

SKAGIT RIVER FLOODING

“One cannot travel far within the boundaries of this county without coming in sight of the Skagit River. Usually, it is calm and placid, pleasing in its cold green movement from the mountains to the bay. But engineers and old-timers alike are unanimous in their pronouncement that sooner or later, the lazy Skagit will come boiling over its banks, engulfing dikes and soaking farmland, businesses and homes indiscriminately. **Mary Pat Lorente, Argus staff writer, Skagit Valley Argus, 11/13/80**

“. . .the threat of flooding and the actual floods themselves are a creeping paralysis that threatens the economic lifeblood and the growth of the entire Skagit River Basin.” **Eugene Hopkins, Manager Mount Vernon Chamber of Commerce, COE Public Hearing Testimony, pg. 12, 2/8/61.**

“Anyone who has studied the Skagit River flood potential knows that we are sitting on a time bomb - - and sooner or later, we will have that 100-year flood that will make a shambles of our county unless we get this added protection.” **George M. Dynes, Skagit County Flood Control Coordinator, Skagit Valley Herald, 10/22/77.**

“So many things have happened in the county since the last major flood. The major food processing plants are in the flood plain, there is more residential development, bigger farming operations, more building. I can't even imagine what would happen at the shopping malls if water broke through or overtopped the dike above Mount Vernon.” **Frank Easter, Director Soil Conservation Service, Skagit Valley Herald, 12/6/78.**

“As long as I've lived in Skagit County, I've known we're living on borrowed time. I've realized for some time that the Skagit River system doesn't have the capacity to prevent large scale floods. That was brought home in 1975.” **Bob Hulbert, Soil Conservation District, Skagit Valley Herald, 4/25/79.**

“In this century alone, the Skagit River has flooded the Lower Valley 16 times. This is an average major flood about once every five and a half years. In the years of 1906, 1909, 1917 and 1921, all within the lifetime of many residents, the mighty Skagit has approached floods of 100-year frequency -- a term applied to about 200,000 cubic feet per second. Floods of this magnitude have catastrophic effect, wreaking tremendous damage on Skagit county and resulting in large scale loss of property and probably loss of life. Old timers said it was a miracle even in the comparatively mild flood of 1975 that some of the dikes didn't give way to the raging waters. . . .a 100-year flood would rampage through the valley, destroy salt water dikes and roar through the town of LaConner. Flood specialists have termed the Skagit River “**a disaster waiting to happen.**” If. . .a major flood occurs, we will pay a cost almost beyond our present imagination. It will be a price we can ill afford.” **Editorial, Skagit Valley Herald, 10/31/79.**

“Many newcomers to the county don't realize the extent to which the Skagit River can flood. The only thing that will get support (for flood control) is if we have a major flood. Then people will become aware of the problem again.” **County Commissioner Howard Miller, Skagit Valley Herald, 11/21/79.**

“A wall of water poured into the scenic town of Hamilton, submerging all but one of the homes there. Our near brush with disaster is a lesson in cooperation. It also is a lesson in humility for our safety,

as we can so easily gauge from the rising water, hangs precariously on the whims of the river.”
Editorial, Skagit Valley Herald, 12/19/79.

“Newcomers to this valley don't realize that the Skagit River likes to flood. The last really bad flood was in the 1950's--the floods of 1975 and 1979 were just spits in a bucket. But people around here tell me they doubt that the river will ever flood again. They are just ignorant. In 1909 there was a lot of snow in the mountains and a warm Chinook wind melted it and the valley was flooded all the way to Padilla Bay. And if it happened today, there would be a hell of a lot more wiped out than there was then. God help everybody if it happens again--a flood like that would be the ultimate disaster next to Mount Baker blowing up.” **Tim Helmer, Nookachamp-Clear Lake Resident, Skagit Valley Herald, 10/17/80**

“Someday there will be a 100-year flood out there and no one will be prepared. Oh, the County will be as prepared as it can be for that type of disaster, but the people out there, the ones who live in a flood plain, they just don't believe it could happen here and they won't be ready.” **Joe Cain, Director, Skagit County Emergency Services, Skagit Valley Herald, 10/17/80.**

“There aren't many people around who remember how devastating that 1921 flood really was. People these days haven't experienced a major disaster, so they just don't understand what that kind of flood does to homes, property and lives. It's frightening and frustrating to me, and to other county officials, that people don't understand. It's a huge area to provide flood protection for, and the county would probably be powerless to prevent damage should a major flood occur.” **Don Nelson, Skagit County Engineer, Skagit Valley Herald, 10/17/80**

“The Skagit River is a time bomb. The floods of 1975 and 1979 were like small children causing a little water to overflow in a bathtub.” **Larry Kunzler, Nookachamp Farmer, Skagit Valley Herald, 4/1/80.**

“It's going to happen one day--nothing is going to stop it--and when it does, there won't be a dry acre in the whole flood plain.” **Tony Tronsdal, Commissioner, Dike District No. 3, Skagit Valley Argus, 11/13/80**

“The number one threat to our community is flooding from the Skagit River. It hangs over us like a brooding monster, poised and ready to sweep down from the mountains and wreak havoc within our valley. Because of the innumerable problems that high waters present, preventing a major flood is next to impossible. **Editorial, Skagit Valley Herald, 8/19/81.**

“That city (Burlington) has a cocked gun at its head. You've got a hellacious problem there. Any fifth-grader could brand it as a flood area. How is flood water going to get over the highway (Interstate 5)? It's a terribly dangerous situation.” **Chuck Steele, Chief of Natural and Technological Hazards Division, Federal Emergency Management Agency, Skagit Valley Herald, 2/4/84**

“It's a terrible thing, that river. I've seen it blow right down the main street of Burlington.” **Dean Benson, Longtime Burlington Resident, Skagit Valley Herald, 5/13/83**

“Flooding is no doubt Skagit County's greatest hazard. It's not if we have a flood, it's when are we going to have one. The floods we've had--and some people are going to take this pretty hard--have been nothing compared to what could happen.” **Tom Sheahan, County Emergency Services Director, Skagit County Business Pulse, 2/96**

“There’s a potential for catastrophe here.” **Jackie VanderVeen, Skagit County Public Works Dept., Skagit Valley Herald, 10/9/99**

CAUSES OF FLOODING –THE BLAME FACTOR

“Small stream tributaries to the Skagit are contributing substantial amounts of sand, gravel and logging debris during periods of heavy rainfall. This small stream erosion is most severe on recently logged, non-restocked, steeply sloping areas. Substantial amounts of the finer materials from such stream erosion are carried downstream, contributing to the siltation problem at and near the mouth of the Skagit. This siltation creates an additional outlet problem for drainage districts.” **Anton F. Harms, Work Unit Conservationist, Skagit Soil Conservation District, letter to SCD Board, 2/6/61**

“Historically, this second largest river system in the State of Washington has changed from a calm, meandering stream to a raging torrent with little or no notice. As the watershed becomes more denuded from logging operations, these natural barriers to flooding that have existed in the past become less and less a control factor.” **Eugene Hopkins, Manager, Mt. Vernon Chamber of Commerce, Public Hearing testimony, 2/8/61**

FLOODING IN GENERAL

“There is no doubt that the foe is formidable. Flash floods -- those that come within a few hours of heavy rains **or perhaps levee failure** -- are the nations top weather disaster. In 1979 such floods killed 100 persons and caused an estimated \$4 billion in property damage. During the 1970's according to the National Weather Service, an average of **200 people a year died** in flash floods, or triple the rate of the 1940's. **Decade by decade, the death and property toll is rising largely because more development is taking place on flood plains.** “ AP Release, Skagit Valley Herald, 4/30/80

“Flooding has been made much worse by years of inattention to floodway management, inability to curb development along the river valleys, and the accelerated logging of watersheds, according to more than a dozen experts interviewed by the Post-Intelligencer during the three weeks since the record floods hit. All parties who use the rivers are partly to blame for the chronic flood damage, experts said. And lessons from past floods went ignored. **Floods are, in fact, inevitable in this climate, advocates of tougher development controls say.**” **Angelo Bruscas, P-I Reporter, Seattle Post-Intelligencer, 12/27/90**

“The levee systems have given people a false sense of security. I look all over and see the levees are built right on top of the rivers. But you have to give the river room to move.” **Tom Bean, Senior Engineer, King County Surface Water Management Department, Seattle Post-Intelligencer, 12/27/90**

“I think the ultimate solution is you end up having to live with nature. There is a limited ability to impose structural solutions and quick fixes on a major natural phenomenon that may be beyond our ability to manage properly or even control. I think whatever we do we have to respect its ability to do what it will . . . That's the problem with structural solutions -- they can do a very good job of lulling you into a false sense of security.” **Bob Barnes, Senior Environmental Scientist, Puget Sound Power & Light Co., Skagit Valley Herald, 12/17/90**

“I'll be the first to admit there are probably an infinite number of solutions to this problem. But they don't solve the fundamental problem. The fundamental problem is our forefathers chose to live on a floodplain. That was a mistake.” **Robert Boudinot, former Burlington City Engineer, The Everett Herald, 5/1/91**

“Skagit County has the potential of having the largest major catastrophe on the West Coast of America, its waiting to happen right here.” **Noel Gilbrough, COE, public meeting of the Skagit River Flood Control Committee, Edison Fire Hall, 3/8/93**

“It is my understanding that the County fully intends for my community to receive other peoples' water during flooding events. During the 1990 floods, I received a phone call from my brother, who lives in Sedro Woolley. He said that he was threatened with floodwaters, so he called the County to ask for assistance. They said they would send a truck with sandbags right away. He suggested I try the same. I called the County and explained that the waters were rising and that I needed assistance. I asked for sandbags. I was told, “Sure. What is your address?” When I gave my address, I was told that the County would not send trucks into my area with sandbags because “you are supposed to flood.” This seems to be the attitude that County officials have toward my community, and I feel it is grossly unfair. “ **Declaration of Steve Strawn, , Halverson vs. Skagit County, U.S. District Court, Seattle Wa. 6/21/93**

A river is more than an amenity, it is a treasure. It offers a necessity of life that must be rationed among those that have power over it --**Justice Oliver Wendell Holmes**

SAUK RIVER DAM

“Until about a month ago, I thought we could get flood prevention, but our great senator has dropped the ball on the Sauk flood containment dam. Now we have no choice but to play catch-up. We can no longer fight for flood prevention. We must now settle for flood protection. We will take the water nature gives us but we won't take the water that other dikes would give us.” **Ken Johnson, Nookachamp's Farmer, Skagit Valley Herald, 12/19/78.**

“To hinge flood control on the Sauk flood containment dam is unrealistic. We have to decide on the trade-offs involved in other alternatives.” **Bob Hulbert, Soil Conservation District board member, Skagit Valley Herald, 1/3/79.**

“A dam on the Sauk would not be allowed because of the inclusion of the Skagit river and its tributaries in the federal Wild and Scenic Rivers system. **Forest Brooks, Project Study Manager, U.S. Army Corps of Engineers, Skagit Valley Herald, 6/26/79.**

“Numerous residents proposed a dam on the Sauk River because the river accounts for about 40 percent of the flood waters. But building a dam on the Sauk is illegal because the Sauk-Suiattle river system was designated a Wild and Scenic river two years ago. Dams are expensive, time-consuming to build and environmentally troublesome. It's 15 years before there are any benefits, and the environmental struggle to get one would be awesome.” **Don Nelson, Skagit County Flood Control Engineer, Bellingham Herald, 9/23/79.**

The cards remain heavily stacked against such a possibility. Such a project would require an amendment to the Wild and Scenic Rivers Act, federal legislation that currently prohibits dam

construction on the Sauk River. In addition to that hurdle which would be virtually impossible to remove, remaining roadblocks include debate over potential disruption of fish runs and the proposals cost-benefit ratio. An educated guess on the cost of a Sauk River dam would be \$400 million dollars. Local cost for a mixed use hydroelectric flood control dam could range from \$20-60 million dollars. **U.S. Representative Al Swift, Democrat, 2nd District, in interview with Steve Berentson, Staff Writer, Skagit Valley Herald, 8/14/81**

DREDGING

“Because of the large silt and bed-load of Skagit River any reduction of flood heights by dredging the existing channel of Skagit River and its Forks would be very temporary. Rough estimates of dredging between the mouths of the river and Burlington indicate 2,000,000 to 3,000,000 cubic yards of initial dredging required to lower flood stages 1 to 2 feet, and this work could only remain effective by continued dredging estimated at 500,000 cubic yards annually. . . . Lowering of flood stages by dredging the upstream river channels could not be justified because of the high cost of initial work and subsequent annual maintenance dredging.” **Colonel E.C. Itschner, Seattle District Corps of Engineers, letter to H.O. Walberg, County Engineer, 4/17/50**

“Dredging the river would be a continuous process and would be entirely the county's cost after the first year. The Corps also cannot undertake a project which provides anything less than 100-year protection to cities and which does not return at least a one-to-one cost-benefit ratio.” **Gene Sampley, Skagit County Public Works Director, Skagit Valley Herald, 1/3/79.**

Dredging also is not feasible because of the high cost of maintenance. The channel would have to be dredged every year or two, and could have detrimental effects on the environment. **Forest Brooks, Project Study Manager, U.S. Army Corps of Engineers, Skagit Valley Herald, 6/26/79.**

LEVEES

“The local community has done its work and stands ready to meet its future obligations regarding this project (1979 Levee Improvement). Now, we should act to help them provide Skagit Valley citizens with reliable protection from the ravages of floods.” **U. S. Representative Al Swift, Skagit Valley Herald, 3/13/79.**

“To the Nookachamps-Clear Lake area, this (raising the levees) can only do one thing, when you try to force the same amount of water through a smaller opening, it goes up. Somebody has got to pay for the right to flood the land. We can with some degree of certainty predict what will happen if the project is built. The local sponsor must acquire the right to do that.” **Vern Cook, Project Manager, Corps of Engineers, Skagit Valley Herald, 4/18/79.**

We will take the water nature gives us but we won't take the water that other dikes would give us.” **Ken Johnson, Nookachamp's Farmer, Skagit Valley Herald, 12/19/78.**

“Flood protection in Skagit County is long overdue. We'd be the last to say the proposed project is a perfect solution to the problem. We realize there is no perfect solution. The opinion of the board is that the project as proposed is the best protection available at this point. **Bud Norris, Chairman, Skagit County Commissioners, Skagit Valley Herald, 6/20/79.**

“If this is not the perfect plan, let's find the perfect plan. When everyone in Skagit County has to pay, then everyone should have benefits.” **Charlie Boon, Nookachamps Farmer, Skagit Valley Herald, 6/20/79.**

“They complained (Nookachamp residents) because a levee on the north side of the river would increase flooding on the south side, endangering homes and dairy cattle. The Nookachamps area will act as a natural drainage basin.” **Don Nelson, Skagit County Flood Control Engineer, Bellingham Herald, 9/23/79.**

“In the early 1930's Diking District 12 with assistance from the county engineering department moved the dikes closer to the river thus forcing the water into the Nookachamp-Clear Lake area. By so doing they condemned the entire Nookachamp Valley floor to receive floodwaters that they otherwise would not have “naturally” experienced. None of what I've just stated is conjecture on my part. For at a meeting with the U.S. Army Corps of Engineers in Seattle on July 18, 1979 with Nookachamp-Samish farmers the Corps stated flatly that the severity of the flooding in the Nookachamp-Clear Lake area is “Directly attributable to the actions of Diking District 12. For the natural drainage for the Nookachamp area is in fact, the City of Burlington.” For Mother Nature has never attempted to drain water uphill.” **Larry J. Kunzler, Nookachamp Farmer, Letter to the Editor, Skagit Valley Herald, 10/29/79.**

“We simply do not have the capacity in our diking system to take care of any more flood waters than we had in the recent December of 1975 flood, and we know from past floods that we must prepare for water in many places at least three feet higher on our dikes. Federal and state authorities recognize the seriousness of the threat. In the words of one agency, “Skagit County is a disaster waiting to happen!” **Pete Walker, Chairman, Skagit Flood Control Council, Letter to the Editor, Skagit Valley Herald, 10/31/79.**

“Local funding for a long-sought Skagit River flood control measure was washed away in no uncertain terms Tuesday by voters, who rejected the bond measure by a whopping 71.4 percent negative vote. The entire project must now go back to the drawing board in an attempt to find the next step forward. For we greatly doubt that Skagit county residents are willing to sit by and allow much of the valley to be hit by a raging flood. And believe it or not, the Skagit River, as we said earlier, is **“a disaster waiting to happen.”** **Editorial, Skagit Valley Herald, 11/8/79**

“A flood damage reduction plan might be the best approach now. This could include prohibiting construction in the flood plain, requiring flood plain insurance, removing some levees, and purchasing property in flood areas for conversion to recreational use. **Vern Cook, Project Manager, U.S. Corps of Engineers, Skagit Valley Herald, 11/21/79.**

“The town of Hamilton cannot put up a dike because of the impact it would have on surrounding areas. Preliminary hydrology studies performed by the U.S. Army Corps of Engineers determined that construction of a levee around the town would simply not be feasible. Its construction would constrict the flow of water, raising the water level by more than 10 feet in surrounding areas.” **Rich Worthington, U.S. Army Corps of Engineers, Skagit Valley Herald, 4/9/80**

“The dikes aren't going to hold a 100-year flood. You might as well not have dikes in a 100 year flood, and in fact, you'd be better off without them. The dikes will only make things worse. The nearest Skagit County has ever come to a 100-year flood in recent history was in 1909. Flooding

during the past four or five years has been at the 10 or 12 year level.” **Jerry Gardner, U.S. Army Corps of Engineers, Skagit Valley Herald, 3/25/81.**

“Its unbelievable how fast a dike can unravel. 500 feet of dike could come down in a matter of minutes. If you're in front of one of those levees when it goes, you've had it. Burlington, with all its commercial development, is the danger zone in Skagit County.” **Don Nelson, County Flood Engineer, Skagit Argus, 3/16/82**

“. . .work on 30 miles of dikes and levees continues -- little by little. Skagit County Flood Control Engineer Don Nelson has set a standard for dike repair to try to keep river dike districts equitable. “It's called the 50-year water profile which means every time we rebuild or repair, we do it to that level”, he said recently. “That way everyone gets equal treatment.” Nelson started the standard after flooding in 1975. “The profile doesn't give 50-year protection,” he said. “The specifications allow two feet of freeboard. I estimate that gives dikes 25-year protection. Looking at what we had in November, I'd say we had a 25-year flood. Not a 100 or 50-year flood. The (1979) levee project would have done it all in one sweep and it failed, **so we are doing it this way.** We're getting it accomplished. We're miles ahead of where we would have been if we didn't do anything”, he said. He estimates it will take five to 10 years for the whole dike system to get up to the 50-year water profile level. Those improvements not only make the dikes higher, but also stronger, in order to minimize seepage and blowouts. . . . Money also is available from the state Flood Control Assistance Account Program. That helps any agency with flood control. The grants encourage flood control work”, he said. **M. Sharon Baker, Staff Writer, Skagit Valley Herald, 12/20/90**

“...I also realize that for every change man makes to a river's levee system, a change in the river may result. ... Neither I nor my staff want to do something that will make the problem worse ...” **Donald T. Wynn, Colonel, Corps of Engineers, District Commander, Seattle District, letter to Leonard Halverson dated 10/15/96**

AVON BYPASS

The by-pass plan, formerly called the Avon Bypass proposal might not be the only way to prepare for a major flood, but it is among the more reasonable approaches. Serious talk of a bypass died 20 years ago because of difficulties in getting rights of way and easements from local property owners. **Bill Spurlock, Chief of Flood Plain Management Services, U.S. Army Corps of Engineers, Skagit Valley Herald, 3/15/84**

The river should have a space to go. And we should keep the cities out of the flood plain. **Josef A. Kunzler, Age 8, 12/19/90**

FLOODWAYS

“The County, through court action, has had to become more restrictive in enforcing floodway regulation since January of 1976. If anything we're not being as restrictive as we should be.” **Paul Shelver, Skagit County Zoning Administrator, Skagit Valley Herald, 7/20/79.**

“Gages Slough, the meandering body of water which wanders through the Burlington area, also has historically acted as a floodway during high Skagit River flows.” **Jerry Smith, Washington State Department of Game, Skagit Valley Herald, 4/22/83**

“Another key effective flow area is the Gages Slough which is a floodwater conveyance system consisting of lower ground throughout the city and into the county.” **Charles L. Steele, Chief, Natural and Technical Hazards Division, Federal Emergency Management Agency, Letter dated 6/10/83**

“Gages Slough obviously carried the flood flow before and it would again. Local citizens have a false sense of security because local officials are denying there's any hazard associated with development around Gages Slough.” **Bill Spurlock, Chief of Flood Plain Management Services, U.S. Army Corps of Engineers, Skagit Valley Herald, 3/15/84**

“If your question is whether development in the floodplain has already raised the flood waters over one foot in the floodplain, the answer is YES. All you have to do is look at the freeway or the existing levees.” **Forest Brooks, Corps of Engineers Project Manager, Skagit County Flood Control Committee, 10/7/96**

“Each one of these areas have to have a long-term prescription. We can get ourselves into trouble ... to solve what appears to be a limited problem, only to transfer it somewhere else.” **John Matzinger, Whatcom County River and Flood Engineering Manager, Bellingham Herald, 11/10/96**