 1917 and December 1921.” However, the breaking of the dikes “causes the Railway Company great damage north of this bridge up to Burlington and westerly on the Anacortes Line and of course causes a great deal more damage to the landowners.” (Source: [10/6/22 letter to President of GNRR from A.H. Hogeland](#)) However, the GNRR upper level management decided, “to leave bridge #36 as it is and provide an overflow channel, which would cross our track north of Bridge 36. The track at this point being placed low enough to let the floods pass over it, the track being protected, as far as possible, by heavy material.” (Source: [10/11/22 letter to President of GNRR from the Vice-President](#))

On November 30, 1923, Colonel Barden of the Corp of Engineers held a public hearing on flood control in Skagit County. At that time the Corp’s position was that the United States was primarily interested in “the navigation of the river, and would consider flood protection only in connection with the improvement of the river for purposes of navigation.” No immediate action was contemplated on Mr. Herzog’s proposal. (Source: [12/20/23 letter to President of GNRR from L.C. Gilmore](#))

By-Pass Most Feasible Method of Flood Control

A \$4,740,000 canal leading from Avon westward into Padilla Bay, augmented by power reservoirs in the upper Skagit country, has been named as the most feasible method of flood control for the Skagit river and its Tributaries. The recommendation was made by Thomas M. Robins, colonel of the United States Army Corps of Engineers in a news release . . . The construction of the channel westward from Avon was recommended as essential and it would be started at once. “This report finds that the best plan for flood control on the Skagit River is to construct a by-pass, leading from the river near Avon into Padilla Bay, and to provide storage in



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connection with proposed power developments on the Skagit river system at the Ruby, Cascade, lower Sauk, and Baker lake dam sites. Provision of storage cannot be undertaken at this time because the proposed power developments are not now warranted, but the by-pass should be built as soon as practicable because this work alone will afford much needed protection. (*Source: [8/22/35 Argus](#)*)

Federal Funding For By-Pass Achieved

Congressman Mon Wallgren reported this week that he had been instrumental in obtaining an appropriation of \$3,150,000 for building a spillway from Avon to Padilla Bay as a flood control project for Skagit county. The bill now awaits the signature of President Roosevelt. To get this money, it is stated that this county will have to contribute a big sum¹ for right-of-way and damage to property. (*Source: [6/4/36 CT](#)*)

A bill that provided \$5,386,000 for second congressional district flood control projects when it passed the House, came back from the senate with the allotment reduced to \$3,411,000 for two projects instead of five million for five projects. . . . The bill allots \$3,150,100 for the construction of the Avon-Padilla Bay cut-off on the Skagit River and \$261,000 for channel and bank work on the Stillaguamish. . . . The 17 projects in five counties being carried out under the direction of the Corps of Engineers and WPA represent a real start toward meeting flood and erosion threats. . . . The needs for flood control are being recognized. (*Source: [6/11/36 CT](#)*)

By-Pass Again Touted As Most Feasible To Eliminate Floods

Two U.S. army engineers from the office of Col H. J. Wild, in charge of the district, today told the Mount Vernon chamber of commerce that \$4,982,000 flood control channel from Avon to Padilla bay is the most feasible procedure to eliminate flood danger in the lower part of Skagit county. . . . “The Skagit River has been studied from many different angles.” Maj. Baker stated, and after naming several stated that the most effective means visualized was by the diversion of the channel at Avon.” . . . When questioned as how he had arrived at the cost of the benefits, Maj. Baker stated that damages from all the past floods had been totaled and the average annual loss computed with the construction costs. The proposed channel is to start at Avon but preliminary work would have to start east of the Great Northern railroad bridge. The proposed channel is to be 1,500 feet wide at the bottom. It will be used strictly as a flood control measure and will not carry water except during flood conditions. Maj Baker reviewed the history of floods on the Skagit during the past 26 years for which records have been kept. The highest flow of water at Sedro-Woolley during that time has been 220,000 feet per second. The present river below Mount Vernon can accommodate a flow of about 120,000 feet per second. The proposed channel is to carry any in excess of 100,000 feet per second, Baker stated. The channel’s capacity is 120,000 feet per second.² We have had larger floods, the speaker stated. In 1815 it is known that a flood with 450,000 cubic feet per second was seen. In 1853 there was a

¹ A “big sum” would have been over a million dollars.

² Channel of river could only carry 120,000 cfs. In 1936.



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flow of 350,000. The building of power dams on the Ruby, at Diablo, on the Baker and Cascade rivers will all tend to help the flood control situation and although the channel itself is not capable of handling flood waters to such extremes as has been mentioned, with the aid of these other factors it should be adequate. Many questions and suggestions were raised by the people present. Suggestions by Wm. Hayton, Albert Mosier and Gene Dunlap that rip-rapping the cut banks of the river from Mount Vernon to the Sauk and dredging the mouth of the river were heard. The guest speaker stated that such was a good policy but that its cost would far exceed that of the channel proposal. He estimated the costs of such a system at eleven million. Dredging at the mouth of the river met opposition from the speaker. **Dredging will have no effect on high tides**, he stated. And high tides are always higher during flood periods. It is the high tide that will tend to hold your river up, he added. (Source: [11/5/36 MVDH](#))

Corps of Engineers Takes Public Testimony on By-Pass Proposal

On June 22, 1936, Congress passed the "Omnibus Flood Control Act." Besides setting the standards for cost sharing on Public Projects the Act authorized the construction of the Avon By-Pass. On March 2, 1937 the Corp of Engineers held a public hearing in the City Fire Hall in Mt. Vernon. Some of the testimony of the hearing went as follows:

<u>NAME</u>	<u>TESTIMONY</u>
T. G. Hasty, Asst. Engineer, GNRR	We have nothing particular to offer on this except that the railroad company will not oppose this project and expects they will not be subject to any expense.
Coit G. Utgard, Dike District #1	As for as I can find out from talking to the different people, they are against the Avon spillway. The feeling in Dike Dist 1 is that the flood control here is in straightening and dredging the river.
J.T. Mason, County Commissioner	What we want more than anything else is the mouths of the rivers dredged, so our flood waters can run out. The general sentiment is opposed to Avon Cut-off. I don't know how we can raise that amount of money (\$1,800,000).
Carl P. Kloke, County Auditor	Under state law we are limited to 5% of our assessed valuation of our county. Our County is assessed at \$20,000,000. In order to exceed that amount, it would require a vote of the people carried by a 3/5 majority.
J.H. Hulbert, Farmer	The general opinion of the farmers seems to be against the Avon Cut-off and they don't understand how the channel will be, and probably at the present time turn it down. (Endorsed dredging the mouth of the river.)
Colonel Wild, Corp of Engineers	For the benefit of some of you who think it will not fill up afterward (the Skagit River), I might state that Swinomish was dug 12 feet deep last October and has already filled up from four to seven feet in that length of time near the "Hole in the Wall". It shows you how long the mouth of the river would probably stay dredged.



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NAME

TESTIMONY

H. R. Abbott, Dike
District #12

...all the people I talk to want the river dredged. One man wants a spillway at Ferry, another at Sterling and another at Sedro Woolley, no spillway at Avon. But every man was in favor of dredging the river.

John Wylie, Dike
District #18

The dam on the Sauk would eliminate a lot of floods. The cost of the Avon Cut-off is what everyone is against. There should be some spillways.

Grant Sessions,
Secretary Skagit
County Planning
Council

I have heard expressions of Avon Cut-off and from the standpoint of the farmers where I live they are most of them opposed to it, primarily because of the cost, feeling that it is impossible for the county to raise any such amount of money (\$1,800,000). I am satisfied in my own mind, living out on Padilla Bay that your best plan would be to go out through the Joe Leary Slough area.

Lars Langloe, Flood
Engineer, Dept of
Conservation
(forerunner of Dept
of Ecology)

Lengthy testimony. Denied forest practices contributed to large floods. "There is no particular evidence that deforestation causes any great increase in floods." Without using the term bio-engineering endorsed the concept. Wanted buffers along the river for vegetation to grow. "Until the farmers do that they will always have trouble. We have got to maintain and help nature in its own way, and we must quit being so greedy with respect to the land. Although I am not holding the farmer blameless, he has probably done it in ignorance."

R.V. Welts,
Chairman, Skagit
County Planning
Council

When the settlers came into this valley, the individual realized that he was not financially powerful enough to protect his land against the elements, and banded together into diking and drainage districts. It is apparent that dredging a narrow channel in the bottom of the river will not handle any additional amount of water at flood time sufficient to be of great benefit. The farmers have tilled the soil up close to the banks of the river; the dikes are built there, and the problem of dredging presents a situation where there is no place adequate to waste the sand that is taken from the river bed. There is no lack of willingness on the part of the farmers, the County, the various entities, to help solve this problem. Primarily, it is their problem. They know it. But they must have aid from a higher source, either state or nation, or a combination of those two, if this farm land is to be saved.

(Source: Transcript of Public Hearing 3/2/37)

The Great Northern Railroad notified its president about the hearing held on March 2, 1937. They stated, "The attitude of those present was quite unfavorable for the reason that the local people would be expected to assume an expense amounting to \$1,832,000 set up by the Government as their portion of the cost of this project. It is likely that this matter will be indefinitely postponed." *(Source: [3/10/37 letter to W.P. Kenny, President GNRR](#))*



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Sauk Dam Preferred Over By-Pass Proposal

At last week's conference on Skagit flood control problems held with U.S. army engineers, A. G. Mosier, prominent local civil engineer, submitted a report advising the construction of a reservoir at the Sauk River³, rather than a huge spillway plan, which army men had recommended. "Having an experience of 47 years with the actions of the Skagit River, it is my belief that channel control, or bank erosion control, is the most important element of the situation," said Mosier. "The relief for surface drainage is also urgent. That flood control begins at the source and not at the mouth of a stream is common sense. Now that the Seattle project insures the building of the Ruby Creek dam, which insure 26 percent control of most floods, and with the enforcement of the operation of the Baker River dam for a reserve reservoir to handle emergency run off from that region, my contention that all floods could be controlled if a flood reservoir were built on the Sauk river. The estimate for such a dam given out by the U.S. engineer's office, is \$5,700,000, only about one million more than the Avon Cut Off, which, in my opinion, would be entirely unnecessary were this reservoir dam built. (Source: [3/11/37 CT](#))

Funding For By-Pass Approved – Sauk Dam On Back Burner

. . . Of the 190 projects in Washington, Oregon and Idaho, 113 projects, cost \$189,984,00 to construct or complete, were listed for immediate construction. Among these projects in Washington state were . . . The proposed \$4,798,000 cutoff in the Skagit river; . . . Fifty projects, costing \$219,374,000 and recommended for deferred construction, included dredging the Columbia river from Vancouver to the Bonneville dam at a cost of \$2,380,000; . . . Among 22 projects, costing \$111,510,000 and listed after the deferred group, were the \$25,532,000 Ruby dam project on the Skagit river; the \$14,612,000 Sauk river project; . . . Among local projects recommended for deferred construction were . . . Skagit county drainage district 17, flood control, \$107,000; Sauk river channel, river channel, revetments, \$53,000; . . . (Source: [4/12/37 MVDH](#))

Ross Dam and By-Pass Vital For Flood Control

Construction of Ruby dam as a vital factor in bringing about an effective flood control for the Skagit River was strongly recommended by Glen H. Smith, outside construction engineer for City Light, at the annual conference of the Puget Sound Flood Control Council which is in session in Mt. Vernon today. Smith spoke briefly shortly before noon today, outlining the history of the Skagit river floods and emphasizing the assistance already realized through the Baker river and the Diablo dams. The Ruby dam with the assistance of the proposed Avon cut-off will eliminate flood danger for the Skagit Valley, he concluded. (Source: [5/20/37 Argus](#))

Skagit County's need for a solution to its flood problem gained a new convert yesterday when the Puget Sound Flood Control Council, in annual session here, unanimously adopted a

³ "All floods could be controlled if dam on Sauk allowed." This is the same river that carried at least 3 volcanic lahars to the lower valley from Glacier Peak. There will never be a dam built on the Sauk.



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resolution asking the responsible authorities to take immediate action. . . . The resolution stressed that the federal government had allocated money for a spillway between Avon and Padilla bay but that **the county could not take advantage of the allocation since Skagit residents have no means of raising a million dollars**, which is mandatory before the project is undertaken. . . . Earlier in the day, Glen H. Smith, engineer for City Light, Seattle, had told the 70 in attendance at the conference that the Skagit Valley is in danger of a flood “such as the white man has never seen.” (Source: [5/21/37 MVDH](#))

Corps of Engineer Report

On July 30, 1940 the Corp of Engineers prepared a Report on Survey for Flood Control of Skagit River and Tributaries. The report stated in part the following:

At a joint public hearing held by the Departments of War and Agriculture on March 2, 1937, County officials stated that the County’s financial position was such that it would be impossible at that time for the county to furnish the local cooperation require for the construction of the Avon By-Pass as authorized under the existing project. The consensus of opinion was that the by-pass was not wanted but that dredging in the lower river channel and bank revetment to prevent erosion of land was necessary. (*¶ 77. Desires of local interest.*)

The opposition of local interests to the construction of the Avon By-pass, as expressed at the public hearing, is caused largely by the desire to these interest to avoid or reduce the very heavy contribution required of them under the adopted project. **It is probably utterly impossible for them at the present time to make the required contribution and it may continue to be impossible for many years to come⁴** unless the required contribution is lowered by Act of Congress. (*¶ 99.*)

In view of the foregoing it is concluded that **the only feasible method of providing flood control for the area downstream from Sedro-Woolley is by the Avon By-Pass**, augmented by reservation of top storage in future power reservoirs, but that there is no possibility that the required local cooperation for the by-pass can be secured at present and only a remote possibility that any of the proposed power reservoirs. (*¶ 118. Conclusion.*)

(Source: Report on Survey for Flood Control of Skagit River and Tributaries, 7/30/40)

Corps Reviewing By-Pass Concept

H.O. Walberg, president, and L.J. Wright, vice-president, represented Skagit County when the 13th annual meeting of the Puget Sound Flood Control Council was held December 1 at the Seattle Chamber of Commerce. . . . Col. Hardy disclosed that his office is now making a review of the Skagit river report which recommended the construction of the Avon bypass, and

⁴ This is exactly the reason the By-Pass was never built.



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indicated that a conclusion more favorable to the county may be reached during 1945. (Source: [12/6/45 MVDH](#))

Another Reason By-Pass Was Opposed

The proposed Avon cutoff might be one feature of the long range plan, but this would not effect the stream bank above the site of the proposed cutoff. Engineers are now studying storage opportunities on the upper Skagit. . . . No accurate survey of the channel above Mt. Vernon is available. (Source: [2/14/46 CT](#))

1951 Flood Prompts Corps To Again Look At By-Pass

The US army engineers are nearing completion of a comprehensive study of Skagit River flood conditions, but a representative of the Seattle district office today held out little hope for any action by the army engineers in the foreseeable future to remedy the situation. Byron Clark, speaking before the members and guests of the Mount Vernon Kiwanis Club this noon at the President Hotel, said that the flood control plan considered most feasible by the engineers – raising of the dikes along the entire lower river – could probably not be justified economically to earn Congressional approval for the project. He said **the long-proposed Avon Bypass plan, cutting a channel for emergency overflow from the Skagit River to Padilla Bay would be “slightly more expensive”⁵ and indicated it would not have compensating features making it a first choice plan.** . . . “Not a penny has been appropriated for the Avon By-Pass to date,” Clarke said in answer to a question. Clarke pointed out that under the existing law flood control projects must be “economically justified” by showing that damage which would be prevented over a period of years would exceed the cost of the work, spread out of the same period – say 50 years. He said that even the least expensive way of meeting the flood situation on the Skagit could not be justified on that basis. . . . This year’s flood, he pointed out, was exceeded in volume and damage by several in the past and he was inclined to doubt that “floods are getting worse.” He also disputed a remark that “the Skagit is silting up,” quoting studies made of the river bed near its mouth in 1930 and 1950, showing comparatively little change. He discounted the importance of closed slough outlets as a flood cause, and said their effect would be very local and not too great since the sloughs carry off little water in comparison to the main stream. He said Swinomish Slough jetty work had absolutely no effect on the Skagit. Clarke also minimized the effect of cutting over timber as a cause of floods. “The main cause of floods in this area,” he said, “is the appearance of storms concentrating in the area of the watershed.” Clarke did not think that dredging the Skagit would have any great effect on preventing floods, at least in the area above the North Fork bridge. He dismissed as far too expensive to consider the diversion of the entire river. The engineer pointed out that Ross Dam has had a helpful effect in reducing flood levels and estimated that the most recent flood would have been one to two feet higher if the dam’s reservoir had not operated as a check. “That margin,” he pointed out “could have been very serious, as you all realize.” (Source: [2/22/51 MVDH](#))

⁵ \$9,600,000 vs. \$4,798,000 or approximately 5 million dollars more than in 1937. Slightly more expensive?



No Money Available For By-Pass

Doubt that federal aid would be forthcoming for flood control in the Skagit valley was expressed by Byron Clarke, of the Seattle office of the United States army engineer corp. . . . The question of the often discussed Avon bypass was put and Mr. Clarke contended that at present construction costs it would amount to about nine million dollars. The other alternative, repair, and improvement of the present dike and jetty system would cost in the neighborhood of five million dollars. Although the army engineer survey of the situation is not quite complete at his time Mr. Clarke stated that it was his belief that there would be no recommendation to the federal government for aid in any of these projects suggested. The speaker left the impression that if anything was done to improve the situation in the county it would be up to the home folks. He did say he believed the most economical plan was to repair, widen and raise the existing dikes, both the bypass and dredging at the mouth of the river being impractical from the financial viewpoint. (Source: [3/2/51 B.J.](#))

By-Pass Concept Begins To Die

In 1952 the Corp of Engineers prepared an internal report on flooding in the Skagit River Valley. With respect to the Avon By-Pass the Corp report stated the following:

No work has been done on the project because local interests have not met the terms of local cooperation and a large group of local farmers are opposed to the project. (§ 87. *Diversion*) **NOTE: The estimated cost of the By-Pass was \$9,600,000 and was designed to carry 110,000 cfs. (Page 37)**

Local interests have taken no action toward providing the required local cooperation for the existing flood diversion project adopted by the 1936 Flood Control Act. Studies made for this report indicate that the degree of protection contemplated by this adopted project can be obtained at less cost by improving the existing levee system, but even this work cannot be economically justified at this time. (§ 106)

I therefore recommend that the existing project (Avon By-Pass) for flood control of Skagit River, Washington, be abandoned, and that no other project for control of floods be adopted at this time. (§ 108. Recommendation)

(Source: Report on Survey for Flood Control of Skagit River and Tributaries, Washington, 2/21/52)

In August, 1952 the Avon By-Pass was declared "inactive" by the Seattle District. (Source: [8/19/52 letter from Seattle District to North Pacific Division](#))

The Board of Engineers for Rivers and Harbors at its meeting on September 20, 1955, held in Washington, D.C., concurred in general in the unfavorable recommendations of the District Engineer, Seattle District, Seattle, Washington, and the Division Engineer, North Pacific



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Division, Portland, Oregon, regarding the advisability of Federal improvement of the Skagit River and Tributaries, Washington, in the interest of flood control. The Board is of the opinion that the benefits to be derived by provision of local flood protection works are insufficient to justify construction of such works by the Federal Government at this time. Storage possibilities for flood control alone and in combination with hydroelectric power generation were also considered but none was found to be feasible for development by the Federal Government at this time. The Board further finds that the degree of protection that would be provided by the Avon bypass authorized by the Flood Control Act of 1936 could be secured at less cost by improving the existing levee system but that such improvement cannot be justified at this time. No action has been taken to provide the required local cooperation for the authorized project and no work has been done. The Board, therefore, recommends that the existing project for flood control of Skagit River be abandoned. (Source: [10/20/55 B.J.](#))

By-Pass Plan Resurrected

In January 1960 a group of dike district commissioners and the Assistant County Engineer (Lloyd Johnson) met in the Corp of Engineers, Colonel Young's office in Seattle. While mostly concerned about slough closures by the Corp of Engineers on the South Fork of the Skagit River they also discussed the, "overall flood control problem of the entire river basin in which they expressed a considerable amount of interest." The Colonel informed the group that the Corp anticipated "a new Congressional resolution authorizing the Corps to make a restudy of the Skagit River flood control problem" and as soon as funds would be made available the Corp would begin. (Source: [COE Memorandum For Record 1/6/60](#))

Higher Levees Opposed – Bypass Should Be Looked At

The Skagit County Flood Control Council is definitely opposed to building dikes any higher along the Skagit River, Lloyd Johnson, county flood control coordinator, said today that the group feels such action, because of the built up underlayments of sand, logs and general debris, would only mislead public trust and possibly end in a major break-through by the river at a weak point. Following the council's planning session at the courthouse yesterday, Johnson said the organization will not endorse any one of the particular flood control plans, but will vigorously oppose the higher dikes thinking. . . . Johnson said that the Faber Dam proposal is recognized as an ideal solution to the flood control problem. However, such an undertaking would require from 300 to 400 million dollars, and the complete cooperation of people in the affected upriver area, and the sanction of the state fisheries department. . . . Another plan that warrants strong consideration is the proposed spillway near Avon to the bay. Johnson said that such a channel would completely eliminated flood dangers from Sedro-Woolley south. Above that point, he felt the condition could be controlled with dikes. The county flood control coordinator pointed out that the threat of floods is hampering the Valley's economic growth. He said that it has been indicated that several large businesses have rejected sites here because of the danger. Johnson said that the Riverside Bend area which has been zoned for commercial



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development is very poorly protected against rising waters because the dikes are as high as practical on such shifty underfooting. (Source: [1/18/61 SVH](#))

Corps Holds Another Public Hearing

Corp of Engineers held a public hearing in the Skagit County Courthouse in Mt. Vernon for the purpose of determining what if any project the local people wanted. "The authorized Avon Bypass to divert a portion of Skagit River flood water to Padilla Bay was favored by the Washington State Dept of Game and Fisheries and the Skagit County Engineer. The **Bypass project was favored** by the Dept of Game and Fisheries **because it would have no effect on the existing Skagit River fishery resources.**" (Source: [Summary of Public Hearing on Flood Control, 2/8/61](#))_ Some of the testimony of that hearing went as follows:

<u>NAME</u>	<u>TESTIMONY</u>
Gene Hopkins, Manager, Mt. Vernon Chamber of Commerce	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. The record will bear us out that the Mt. 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 build up at the mouth continues at an alarming rate. ... floods themselves are a creeping paralysis that threatens the economic lifeblood and the growth of the entire Skagit River Basin.
Ralph W. Larson, Fishery Management Coordinator, Dept of Game	The Skagit River system has produced a catch of as high as 23,000 winter-run steelhead in one season. The Skagit River system is extremely important. The proposed Avon Bypass 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. The Dept of Game...would desire to offer no objections to the dredging of the Skagit River to Mt. Vernon, improvement of dikes, or the Avon Bypass.
Jess Knutson, Farmer, SCD supervisor	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.
Leo E. Sullivan, Skagit Economic Dev. Association	...we are very much interested in having the Skagit River dredged for six-foot shallow draft barging from the City of Concrete to the Sound.
Senator Fred Martin	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.



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<u>NAME</u>	<u>TESTIMONY</u>
Daniel Sundquist, Dike Dist #3	During last 10 years spent \$439,000 on dikes. I don't think it is advisable to <u>continue to increase the height of our dikes</u> , due to the underlying nature of the ground – sandy or porous material under the dikes.
Robert Schroeder, Dike Dist #12	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 (west Mt. Vernon dump), narrowing the stream flow, it will be necessary to raise the height of the dike. ... The new highway 99 will hold water in a pocket, which will flood Burlington and all the area above it. They have choked off Gages Slough with the new highway there and the water can't be released fast enough to leave it out. Had spent almost \$900,000 on dikes since 1950.
Lloyd Johnson, Associate County Engineer	The general feeling among people in our area that the diking system from the GNR bridge (BNSF) on to Mt. 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. ... 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 interest. (He suggested) moving dike on left bank of Fresh Water Slough back and removal of dam on Freshwater Slough built by Corp. 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 ... This dam (Upper Baker) has now been constructed by private interests for power use only with no provisions for flood control. ... As one of our Dike Commissioners stated, he would <u>like to see this problem solved in this generation rather than pass it on to his son to solve</u> . Time is of the essence for this control; and we hope a disaster is not necessary to secure our needed project.
Earl Hansen, Dike Dist #17	This river prompted a survey of the dike system, resulting in the raising of the dike to a uniform height – the total dike is now eighteen inches above the 1951 flood level. ... It would appear to me that small dams on the smaller tributaries would be of more value and less cost (then one at Faber).
Lowell Peterson, Concrete	45 people attended meeting in Concrete. All 45 residents of the upper Skagit Valley who were present at this meeting favored the dredging project (Concrete to Fir Island).



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<u>NAME</u>	<u>TESTIMONY</u>
Ralph B. Anderson State Dept of Fisheries	(Reading letter from Milo Moore, Director) ... The Skagit River is the most important valuable tributary of the Puget Sound area in sustaining and supporting commercial and sport fishing. ... 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 dam would nearly obliterate this run as well as silvers and other species. One method of flood control proposed has been the Avon Bypass or overflow channel, downstream. <u>This Dept. wishes to emphasize the importance of this proposal</u> , 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. Dept. did not have any objection to dredging from mouth to Mt. Vernon.
Greg Hastings, State Dept. of Conservation (forerunner to Dept of Ecology)	Since 1943 the State ... expended \$858,563 in Skagit County (for flood control). Figure represented around 15% of total state budget since 1943 for flood control (\$5,630,000). He endorsed the concept of all the diking districts banding together into one district.
Honorable A.H. Ward	Local Judge. Lived in Nookachamps. Served in Corp of Engineers in WW1. Corp recommended Avon Bypass in 1936. From engineering standpoint project seemed very feasible and good solution to problem. Economically it presented some problems because they had a cost sharing program. Had experience with condemnation actions. You could expect (to pay) \$1,000 an acre. ... The proposal to build the dikes higher and solve the problem is a snare and a delusion (due to sandy soils and boils). (Building dikes higher) people live with a false sense of security.

(Source: Record of Public Hearing Held At Mt. Vernon, Wa., 8 Feb 1961)

Avon By-Pass – New Concept

In 1962 the Corp began low level meetings with local officials concerning a new concept of the Avon Bypass proposal. In a meeting held in Max Dales Restaurant with the Skagit County Flood Control Council, Skagit County Engineers and the Skagit County Commissioners the Corp unveiled their new Bypass proposal. Mr. Ray Skrinde, Project Engineer “told of the old proposed Avon Bypass with its sixteen hundred foot width and compared it with the new proposed three hundred and forty foot bottom width and its new entrance location upstream from the GNRR bridge. Dikes would be 25 feet wide on either side of the bypass. Would require 7 million cubic yards of excavation and would be 7 to 8 miles long from the Skagit River to Padilla Bay. Project showed annual benefit of over 1 million dollars. Bottom elevation of Bypass would be 10 to 15 feet below current ground elevations. No rock rip-rap was proposed through the Bypass. Local share estimated at \$3,900,000. Flood Control Council voted to work



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with County Commissioners and Corp to construct the project. (Source: [Minutes of Skagit County Flood Control Council dated 7/12/62](#))

A long-considered flood control project is undergoing new study in the Skagit Valley as probably the most practical means of curbing damage and offering a number of other advantages. The project is the Avon By-Pass first authorized in 1936⁶, frequently discussed since then and now revived by the Corps of Engineers as the most practicable solution to Skagit River Flood problems. . . . “For the 1951 flood the Bypass would have lowered flood stages three to five feet in the Skagit River and two to four feet in the North and South Forks of the Skagit River”, the Engineers noted. (Source: [8/22/62 SVH](#))

Avon By-Pass Plan Pushed – Could Produce New Fish Runs

Development of new fish runs and of a several-mile length of excellent boating-swimming water are important by-products of the revived “Avon By-Pass” flood control plan for the Skagit valley that are being seriously studied. . . . “The experts say near-ideal conditions could be provided for natural fish propagation and it is possible completely new runs of fish could be produced.” . . . Johnson said it was possible the engineers could proceed with final design and construction as early as 1964. (Source: [8/23/62 Argus](#))

The Avon By-Pass has again been proposed to Skagit County by the Corps of Army Engineers as the most practical means of additional flood control. Many miscellaneous other uses of this by-pass other than flood control are under study, such as fish farming, recreation, drainage, irrigation and water transportation. The U.S. Fish and Wildlife consider fish farming conditions in the upper part of the by-pass as very good and they are reporting as being enthusiastic about the prospects. The Skagit River water temperatures are near ideal for fish farming. Plans for swimming, boating and other recreation will be utilized to everyone’s advantage. (Source: [8/23/62 B.J.](#))

The Avon By-Pass...is being revised as a solution to flood control here by the Corps of Engineers. . . . Proposed by the US Engineers in 1936, the original by-pass plan was dropped because of local costs involved and because of strong objections based on the farm lands it would have taken out of production and feared effects on adjoining lands. Now the engineers propose a 340 instead of a 1600 foot wide channel. . . . About four million of the total nineteen million dollar estimated cost of the project would have to raised by the county...The by-pass plan would protect the valley from a “30-year” flood, the engineers believe. . . . The by-pass could have lowered the Skagit river flood stages three to five feet and the river level from two to four feet in the North and South forks in the 1951 flood, which broke dikes on Fir Island, at Conway, and lapped the top of dikes elsewhere up and down the river. (Source: [8/23/62 Argus](#))

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⁶ Cost of the By-Pass put at \$19,000,000 vs. \$4,798,000 in 1936.



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drainage, irrigation and water transportation. The U.S. Fish and Wildlife consider fish farming conditions in the upper part of the by-pass as very good and they are reporting as being enthusiastic about the prospects. The Skagit River water temperatures are near ideal for fish farming. Plans for swimming, boating and other recreation will be utilized to everyone's advantage. . . . Flood damages for a flood larger than that of 1951 have been estimated at over six million dollars at today's prices and with our present development. . . . The by-pass channel as authorized in 1936 contemplated a shallow channel approximately 1,600 feet wide. The channel now proposed has been deepened and narrowed to a 340 foot bottom with 3 to 1 side slopes. . . . Protection for about a 10-year flood is provided by the present levee system. With the by-pass constructed the area below the intake would have protection for about a 30-year flood. For the 1951 flood the by-pass would have lowered flood stages 3 to 5 feet in the Skagit River and 2 to 4 feet in the North and South Forks of the Skagit River. . . . Consideration is being given to additional flood protection by upstream storage. Complete protection from storage alone is not feasible because suitable storage sites are limited. The best sites for multiple purpose storage have been developed for single purpose uses. (Source: [8/23/62 B.J.](#))

Avon By-Pass Committee Formed

By September 1962 the County Commissioners had formed an "Avon Bypass Committee." The group actively solicited the support of the elected officials. (Source: [9/5/62 letter to Corp from County Commissioners](#)) In October 1962 the Seattle District Corp of Engineers notified its superiors at the North Pacific Headquarters, that "Local interest are keenly aware of favorable prospects for economic growth and recognize the importance of the bypass to provide flood protection to the entire lower Skagit River Basin." Total construction cost were estimated to be \$19,000,000 with a \$4,000,000 local share. (Source: [10/2/62 letter to Division Engineer, North Pacific from Colonel Perry, Seattle District](#))

More Money For By-Pass Study

For Skagit county civil works, the budget asks \$120,000 for dredging the Swinomish channel and revetment repairs, and \$70,000 for continuance of the Skagit flood survey. . . . "Apparently, the Corps has decided a point of no return has been reached," Westland explained. "Otherwise, the survey would have been discontinued. Only the possibility of a favorable benefit-cost ratio would warrant expansion and continuance of the survey from the original \$135,000 to \$275,000 now. (Source: [1/17/63 Argus](#))

New Route For By-Pass

The Washington Association of County Commissioners and Engineers...passed a resolution requested by the Washington State Flood Control association asking the legislature and the state highway department to cooperate in the by-pass project. . . . The new route will



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follow the line between Drainage Dist. No. 19 and Dike and Drainage Dist No. 8. (Source: [1/31/63 Argus](#))

The Avon Bypass – a big ditch that is supposed to carry flood waters from the Skagit River to Padilla Bay – is no longer destined to be located at Avon. Ray Skrinde of the Corps of Engineers told a gathering of county people yesterday that redesigning has placed the bypass nearer to Burlington, and extended its length to approximately 8 miles. Compensating for the added length, however, is the fact that plans for the proposed ditch have narrowed it from 1,600 feet to 500 feet. . . . If the Avon Bypass is to be realized, it will require local financing of about \$4 million and federal financing of \$15 million. (Source: [2/5/63 SVH](#))

The name of the water diversion channel is now a misnomer, but came about as a result of earlier plans for a similar plan to control the river during flood stages. Under the previous plan the river would have been diverted at Avon and flood water taken by a shallow ditch 1,600 feet wide and dumped into Padilla Bay. Recent plans call for changes in the intake location of the ditch and a width of only 340 at the bottom but deeper than originally proposed. The intake of the channel has been relocated to utilize Gages Slough south of Burlington and follow the hillside north of the valley keeping to a minimum the amount of valuable farmland required. Cost of the structure estimated at \$19,000,000 with the Federal Government paying \$15 million of the cost. Average annual benefits from the project are said to be \$1,000,000. . . . The plans call for levee extension and improvement west of Burlington. . . . Protection for about a 10-year flood is provided by the present levee system. With the by-pass, the area below the intake would have protection for about a 30-year flood. The Army Engineer said river flow up to 200,000 second feet of water could be controlled under the plan. (Source: [2/7/63 B.J.](#))

Opposition To By-Pass

Opponents of the Avon Bypass flood control plan last night expressed doubts the proposed project will offer a long-rang solution to the Skagit River's major overflows. . . . Not all the 50 or more persons attending last night's session were against the Bypass. . . . Several opponents leveled criticism and questions at Skrinde's estimate that the Bypass will produce a million dollars in annual benefits for the Skagit Valley, largely by eliminating losses resulting from floods. . . . Another opponent said Skagit River flood waters had actually made his farmland more productive. . . . Asked last night about a time-table for the project, Skrinde said the Army Engineers hope to start design work and detailed layouts for the Bypass by July 1, 1964. . . . Skrinde told his audience last night the Bypass probably will have to be used only once every five or ten years when a major flood threatens the Skagit Valley. (Source: [3/1/63 SVH](#))

Corps Study Ready By Fall 1963

An early-fall target date has been set by the U.S. Army Corps of Engineers officials for completion of reports to be presented to Congress on year-long study of the Avon Bypass flood control proposal. . . . **Authorized In 1936** Johnson, working with the federal engineers as flood control coordinator for Skagit County, explained that the Avon Bypass project was first



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authorized by Congress in 1936. It has been frequently discussed since that time and was revived in the spring of 1962 by the Corps of Army Engineers as the most practicable solution to Skagit River flood problems. As outlined earlier by corps officials, the bypass would consist of a channel 340 feet wide at its bottom extending from the Skagit River to Padilla Bay. From an intake structure south of Burlington, the proposed canal would run eight miles almost directly west to Padilla Bay. Excess flood waters could be diverted into the channel during high water and emptied into the bay. **Cost \$19 Million** . . . Cost of the bypass has been estimated at \$19 million. Federal aid would provide about \$15 million of this total, with local financing from Skagit County, the state, diking districts and possibly flood control zones financing right of way costs and construction of highway bridges made necessary by the project. (Source: [8/14/63 SVH](#))

Cost of By-Pass Fueling Opposition

Warren Good and Norman Dahlstedt, farmers and truckers, and Ray Billups, custom carpet expert who lives in the bypass area, presided at the head table...Dahlstedt said he and others seriously questioned whether the flood overflow channel proposal would give adequate protection and would justify its \$19 million estimated cost. He also said there was doubt that this would be found the final maximum cost by possibly many more millions of dollars. . . . Dahlstedt said the questions were whether “we can afford this” and whether “we want this or something else.” . . . Jim Hulbert, longtime LaConner farmer, said he had seen “water from Stanwood to Edison” and warned “you are going to have some more floods someday.” The Avon bypass is “the only thing they have ever recommended,” Hulbert went on. “It would be very foolish to laugh this off...to turn it down.” (Source: [8/29/63 Argus](#))

The Corp attended a meeting in Burlington with approximately 50 residents owning property in the vicinity of the proposed Bypass. The State Dept of Fisheries, State Highway Dept. and the County Engineer also attended the meeting. Opposition to the project was based on cost, considered it a “pork barrel project” and that it would not eliminate flooding. Fisheries were making a study on the possibility of adding recreation to the project. The consensus of the meeting was that the Bypass was very desirable even though some of those present may be adversely affected. (Source: [COE Memorandum for the Record, Ray Skrinde, 9/17/63](#))

In October 1963 despite the growing opposition to the By-Pass plan the Corp advises Representative Jack Westland that the Corp had not encountered any outstanding opposition to the Avon Bypass in the Burlington area except on an isolated basis. The Corp further advised that the Bypass would lower the floodwaters in the Burlington by 3 to 4 feet. This would provide 30 year flood protection to the area. (Source: [Letter to Jack Westland from Major General Jackson Graham, 10/21/63](#)) By October 31, 1963 the total cost of the Avon Bypass project was estimated at \$23,202,000 with a local share of \$4,141,000. (Source: [Internal Corp memorandum dated 10/31/63](#))



Avon By-Pass – Boon Or Boondoggle

From what we have seen and read, to date, we are unable to determine whether the misnamed Avon By-Pass would be a bonafide boon to our area or just another bureaucratic boondoggle. According to a recent release by Congressman Jack Westland the Corps is considering construction of the by-pass, strengthening of levees and building of a water storage facility as parts of a long-range flood control plan for the Skagit. The informational bulletin makes it plain that the bypass project itself is not intended to be up for discussion at the Nov. 22 hearing. A plan of “uniforming” the Skagit river levee system from Mount Vernon in combination with minor channel widening, and the addition of recreations and fisheries as added purposes to the Avon By-Pass will be the subjects that will be discussed, We do not know if this means the Corps has already been “sold” on the by-pass or not.

At any rate, we did not know the Corps was in the business of “selling” anything. We always thought their function was to take over when a need was expressed, justification determined, and funds provided. Maybe it wasn’t intended that way, but the informational bulletin mentioned above strikes us as a first class promotional piece as far as the recreation and fisheries aspects of the by-pass are concerned. We are presented with sketches of ducklings in the rushes, fishermen netting fish out of a boat, canoeing, bird and duck hunters prowling in the banks, beach balls and beach scenes, picnickers and even overnight campers in tents. . . . With the levee improvements cited, and the addition of the by-pass, the engineers say we would be able to control flows of up to 180,000 c.f.s. from Burlington downstream, and would increase the level of flood protection in presently diked areas to 30-year frequency. Under this plan, the river would carry 120,000 c.f.s. and the by-pass 60,000. . . . The fact⁷ remains, however, that the river has exceeded 180,000 c.f.s. five times in its recorded history – 185,000 in Nov. 1896, 190,000 in November 1897, 220,000 in November 1906, 195,000 in December 1917, and 210,000 in December 1921. We’re certainly no experts on rivers but it’s reasonable to presume these excessive flows could occur again under the right circumstances. If they did, we would all get our feet wet, by-pass or no by-pass.

On the other hand there have been no disastrous floods in the lower Skagit Valley since the completion of the Ross Dam in 1949. During flood periods, the Ross Plant has been shut down, sometimes entirely, to hold back the greatest possible amount of water. In 1949, from Thursday midnight until Sunday midnight, enough water was held behind the dam to cover 116,000 acres of land to a depth of one foot. At the crest of the flood approximately 50,000 cubic feet of water was impounded every second. Although the dam was built primarily for power production, it had appreciably reduced the flood threat in the lower Skagit. . . . We are not convinced either that the by-pass would tend to impair the free flow of people and traffic across the valley. This barrier could work a hardship on business, industry and agriculture. From a strictly selfish viewpoint we can see the City of Burlington and surrounding area locked in by the river on one side and the artificial moat on the other. It would appear that the Burlington Cut-Off would be a more appropriate name for the project than the Avon By-Pass. Before this thing blossoms into reality sufficient thought should be given to the possible consequences. (*Source: 11/14/63 B.J.*)

⁷ The fact is that all of these figures are “estimates” determined by James E. Stewart in 1923. See [Whitepaper](#) on a discussion of Mr. Stewart’s accuracy - http://www.skagitriverhistory.com/PDFs/Stewart_White_Paper.pdf.



Another Public Hearing On By-Pass Plan

A plan for uniform flood control along the Skagit River south of Burlington will be the subject of a hearing Nov. 22 at the Elks Lodge in Mt. Vernon. . . . Spokesmen for the Corps of Engineers said the Avon Bypass is the subject of one of three separate studies now under way which are not of direct concern at the Nov. 22 hearing. The other two are a study of Skagit River navigation from Concrete to the mouth and a study of upstream storage along the Sauk River and other tributaries. . . . Of major concern at the Nov 22 hearing will be plans to provide uniform levee protection along the Skagit from its mouth to Mt. Vernon; strengthening of the levee system, and widening of the channel at some points to remove restrictions. (Source: [11/14/63 SVH](#))

...Primary subjects of Friday's hearing are the Engineers plan to bolster dikes and widen channel of the river below Mt Vernon and their addition of recreational features to the revised Avon Bypass plan originally authorized by Congress in the 1930's. "We would not recommend the lower river work without the by-pass," Robert Gedney, chief of basin planning branch, Seattle engineer district, told the special meeting group. He explained that as now diked lands along the lower river have from two to seven year flood protection. . . . Also brought out at the meeting was that the State fisheries department within the last two months had asked the Engineers to consider use of part of the Avon bypass channel for migratory fish propagation. (Source: [11/21/63 Argus](#))

Highly favorable benefit-to-cost ratio⁸ for the Skagit River flood-control and Avon Bypass project is announced by Colonel Ernest L. Perry, Seattle Army District Engineer, . . . Under present conditions, the safe channel capacity of the Skagit River downstream from the proposed Bypass is only 90,000 to 120,000 cubic feet per second (c.f.s.). With the improvements on levees, a safe capacity of 120,000 c.f.s. with 2 feet of freeboard would be obtained. All levees would be widened and strengthened to provide a minimum 12-foot top width. (Source: [11/21/63 B.J.](#))

The purpose of the hearing was to obtain the views of all interested parties on the proposed Avon Bypass plan. The Bypass was to carry 60,000 cfs, create 340 acres of water surface and 440 acres of adjacent land available to the public for recreational pursuits. Proposal could attract 60,000 people annually. Plan would create a 8 mile long cold clear lake. U.S. Fish and Wildlife developed resident trout fisheries in Bypass. Minimum flow of 100 cfs required. Lower section of Bypass would be used for migratory fish rearing. (Source: [COE Informational Bulletin 11/22/63](#))

The Corp of Engineers scheduled a public hearing on the Avon Bypass proposal for November 22, 1963. Due to the assassination of President Kennedy the meeting was cancelled and rescheduled for January 10, 1964. (Source: [Letter to GNRR headquarters from GNRR Assistant Chief Engineer, 9/7/65](#))

⁸ The benefit to cost ratio was 3.6 to 1 with recreation as added feature.



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The city of Mount Vernon is on record with the U.S. Corps of Engineers as endorsing flood control plans recommended by the Engineers. . . . The mayor said he had consulted with City Engr. Denny LeGro and written the approval letter prior to the original hearing date, Nov. 22, canceled by the President's death. The letter declares the Engineers' proposals for levee and channel improvements "reasonable and practical, . . . assuming that the costs . . . are economically feasible and that suitable and equitable financial arrangements can be achieved . . ." . . . **"If we hadn't had the dike break below us we'd have had it," LeGro commented, as to the 1951 flood. RECALLS 1951 FLOOD**— 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. (cubic feet per second). But to Mount Vernon residents and the City of Mount Vernon's officials, the peak flood flow of 150,000 cfs. was 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 six or nine inches would have required sandbags to keep the Skagit River from spilling over into our downtown commercial area. **STORE OWNERS PREPARE**—"The city of Mount Vernon, with full knowledge of what a flood flow of 150,000 cfs means to our city, hereby congratulates the Corps of Engineers for their comprehensive and forward-thinking flood prevention plan. **UPSTREAM STORAGE** – "And in conclusion, with the achievement of all the plans presently under consideration for flood control on the Skagit river, that the comprehensive development of upstream storages on the various tributaries of the Skagit river, can give our fertile valley a virtual freedom from the danger of floods – and possibly in our lifetime. (Source: [1/9/64 Argus](#))

Testimony At January 10, 1964 Public Meeting

NAME

TESTIMONY

Colonel Ernest
Perry, COE

Purpose of hearing today is to hear your views on the plans for levees and channel improvements downstream from Mt. Vernon and for adding fishery and recreational purposes of the authorized Avon Bypass. Levee improvements don't stand much of a chance without approval of the Bypass. Levees and Bypass would increase flood protection to 30 year protection. Bypass would be an 8 mile lake 360 feet wide. The idea that dredging will provide additional capacity is in theory correct. In practice dredging would undercut the base of the levees from the toe and would cause the levee to fail by undercutting from the river side ... and we would be faced with the problem of something on the order of 500,000 cubic yards of dredging annually in the lower basin.



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<u>NAME</u>	<u>TESTIMONY</u>
Greg Hastings, WA Dept of Conservation	Our agencies met (Dept of Highways, Dept of Game, Dept of Fisheries, Dept of Economic Development, Parks Dept., Pollution and Conversation) on November 14, 1963 and reviewed the report. Agreed basic plan is a good one. Up to 1943 State, County and Dike Districts spent \$2,350,060 on the dikes. Since 1943 spent another \$1,300,000. Dikes in 1966 only provided 9 year level of protection.
Scott Richards, County Commissioner	A meeting was held on December 31 st at 1:30 p.m. with dike district commissioners from 18 districts. An affirmative vote was given by the attending dike district commissioners for the Corp project. “We want to assure you that the people and taxpayers of Skagit County will have the right to vote on this problem.”
Lloyd Johnson, County Engineer	The proposal of the Corps of Engineers to build the Bypass with the added recreational facilities presents a new era for the people of Skagit County. ...we are indirectly given a playground that will be a very important and progressive step in the future of Skagit County.
James Hulbert, Sr.	By letter stated, “I agree with the thinking of the Corp of Engineers and support their modifications as recommended at this hearing relative to the dike improvements and recreational use of this Bypass.
Paul J. McKay, State Highway Dept.	State Highway Dept. and Highway Commission fully concur with the Corp report however Dept feels that no highway funds could be used in project.
Gwynne Legro, City Engineer, Mt. Vernon	We think the plan has merit. We think it is reasonable. We think the people of Skagit County have the courage and ability to put it over.
George Kimble, Citizen	Mother Nature is one thing that we cannot tell ahead what it is going to do or fight. ... So lets get this flood control program going just as soon as possible before we have any more floods.
Charles Simons, USFW	Avon Bypass provides an opportunity to greatly increase fish and wildlife and recreation benefits with relatively small increases in project cost. ... USFW and Wash Dept of Fish and Game have cooperated in a plan for enhancement of fish and wildlife resources in the bypass area. ... Proposal included boat ramps and parking lots.
Rolf Larson, Wa. Dept of Game	We feel that the proposed levee and channel widening project below Mt. Vernon and the Avon Bypass Project will provide a great measure of flood protection for the lower Skagit River area and also will cause minimum problems as far as fish and wildlife are concerned. ... The proposed inclusion of fish, wildlife and recreation purposes to the Avon Bypass adds materially to the benefits of this project.



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<u>NAME</u>	<u>TESTIMONY</u>
Victor Crissey, Citizen	...I think it's a wonderful proposition for you to fix the river, dredge it; but the bypass – no.
Grant Nelson, Dike District 2	Unanimous approval of the diversion of the flood waters of the Skagit River through the Avon Bypass proposal.
George Dynes, Dike District 20	...DD 20 supports the plans as presented ... (We) realize that as of now we act as a reservoir for flood waters from the Skagit River so the lower parts of the Valley will have additional protection. If our areas were diked at this time it would be impossible for the Skagit River to carry even a normal high water.
Earl Hanson, Dike District 17	Majority of Skagit County Dike Commissioners are in favor of the project.
Daniel Sundquist, Dike District 3	DD 3 approves the proposed Avon Bypass project for flood control and the proposed project for channel improvement and levee improvement.
James Mapes, Dike District 12	Jerry brought his attorney and introduced him. Walter Gerline, Jr. (sic) read a statement into the record. “The undersigned violently object and oppose any attempt to fasten this project with the Avon Bypass ... feeling that the total expenditure for the project is too great to be borne by the area affected and that this burden would be oppressive.” Objected to the Bypass for the added reason that it increases the flood exposure particularly in the area served by DD 12. Also objected to recreational improvement feeling that such a plan is so vague and general as not to be worth consideration.
Fred Lubbe, Attorney for Fire District #6 and citizens opposed to Bypass	They felt “other flood control work” such as widening the levees would be more cost effective. Felt Bypass would cut the County in two and that much more water frontage that can be a danger to the Burlington area. Felt project was being sold on recreational benefits not flood control benefits. Fire District also submitted letter as being opposed to project.
Edna Breazeale, Padilla Bay	Opposed to recreational facets of Bypass. Wanted to know if Indian Slough would have to be dredged to a depth of 60 feet as rumored. Thought the Bypass could “prove detrimental to the best recreational interests of the County.”
Harwood Bannister, Attorney for Swinomish Indian Tribal Community	Tribe felt the Avon Bypass could have affects on the Salmon runs. “If such occurs, then the Swinomish Indian Tribal Community and the members of the Swinomish reservation will consider this as a violation and deprivation of the rights granted under the Treaty of Point Elliott of 1855.”
Zell Young, Mt. Vernon Welder	“Lets have protection now, rather than Aid to a Disaster Area later.”



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NAME

TESTIMONY

Norman Dalstedt,
Farmer

Introduced a petition, which was against the use of the Bypass for any purposes other than flood control and was opposed to the Bypass because it would not provide enough protection.

(Source: Official Transcript of the Proceedings Before the Corp of Engineers, January 10, 1964, Cascade Reporting Co.)

The petition presented by Norman Dalstedt stated the following:

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.

742 Skagit County residents signed the petition. *(Source: COE file #1505-22, Unpublished Appendix (Exhibits 1-23) to Public Hearing 1/10/64)*

Skagit Valley Divided On By-Pass Plan

The Avon Bypass is the "first essential step in obtaining flood control in the Skagit River Basin," Col. Ernest L. Perry, district head of the United States Army Corps of Engineers told persons attending a public hearing today on flood control. . . . **DISTRICTS APPROVE** Just prior to today's hearing, the Skagit Valley Herald learned all seven Skagit Valley diking districts affected by the proposed levee improvement and channel widening program have generally approved. Confirmation came from George Dynes, president, Skagit County Flood Control Council. Dynes added that all 16 of the county's diking districts, except one, generally favor the plan. The single exception objects to only some parts of it, he noted. . . . Col. Perry told newsmen this morning the levee improvement project is linked to the proposed bypass in corps planning because the bypass strengthens and justifies the cost-benefit ratio of the levee job. Without the bypass as an adjunct, the levee system would lack sufficient "life expectancy" to warrant federal expenditures, he said. *(Source: [1/10/64 SVH](#))*

More than 300 persons turned out Friday for a hearing in Mount Vernon on flood control proposals affecting the Skagit River. But most of them came to listen rather than to speak. . . . Army Engineers' proposals for strengthening the existing levee system along the lower Skagit River met with practically no dissent from anybody who spoke Friday. Objections were voiced however to both the proposed Avon Bypass and to recreational use of the bypass, whose major purpose will be to divert high water from the Skagit River. . . . **Valley Divided** Friday's testimony disclosed the Skagit Valley still is evidently divided in feeling over the Avon Bypass. Much of the opposition to the bypass came Friday from the Burlington-Bay View area. . . . At the hearing's outset, Hastings asked his Skagit listeners "do we continue ineffectual and



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inefficient methods . . . or improve our program?” He said \$3,660,000 had been spent so far in this century in the Skagit Valley on flood control measures. He also reported the Skagit Valley is the biggest user of state flood control funds. . . . Support for levee improvements and recreational developments in the bypass came from the Skagit County Board of Commissioners, represented at hearing by First District Commissioner Scott Richards. Representatives of a number of central county diking and drainage districts also offered official support. . . . **Recalls 1951 Flood** In a statement prepared by Mount Vernon Mayor Herman Hanson, that city’s engineer, C. D. LeGro, strongly supported the Corps’ proposals. LeGro recalled the 1951 flood which almost swept into Mount Vernon’s downtown area. (Source: [1/11/64 SVH](#))

The Avon Bypass is the focal point in the Corps of Engineers \$30 million flood control plan for the Skagit River. The official attitude of the engineers is that improvements to the levees of the lower Skagit River would not be worth the estimated \$7 million cost unless the \$23 million bypass is built. . . . A substantial number of Skagit County residents prefer, in fact, that the flood control program be restricted to levee improvements. On the other hand, the Avon Bypass is highly charged with controversy. It is an 8-mile lake that would run from Burlington to Padilla Bay at Bay View and would require extensive bridging where it cuts through state and county roads and highways. . . . When engineering is sufficiently advanced that costs can be reasonably ascertained, the Skagit County Commissioners will be faced with attempting to raise an estimated \$4 million that represents the portion of the costs of construction at this time thought to be Skagit County’s share. (Source: [1/13/64 SVH](#))

On January 31, 1964 the Corp of Engineers informed Senator Henry M. Jackson of the following:

Avon Bypass “would provide protection for all floods with frequencies of occurrence of less than once in 30 years.” 68,000 acres of farmland had an estimated 1962 value of \$113,000,000. “The present level of flood protection in the delta area is once in 3 to 10 years. The cities of Mt. Vernon and Burlington now have only 5 to 8 year protection.” The cost benefit ratio was 2 to 1. (Source: [Letter to Senator Jackson from Colonel Perry dated 1/31/64](#))

On March 13, 1964 the Corp of Engineers met with Norman Dalstedt, Ray Billips, Warren Good, C.R. Carter, Edna Breazeale and Joh Swisher, all opponents to the Bypass concept. On March 30, 1964 the Corp informed Senator Jackson of the results of the meeting. They stated in part:

The Bypass would include provisions for a continuous diversion flow of 100 cfs to prevent stagnation. The diversion flow is less than one percent of the total flow of the Skagit River and much of it would occur during periods when the Skagit River is carrying little, if any, sediment load. 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 cfs to a maximum of 60,000 cfs at 30-year intervals. On an engineering basis, neither of the foregoing operations would result in any sedimentation that would affect or even be noticeable in Padilla Bay. The watershed of the Skagit River is the same area today as it was in 1909. The upstream storage has been taken into account in our studies. . . . The only other



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changes to the watershed from 1909 period are a present day greater extent of cut-over forested areas and more urban and agricultural development than existed heretofore. . . . these factors tend to cause greater floods under today's conditions than under early conditions. . . . 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 pat magnitudes will not recur and will not be exceeded.

The 1951 flood was at the top of the limits of levee protection. A rise of another foot would have resulted in extensive flooding and damage in the town of Mt. Vernon. . . . The Corp of Engineers has no intention of proceeding beyond this point until firm assurances of local support of the project are forthcoming.

(Source: [Letter to Senator Henry M. Jackson from Colonel Perry dated 3/30/64](#))

Fish and Wildlife Report

On May 20, 1964 the United States Fish & Wildlife Service ("USFW") issued its "interim report" on the effects on fish and wildlife of proposed Corp of Engineers projects in the Skagit River Basin. The report analyzed everything from up river dams to levee improvements to the Avon Bypass and their impacts to fish and wildlife. Although previously the USFW had stated, "Avon Bypass provides an opportunity to greatly increase fish and wildlife and recreation benefits with relatively small increases in project cost" (*See testimony January 10, 1964*) the interim report was not so kind. It stated in part:

Avon Bypass operated solely for flood control would have little hunter and fisherman use value and would probably result in major losses of anadromous fish. (*Page 7*) Influx of fresh water into Padilla Bay during flood flow periods may kill shellfish. This possible loss has not been evaluated but, because of the small shellfish populations present, would not be expected to be monetarily significant. . . . Tentative plans are to manage Avon Bypass as a rout fishing lake. (*Page 8*) . . . **fish and wildlife conservation, improvement, and development are proposed as a purpose of the bypass project**, right-of-way portions not reserved for other uses should be managed by the Dept of Game. (*Page 14*)

The interim report also had an interesting section on the proposed dredging of the Skagit River from Burlington to Concrete. It stated in part:

. . . such a project would be extremely damaging to fish populations and fishing in Skagit River. It would be particularly disastrous to pink and chum salmon, since chum and pink spawning and rearing area of the Skagit River, along with about one-third of the Chinook salmon habitat. This project would also be very detrimental to sockeye salmon and sea-run cutthroat and steelhead trout. (*Page 9*)



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The report concluded with a list of recommendations. A summary of those recommendations included the following:

1. Corp of Engineers reports includes conservation, improvement, and development of fish and wildlife resources among the purposes for which the project is to be authorized.
2. A zoning plan be put in place in order that the channel area will be available for various fish and wildlife purposes without conflicting uses for recreational uses.
3. Public access to tidal waters.
4. Easements obtained for retrieving game birds.
5. Another weir be installed for fishery management.
6. Agreements between governmental agencies be signed to delegate management and development of the fish and wildlife resources.
7. Include fish ladders at each water control facility.
8. Locking stiles be installed for bird retrieval.
9. Channel work for by-pass be restricted to June 1 to August 15.
10. Additional detailed studies be conducted in accordance with Fish and Wildlife Coordination Act.

(Source: [*Interim Report of the Bureau of Fisheries and Wildlife, 5/20/64*](#))

By-Pass To Be Under Construction By 1968

The proposed Avon Bypass should be under construction by 1968, Skagit County Flood Control Council members learned Wednesday night. George Dynes, of Mount Vernon, member of a specifically-appointed Avon Bypass Committee of the Council, made a report to the organization as a highlight of the Wednesday session in the Skagit County Courthouse Annex conference room. Other Bypass Committee members are Tom Shane, Jim Hulbert, Noble Lee, and Jess Knutzen. . . . Also included in Dynes' report was previously-issued information that the Inland Empire Waterways Association recently endorsed the Bypass proposal and that \$3,225,000 in federal funds was authorized at the start of 1964 for a study of the proposal. (Source: [*10/29/64 SVH*](#))

The Avon bypass flood control project should be under construction by 1968, George Dynes told the Skagit County Flood Control council at its annual meeting at the courthouse in



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Mount Vernon Wednesday night. . . . Dynes said he understood the U. S. Engineers had tentatively selected a site for the first of two Skagit river tributary dams that at some future time would be built to provide protection against a “100-year” flood. This site, about two miles from Rockport, would be for a 150-foot high dam across the Sauk river that would back water all the way to Darrington. The other dam would be on the Cascade river. (Source: [10/29/64 Argus](#))

Avon By-Pass and Diking The Nookachamps

A proposal to dike the entire Nookachamps Valley from Mount Vernon to Sedro-Woolley along the Skagit River will be the subject of a public meeting Wednesday evening. Dike District No. 20 commissioners, George M. Dynes, John Petter, and Dr. Robert Thompson have issued an invitation to all property owners in the Nookachamps Valley to attend the 8 p.m. meeting at the Clear Lake School gymnasium. The invitation read: . . . “With the completion of the Avon By-Pass, it will be possible to dike the Skagit River from near the new bridge at Sedro-Woolley, following the river to Hoag’s Hill just East of the Great Northern Bridge near Mount Vernon.” (Source: [1/25/65 SVH](#))

Agreeing that the proposed Avon Bypass is essential to a proposed dike extension along the Skagit River from Mount Vernon to Sedro-Woolley, Nookachamps Valley property owners Wednesday night endorsed the Bypass plan. They also elected a committee of three men to study the dike extension proposal. More than 50 persons attended a meeting to discuss the diking plan at Clear Lake School Commissioners of Diking District 20 called the meeting to determine feeling in the Nookachamps Valley concerning extension of the district into that area to permit dike expansion. James G. Smith, District 20 attorney, explained the proposed diking system cannot be built without a municipal corporation like a diking district to sponsor it and deal with federal agencies which help engineer and finance such projects. **Three Elected** Elected to the interim study committee were James C. Christopherson, J. W. Wallace, and Bill Moore, all property owners in the Nookachamps Valley. It was Skagit County Superior Court Judge A. H. Ward, himself a Nookachamps farmer and property owner, who cited the value of the Avon Bypass plan to any Skagit River diking proposals. Judge Ward said it would be foolish to consider building any dikes unless an outlet is provided for surplus flood water through the Avon Bypass. “I feel building of this dike is a good deal if the Avon Bypass is assured,” Judge Ward said. . . . **Earlier in Wednesday night’s meeting, it had been explained several times that the Nookachamps area has served for years as a “reservoir” for Skagit River flood waters.** Whenever the Skagit rises to near-flood levels, its first high water usually spills over into the rich valley lying northeast of Mount Vernon. Such a condition long has been considered a natural protection of sorts against much more severe flooding in other areas down river from the Nookachamps region. **Engineers Study** George Dynes, District 20 commissioner, explained Wednesday night that he had taken representatives of the United States Army Corps of Engineers into the Nookachamps Valley 1½ years ago to discuss possibilities of **relieving the area of its role as a “reservoir.”** The dike extension scheme was thus developed, Dynes said. (Source: [1/28/65 SVH](#))

. . . . The Dist. 20 commissioners have suggested that the Nookachamps basin be protected against the Skagit River by dikes from near the new bridge at Sedro Woolley to Hoag



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hill east of the Great Northern bridge north of Mount Vernon. . . . The Corps of Engineers will consider making a study of giving the Nookachamps lands flood protection if residents of the area want it and funds can be obtained, the meeting was told by Ray Skrinde, who is directing the Skagit River flood control planning. He said the Engineers hope before next fall to have their plans for the Avon bypass project and bank protection-channel work on the lower river completed. . . . Superior Judge A. H. Ward said he would not favor the Nookachamps plan until the Avon bypass is built because, otherwise, **the rest of the Skagit valley would be endangered**. He made the motion to support the bypass project. (Source: [1/28/65 Argus](#))

Corps Holds Pre-Meeting Meeting With Local Officials

On February 16, 1965 a meeting was held between the Burlington City Council and Colonel Holbrook of the Corp of Engineers. Before the meeting the Corp had dinner with County Commissioners Jack Wylie and Claude Wilson, Dike District #2 Commissioners Noble Lee and Albert Gerriels and Skagit County Engineer Lloyd Johnson. The Corp was assured of continued support and interest in the Avon By-Pass project. (Source: [Corp of Engineers MFR dated 2/17/65](#))

Mayor Strong presided with the full Burlington City Council in attendance. Additionally 20 citizens were in the audience including "3 or 4 hardcore individuals, including Mr. Mapes of Dike District 12" who "completely oppose the Bypass." The Colonel fielded questions from the audience including the following:

Q: Have other alternatives been studied?

A: Levee raising and setback levees were considered. Found infeasible or more costly than Corps recommended plan.

Q: Will fisheries make it impossible to build a Sauk River Dam?

A: We do not see this as a block at this time.

Q: Why not buy out Fir Island and let the water flood over the entire land down there and thereby reduce flooding upstream?

A: Fir Island is in the tidal range of control at the mouth of the river. Removal of the dikes on Fir Island would only have a minor effect on flood stages in the vicinity of Mt. Vernon. The stage at Mt. Vernon is dependent primarily on the slope and channel section of the river upstream from the North and South Forks.

Q: The cost of this project appear excessive and beyond the capability of Skagit County. What about the cost of operation at \$30,000 a year?

A: Skagit County has already spent close to 3½ million dollars over the past 15 years in maintaining a levee and channel system of very limited capability. On this basis the local interest cost do not appear excessive. (The maintenance cost) is only 10 to 15 percent of the annual expenditure for flood control by Skagit County, obviously it is not excessive.

(Source: [Corp of Engineers MFR dated 2/17/65](#))



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Approximately 30 interested citizens heard an Army Corp of Engineers' report on the projected Avon Bypass and later participated in a question and answer period at the Burlington City council meeting Tuesday evening. . . . **Further explaining that floods run in cycles; in the Skagit's case 8, 35, and 100 years,** Holbrook said that the improved levee and channel would protect against the 8 year cycle floods, the levee, channel, and Avon Bypass together against the 35 year cycle variety, but that an improved and increased upriver storage area would have to be added to these two parts before the basin would have the needed protection against a flood of the 100 year cycle frequency. . . . Projected figures show that if the flood of 1921 were to occur in this area with its present state of development an estimated damage of \$13,273,000 would occur. . . . Gedney placed the cost of the project at \$24 million, two to four million of which would have to come from Skagit County. Gedney also explained that local diking commissions have spent \$3.5 million dollars on maintenance and improvement since 1947. The original cost of the project in 1936 was \$4 million. (Source: [2/18/65 B.J.](#))

Opposition To By-Pass

Petitions opposing the Avon bypass and, in particular, any modifications for other than flood control purposes were filed with the Skagit county commissioners Wednesday by a group calling itself the Citizens Association for Skagit County Improvement. An accompanying letter said there were 823 signatures on the petitions. It was signed by Norman H. Dahlstedt as chairman and Ray Billups as secretary. The petition headings "oppose any plans to modify the structure of the Avon Bypass for any purpose other than flood control." They go on to say the signers "are in fact opposed to the Bypass itself because as presented to us it will not provide protection of major floods." . . . The letter expressed the belief the public was "nearly 100 percent" in favor of lower river (below Mount Vernon) improvement. The Engineers' plans would increase the downstream capacity by 30,000 cubic feet per second, which the association contended would represent half the bypass' capacity "for one-quarter the cost." (Source: [2/25/65 Argus](#))

Corps of Engineers Releases Report

In March 1965 the Corp of Engineers completed its report entitled "Skagit River – Flood Control and Other Improvements." The report was initiated in October 1960. The report looked at all possible aspects of flood control in Skagit County. The report recommended levee and channel improvements to accommodate a minimum flow of 120,000 cfs in conjunction with the Avon By-pass. The total cost was estimated at \$5,770,000 and would have provided 35 year protection to the flood plain. (Source: *Skagit River – Flood Control and Other Improvements dated March 1965*)

An official of the United States Army Corps of Engineers has disclosed the proposed Avon Bypass may be shortened to eliminate three bridges and thereby save construction costs. Robert Gedney, an engineer with the Corps in Seattle, made the disclosure Monday night at a meeting of the Skagit County Flood Control Council and diking and drainage district



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commissioners. Under the new plan, the Bypass, planned as a flood control project, would be just west of Interstate Highway 5, where it passes over the Skagit River north of Mount Vernon. Such a proposal has been developed because of severe opposition in Burlington to beginning the bypass there, as originally planned, Gedney explained. **Several Plans** . . . A grant of \$30,000 was made by the Corps of Engineers to finance the study. . . . **Another Plan** In another disclosure made Monday night, Gedney said the Corps is considering a plan which would provide for diking the Nookachamps north east of Mount Vernon and then using Nookachamps Creek as a reservoir after it is diked. The Corps' plan would keep low level flood waters from entering the area, Gedney said, but would utilize the creek as a reservoir at high flood peaks. Earlier Monday night, Col. Charles C. Holbrook, Army Engineers' commanding officer in the Seattle district, reviewed plans for flood control measures along the Skagit River. He said the Avon Bypass would increase protection from eight to 35 years, and additional upriver dam storage, planned in the future, would increase protection to 100 years. (Source: [3/30/65 SVH](#))

Money Appropriated For By-Pass Study

Support for appropriation requests for two Skagit County public works projects was given May 19 by Congressman Lloyd Meeds before the House Appropriation Committee. Terming the Avon Bypass "essential to the development of the Skagit River Flood Control Project", Meeds pointed out that it could increase significantly flood protection for the area. The Skagit River Valley has a serious flood protection for the area. The Skagit River Valley has a serious flood on the average of every seven years at present. With the Avon Bypass, protection would be increased so that a serious flood would be expected no more frequently than once in every 35 years on the average. (Source: [5/27/65 B.J.](#))

Comments On By-Pass Plan Solicited By Corps

A July 30 deadline for further comment on the U.S. Army Corps of Engineers' recommendations for Skagit river flood control was set in an announcement from their Seattle office Wednesday. . . . The 124-page report re-outlines the Engineers' plans for the Skagit and reproduces the testimony given by public officials and interested citizens at the public hearing held in Mount Vernon Jan. 10, 1964. The Engineers are recommending levee and channel improvements along the river from Sedro-Woolley down and modification of the Avon Bypass flood control channel plan to include fisheries and recreation facilities. (Source: [7/1/65 Argus](#))

Recommendation of flood control and allied improvements in the lower portion of the Skagit River valley by the Federal Government is being reviewed by the Army's Chief of Engineers for transmittal to the Congress. . . . The value of lands and improvements in the Skagit delta area was estimated at more than \$113,000,000 in 1962. This flood plain is highly susceptible to flood damage which averages more than \$2 million dollars under present levels of development, Col. Holbrook said. . . . "Finally," Col. Holbrook said. "we plan to evaluate



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feasibility of upstream multi-purpose storage in 1966, 1967⁹. This project alone would be planned to control flow of the main river and tributaries so that with all three elements: levees and channel improvement, the Avon Bypass, and upstream storage, 100-year or higher flood protection could be realized for the Skagit River flood plain from Sedro-Woolley downstream.”
(Source: [7/22/65 B.J.](#))

Federal Conditions For Local Flood Control

Ten conditions to be met by “local interests” have been suggested by the U.S. Corps of Engineers in connection with flood control and allied improvements on the Skagit River basin.

1. Provide with cost to the United States, all lands, easements and rights-of-way necessary for the construction of the projects.
2. Hold and save the United States free from damages due to the construction works.
3. Maintain and operate all the works after completion in accordance with regulations prescribed by the Secretary of the Army.
4. Provide without cost to the United States all relocations of buildings and utilities, roads, sewers, related and special facilities necessary for construction of the projects.
5. Provide assurances that encroachment on improved channels will not be permitted.
6. Notify the public annually of the limited flood protection provided by the recommended works subsequent to their construction.
7. Secure the water rights necessary for operation of the recommended works for recreational purposes.
8. With respect to recreational facilities, provide cash, equivalent work, or lands so that the non-Federal share shall be at least 50 per cent of the total first cost of the development.
9. Assure public access for all on equal terms for recreation development.
10. Submit plans for any additional recreational development of the Avon Bypass project to the Secretary of the Army for approval and determination of the Federal interest prior to construction.

(Source: [7/29/65 B.J.](#))

⁹ The upstream storage that was going to be evaluated was a proposed dam on the Sauk River which by inclusion of the Sauk River in the Wild and Scenic Rivers designation was precluded and never conducted by the Corps.



Corps Keeps Elected Officials Informed

In September 1965 Major General Jackson Graham, Director of Civil Works for the Corp of Engineers wrote an extensive letter to Congressman Lloyd Meeds concerning the Avon By-Pass. The letter which was in response to a letter from Congressman Meeds stated in part:

The capacity of the river channel, as increased by the levees, varies from 91,000 to 143,000 cfs depending on the levee heights in the 16 districts that constructed the levees. Such a capacity corresponds to a flow that may be expected about once every 3 years in the districts with the lowest levees to once in 14 years in those districts with the higher levees.
(Page 1)

Construction of the Avon Bypass project would increase this degree of protection by diverting a portion of flood flows to Puget Sound. . . . Officials of Skagit County and of most of the diking districts now support the levee improvements and Avon Bypass. **(Page 2)**

In addition to describing the project Major General Graham also directed responses to several of Congressman Meeds statements in his letter to the Corp. Some of those are as follows:

Statement: Dredging North and South Forks is the proper answer to flood control.

Response: The estimated bedload of the Skagit River is in the order of 700,000 cubic yards per year. Dredging of the North and South Fork channels would result in filling of dredged areas by the heavy sediment load of the river, in a short span of perhaps two to three years. This is one fallacy of dredging as a flood control measure. An even more important point is that in the lower reaches of the river tidal stages are the principal hydraulic control with respect to flood stages. [E]ven if dredging were feasible, the flood control affect upstream would be completely minor.

Statement: Bypass will fill up with sediment the same as any other outlet to the river.

Response: Bypass will be used for passing flood flows on the average of only once every four to six years for only 24 to 48 hours. This limited time, in itself, would forestall any serious silting. In addition, the gates would be open only long enough to take care of flows in excess of about 100,000 cfs on the main river. Both the timing and the volume of flow through the Bypass would be so limited that there is no basis for considering silting of the Bypass as a potential problem.



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Statement: Construction of overbank floodways on the North Fork and south Fork and setback of existing dikes would be better than the Bypass plan of improvement.

Response: Proposal to setback the dikes and to construct floodways has been considered. Setbacks would be required from the mouth to 20 miles upstream to the vicinity of Burlington to provide equivalent flood protection to that of the Bypass. Cost of this would be several million dollars more than the cost of the Bypass. The high cost results from the extensive development of roads, utilities, lands and buildings adjacent to existing dikes.

(Source: [Letter to Congressman Meeds from Major General Graham, Director Civil Works, dated 9/7/65](#))

Corps Explores Other Options

On February 2, 1966 a Corp of Engineers employee, Ivan Decker, conducted a "field trip" to Skagit County. He met with several local officials independently of each other. (Lloyd Johnson, Skagit County Engineer, Gwynne LeGro, Mt. Vernon City Engineer and Mt. Vernon Mayor Hanson, Burlington City Engineer Radar and associates, Skagit County Planner Wayne Kite and local contractors) He explored the possibility of abandoning the Avon Bypass in favor of increased levees. The County engineer had "no objections" to a levee alternative if the "blowout problem" could be solved. The Mayor of Mt. Vernon and his engineer were "open-minded" to raised levees as an alternative. (Source: [Corp of Engineers MFR dated 2/7/66](#))

Corps Supplemental Report

In March, 1966, the Corp of Engineers issued a supplemental report to the March 1965 Report on Flood Control and Other Improvements on Skagit River. The supplement addressed evaluations of all alternatives to flood control in Skagit County. A summary of those alternatives is presented below:

Channel Deepening (Dredging): Deepening the Skagit to carry flood flows is not feasible. Would undermine existing levees. Would require \$200,000 annual maintenance dredging. Would have extremely adverse effect on the salmon and steelhead trout resources.

Channel Widening: Would require widening 300 to 600 feet from Sedro Woolley to mouth. Would cost 7 million dollars more then equivalent Avon Bypass protection.



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Channel Dredging at Mouth: Would only provide very localized flood protection for only a short distance upstream. No protection for Mt. Vernon or Burlington.

Levee Raising: Found uneconomical. Cost would exceed \$28,000,000 just to accommodate 144,000 cfs. Major levee raising would result in backwater effects from confining flows between levees that would cause more than a 3 foot rise in water surface upstream from (to) Sedro Woolley.¹⁰

(Source: [Supplement to Review Report on Flood Control and Other Improvements on Skagit River, Wa., Corps of Engineers, Seattle District dated March 1966](#))

Corps Cost Comparison

In June, 1966 in an internal memorandum, the Corp of Engineers examined cost for alternatives to the Avon Bypass. The most feasible alternative to the Avon Bypass and downstream levee and channel improvement was found to be raising of existing levees. The cost was estimated at \$27,400,000. That cost was \$4,682,000 less than the Avon Bypass and downstream levee improvements¹¹ which had soared from the original cost of \$9,600,000 (See [Report on Survey for Flood Control of Skagit River and Tributaries, Washington, 2/21/52](#)) to \$32,082,000. However, the Chief of the Puget Sound Basin Section felt that the estimates for the levee improvements was understated for such items as rip-rap protection, embankment contingencies, road relocation, unit cost, pump station for the Nookachamp Creek Area, and engineering and design and administrative cost. He estimated that the raising of the levees could be understated as much as \$6,000,000. He also stated that in meetings with Skagit County that raising existing levees was not practicable due to blowouts and interior drainage problems. He concluded by stating, "I would recommend that no further consideration be given at this time to the alternative of raising existing levees and that we direct future efforts towards our authorized Avon Bypass Project and the proposed downstream levee and channel improvements." (Source: [Corp of Engineers MFR dated 6/14/66](#))

The Beginning Of The End

On August 10, 1966 the Corp met with Skagit County Commissioners Claude Wilson, Mel Halgren and Jack Wylie to discuss local cooperation for the Avon Bypass Project. The Commissioners stated that the maximum contribution that Skagit County could make toward the proposed \$6,000,000 local contribution was \$2,000,000. This

¹⁰ This impact, 30 years later, was hydraulically proven in the [Halverson vs. Skagit County](#) litigation.

¹¹ It is important to note that the downstream levee improvements were providing only 8 year flood protection. In conjunction with the Avon Bypass that protection would have risen to a 35 year flood protection. (Source: [Corp of Engineers MFR dated 7/12/66](#))



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would be accomplished by a 2-mill levy on current property assessments. The Commissioners would only support the Avon Bypass project if it was approved by the voters and the diking districts would have to sponsor the project for the County. There was general agreement that the diking district areas benefiting most from the project should pick up a larger portion of the tab than the general assessment over the county. County Commissioner Wilson representing the 3rd District was concerned about the lack of benefits to the upriver communities. Commissioner Halgren representing the Anacortes area believed the project was essential for the general well-being of the county. Commissioner Wylie representing Fir Island and other diking areas was a strong supporter of the project. A meeting was planned with the dike districts for August 17th. (Source: [Corp of Engineers MFR dated 8/13/66](#))

At the meeting with the diking districts there was general disagreement between the diking districts and the County Commissioners on the sharing of responsibility for local cooperation requirements for the Bypass Project. The Diking Districts considered that sponsoring of the Bypass was a County problem; the County Commissioners believed the initiative should spring from the diking districts. At the August 10, 1966 meeting many of the diking districts, not immediately affected by the Bypass Project, indicated lack of interest in supporting the Project, except if it were undertaken as an overall County responsibility. (Source: [Corp of Engineers MFR dated 8/23/66](#))

After the August 17th meeting with the Dike Districts the Corp of Engineers, realizing that the Bypass project was in serious jeopardy sent a 4 page letter with a 2 page attachment on cost analysis breakdown to the County. The letter stated in part the following:

“...the present plan provides for a channel beginning at Avon and discharging into Padilla Bay through Telegraph Slough. Also included in the plan is channel widening of Skagit River upstream from Avon and extension of levees upstream of Burlington to further protect that area from flooding. ... In general the plan is similar to the plan considered in 1965 except the entrance channel has been moved downstream approximately 3 miles. The new alignment was developed in cooperation with the Skagit County Engineer and Skagit County Planning Director and has not only been found to be less costly than the original alignment but also eliminates many objections about cutting off the Burlington area from future expansion.

. . . benefit-to-cost ratio of 1.5 to 1. The overall project has increased from \$23,250,000, at the time of our public hearings in 1964, to \$28,200,000. Of this amount local interest costs have increased from \$4,150,000 to \$6,100,000.¹² . . . Before detailed planning can proceed on the Avon Bypass Project, we must receive assurances that the requirements of local cooperation will be satisfied. If the requirements for local cooperation cannot be satisfied, the project would again become

¹² Over one half of this cost was due to highway bridge construction. (COE Summary of Project Cost, dated 8/25/66)



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inactive and deferred for future consideration until some indefinite time in the future.

This project in itself would raise the immediate level of flood protection in the basin from once in three years with present diking district flood protection to an average of once in 25 years, and in combination with the proposed levee and channel improvement in the lower river to a level of flood protection of once in 35 years.

Recent meetings between representatives of this office, your Board of County Commissioners and representatives of the Drainage and Diking Districts of Skagit River Valley and the Washington State Department of Conservation have revealed a serious diversity in views on the courses of action that Skagit County may take in regard to developing a long-range comprehensive plan for the overall basin.

...

The Skagit Basin has been exceedingly fortunate in not having been subject to really major floods since about 1921. However, the period 1896 to 1921 is replete with examples in which at least six times, past floods would have exceeded almost twice the present channel capacity. Again in 1951, flood stages were within inches of overtopping the dikes at Mt. Vernon. These events can be readily repeated, even with full consideration of present-day upstream storage.

In effect, it appears that Skagit County is facing a crisis in their planning not only for maintenance of the existing levee system but for attaining a higher level of flood protection in the valley.

(Source: [Letter to Board of County Commissioners from Colonel Holbrook, Corp of Engineers, dated 8/25/66](#))

The County Commissioners as first promised by Commissioner Scott Richards (See [January 10, 1964 Public Hearing](#)) had scheduled a vote of the people of Skagit County on the Avon Bypass for November 1966. However, in a letter to the Corp from County Commission Chairman Claude Wilson the opportunity to vote on the Avon Bypass was lost. Commissioner Wilson stated:

“A meeting was held with the Dike District Representatives on August 17th and the Avon Bypass project was thoroughly discussed at this meeting. Considering the inadequate time element and the lack of interest in flood control at this particular time, it is our decision not to place a bond for local matching funds on the November ballot. Your recommendation for a Skagit County Flood Control Advisory Council is a suggestion we are seriously considering. We are looking forward to appointing a citizens group to recommend back to us, our future action regarding the Bypass project. We



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wish to thank the Corps of Engineers for its work and efforts on this project, but since Skagit County has not experienced any major flood damage during the past fifteen years, we are at a distinct disadvantage to take action at this time.”

(Source: [Letter to Colonel Holbrook from County Commissioner Chairman Claude Wilson dated 9/6/66](#))

Thus for all intents and purposes the Avon Bypass Project died due to “lack of interest in flood control.” The record is replete with subsequent meetings where the Avon Bypass was discussed but no further action was ever taken and in 1975 the project was abandoned in favor of levee improvements.

By-Pass Renamed Begins To Rise From The Ashes

In July 2000 Skagit County formed the Skagit River Risk Management Working Group. (Source: [Skagit County Flood Control Committee Minutes 6/5/2000](#))

But finding a palatable solution to fighting floods along a crowded river is likely to be tough no matter what option is selected. That's why the county initiated the Skagit Flood Risk Management Working Group earlier this year. It's made up of a broad cross-section of city, county, state, federal and tribal interests -- from those who live along the river to agency officials who set policies for keeping floods at bay. The group will look at the economic costs and benefits of various options and scrutinize hydraulic models that explain how the river works. Members also will have to account for how any of the proposals affect salmon, which are protected by the federal Endangered Species Act.

(Source: <http://skagitvalleyherald.com/articles/2000/09/19/news12041.txt>)

In 1922, an engineer suggested building a trench to drain water from the Skagit River when it flooded. That project never happened. But now, it just might. Skagit County, the U.S. Army Corps of Engineers and a host of other agencies, tribes and interest groups are pushing ahead with work on a project that would protect area cities and farms from up to a 100-year flood. The project, as suggested in 1922 and approved by Congress in 1936, was called the Avon Bypass. The rock-lined trench would stretch from near the railroad bridge between Burlington and Mount Vernon to the Swinomish Channel. The price, in 1936, was estimated at \$1.8 million. The Avon Bypass is now called the Swinomish Diversion, but the concept is the same. It would be a 2,000-foot-wide swath of land with dikes on either side, reaching from the bend in the Skagit River, just west of Interstate 5, to the Swinomish Channel. It might follow Highway 20 for much of its length -- in fact, the highway could be rebuilt on top of one of the dikes. Rather than a rocky trench, the channel would be a wide, grass-lined depression. Gazebos and ball fields would allow it to be used for recreation during the dry seasons, and a constant small stream would provide habitat for young salmon. And when the Skagit River threatened to spill its banks, the floodgates would be opened, sending water spilling down to Padilla Bay. The bypass could absorb the water from a 100-year flood, which otherwise would submerge Burlington, much of western Mount Vernon and nearly all the land between those cities and the Swinomish Channel. **The price, in 2001, is estimated at \$225 million. . . .** The Swinomish



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Diversion is one of two alternatives endorsed last week by the county's Flood Risk Management Working Group. The group, a panel of representatives from cities, the agriculture community, dike districts and state and federal agencies, hashed out differences in monthly meetings over the last year. It concluded with two preferred alternatives -- the diversion and levee setbacks. The group didn't recommend that the diversion or setbacks be built, only that they be studied in detail. No project got the unanimous approval of everyone on the panel. Rather, these were the projects with the fewest serious objections. "We're going to get beat up for whatever we decide here," said Dave Hedlin, a farmer and member of the group. The group's recommendation is expected to go to the county commissioners on July 9. If the trio approve the recommendations, the Corps of Engineers will begin the environmental impact statement, which will examine what will happen if either project is built -- or if nothing is done. The document also will include 35 percent of the design work on each project. . . . **The local Indian tribes support the project**, according to Larry Wasserman of the Skagit Systems Cooperative. There may be minor impacts on salmon, he said, but there are large benefits that outweigh them. A major unresolved question is exactly where the channel will go. The flood group had considered two alternatives -- one that follows Highway 20 and one that heads straight west from the river. But in the end, the group lumped them together as simply a diversion concept, without a specific alignment other than south of Highway 20. That leaves many possibilities open and keeps people from hurriedly buying land in the path of the bypass. . . . Dahlstedt agreed. "It's time we stop talking and stop studying and do something."

(Source: <http://skagitvalleyherald.com/articles/2001/07/01/news24112.txt>)

After four years of evaluation, a local advisory body has narrowed the solutions to two. One would push the river levees back far enough to give the Skagit room to spread in a flood. The other would relieve pressure on the river dikes by opening a channel to the sea. Neither solution is cheap. Both will have numerous opponents. Either will have to cross formidable hurdles to become reality. However, either option is far cheaper and far better than doing nothing. The time has come for Skagit County to stop talking and start doing. (Source: <http://www.skagitvalleyherald.com/articles/2001/07/08/news23404.txt>)

Opposition To By-Pass Again Begins To Grow

A while back the Skagit Valley Herald ran a story on the proposed flood bypass west of Avon and I thought "What a great idea: Create a wide floodway with low dikes/berms so the floodwater need only be a few feet deep resulting in relatively low construction costs!" Then the reality of a county government that sees taxpayers as unending sources of money hit me as I read further. "We'll buy all the land, create parks, ball fields, a salmon stream, etc., costing millions!" said the county. Has anyone considered the following options?:

1. Create a floodway easement that allows landowners to keep their land for farming, livestock, etc. Give them a big tax break and compensate them for crops lost during floodway use. There can still be a buyout option and lost property taxes would be no worse than if the county owned the land.



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2. Forget ball fields, parks, etc. We don't need more county employees using tax dollars maintaining these areas and repairing them after floodway use.
3. Lose the salmon stream. Even if DOE allows it some NMFS regulator would probably say this: "Nice floodway, but we can't let you use it because it would harm the salmon in your stream." With all the asinine regulations we've seen regarding salmon recovery is this really that far-fetched?

The floodway idea is a good one as long as reducing flooding at a reasonable cost to Skagit County taxpayers is the goal. Anything else is unnecessary bells and whistles.

(Source: <http://skagitvalleyherald.com/articles/2001/08/15/news336.txt>)

Steve Beaner found the perfect home six years ago, and he knows he'll never find another one like it. His three-acre parcel was detached from a farm before the state's Growth Management Act made just such a property nearly impossible to find. His land, just south of Highway 20, is in the likely path for a possible Swinomish Diversion. The proposal calls for a 2,000-foot-wide trench that would carry floodwater from the Skagit River near Mount Vernon to the Swinomish Channel near Padilla Bay. . . . The diversion would be enough to hold the excess water from a 100-year flood. The other alternative being studied, pushing back the dikes to widen the Skagit River, also would keep the water away from private property. The alternatives that aren't acceptable, Munks said, are selective overtopping -- flooding rural areas on purpose to protect the cities -- and doing nothing at all. . . . County officials hope to get Congress to authorize money for the project in fall 2004. The Corps will pay for 65 percent of the project. By combining salmon recovery and hike-and-bike trails, commissioners also can attract money from state and federal environmental and transportation agencies, Dahlstedt said, lowering the local cost to as little as 15 percent. But one of the prices will be compensating the estimated 164 landowners affected by the project. And not all of them think that's possible. "I don't want to be compensated for what I have," said Beaner, the landowner on Highway 20. "I don't want to lose what I have." (Source: <http://skagitvalleyherald.com/articles/2001/09/06/news25213.txt>)

Dredging Again Raises Its Ugly Head

Although county officials presented two options for Skagit River flood control to residents at a meeting Thursday night, most of the speakers from the audience had one solution on their minds: dredging. But dredging is more expensive than just widening dikes or building a bypass channel because it has to be repeated as the river silts in, county Commissioner Ken Dahlstedt said. And even if dredging were done every year, the Skagit River couldn't be dredged deeply enough to keep a 100-year flood within the river channel. On top of that, state agencies simply won't allow dredging, said Commissioner Don Munks. . . . Widening the river from Burlington to Skagit Bay was the focus of Thursday's meeting, although the commissioners favor a bypass channel that would take water from the river near Interstate 5 to Padilla Bay. Either proposal would cost around \$225 million, although the bypass has more potential to bring in money from outside governments and agencies. Either project would be far cheaper than the damage that would be done by a 100-year flood -- up to \$1 billion, Dahlstedt said. The 1990 and 1995 floods that inundated Fir Island were estimated to be 35-year floods. Widening the river by



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setting the dikes back will just result in a slower flow with more sediment building up, said Jim Youngsman. He said the county should challenge the state agencies and exert what he said is the county's legal right to dredge.¹³ (Source: <http://skagitvalleyherald.com/articles/2001/09/14/news25708.txt>)

Summary of 2001 Efforts on By-Pass

Skagit County took a step closer in 2001 to something it has talked about for years -- a permanent flood control fix. County commissioners say the best option is a diked channel that would divert water from the Skagit River at Mount Vernon to Padilla Bay. That proposal that has been around, in one form or another, since 1922. The county and the U.S. Army Corps of Engineers also are studying the possibility of widening the river by pushing the dikes back, but that would cost more and affect more landowners. The project has been opposed by people who would lose their homes if the project is built, as well as by people who believe flood damage would be best minimized by dredging the river.

(Source: <http://skagitvalleyherald.com/articles/2002/01/01/news26859.txt>)

Opposition To By-Pass and Dredging Issue Continue in 2002

With respect to the dredging of the Skagit River and building of a bypass, it's not an easy task. The Army Corps of Engineers has maintained that dredging the river is no longer an effective means of flood control. At issue is the overall idea of a flood bypass. Do the citizens of Skagit County want to be liable for a project that costs nearly \$400 million dollars? What is this going to do to your property taxes? Skagit County's general fund per year is barely 1/10 of that. Are the citizens of the upriver communities going to support a flood bypass project that overwhelmingly benefits Burlington and Mount Vernon? Think about it. By the time a major flood reaches Burlington and Mount Vernon, all of the upriver communities are underwater. And while these citizens have on their galoshes and are busily pumping water from their basements, you're going to ask them to support your \$400 million bypass? If not for financial reasons alone, can you even get support from the Swinomish Tribe for a bypass which empties into Padilla Bay, continually destroying the eelgrass beds and salmon fishing in general? There is a fine balancing act that needs to take place between county officials, engineers, and outside parties in accordance with local, state, and federal laws. Maybe the smartest option is to stop future development of areas directly in the flood plain (a novel idea), and let the Skagit River do as it may. (Source: <http://skagitvalleyherald.com/articles/2002/12/16/news3087.txt>)

The Skagit RISK paper came out on October 20 to the 26 on Flood Awareness Week about floods in the past. The range of flooding is from 1921 to 1995. It is said in the article the county has spent \$8.4 million to study to effectively to have a way to manage large flood events in Skagit County. . . . The \$8.4 million that was spent to study the Skagit River would have went a long way to pay to dredge the river. The dredgings could be sold to sand and gravel companies or sold to anyone who may need it. With dredging the river it would make the river

¹³ See [Historical Paper On Dredging](#))



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deeper and give more water for the fish to spawn in. I have watched the sandbars rise up in the river. I watched the banks wash away and logjams appear up and down the river. There is too much money wasted on these studies and nothing is accomplished. (Source: <http://skagitvalleyherald.com/articles/2002/12/16/news3087.txt>)

Funding Delays By-Pass Plans

Skagit County's possible flood control project has been delayed at least two years because Congress hasn't passed a budget for the federal government. Since the federal government's 2003 fiscal year began on Oct. 1, 2002, the U.S. Army Corps of Engineers -- the federal agency that's splitting the cost of planning the project -- has been subsisting on the money provided by "continuing resolutions." That is Congress' way of providing a stream of money to keep work going -- at a reduced rate -- until a budget is passed. "We've been limping along with minimal funding," said Steven Babcock, the Corps' manager for the Skagit County project. That has slowed down the work on the Skagit County project, making it impossible for the Corps and the county to meet a fall 2004 deadline that had been considered very ambitious to begin with. . . . At this point, the studies are so far behind that even a huge infusion of cash from Congress wouldn't get the project back on track by 2004. Many of the studies can't be done until another study is complete, and many studies -- especially environmental ones -- require data collection over a minimum period of time. "If we're unable to proceed with a key piece of work, that has a domino effect," Babcock said. But even once a budget is approved, the Corps is unlikely to get as much money for the project as it did before. The new Homeland Security Department and the possibility of war make it hard for flood control projects to get as much money, Babcock said. (Source: <http://www.skagitvalleyherald.com/articles/2003/01/26/news/news05.txt>)

Three Options For Flood Control

Skagit County and the U.S. Army Corps of Engineers have been working on an \$8 million feasibility study to find out how to best alleviate flooding in the Skagit River basin. The study started in 1997. In 2001, the agencies came out with findings and recommended options. The first proposal, tentatively embraced by a majority of the Skagit County commissioners, is building a 2,000-foot-wide bypass channel that would reroute flood water for five miles from Burlington to the Swinomish Channel. That alternative could cost about \$225 million and includes widening the river channel and lengthening the three bridges over the wider river, said Don Dixon, surface water section manager for Skagit County. The other option is setting the dikes back by about 1,000 feet from the Interstate 5 Bridge to Skagit Bay. That alternative also includes the three-bridge corridor widening and is considered more costly -- about \$280 million. The third alternative is to reconfigure the dikes near Memorial Highway just west of Interstate 5 so water can flow over their tops and spill into nearby farm fields. (Source: <http://skagitvalleyherald.com/articles/2003/03/02/news/news04.txt>)



Historical Record of Avon By-Pass Proposals On The Skagit River

By-Pass Dies Again – Baker Dam Storage Preferred

By way of background: after our last "executive" meeting with the Seattle District COE staff, it was apparent to Public Works staff that the emphasis on the flood bypass part of the proposed flood project was sinking this thing like an anchor on the Titanic. Federal resource agencies are dead set against it, Tribes are killing it with faint praise, and our local cities are ambivalent at best. In short, we are continually trying to carry the baggage on this project, attempting to sell it, and those who will be most negatively affected by the floods are mostly sitting back and watching. In addition, we are at a good transition point in the project, because we now know the makeup of our own County Commission. Also, the Corps is working (very slowly) in crafting a new Project Management Plan which will call for studying the effect of the bypass on the eelgrass of Padilla Bay. . . . Given all this, we in Public Works want to change the focus of the discussion. That focus would be getting the 100-year flood through the "3 bridge" corridor, which is the constriction that exists now which will force water to jump the river east of Burlington. As you can see from the outline, I believe if we focused on this as "Phase I" of the flood project, then we might be able to actually get something done. And at a much reduced federal construction cost. (*Source: E-mail to Robert Wagner from Chal Martin 12/20/2002*)

The last proposal — a bypass channel that would carry floodwater from the Skagit's bend west of Burlington and Mount Vernon to Padilla Bay — is all but dead, because of the projected \$300 million cost. County officials say if they can count on space in Lake Shannon, the lake behind Lower Baker Dam above Concrete, then they can get the cost of effective flood control measures down to \$100 million, with the federal government picking up most of the tab. So far, Puget Sound Energy — which owns the two dams on the Baker River — has been against the idea of new flood control storage until the U.S. Army Corps of Engineers is ready to talk about compensation. That won't happen until around 2008, when the Corps expects to complete a study of flood control improvements. If the county had more room behind the dams upriver, that would mean less water coming down the river. And that means a 100-year flood would be smaller by the time it hit the lower valley. The bypass project, which the county promoted heavily in 2001, was just too expensive, in part because of environmental concerns. The state Department of Ecology, in particular, was concerned about the impact it could have on the eelgrass beds in Padilla Bay, according to Martin. Those beds provide valuable habitat for juvenile salmon. The cost of studying the impact on eelgrass was estimated at \$2 million. The entire project was expected to be \$220 million, plus \$80 million to widen the three-bridge corridor. The state's congressional delegation told the county to give up hope, Martin said.

(*Source: <http://skagitvalleyherald.com/articles/2004/03/28/news/news02.txt>*)



Personal Opinion

It is clear from reading this paper and reviewing the documents referenced that the Bypass concept is feasible from the standpoint engineering. Giving the water a place to go other than between the levees is something that any eight year old child could understand. However, it is just as clear that Skagit County cannot afford the horrific cost of the project. It couldn't afford it in 1936 when it was 4 million dollars, in 1966 at \$32,000,000 nor in 2004 (estimated 300,000,000). Given the history of this project's proposals it is my opinion that it should not be considered again and has went the way of the Sauk River Dam and dredging. However, by not building this project and without additional storage behind the dams on the Skagit and Baker rivers, it necessitates keeping the area that the Bypass/Diversion Channel would have occupied open and free from development, because as history has showed us, that is where the water goes during major flooding events. (See [Historical Floods Of The Skagit River](#))

It is somewhat a sad commentary on the local government's inability to fund and construct this project over the years. I once attended a meeting in 1979 when former County Commissioner Howard Miller stated, "The only time anything will happen on the flood control issue in Skagit County is when Burlington is washed into Padilla Bay." At the time I thought that was a very irresponsible statement for an elected official to say, however, after reviewing the documents referenced in this paper, I'm beginning to understand that the statement was made more out of frustration than as a statement of fact. With the Sauk River dam, dredging, over-topping levees, and higher levees all seemingly out of the picture, the only thing left is more storage behind the dams and an emergency plan for floods in excess of those in 1990 and 1995.

And so it goes. Enough said about the Bypass plan. Only time and Mother Nature know for sure just how big of a mistake this has or has not been.