



DRAFT TIMELINE OF HISTORICAL EVENTS ON THE SKAGIT RIVER – 1940-1949

Prepared by: Larry J. Kunzler, February 23, 1996

DATE	EVENT/ Document	COMMENTS
7/30/40	<u>REPORT</u> Report on Survey for Flood Control of Skagit River and Tributaries	This report was prepared in response to the 3/29/37 report. Considered storage (dams), diversion channels (Avon By-Pass), modifying dikes and channel improvements (widening and riprapping). <u>Conclusion:</u> Only feasible method of providing flood control was Avon By-Pass however local government cannot afford it. <u>Recommendation:</u> Continue snagging of Skagit upstream of Sedro Woolley at cost of \$10,000 per year.
7/5/40	<u>REPORT</u> W.P.A. Flood Control Work (was included as Appendix to unpublished 1942 COE report. It is believed that this unpublished report was later used as the basis for the subsequent 1952 report).	3 major flood related projects were identified. #1 spent \$269,349, used 198 men and took almost 3yrs to complete. Involved extensive brush revetment work in 6 locations between Burlington & Hamilton. #2 spent \$41,221, used 70 men and involved snagging btwn Hamilton & Marblemount. #3 was on the Sauk River used 63 men, cost \$42,032 and involved brush revetment & snagging. Brush revetment work failed in the Burlington area reportedly due to log boats towing log rafts and rafts dragging on revetment.
12/1940	<u>REPORT</u> Flood Control Economic Justification Study Avon By-Pass and Extension of Dikes to Sedro Woolley, Appraisal of Damages 1815 H.W. and 1921 H.W. Skagit River West of and including Sedro Woolley--Samish River Delta, H.R. MADISON 12/40	Report is unique in that it is the only one identified that compares two distinct floods (in this case 1921 and 1815) for the differences between damage figures related to respective heights of flooding. Report was critical of Stewart Report as having estimated flood levels too high downstream of Sedro Woolley. Established "zero damage" at 110,000 cfs., and estimated that 1921 flood would break through dikes existing in 1940. Has attached maps showing 1921 flood levels in Burlington, Clear Lake as compared to 1815 flood levels.
6/15/42	<u>REPORT</u> COE Report on Survey for Flood Control Skagit River And Tributaries	Unpublished report not released to the public. Later returned to Division for further work by ltr dtd 8/21/42. Was told to develop "comprehensive plan for developing water resources of the basin."



DRAFT TIMELINE OF HISTORICAL EVENTS ON THE SKAGIT RIVER – 1940-1949

Prepared by: Larry J. Kunzler, February 23, 1996

DATE	EVENT/ Document	COMMENTS
1946	Second phase of Ross Dam completed. <u>The Skagit Dams</u> , Josef Kunzler, 1991	Raised height of dam another 195 feet to 495 feet.
5/8/46	<u>LETTER</u> To District Engineer, Seattle from Senator Jackson	Senator responded to letter writing campaign began by Sedro Woolley residents Mr. & Mrs. Frank Neble. They owned a farm near Skiyou Island and were concerned about river erosion. Lost their driveway, orchard and barn. The Neble's continued writing letters through 11/46.
7/3/46	<u>LETTER</u> To Division Engineer, North Pacific Division, from District Engineer, Seattle Division	COE does not feel that local cooperation will be forthcoming on any flood control project at this time. Requested local govt not be contacted until completion of ongoing survey report.
7/29/46	<u>LETTER</u> To COE fm Skagit County re Skiyou Island.	Several letters were identified with respect to a small dike on Skiyou Island presumably built by the County to keep river "in its channel" and from coming in the back door to Sedro Woolley. COE felt that even if main stem of river jumped to Skiyou river channel near Sedro Woolley would be little changed and refused to get involved.
9/27/46	<u>LETTER</u> To Division Engineer, North Pacific Division, from District Engineer, Seattle Division	Regarding flood control storage in Ross Reservoir. Ltr states storage in Diablo reduced peak of 1932 flood at Sedro Woolley by 26,000 cfs. If Ross was built no storage would be available behind Diablo because of "efficient power generation". COE wanted 200,000 acre feet of storage behind Ross Dam. Storage to be in affect from November 1st to April 1st. Also established instream flow at 1,150 acre feet during 24hr period.



DRAFT TIMELINE OF HISTORICAL EVENTS ON THE SKAGIT RIVER – 1940-1949

Prepared by: Larry J. Kunzler, February 23, 1996

DATE	EVENT/ Document	COMMENTS
11/20/46	<u>LETTER</u> To Federal Power Commission from Brigadier General R.C. Crawford, Acting Chief of COE	In re flood control storage in Ross Reservoir. Storage between elevations 1710 & 1735 would provide 300,000 acre feet of flood storage. Would be needed to control floods of record. 200,000 acre feet needed to control floods since 1909. Dam only being built to elev. 1600 (top of gates). Recommended flood storage be provided between November 1st and April 1st. Would have allowed flood waters to be released at 10,000 cfs until level drops to 1582.5.
12/11/46	<u>LETTER</u> To Mrs. Frank Neble from Colonel Hewitt COE	In response to Mrs. Neble letter to the President, the COE performed work on Skiyou Island. Subsequent letter (12/13/46) by Mrs. Neble blamed log raft towboats (Elwa) for damage to riverbank. COE did not want to restrict log towboats because of effects on timber industry.
1/16/47	<u>LETTER</u> To Division Engineer, Portland from District Engineer, Seattle	Concern expressed by request that 200,000 acre feet flood storage be required behind Ross from 1 Oct to 1 May instead of 1 Nov to 1 Apr.
4/29/47	ORDER U.S. Federal Power Commission	Issues order approving construction of third step of Ross Dam, requiring 200,000 acre feet of flood storage between November 1 and April 1. Draw down to be accomplished by Nov 1st. Flood gates to be opened and uncontrolled when elevation hits 1600 ft and to remain so until level comes back down to 1600 ft. Waters can be released up to 10,000 cfs until level drops to 1582.5.
8/15/47	<u>LETTER AND PETITION</u> To District Engineer from Skagit County residents in Burlington Bend area.	Letter states in last 18 months, Austin Lytle lost 24 acres. Wanted channel straighten across ox bow. Project needed to protect Burlington. Has attached map showing movement of Burlington Bend from 1936 & projected to 1956. Concern from Burlington Mayor Dick Wilson was that river would link up with Gages Slough or Samish River. Felt state of emergency existed. Citizens did not want revetment work, preferred channel change.



**DRAFT TIMELINE OF HISTORICAL EVENTS
ON THE SKAGIT RIVER – 1940-1949**

Prepared by: Larry J. Kunzler, February 23, 1996

DATE	EVENT/ Document	COMMENTS
8/27/47	<u>REPORT</u> Condition Investigation Report of WPA work referenced completed on 7/5/40	Work done on Utopia suffered heavy damages. Just below work done on Neble area of Skiyou. Blamed work on Neble area as establishing new channel and shifted flow to opposite side of river. All 1940 projects suffered heavy damage and river continued erosion.
9/25/47	<u>LETTER</u> To COE Division Engineer from District Engineer	Addressed scope of flood control work on Skagit. Felt only power generating & flood control sites on Skagit basin were in principal spawning grounds of Skagit River. Suggested US Fish & Wildlife would object.
1/20/48	MEMORANDUM To Col. Hewitt from Pease RE: Burlington Bend Bank Erosion	County engineer Walberg called re emergency project at Burlington Bend. County & state were willing to go ahead with cut-off project last year. Project dropped when local interest could not meet navigational terms of permit. Would have required maintenance dredging. (See 8/15/47 letter and petition.) County opted for rock rip rap instead. Wondered why county would only spend \$50,000 now when last summer was going to spend \$100,000.
2/11/48	MEMORANDUM To Col. Hewitt from Pease RE: Burlington Bend Bank Erosion	Felt river might flow through Burlington or northwesterly through Joe Leary Slough or Samish River. Used 1937 aerial photographs to show how bend had increased in size and meandered towards Gages Slough. Feared bend would increase in size to that of Sterling Bend. Quoted local farmers as referring to soils as "sugar silt" in Bend area. Potential damage from Bend enlargement was severe. Major channel change in this area was concern. Felt river might create natural channel change to south which would relieve pressure but damage left bank property. Suggested area be rip rapped. Estimated cost \$180,000.
2/25/48	<u>LETTER</u> To COE fm Skagit County Commissioners RE: Burlington Bend Project	County offers \$32,000 towards project with COE funds of \$100,000 and State Dept. of Conservation and Dev. ("DCD") with \$42,000. COE was to load, haul and place the riprap. County was using quarry 2 miles from Burlington Bend (Burlington Hill???).



**DRAFT TIMELINE OF HISTORICAL EVENTS
ON THE SKAGIT RIVER – 1940-1949**

Prepared by: Larry J. Kunzler, February 23, 1996

DATE	EVENT/ Document	COMMENTS
3/5/48	<u>LETTER</u> To Division Engineer fm District Engineer RE: Burlington Bend Project	Feared river going to make major channel change through Burlington in old slough (Gages) or reach Puget Sound through Joe Leary Slough and the Samish River. Since 1937 Bend had changed by upper portion progressing downstream and outside bend extended northward several hundred feet. Attributed failure of 1936 WPA willow brush mat to lack of maintenance by local interests and destruction by log rafts. Cut off channel denied because County would not hold and save the United States free from all claims for damages resulting from the work. (See 8/15/47 petition). Recommended approval of project with County being required to furnish additional \$42,000.
4/1/48	<u>LETTER</u> To Division Engineer fm COE Wash. DC office. RE: Burlington Bend Project	Stated that local interest would have to come up with any cost over \$50,000 since Sec. 12 of 1946 Flood Control Act was not applicable. 1936 WPA brush mat project was not a flood control structure designed to prevent overbank flow. Sec. 14 of Act was applicable up to \$50,000.
4/21/48	TELEPHONE TRANSCRIPT Conversation between Art Garton, Washington State and Col. Shuler COE	City of Burlington to contribute \$5,000, Dike District (12) \$5,000, County \$26,000, State DCD \$88,000, COE \$50,000. Was looking at lowering cost by cutting out sand blankets.



DRAFT TIMELINE OF HISTORICAL EVENTS ON THE SKAGIT RIVER – 1940-1949

Prepared by: Larry J. Kunzler, February 23, 1996

DATE	EVENT/ Document	COMMENTS
4/22/48	<u>LETTER</u> To Division Engineer fm District Engineer RE: Burlington Bend Project	Continued erosion will result in major channel change. Bend only 1,000 feet from old slough (Gages). Described slough as winding "...through the eastern and southern part of Burlington and then extending westerly to lower ground and a <u>natural overflow floodway</u> across the Pacific Highway (Burlington Blvd) and on to Padilla Bay through Fredonia and Whitney." Described reasons why cut-off was denied: log traffic of 300,000,000 board feet would be seriously interrupted; would require 260,000 cubic yd excavation at cost of \$100,000; large sums needed for bank protection downstream from cut-off; local govt refused to hold harmless US Govt from damages as result of cut-off; track record of cut-offs has been that they cause more problems than they cure. Recommended approval of \$50,000 COE contribution project.
5/10/48	<u>LETTER</u> To Division Engineer fm COE Wash DC RE: Burlington Bend	COE granted \$50,000 and approved project.
5/18/48	<u>LETTER</u> To COE fm Frank Neble RE: Erosion	Mr. Neble very concerned about bank erosion upstream from where COE put in rock fill at his farm. Neighbor (later identified as Chris Wolf) had to move his house for the 2nd or 3rd time.
6/18/48	<u>LETTER</u> To District Engineer fm DCD RE: Burlington Bend Project	Would not honor federal voucher for \$88,000 for Burlington Bend project. Funds can only be spent on reimbursement of local governments meaning money could only be spent after work was completed, not in advance of.
6/30/48	<u>LETTER</u> To DCD fm District Engineer RE: Burlington Bend Project	COE demands money be paid in advance.
6/30/48	<u>LETTER</u> To Skagit County BOC fm District Engineer RE: Burlington Bend Project	Lack of definite plan by DCD preventing COE from proceeding with project. Mandatory COE have funds before awarding bid contract work.



DRAFT TIMELINE OF HISTORICAL EVENTS ON THE SKAGIT RIVER – 1940-1949

Prepared by: Larry J. Kunzler, February 23, 1996

DATE	EVENT/ Document	COMMENTS
7/8/48	<u>LETTER</u> To DCD fm District Engineer RE: Burlington Bend Project	COE recalled bids because of lack of state funding. COE proposes to go ahead with clearing, filter blanket, & grading upon agreement that State & County will complete the rest of project.
7/15/48	<u>LETTER</u> To Senator Cain fm COE Wash. DC office RE: Frank Neble letters	DC office asked District Engineer to gather more information. Info should include feasibility, desirability & cost.
7/22/48	<u>LETTER</u> To Division Engineer from District Engineer RE: Burlington Bend Project	Skagit County did not want to put adequate slope on project in Bend. Just wanted to drop rock over the side of bank. Felt County position may prevent COE from participating in project and recommended against Federal participation in plan.
7/28/48	<u>LETTER</u> To Skagit County BOC fm District Engineer RE: Burlington Bend Project	COE agrees to provide limited assistance in Bend project.
7/29/48	<u>LETTER</u> To Division Engineer fm District Engineer RE: Frank Neble letters field reconnaissance report	Area of river was S13 T35N R5E, one mile downstream from Lyman. Residents were concerned that Skagit would link up with old sloughs in Minkler Lake area. Heavy rock revetment was placed under emergency flood authorization at Utopia Bend 1 mile downstream in 1947. Felt there was no imminent danger of channel change and no prediction as to the future time such a change could take place. Recommended no corrective works be undertaken. Later correspondence concurred with recommendation.
7/31/48	<u>LETTER</u> To District Engineer from Skagit County Road Engineer H.O. Walberg RE: Burlington Bend Project	County to proceed with Bend project. Accepted bids for placing of 37,000 tons of rock riprap.
8/6/48	<u>LETTER</u> To Skagit County BOC fm District Engineer RE: Burlington Bend Project	COE wanted written assurance fm county that riprap would be placed on filter blanket in accordance with plans and technical specifications and immediately after filter blanket was installed.



DRAFT TIMELINE OF HISTORICAL EVENTS ON THE SKAGIT RIVER – 1940-1949

Prepared by: Larry J. Kunzler, February 23, 1996

DATE	EVENT/ Document	COMMENTS
12/11/48	<u>LETTER</u> To District Engineer fm Skagit County Road Engineer H.O. Walberg RE: Burlington Bend Project	Project would be completed within a few days. Included 4,000 feet of rock revetment. Was preparing plans for 1949 project upstream of Burlington Bend.
12/27/48	<u>LETTER</u> to Federal Power Commission fm City of Seattle RE: Ross Dam	Spillway gates were to be installed sometime in 1951-1952 after removal of timber. Wanted to delete flood control Article 36 from license and make it a separate amendment.
1949	Ross Dam completed. <u>The Skagit Dams</u> , Josef Kunzler, 1991	Third phase was additional 45 feet which raised height of dam to 540' which is how high it is today.
1/14/49	<u>LETTER</u> to Skagit County BOC fm Skagit County Road Engineer Walberg RE: Flood and Erosion Control Program 1949	Estimated cost of program \$328,800. 11 projects including 3,300 ft of riprap at Sterling & Wolfe's. Others were Nookachamps West, Burns Bar, Avon Bend, Rockport, Dexter's F, Darigold pumphouse & Mt. Vernon Bridge South
1/25/49	<u>LETTERS</u> to State Director of Department of Fisheries & Game and U.S. Fish & Wildlife Service fm District Engineer RE: Possible Dam Sites on Skagit System	<u>Faber</u> site: 300 ft high near Concrete 4,600,000 acre feet storage; <u>Lower Sauk</u> site: 250 ft high 700,000 acre-feet storage; <u>Cascade</u> site: upstream of Marblemount, 300 ft high, 300,000 acre feet storage; <u>Upper Baker</u> site: 300 ft high, 200,000 acre ft storage. Wanted to know effects of construction on fish & wildlife. Felt Faber & Lower Sauk had greatest potential for power & flood control benefits.
2/23/49	<u>LETTER</u> to District Engineer fm Wash State Dept of Game RE: Dam sites referenced in 1/25/49 COE ltr.	Skagit River most valuable tributary of Puget Sound from both commercial and recreational fishing standpoint. High dam at either Faber or Lower Sauk would do irreparable damage to the fisheries of the Skagit. Dam on upper Baker would flood out large part of available spawning grounds. Felt present dam on Baker caused terrific losses of fish, completely eliminating the runs of steelhead, cutthroat and spring chinook. Endorsed diking & dredging as correlated with the construction of either the Avon or Joe Leary cutoff as means of flood control.



**DRAFT TIMELINE OF HISTORICAL EVENTS
ON THE SKAGIT RIVER – 1940-1949**

Prepared by: Larry J. Kunzler, February 23, 1996

DATE	EVENT/ Document	COMMENTS
2/25/49	<u>LETTER</u> to District Engineer fm U.S. Fish & Wildlife RE: Dam sites referenced in 1/25/49 COE ltr.	Opposed Faber & Lower Sauk because of tremendous fish loss. With exception of Columbia, Skagit best salmon producing stream in state. Sauk river rich in spawning areas with tributary Suiattle supporting large salmon and steelhead populations. Reserved judgement on Baker & Cascade until further studies could be done.
3/4/49	<u>LETTER</u> to District Engineer fm Washington State Dept of Fisheries RE: Dam sites referenced in 1/25/49 COE ltr.	Opposed Faber & Lower Sauk and Baker because of destructive effects on fish life. Wanted to study Cascade site further. Skagit second only to Columbia in production of salmon. Endorsed Avon & Joe Leary cut-off and channel improvements as means to flood control.
4/12/49	PUBLIC HEARING transcript of meeting held at 10:00am Mt. Vernon City Hall Colonel L.H. Hewitt presiding. RE: Modification of navigation project, Colonel stated had nothing to do with flood control.	
11/28/49	FLOOD 1/7/50 Letter to Corps from Public Works Dept	(Approx.) 158,000 cfs at Concrete, 112,000 cfs at Mt. Vernon. “. . . indicating that the extent of the retention of the Nookachamps area is quite an important factor in determining the maximum stage of the river in the Mt. Vernon area.”