The Skagit River
When History Meets Technology

Presentation by: Larry Kunzler,
NORFMA Annual Conference, 9/13/05
LABELS

- Leading State Floodplain Management Advocate
- Skagit River Historian
- Other Terms Include: Professional Hemorrhoid, Radical Environmentalist, No-Growth Nut, Fascist, Communist
FLOOD CONTROL

- JUMBO SHRIMP
- MILITARY INTELLIGENCE
- GOVERNMENT EFFICIENCY
- CATASTROPHIC SUCCESS
“One man’s flood control, is another man’s flood problem.” (Source: Testimony of Ed Manary, Legislative Liaison for Washington State Department of Fisheries, 10/14/91)

This is really just the basic principle of physics, “For every action there is an equal and opposite action.”
FLOOD CONTROL
In Skagit County
FLOODPLAIN MANAGEMENT

- Is not solely an engineering responsibility; it is a land use responsibility.

- Plans flood plain use from a standpoint that balances resource protection, environmental enhancement, flood damage protection and land use development.

- In the long run, it is cheaper to prevent and/or remove the problem instead of protecting it and creating more problems.
FLOODPLAIN MANAGEMENT FAILURE IN SKAGIT COUNTY

➢ In 1962 Corps of Engineers estimated flood in excess of 1951 flood would have caused $6,000,000 in damages to the floodplain.  
   (Source: Burlington Journal, 8/23/62)

➢ Today, the estimated value of the facilities within the (Skagit River) floodplain is $3 billion dollars.  
PURPOSE

“\textit{The farther backward you can look, the farther forward you are likely to see.}” – Winston Churchill

The purpose is to preserve the past for the future for use in the present.

Our written past was being lost.

Skagit Valley Herald, Skagit Argus, Concrete Herald and the Courier Times all have lost the 1909 flood event articles.
STATUS

➢ Skagit Argus & Burlington Journal – 1909-1969 – Published

➢ Courier Times – 1904-1951 Published

➢ Skagit Valley Herald – 1894-1969 Published

➢ Concrete Herald – 1920-1944 Re-typed

➢ Final Index – Available www.skagitriverhistory.com
<table>
<thead>
<tr>
<th>Month</th>
<th>Daily Avg</th>
<th></th>
<th>Monthly Totals</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hits</td>
<td>Files</td>
<td>Pages</td>
<td>Visits</td>
</tr>
<tr>
<td>Aug 2005</td>
<td>469</td>
<td>358</td>
<td>64</td>
<td>21</td>
</tr>
<tr>
<td>Jul 2005</td>
<td>409</td>
<td>284</td>
<td>45</td>
<td>19</td>
</tr>
<tr>
<td>Jun 2005</td>
<td>966</td>
<td>674</td>
<td>75</td>
<td>27</td>
</tr>
<tr>
<td>May 2005</td>
<td>445</td>
<td>275</td>
<td>40</td>
<td>15</td>
</tr>
<tr>
<td>Apr 2005</td>
<td>379</td>
<td>191</td>
<td>47</td>
<td>11</td>
</tr>
<tr>
<td>Mar 2005</td>
<td>636</td>
<td>304</td>
<td>89</td>
<td>20</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>8138062</strong></td>
<td><strong>3259</strong></td>
<td><strong>9773</strong></td>
<td><strong>59290</strong></td>
</tr>
</tbody>
</table>
ISSUES

- All flood events
- Flood Control Meetings
- Fish Related Articles
- Dam Building In Skagit County
- History of Agriculture
- History of Logging
- Erosion Control Projects
- Community History
- Diking and Drainage Issues
- Interesting Anecdotes
Price of Groceries

**Source:** Courier Times 4/9/36

<table>
<thead>
<tr>
<th>Item</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coffee</td>
<td>$0.25</td>
</tr>
<tr>
<td>Tea</td>
<td>$0.29</td>
</tr>
<tr>
<td>Raisins</td>
<td>$0.19</td>
</tr>
<tr>
<td>Toilet Tissue</td>
<td>$0.10</td>
</tr>
<tr>
<td>Cocoa</td>
<td>$0.10</td>
</tr>
</tbody>
</table>

**Source:** Courier Times 8/17/39

**Crossman’s Market**

- **Roast** 1 lb: $0.15
- **Bacon** In Piece: $0.19
- **Salt Pork** 1 lb: $0.15
- **Short Ribs** 1 lb: $0.10
- **Seasoning Bacon** 15 oz: $0.15
- **BULK PICKLED Pig Feet** 2 lbs: $0.25

*Better Meats... Better Service... at CROSSMAN’S*
IMPORTANCE OF HISTORICAL RESEARCH ON THE FLOOD ISSUE

➢ Can help clear up public’s perception of what must be done.

➢ Can help government agencies correct mistakes passed down through the decades.
STEWART WHITEPAPER

JAMES E. STEWART
SKAGIT RIVER
FLOOD REPORTS AND
ASSORTED DOCUMENTS

A CITIZEN CRITICAL REVIEW
WHITEPAPER
By:
Larry J. Kunzler
2/14/04
A public hearing will be held in the Commercial Club at Mt. Vernon, Washington at 1 p.m., Wednesday, November 26, in connection with a report on preliminary examination of Skagit River with reference to its floods which was directed by the Act of Congress of May 31, 1924. The purpose of the hearing is to give interested parties an opportunity to present their views and any facts that may have a bearing on the solution of this problem.

The information desired includes the following items:

(a) Frequency, duration and height of floods including (preferably shown on maps) areas subject to floods of different heights.

(b) Detailed estimates of the damage caused by floods to various interests.

(c) Cost of levees (dikes) already constructed and annual cost of maintaining same.

(d) Suggestions as to the methods considered most desirable for flood relief.

(e) Amount of cooperation to be expected on the part of local interests in carrying out any comprehensive scheme for flood relief.

While for accuracy of record all important facts and arguments should be submitted in writing, oral evidence will be heard.

Source: Courier Times 11/20/24
“Because of the limited funds available in time past, such technical data as has been gathered in this vicinity, has been very meager and calculations of stream flow are at best only an estimate and accurate to within only 10 to 20%. The technical data so far gathered, has been done entirely by the USGS Department of Water Resources, and they have had to rely upon intermittent gage readings, observations, and recollections of residents, and more or less disconnected precipitation records.”
I would like to emphasize the point that Mr. Knapp brought out in his paper, that before any really scientific plan can be prepared for the protection of this valley from floods, it is necessary to have more authoritative information than we now have as to the amount of water carried by the river in time of floods. . . . The information that was collected by Mr. Stewart and given in his report to the committee was excellent so far as the data that he had to work upon permitted, but that data was necessarily more or less inaccurate.
1921 Flood Larger Then 1909?

Measurements at the Dalles, near Concrete, show that the flood water this year reached a point two feet higher than at any previous time in the memory of the oldest settler. Charley Moses says that it was the biggest flood, with the biggest volume of water ever carried in the Skagit.

At Van Horn the water was 14½ inches higher than it had ever been. In 1909 the river in the upper valley was only about two-thirds as wide as it is now. Hundreds of acres of land are being washed away every year, by both Skagit and Suiattle rivers. W. A. Ellson says he has been on the upper river for 21 years and this is the biggest flood he has seen or heard old timers tell about.

Source: The Courier Times 12/22/21
1921 Flood Larger Then 1909?

THE CONCRETE HERALD
Formerly the Hamilton Herald Established Nov. 23, 1901. Oldest Paper in the Upper Skagit.

December 31, 1921

FLOOD WAS HIGHEST IN SKAGIT COUNTY HISTORY

Old timers in the Skagit valley, who have seen all the floods in the Skagit valley since the early 80's say that the recent flood carried a greater volume of water than any previous flood since the county was settled, surpassing even the famous high water of 1897. The fact that the river did not reach marks set in former years at some points in the upper valley is accounted for by the widening of the river since that time. In all places where the banks of the river have remained unchanged the 1921 mark is considerably above that of any previous flood known to settlers.
along the Skagit. Burlington had about one foot of water in some of the streets, and there were many buildings over the town that were not even surrounded by water. Neither the

Thursday was a great day in Burlington and many talked of camping on the heights Tuesday night, but the change came about noon, the water went down rapidly and Burlington has perhaps received less damage then any other town on the Skagit.

Source: Burlington Journal 12/3/09
1921 December Flood

Monday night, December 12, the dikes east and southeast of Burlington broke. Tuesday morning at six o’clock the flood water covered Fairhaven Avenue, and in part the residence districts of the city. At this time the entire lowlands lying east, west, south and in part northwest of Burlington were inundated. The depth of water is on relative, the lamentable fact being that the area of low lands covered with water was wide-spread. That certain spots

Source: Burlington Journal 12/16/21
SUMMARY

“Stewart’s study of historical floods in the Skagit River basin had, by today’s standards short-comings, simplifications, incomplete documentation, no known photographic documentation, and took decades to review and complete the evaluation of flood hydrology for the Skagit River near Concrete.

. . . thus the USGS has every reason to believe that the 1921 value is as good as could be obtained.”
1932 vs. 1921 Flood Elevations

When the river began to drop Saturday night, it still lacked six to eight feet of being up to the record level of 1921,

- 1932 Flood 39.99
- Add 8 feet = 47.99
- USGS 1921 Flood 47.6
- 1909 49.1
- 1897 51.1

When the river began to drop Saturday night, it still lacked six to eight feet of being up to the record level of 1921,
WHAT ELSE HAVE WE LEARNED?

- FLOODS WERE NOT ALWAYS VIEWED AS SOMETHING WE NEEDED TO FEAR

These floods are fraught with no great danger and throughout the county where the dikes gave way there has been no loss of life and but little damage to property and the farmers are not at all discouraged or alarmed about the future. (Source: The Skagit News-Herald, 11/19/06)
The citizens take the freaks of the river in a philosophical manner and are not in the least discouraged. (Source: The Skagit News-Herald, 11/19/06)

We have done a little wading and done a little swimming, And we hit for good tall timber when the river got to raging, But we didn’t lose our horses, our cattle, nor our women, Though the water was rather wet and quite above its staging. . . .So here’s to good ole Mt. Vernon and the fertile Skagit valley, We don’t care for the river if she does go on a spree, Let her fill her banks and gurgle, and boil, and foam, and sally, It’s the land of milk and honey she is kissing, don’t you see? (Source: The Skagit News-Herald, 11/19/06)
THINGS TO BE DONE

After all, it might have been far worse. No irretrievable damage has been done. The thing to be done now is to clean up, begin the work of repair, and proceed as though nothing had happened. Skagit county has a glorious future and not even extraordinary misfortune can set it back for any length of time. The weak-kneed brothers will move out; those made of sterner stuff will stay and reap the rewards of grit and energy. It is no time for calamity howlers, and they should not be tolerated. Let them go their way; their places will be filled by better men.

No expense should be spared to put the work ahead.
TOWN OF HAMILTON
2003 FLOOD EVENT

The Rewards of Grit & Energy

No Calamity Howlers Allowed!
That the people of the county should take the burden of providing adequate protection on their own shoulders, was the opinion of H.L. Willis, who cited the accomplishment of the city of Gaveston [Galveston, TX], which built its mammoth sea wall by bonding its own citizens without any outside assistance. He urged the adoption of organized effort as soon as possible and concluded with, “Let’s do the job ourselves.” (Source: The Mount Vernon Argus, 1/5/22)
1st Flood Committee Formed

Seven Men Will Investigate the Problem of Flood Protection In Skagit County.

The second step toward flood protection in the Skagit valley was taken this week by the appointment by J. Z. Nelson, of a committee of seven to form an organization for the improvement of the Skagit river. Mr. Nelson was named chairman of a mass meeting held here last week and was instructed to name this committee as soon as possible. After studying the problem carefully he has announced the following as composing the group for investigation of the problem: H. L. Willis, Mount Vernon, chairman; John Finstad, Conway; Charles A. Nelson, LaConner; Augustus Brawley, Mount Vernon; Hiram Stump, Edison; Charles Callahan, Burlington, and Will Knutzen, North Avon.

Source: Mt. Vernon Argus, 1/12/22
In recent years there has been some agitation for the purpose of controlling the floodwaters of the Skagit river, but as time passes on after a disastrous flood, the people of the valley easily forget that they ever had a flood, until another comes along. Then they will have meetings for some time figuring on dredging and straightening the channel, but in the end nothings comes out of it.

Source: Mt. Vernon Argus, 3/20/24
Dams and Flood Control

- People recognized the importance of dam storage for flood control. John Finstad of Conway wrote: “Supposing the upper 20 feet of this dam (Ross Dam) was reserved for flood control it would take care of the maximum flow of 50,000 (cfs) for at least twelve days. Stone & Webster are going to build a dam across the Baker canyon back of Concrete in the near future (Lower Baker). Here another lake will be created up to six or seven miles long. If 20 feet was reserved for flood control at this dam, Baker river would be eliminated from any flood danger from that source.” (Source: John Finstad letter, Mt. Vernon Argus, 3/20/24)

- In the 1932 flood, at Baker River before the flood, water was 36 feet below the top of the dam, and at the peak of high water it flowed nine feet deep over the top of the dam. (Source: Courier Times, 3/3/32)
Downtown Mt. Vernon went underwater twice, once in 1894 and again in 1897.  *(Sources: The Skagit News, 10/21/1895, Mt. Vernon Argus, 10/15/21)*

Avon By-Pass proposal was dead on arrival at Skagit County because County could not afford it.  *(Source: Mt. Vernon Daily Herald 5/21/37)*

There have been fish hatchery's on the Skagit River since 1898.  *(Source: Concrete Herald 1/17/20)*

Dredging mouth won’t stop high tides therefore concept was never implemented.  *(Source: Mt. Vernon Argus, 11/5/36)* The tide at the mouth of the Skagit acts as a dam against the outflow of the flood river, slowing down the flow of water ... *(Source: Skagit Valley Herald 11/5/55)*
SUGGESTIONS

» AGENCIES: Try and change your agency processes from within your agency.

» PRIVATE CONSULTANTS: Do historical research for your clients.

» larry@skagitriverhistory.com