



## **FEMA: THE TOTAL FAILURE PACKAGE**

The Federal Emergency Management Agency (“FEMA”), now part of the Department of Homeland Security (“DHS”), administers the National Flood Insurance Program (“NFIP”). While the agency has made some progress in Skagit County in buying out “distressed” properties by removing structures (buying them out) that are repeatedly damaged by floodwaters and in other cases providing funding to raise up other structures, overall the argument can clearly be made that the agency is responsible for actually promoting development in the Skagit River floodplain through a series of regulations and the failure to enforce others. One need only to review the documents posted on [www.skagitriverhistory.com](http://www.skagitriverhistory.com) and referenced herein, to justify that statement.

Two of the most egregious elements of the NFIP are the fact that when determining “base flood elevations” FEMA does not take into account the presence of levees or flood fighting activities, thus creating a terrible sense of false security to homeowners in the floodplain who purchase homes located in subdivision developments located on fill or to the homeowners who purchase property upstream of levee systems who are directly impacted by the presence of the levees, and the fact that developers are encouraged to build on fill because then they do not have to pay for federal flood insurance. Not paying for federal flood insurance is a tremendous incentive not to build on post and pier construction. Compound that with the obvious impacts of the fill on overbank flood flows (“sheet flow flooding”) and the fact that when the Corps of Engineers runs its cost benefit ratio for flood control projects that they include the cost of the structures built on the fill and it becomes pretty obvious that the cost to the American taxpayer is phenomenal.

When FEMA first came to Skagit County it appeared that their regulations were promulgated to lessen the impacts of fill in the floodplain and as a result would lessen development in harms way. [The "regulatory floodway" designation as part of the NFIP as administered by FEMA was sparked with local controversy almost from its inception.](#)<sup>1</sup> Meetings were held between local county & city officials and FEMA and Corps of Engineers (“COE”) officials [as early as August 1980](#)<sup>2</sup>. Filling practices in the Burlington area of the Skagit River floodplain were of central concern because “...that might obstruct overflow areas and aggravate flooding problems.”<sup>3</sup> The Federal government was adamant that local governments “...must control filling as part of the agreement with

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<sup>1</sup>See [Skagit Valley Herald](#) article dated 3/25/81 entitled [Floodway plan could 'devastate' growth](#).

<sup>2</sup>See [Memorandum For Record](#) (“MFR”) dated 5/9/80.

<sup>3</sup>Id. at page 2 &2.



FEMA", because filling of the floodplain "...could aggravate flooding elsewhere, which would be morally and legally wrong."<sup>4</sup>

As early as November 17, 1981 FEMA, citing to 44 CFR ' 60.3c(10), was advising local elected officials that local jurisdictions could not allow "...any development in the flood plain unless it has been demonstrated that the cumulative effect of all existing and future development will not raise the level of flooding from the base (100 year) flood more than one foot at any point within the City."<sup>5</sup> (Emphasis added) Concurrently with such advice, the Skagit County Flood Control Committee ("SCFCC") was trying an alternative solution to the "conventional regulatory floodway" (equal conveyance approach) requirement of the NFIP. The SCFCC made a formal recommendation to the Skagit County Board of Commissioners ("BOC") on a proposed "limited density floodway" approach. The majority members of the SCFCC, (certainly not all members including myself), felt that 75% of the floodplain could be developed while leaving 25% of the floodplain undeveloped.<sup>6</sup> The BOC accepted the report and later asked FEMA to proceed with the establishment of such an approach.

An interesting side-bar to the above referenced BOC meeting is that it was disclosed that Puget Sound Electric (then known as Puget Sound Power & Light) had advised the SCFCC of the following:

Commissioner Miller inquired if the committee had contacted Seattle City Light regarding flood control from the dams. Arnold Hanson replied they did not contact City Light but had talked to Puget Power and were told that on the Baker River there is 100-year flood protection. He didn't not know if the same were true of City Light but suspected there is close to 100 year protection on the Skagit River, and felt all the wanner possible could be held and there would not be any more protection.

Clearly PSE mis-led the SCFCC and this is the main reason that Skagit County never asked the Corps of Engineers to "study" any further storage possibilities behind Upper or Lower Baker dams.

During the week of March 15, 1982, FEMA "...determined that a conventional floodway would not be established for the communities within the Skagit Delta area."<sup>7</sup> Having made this determination, FEMA hired the world renowned engineering firm of Dames & Moore to begin preparation of a study to determine a "density floodway" for the lower valley. FEMA further directed Dames & Moore to "...show floodways delineated to include only the main channel of the Skagit River and the levees. Thus, the floodway should be delineated at the inside toe (protected side) of the levees."<sup>8</sup>

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<sup>4</sup>Id. at page 4 &4.

<sup>5</sup>See [letter to John Sandell](#), Port Commissioner, from William H. Mayer, Regional Director, FEMA, dated 11/17/81.

<sup>6</sup>See [RECORD OF THE PROCEEDINGS](#), Skagit County Board of Commissioners dated 11/10/81.

<sup>7</sup>See [Memorandum For Bernie Claveloux](#), Dames & Moore, from Bill Locke, FEMA Project Officer, dated 4/2/82.

<sup>8</sup>Id. at page 1 & 1.



In December 1982, Dames & Moore [released their report.](#)<sup>9</sup> As expected, the 75/25% recommendation was proven to be nothing more than pure speculation on behalf of the SCFCC. The Dames & Moore study created five separate "overbank flow path" areas. The density criteria for each flow path varied "*...from 5 percent to 14 percent depending on the flow path and the lot size.*"<sup>10</sup> The reports final recommendation, based on best available scientific and technical information was that "*To make flood plain management regulations easier to enforce, a 10-percent density criterion for all flow paths and lot sizes is recommended.*"<sup>11</sup> Given the information contained in the Dames & Moore report, when one looks at the proposed development to take place in the City of Burlington published in [the Skagit Valley Herald newspaper article dated 3/8/91](#)<sup>12</sup>, not to mention all subsequent development that has taken place after the article was published, it would certainly appear that we might just be pushing the 10% figure if we haven't already exceeded it. Keep in mind, that floodwaters do not have to be raised 1 foot across the entire floodplain, but "*...at any point within the community.*"<sup>13</sup>

Needless to say, the Dames & Moore Report was unacceptable to local development interest and the "density floodway" concept was rejected by local government. Had the density concept been adopted, there would not be a Cascade Mall, K-Mart Mall, Outlet Mall, Fred Meyer, Wal-Mart, Costco or Target Store let alone 78 unit subdivisions as we now know them.

So now without a "regulatory" or "density" floodway, FEMA opted to use "encroachment standards" found within 44 CFR '60.3(c)(10). By this time some of the controversy had waned as was evident by the fact that when FEMA held its Final Coordination Meeting for the Skagit County Flood Insurance Study on June 14, 1984 only sixteen people were in attendance. [Of that number only 6 were non-government types and one of those was a reporter from the Skagit Valley Herald.](#)<sup>14</sup> [At this meeting, the only questions that were raised "...of any substance concerned the encroachment standard in the Burlington area." "...the only practical means to address the issue is to have the city pre-plan the encroachment standard by devising methods that will comply with '60.3\(c\)\(10\) of the Federal regulations. The county will also need to have this section of the regulations in their ordinance and a plan to implement it..."](#)<sup>15</sup>

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<sup>9</sup>[Analysis of Flooding in the Skagit River Delta Area](#), prepared by Dames & Moore, dated 12/82.

<sup>10</sup>Id. at page 9 Table 2 & 1.

<sup>11</sup>Id. at & 2.

<sup>12</sup> [Skagit Valley Herald article](#) Cascade Mall Tops Burlington Projects, 3/8/91

<sup>13</sup>[See](#) 44 CFR 60.3(c)(10), and SCC 15.20.205.

<sup>14</sup>[See Meeting Attendance Record](#) attached to Memorandum for John Gibson, Assistant Administrator, FEMA from Charles Steele, Chief, Region X, FEMA, dated 6/18/84.

<sup>15</sup>[See Memorandum For John Gibson](#), Assistant Administrator, Office of Risk Assessment, FEMA from Charles Steele, Chief, Region X, FEMA, dated 6/18/84.



Skagit County accepted the findings of FEMA's Flood Insurance Study and proceeded to modify their flood ordinance accordingly. Several meetings were held with local and federal officials concerning the verbiage needed to submit an ordinance acceptable and in compliance with federal regulations. One such meeting took place on October 26, 1984. [As a follow up to that meeting FEMA advised Bob Schofield, Director of the Skagit County Planning Department through correspondence dated November 1, 1984 that:](#)

*"...the Skagit Delta analysis is anything but normal, since we had to ascribe a frequency to a flooding event that involved multiple levee failures, sheet flow conditions and uncertain flow paths. The net result is a depiction that we feel we can defend, but that may not realistically portray a flood that may occur in a particular area adjacent to a levee if that levee is overtopped or fails. Wherever a failure occurs, it is a certainty that our information will understate the hazard in the immediate area, since we did not attempt to portray levee failures along the levee system."<sup>16</sup>*

[The reason the FIS did not attempt to portray levee failures is that FEMA's "...hydraulic analysis was performed as though the levees did not exist..."<sup>17</sup>](#) when arriving at their flood depths.

[At the meeting on October 26, 1984,](#) county officials and FEMA also:

*"...discussed the need for a setback from the levees in the interest of protecting the public health and safety. Two separate types of zones were discussed, first a zone where all new construction would be prohibited and, second, a zone where special building techniques and engineering certifications would be required. In our discussions, we concluded that a 100 foot setback would be desirable and realistic in view of the real hazard posed by levees that could break at any point... These two strips would also serve as additional conveyance areas to complement that which is described in the next paragraph.*

*"Concerning conveyance areas, we agreed that the work Bob Boudinot is doing to designate secondary drainage channels, such as the Gages Slough, as areas for which building cannot occur, as well as designating areas adjacent to such channels as areas in which buildings must be elevated using post, pier, pile, or column techniques, would be desirable and would probably comply with the encroachment provisions found at '60.3(c)(10) when combined with the additional strip available along the levees discussed in the previous paragraph. We agreed that construction in these areas*

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<sup>16</sup>See [letter to Bob Scofield](#), Director, Skagit County Planning Department from Charles Steel, Chief Natural and Technological Hazards Division, FEMA, Region X, dated 11/1/84.

<sup>17</sup>See [letter to Honorable Raymond C. Henerly](#), Mayor, City of Burlington from John M. Gibson, Assistant Administrator, Office of Risk Assessment, FIA, dated 5/22/84.



would not need to be certified against velocities as they would for the strip adjacent to the river and levees.

...

...Adoption of these measures will also comply with Federal regulations and, if adopted as described here, will most assuredly comply with the very difficult encroachment standards spelled out at ' 60.3(c)(10) of the Federal regulations.<sup>18</sup> (Emphasis added).

Skagit County adopted all of the above referenced provisions into its Flood Damage Prevention Ordinance. No project, either for private developers or for the diking districts or the Public Works Department's many flood control projects has ever produced a hydraulic analysis in accordance with the above cited regulations. This despite the fact that subsequent to the 1990 flood events, tremendous amounts of fill have been placed in the floodway (i.e. riverward of the landward toe of the levees) which has had the impact of higher flood levels at the Mt. Vernon gage with less flow.<sup>19</sup>

FEMA, the Corps of Engineers, Skagit County and the City of Burlington has full and complete knowledge that the placement of fill in the conveyance areas is in violation of Federal, State, and local regulations. In late 1986, the Burlington Northern Santa Fe Railroad ("BNSF") without benefit of permits began filling the areas within Gages Slough where its bridges cross said slough. Skagit County issued a stop work order to BNSF. BNSF subsequently filed a variance request from the provisions of SCC 15.20. On February 20, 1987 FEMA wrote to the Skagit County Hearing Examiner, Bob Schofield, former Planning Department Director. In their letter FEMA stated:

*"The Burlington Northern has violated the flood plain permit requirement and the encroachment standard of ' 60.3(c)(10). This is a very serious violation, in view of the extensive hearings and other meetings over a 4-year period that went into the negotiated agreement among Skagit Valley communities in lieu of a conventional floodway designation. The encroachment remains a violation until either the fill is removed from the Slough, or a scientific, technical engineering analysis is provided demonstrating that the cumulative effect of the proposed fills, combined with all existing and anticipated development, will not increase water surface elevations of the base flood more than one foot. Such an analysis would, of course, have to apply to the entire reach of the Skagit River in the Delta, as explained at our recent negotiation session with the County and the Railroad.*

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<sup>18</sup>See [letter to Bob Scofield](#), Director, Skagit County Planning Department from Charles L. Steele, Chief, Natural and Technological Hazards Division, FEMA, Region X dated 11/1/84 at page 3.

<sup>19</sup>See [Historic Flood Flows](#) and compare gage readings pre-1990 flood to post 1990 floods.



*Other such areas are similarly designated, ...*

...

*Clearly, the applicant has not provided information demonstrating that additional threats to public safety based on the cumulative impact would not occur as discussed above...<sup>20</sup> (Emphasis added).*

FEMA and Skagit County are to be congratulated for enforcing the language contained in the NFIP and the local regulations and stopping any further fill from being placed in Gages Slough, however neither FEMA nor Skagit County forced BNSF to remove all of the illegal fill that BNSF had placed into the slough prior to the stop work order being issued. The fill still remains there today. Subsequent to this incident further encroachments into the conveyance areas have taken place which include but are not limited to additional fill on the riverward side of the levees and a new road across Gages Slough adjacent to Interstate 5. Clearly the fill is designed to “blow out” during a major flooding event however, fill is fill and under a strict interpretation of the NFIP regulations it should not have been allowed.

In researching this paper I found it particularly distressing to review [a Corps of Engineers Memorandum For Record \("MFR"\)](#) prepared in response to a meeting with Skagit County and the Corps involving a 1993 proposed flood control project.<sup>21</sup> The MFR in part stated the following:

**Floodplain considerations: Excavated material from the Skagit River will be placed on the back side of the levee at two places: a levee adjacent to the RR track and into a borrow pit formed when the original levee was constructed. The fill would allow these dikes to be monitored better during a flood. Brookings stated that the project meets the current flood plain regulations in Skagit County (will not cause a 1' rise in flood elevation). Malmgren stated that the effects of the fill placement are not calculable in his model. Due to the large floodplain, a very large amount of fill would be needed to result in a 1' rise in flood elevation. Even the existing growth in all of Burlington would not cause a 1' rise because the floodplain is so large. Brookings agreed with letter from Larry Kunzler that cumulative effects of growth need to be looked at but said that this project would have a minimal effect since it is so small.**

One has to wonder why the Corps of Engineers cannot calculate the cumulative impacts of fill in the floodplain in accordance with FEMA NFIP, while it is apparent that [Dames and Moore just eleven years before](#) seemingly had no problem when they made their

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<sup>20</sup>See [letter to Skagit county Hearing Examiner](#) from Charles Steele, Chief Natural and Technological Hazards Division, FEMA, Region X, dated 2/20/87.

<sup>21</sup>See [MFR 93-2-00504](#) Skagit County Public Works, Meeting with Dave Brookings (Skagit County Public Works, Ron Malmgren (CENPS-EN-HH-HF), Ann Uhrich (CENPS-OP-RG), Evan Lewis (CENPS-OP-RG) dated 8/27/93 0900 hrs.



recommendation that only 10% of the floodplain should be developed<sup>22</sup> before the floodwaters would raise one foot. It is unknown how much money was spent by FEMA on the Dames and Moore study; however what is known is that the taxpayers paid for it. Which begs the question; what good are studies if no one is going to use them?

### **CONCLUSION**

Based on a review of the documents cited herein, there is clear and convincing evidence that the federal government has contributed to the millions of dollars of damage experienced by the people of Skagit County and during a catastrophic flood event would be responsible for the three billion dollars of development in harms way due to their regulations and the lack of enforcement thereof. I would submit that it would be in the best interest of the American taxpayer if all the federal agencies involved with the flooding issue in Skagit County immediately demand that all of the storage behind the Skagit River dams be utilized. It is by far the most cost effective means of flood control for everyone and clearly least damaging to the environment.

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<sup>22</sup> [Analysis of Flooding in the Skagit River Delta Area](#), prepared by Dames & Moore, dated 12/82.