



Federal Emergency Management Agency

Region X
Federal Regional Center
130 228th Street, S.W.
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April 17, 1991

Mr. Larry J. Kunzler
Boyle and Gates
2 Union Square
601 Union Street
Seattle, Washington 98101

Dear Mr. Kunzler:

Thanks for the opportunity to review your publication Skagit River Valley -- The Disaster Waiting to Happen. This is a marvelous book about a difficult, most unusual piece of geography, one that deserves the kind of attention you have given it.

The main value of your book is that it pulls together so many thoughts and ideas from so many sources. To my knowledge, no document has as comprehensively related all that has happened on the subject of flooding in the Skagit Delta, as yours. While the book does not offer any absolute solutions, all the necessary thoughts are there, to assist the reader in formulating his or her own opinions.

It is clear in a reading of your book that the Skagit Delta is an extremely unique geographic place, one that defies conventional analysis. In fact, that is one of my major themes in writing this to you. During the Flood Insurance Study phase (that lasted from 1976 to 1984), trying to define flooding in the Delta through the only tools available to us in this business, was a constant source of frustration.

What we ended up with on the floodplain maps for the Lower Skagit, was nothing to plaster technical journals with. It was a compromise, between the need to assure a high enough level of awareness of the potential flooding danger almost everywhere in the Delta, and the need to be fair to those who live there and wish to continue to do so, such as by constructing new buildings.

In other words, the Skagit defied conventional floodplain definition. The compromise is depiction of a floodplain that is so large that one flood could not cover such an area, but flood elevations that are probably understated for those areas where breakouts will occur (like Fir Island), and floodwaters will want to reclaim. It was analyzed in this way because of the nature of this stream, that is perched in some places higher than its surrounding land, and where waters escape, not to return to their channel like normal floodwaters in normal rivers (analyzed through normal methods).

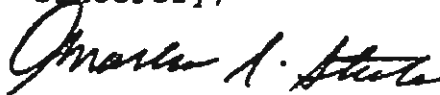
2.

In summary, the floodplains we defined were as good as we thought we could do. With bigger budgets, methods that are perhaps better (such as two-dimensional modeling) could have been employed; but there is not consensus that the product would have looked any different, even with a vastly higher expenditure.

I would hope there could be a comprehensive analysis done in the Delta some day, that would factor in the many dynamic things we all know are happening; things like greatly increased urbanization, increased logging in the watershed, increased sedimentation in the channel, etc. Only a comprehensive look at these factors, coupled with a new look at floodplain delineation, would suffice for this most important and special area.

Again, my thanks for the opportunity to review this excellent document. It is very well written, has good graphic attraction and should be made available for all to read and learn about the potential hazards in the Delta. Your efforts to bring the many thoughts of those who have cared through the years, are deeply appreciated.

Sincerely,

A handwritten signature in cursive script, appearing to read "Charles L. Steele".

Charles L. Steele, Chief
Natural and Technological
Hazards Division