Comments on the Draft Chehalis Basin Flood Mitigation Alternatives Report

8/13/2012

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Hi; I hope you are having a great day and things are going well for you.

I received an e-mail stating that your organization would like to hear from some flood affected individuals back in 2007.

To start with, I reside at 1358 NW River street (correctly named) , Chehalis WA. 98532. My personal cell is 360-880-8905. and My name is Steve Emrich.

I own roughly 30 acres along the Chehalis River and have lived on or near this street since 1958. Yes, I am an old timer around here at 55 years.

I am a firefighter for the city of Chehalis and also a member of the swiftwater team that is part of the fire department. When the flood started to rise in the early morning hours, I was called back to work with the swiftwater team and did so until 9 pm that night. During that time, my wife and 4 yr. old daughter were at home and watched and prepared for the flood and river rise. The water eventually came over our road, up to our house and eventually 8"in our house. When I got home at 9 pm, I arrived by boat onto our water covered back porch and our 4 yr. old riding her tricycle in the flood water in our house,(why not!) It is an eerie feeling hearing water running by outside your house during a flood, as we have had a few times in the past years, but to have it flowing through your house is another story altogether. Early the next morning, the water was receding and we washed, swept the muddy silt out as best we could. A boat ride around the farm showed 5' of water in my farm shop, 2 other barns where equipment is wintered over under cover, 2 buildings with 3' of water in them which had the farm quads, motorcycles, tools and other personal storage items. It took another day for the water to recede sufficiently to get a look at the devastation in those buildings, barns etc. When we got to them, everything in those structures were in a state of complete devastation and full of mud and debris. All our tractors went 2/3 under, all quads and power tools were submerged, (and we had all these up on high ground, trailers and tables in prior preparation for this event) fuel containers were floating, one farm equipment shed washed away, 7 cords of firewood flowed downstream, all our fences for cattle around our section for cattle were bent, broken, covered with debris or just plain gone. We own the house next door as a rental and it suffered the same devastation as ours did. It was quite a chore hauling out all the insulation from under the house as well. We tore out 4'-9' of walls in our house such as sheetrock, insulation,etc. and re-did all the outlet wiring, tore out floors, sanitized and just plain worked day and nearly all night for 10 weeks to get our house back to livable condition. The farm took 3 more years to get back in shape with equipment repairs, fence and building repairs, tool and equipment cleaning, etc. We had to do some downsizing of buildings and equipment as too costly to rebuild and replace some things that were lost or damaged.

The bummer of it is our flood insurance policy that we had written for the farm and rental as well as our property which was supposed to be the same as our home and farm owners policy was only written for our house! Not even covering our carport and outbuilding where 3 freezers full of home grown vegetables, beef and other items were floating in the flood water. 4 tons of pellets for our winter heat source was a pile of soggy sawdust. We used 2 kerosene heaters to dry out our house and to try to keep warm with for 10 weeks. Thank goodness we have a multi-level house where we lived upstairs with a shower, sink, bathroom and microwave and bedrooms for that 10 week time we did the downstairs repairs. Doing all the work ourselves in the repairs, we had just enough house insurance coverage for the new walls, flooring, appliances and electrical needs. The outbuildings, rental, and the farm were all out of pocket for all the needed repairs to farm equipment and buildings, etc.

All in all, we got stronger from it, rolled up our sleeves and just did what was needed to get back on our feet.

I sure do wish the folks at the Army Corps of Engineers would have listened to my dad's recommendations 40 years ago as well as my time talking with them 10 years ago about flood protection. 1 dam on the upper Chehalis and re-do the Scheuber road by-pass drainage ditch under highway 6 and along the Scheuber road to alleviate early rises of flood water. It is so easy to see and would protect I-5 as well as the people living in the valley. In regards to the diking projects suggested, I was told by a rep. of the Army Corps that I toured with that I lived close to the river, on the wrong side of the dikes and to keep paying my property taxes , but the flood waters would be worse than ever before and that it was just too bad for me and the good of the majority!

Well, Thanks for your time and I hope a lot of folks take the time to write you their side of the flood story and their suggestions for prevention ideas. The 1 dam makes sense to me, keeps one tributary clear and provides better flows in the summer months, and hey, why not try to get the reservoir to be a campground area for campers and tourists to stimulate some growth and business out in the PeEll area!

Thanks again for listening;

Sincerely, Steve Emrich

Greetings,

I have lived in Centralia for 38 years. During those years I have been through 3 major flooding events and sustained significant losses to property and equipment. With a hanger and an aircraft at the Chehalis airport I have repeatedly had major repairs to the hanger structure. In 2007 my aircraft was damaged to the tune of 70.000 dollars.

But more importantly I have seen first hand scores of friends, family and neighbors been virtually devastated by these flooding events. My brother in law, a dentist had a loss of $600.000 to his dental office and loss of income for many months of repair. Due to the flooding history, he is unable to get tenants to occupy the building. This area is economically depressed due to the ongoing threat of flooding.

I am strongly in favor of a water retention dam on the Chehalis river west of Pe Ell.

Please consider the welfare of the citizens of this community as you propose your budget for this next biennium. People who do not live here and do not have to experience these horrific events, should not be allowed to hold us hostage via their ideological opinions.

Respectfully

Helgi Heidar MD

Melissa,

None of the five points listed below even mentions dredging. Levees, flood walls and dams are not serious solutions. They always have and always will fail. They are a waste of major waste of money in Washington State. Dredge the rivers and be done with it. No serious discussion on this topic can be accomplished while ignoring this important fact.

Daniel Thorson

Are you concerned about flooding issues in the Chehalis Basin and potential solutions? If so then your input is needed by Friday, August 10, 2012.

At the direction of the Governor and Washington State Legislature, the William D. Ruckelshaus Center has prepared a draft report on alternative flood damage reduction projects for the Chehalis Basin. The purpose of the report is to provide decision-makers with key information on projects to reduce flood damage in the Basin. Projects covered in the draft report include:

- Water retention project (multi-purpose dam) on the mainstem Chehalis River upstream of Pe Ell.
- Improvements to the levee around the Chehalis-Centralia Airport.
- Flood walls to protect Interstate 5 in the Chehalis / Centralia Area.
- Raising/improving the US Army Corps of Engineers levee system around Centralia and Chehalis (the "Twin Cities Project").
- Other potential construction projects and programmatic approaches, such as land use planning, flood proofing, home elevations and buyouts, and livestock evacuation and sanctuary areas.

The final report is intended to be available in late August/early September.

Written comments are due Friday August 10, 2012 and should be sent to Melissa Kuehne at eithermelissa.kuehne@wsu.edu or by U.S. mail to Melissa Kuehne, Ruckelshaus Center (WSU West), 520 Pike Street (Suite 1101), Seattle, WA 98101.

Melissa, I wrote this last evening after I had walked around the yard enjoying the beauty. The roses are gorgeous this year. It's a beautiful place to be. But, not much longer for me. I'll move within the year. Will I stay in Lewis County. At this time, I have to say, "no." Though I've friends here, I'm afraid. Afraid of another flood and facing another loss. No. I'll move somewhere else. Jim was 71 and I was 64 when we rebuilt after the flood. We lost our home, completely.

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It's so bitter sweet. I look around at what Jim and I fought so hard to rebuild after the December 3, 2007 flood. He's gone. Lost to cancer.

We moved to Lewis County in 2006, after Jim had been diagnosed with and had undergone treatment for cancer We sold everything to buy our "home" free and clear. Then came the Dec. 2007 flood. We lost everything. We had one half hour to leave our home. We didn't know it at that time, but as we spent 12 hours on higher ground, waiting to be evacuated by the Coast Guard, we knew. We knew the river would take everything. And it did. The house, the car, the motorcycle, the RV, everything we had worked for was gone. Gone in 12 hours. A lifetime of hopes, dreams all gone in 12 short hours.

Why? Why did it happen? Why did what we had worked so hard for been lost so quickly? Was it clear cutting? Was it the "perfect storm" or was it because all these many years nobody had really addressed the "problem?" Not the "problem" of flooding I-5 and shutting off commerce but, the problem of saving homes and lives. Aren't those truly more important?

Jim's gone now. So is mom. Mom, who was 95 when she was air lifted out by the Coast Guard. Mom, who had to go live with relatives in Oregon while we tried to rebuild our lives. How can this be? We worked so hard to achieve some sort of life after retirement – and it's gone. Gone up in muddy river sediment. Jim died this last month from cancer. Mom died the prior year. Now I'm alone. What can I do? Declare bankruptcy and go into foreclosure. We took an SBA loan after the flood to rebuild. We owned the land. It seemed the right thing to do. After all, it had never flooded there before. Now the real estate market has bottomed out. I can't sell our home for what we owe and Jim is gone. I can't maintain it, either financially of physically. I have MS. We've lost everything to this damn flood. Am I bitter? Yes! Is there something that could have been done long ago to prevent this flood. YES!!! But it was ignored. The Corps of Engineers was handling everything with it's proposed levy solution – that's gone on for over 30 years!!! Why wasn't something done before 2007 – after the 1996 flood!! Am I mad? Yes! And what are you, the State of Washington, going to do about it? Just protect the commerce on I-5 – or maybe, just maybe protect the CITIZENS OF THE STATE OF WASHINGTON, instead of just the REVENUE for the State of Washington.

The retention dam needs building NOW! Lives need to be saved, not fish, not commerce, but people's lives. Now is the time to act – not 30 years from now.

To: The Citizens of Grays Harbor County

This letter comes in response to a recent article entitled, "Study suggests multi-pronged flood solutions," by Steven Friederich, dated 7/25/2012.

First, I applaud Steven Friederich for sitting through, and reporting on, the often times laborious, sometimes tedious, meetings, of the Chehalis Basin Flood Authority.

However, one has to wonder, with the millions of dollars already spent on consultants & studies, why there is still no apparent progress, solution or answer to this group's attempt at preventing flooding on the beautiful, natural Chehalis River. I wonder, has The Flood Authority ever stopped to think that perhaps doing nothing at this time might be the best way to proceed. It would appear to me, and many citizens of Grays Harbor County, that the Flood Authority has been spinning its wheels for years, while spending a great deal of money in the process.

What is the answer?

For those of us who live on the river--especially downstream from the proposed earthen dam and levees--we would say, DO NOTHING! That is correct--DO NOTHING because there are no answers to the questions regarding dangerous effects the "proposed" projects would most likely have on people and properties downstream. It would also be prudent to look at the devastation caused by earthen dams over the years in Washingston State, as well as elsewhere throughout the world. This is an unequivocally dangerous proposal and should not be considered. Period. This stance is validated by the most recent 282 page report presented by the Ruckelshaus Center and certainly questions the policy makers in this county.

Not even the latest "new report" required by the state Office of Financial Management, was effective in offering any kind of quantifiable activity or project that hasn't been considered previously, as well as the mitigation questions. This report is nothing more than a weak attempt to keep the Flood Authority rolling along and justify more millions being spent for what? Honestly, this entire endeavor is absolutely pointless without the completion of mitigation studies--that means "what happens downriver when you start changing upriver" whether it be earthen dams, levees or any number of projects sighted in the "many pronged attack." There are too many variables, tidal flow, high winds, heavy rains and this question cannot effectively be answered--no matter the money spent. Even with these suggestions offered by the Ruckelshaus/Jim Kramer report--the Flood Authority has no more answers than it had several years ago! To many of us, it is beginning to look like an unending lesson in futility!

Why doesn't the Federal Government step up to the plate...build an overpass to eliminate the flooding issues on I-5 in the Centralia/Chehalis area. All of the building there was done with full knowledge that it was in a flood plain. Why doesn't the Chehalis River Authority disband and stop acting like they are accomplishing something? They aren't. Stop spinning your wheels with useless studies, and certainly some amount of bickering reported to the citizens of Grays Harbor over the years. Divert the 5 million dollars you are posed to receive, already alloted--to a fund which would help flood victims in the case of a flood.

Five million dollars would be a start. Then, take a serious look at the logging industry for the large part they have played, and continue to play, in the flooding on the Chehalis and many other rivers in this state. Work with Mr. Peter Goldmark, our Public Lands Commissioner for some answers and hopefully some assistance and solutions. Perhaps DNR would be willing to contribute to my proposed "Flood Victim Fund."

As for Mr. Kramer signing a recent $91,200 contract to "provide facilitation services" to the Flood Authority--nonsense. If he is unable to offer opinions or direction to the Flood Authority, it is a complete waste of more money. Put that money also in the fund to help flood victims in the event it is needed! There, now you already have $5,091,200. That's a good start. Leave the river alone--no good comes from trying to control natural habitat. I wonder if the Chehalis Flood Authority knows that a DNR driven, 5000 acre Natural Area Preserve and a one of a kind estuary system, which contributes natural flood control, currently exist at the mouth of our precious Chehalis River? Please, let us not jeopardize what we have with more relentless studies and inept attempts to control yet another natural river!

Sincerely,

Carol Seaman

2001 Mallard Lane

Aberdeen, WA 98520

Hello. On our DNR website was an "Ear to the Ground" article suggesting a request for flood mitigation ideas. I grew up in that area and still live close by and have seen this flooding since the 60's. I have always wondered if a flood channel could be cut on the west side of the valley along Schuber Rd, west of the hospital, and ending somewhere around the Galvin area where it would rejoin the river. A project of this nature would be Army Corps of Engineers size, and some of what was dug could be used to bolster the levees. Seems that a shallow angled flood channel (like I've seen in the Midwest) could still be used for some agriculture and the route would displace a minimum number of residence. That is my 2 cents worth. Have a good day.

Ronald T. Worrell

Aviation Maintenance - Resource Protection

State of Wash. - Dept. of Natural Resources

Voice 360-664-8602 Fax 360-586-5546

Sir,

NC Machinery has had a significant presence in the City of Chehalis at I-5 Exit 79 since the 1960"s as a significant employer and significant local tax payer in support of the construction, logging, and power generation industries. Our company's ownership has financially and materially supported community improvement efforts including, but not limited to, annual Scholarships to Centralia College students, major contributions for the Providence hospital expansion, and donations of equipment to local communities for the construction of youth ball fields.

Logically, floods and the associated losses have moved from the category "possibility of flooding,"' to "in the likely event of flooding". It is our sincere desire that the various governmental agencies responsible for protecting the people and business assets make the necessary physical improvement to mitigate the Chehalis River flood threat.

While the Management of NC Machinery makes no claim to have the answer to which project is the one that will be the "silver bullet," upon review of the many possible options it is our belief that a retention dam/generation dam provides the ability to retain a significant portion of flood waters where the waters begin while offering a method of recapturing some portion of construction through future sale of generated power via a reusable, green, fuel source, that being water.

Using the retention dam in conjunction with the expansion and raising the existing dike system, we believe, provides a significant bulwark against future flood events that would allow our ownership to enjoy an improved outlook of the safety of our significant Chehalis assets.

NC Machinery, Chehalis suffered fairly minor flood damage in 1990, significant damage in 1996, and catastrophic damage in 2007. As has been illustrated in Chehalis Draft Report 7-12-2012, the floods appear to be progressively more damaging with each event and be assured the insurance carriers for NC Machinery have taken note. In those events our company has rebuilt the facility twice, lost inventory, twice, had our business interrupted, and had to retool twice. But what about the other non-monetary costs of our employees?

From November to March, every single year, when it snows, then rains: rains heavily for extended periods: when the Willapa Hills carry a heavy snow load: or a Pineapple Express is forecasted, the personnel in our Chehalis facility become a little more tense because they know "this could be the year we get another flood, and if we get another one .....?" Then, there are the personal tragedies of lost homes or belongings, friends and co-workers who need a refrigerator, bed, or sofa because theirs "got wet." These are the personal sides of the Flood Control Project and not quantifiable in a cost/benefit analysis, how do you put a value on the knowledge that your home will be where you left it when you return from work or a shelter. Those of us who were only inconvenienced open our wallets, homes, and cupboards all the while giving thanks that it isn't us needing assistance.

Respectfully,

Miles Folks

Branch Manager

NC Machinery Co., Chehalis, WA

Melissa,

Good morning to you, I would like to comment on all the fill material they have been placing in an around all the commercial sites around I-5 & Chehalis area, under Home Depot, and opposite the Wal-Mart store on the south side shopping strip in Chehalis, all that import material came from the Clay deposit on the hillside across the Freeway, it seems to me because of a water issue and flooding problems, they would want to import more of fracture rock and design drain fields and pervious paving which would allow for displacement of water and not effect the buildings and roads above, instead they just fill them with clay dirt period. Seems like they always want to use the cheapest material they can find for there applications, it's like there building dikes all around the freeway and gives the water no place to go. Also on the freeway expansion were there going to raise I-5 down to exit 72 with fill dirt, why don't they just build the freeway like a concrete bridge north and south from I-5 Mellon St in Centralia down to the Wal-Mart I-5 Exit 79, that would allow all the water if it floods just to run under the bridge. They build them in Louisiana and there miles long and still standing over the swamps. Just a thought, makes sense to me. You look at the millions it cost daily when they close down the freeway do to flooding. I think they need to re design that part of the freeway, pretty simple math; you keep filling in these areas with cheap fill dirt you just create more flooding. That's pretty much the end result. You don't have to be an engineer to figure that one out. With all the ideas and plans in motion they all need to fit like a puzzle or this flooding issue will never go away. Just wanted to share my thoughts. Regards Richard Tardiff

Melissa,

One more thought if they built it that way, they could actually leave the existing road under the bridge to use them as feeder roads north and south that would allow traffic to travel from Mellon Street to Chambers Way Exit 79, prevent traffic from getting on an off the freeway which in turns reduces accidents and it also saves on tearing out the sections that need to be raised up with millions of tons of fill dirt. That cost would be applied to the overhead bridge. Have a good day, Richard

I appreciate the opportunity to provide the following comments on the revised Chehalis River Flood Storage Dam Fish Population Impact Study, dated April, 2012. The revised report incorporates some improvements from the draft, primarily the temperature modeling information. However, there are further improvements that are necessary before fish mitigation plans can be developed. Below are my summary comments, followed by more detailed comments specific to each section of the report.

This report describes the effects of a dam on fish in only a small portion of the Chehalis River Basin.

This report only considered the effects of the dam on a portion of the salmon and steelhead populations originating in the upper mainstem of the Chehalis River. The authors should have considered the effects of such a dam on the fish populations in the entire basin and the Evolutionary Significant Unit for each species. The authors should also incorporate estimates of the effects of the dam on other important fish stocks, including fall chinook.

The dams analyzed in the report do not represent the configuration and operation of a project that would most likely be built on the Upper Chehalis River.

The design and operation of the dam should have incorporated the ability to control flows to meet ramping rates; a selective-withdrawal structure to meet water quality goals (e.g., temperature and D.O.); and current fish passage technologies. The seasonal flow regime also needs further refinement to maximize benefits to fish and their habitat during the summer low flow period.

An acceptable mitigation plan cannot be developed until dam configurations and operations are more fully developed.

The report appears adequate for a coarse evaluation of the effects of flood control on the mainstem Chehalis River. However, the actual configuration and operation of the proposed dam, and the fish passage facilities incorporated into the project, will have a direct bearing on the effects of the dam on fish habitat and populations. The authors must accurately define these items before specific mitigation measures can be recommended. There are many similar facilities in the region that can be surveyed to elucidate this information.

Sincerely,
Shane Scott
Principal - S. Scott and Associates LLC

Specific comments on the revised Chehalis River Flood Storage Dam Fish Population Impact Study

Pages 11 - 19: HEC-ResSIM Model Assumptions and Results

The assumptions used in the analysis may be adequate for analyzing the effects of the dams on flooding in the Chehalis River Basin. However, the configuration and operation of both the flood control dam and multi-purpose dam needs further refinement before any conclusions can be made on the effects on fish and their habitat. Again, there are several dams in the region with operational regimes that can be applied to the dams considered in this analysis.

The assumption that maximum rate of change in reservoir outflow would be limited to 200 cfs is likely incorrect. Water outflow regimes from both types of dams would need to meet WDFW ramping rates as described in Hunter (1992). The authors need to identify at what river elevation ramping rates would be initiated. This river elevation is related to the location of potential fish stranding habitat. Then, a flow regime would need to be developed for river elevations above the stranding habitat and that meet WDFW ramping guidelines below the stranding habitat.

The water releases from the dams as modeled do not meet Washington State water quality standards for temperature or dissolved oxygen (D.O.). The simple assumption that cool water will be released from the bottom of the multipurpose dam is not adequate for this analysis. First, the water must be released in a controlled manner at a temperature and D.O. concentration that meets water quality standards. Then, the volume and temperature of cool water below the thermocline needs to be identified to more accurately estimate the amount available to affect

river water temperatures downstream of the dam.
The volume and temperature of water above the thermocline also needs to be better estimated. As the reservoir is operated each season, the volume of cool water below the thermocline is exhausted. If used too quickly, the warm water released from the dam could significantly increase temperatures downstream of the dam, thereby adversely affecting fish and other aquatic organisms.

Page 38: Water Quality

The assumptions used in the analysis may be adequate for analyzing the effects of the dams on flooding in the Chehalis River Basin. However, the configuration and operation of both the flood control dam and multi-purpose dam needs further refinement before any conclusions can be made on the effects on fish and their habitat. To better estimate the actual operation of a multipurpose
the authors could have used water releases from below the thermocline as described in Appendix C of the report. Again, there are several dams in the region where operational regimes can be applied to the dams considered in this analysis.

Page 54: Fish Habitat Availability Downstream of Proposed Dam Site

The actual operation of a dam will likely differ from that modeled in this analysis. This is especially true during periods of low, summertime flows where water flow and temperature are likely a limiting factor for fish downstream of the proposed dam site. To meet the water quality standards of temperature and D.O., the actual flows from the dam will be different that that modeled in the analyses. Again, the report appears to provide a suitable analysis of the effects
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of a dam on flood control but further refinement of dam operations is required before a fish mitigation plan can be prepared.

Page 58: Fish Habitat Availability Upstream of Proposed Dam Site

The reservoirs may flood existing blocked areas, thereby opening sites upstream of the dam to access by adult salmon and steelhead. These blockages should be identified and any available habitat above these locations should be included in the analysis.

Page 68: Anticipated Habitat Changes Resulting from the Construction and Operation of a Dam

The analysis appears to only allow a maximum 2,000 cfs to be released from the dam. Is this the properly sized outlet works for this size of project at this location? Any dam built would have to be designed with a spillway to pass the Probable Maximum Flood (PMF). The authors do not identify if the outlet works on the dam will pass the PMF. Flows higher than 2,000 cfs can be expected; therefore the effects on downstream fish habitat should be identified.
As mentioned above, the operation of the dam as proposed in this analysis does not meet State water quality requirements. The actual seasonal water release scenario may not allow the dam to meet the flow objectives modeled in this analysis. This needs to be corrected before the effects of the dam on fish and their habitat, especially during the summertime low flow period, can be properly modeled.

Page 69: Fish Survival Past Dam

The authors should base the range of juvenile fish passage survival rates on actual survival tests. For the "poor" survival rate analysis, the authors reference a very low juvenile fish passage survival at Cowlitz Falls Dam. These numbers are used incorrectly, as they reference survival to a location downstream of the dam. Actual survival numbers are provided in the Normadeau Associates, Inc., report provided to the authors.
The authors also analyze the population effects of zero fish passage survival at the dam. This is an unnecessary analysis, as a dam would not be allowed to continue operating without providing for fish passage survival. Again, the authors should base a range of juvenile fish passage survival rates on actual survival tests.

After the December 2007 flood my wife and our three girls began helping people in the upper basin muck out their flooded homes and farms. Our girls were between 10-16 at the time. We would take one of them with us each day as much for them to understand how destitute the poor families were who were flooded and how lucky they were to have a home that does not flood. The first couple of homes where we helped were owned by friends but by the third or fourth home we were mucking out the homes of strangers. Some people may think that a flooded home just means that things get wet. Its much more significant than that. The flood water was filled with dirt and the dirt went everywhere the water went. What it left was a substance like grainy chocolate pudding in every drawer, every appliance in every wall. It was a horror to see a home hit by the 2007. At every home the drill was the same, the volunteer would be assigned a room and our job was to make two piles, the first pile was things we thought could be saved and the other was things to throw away. The most searing memory for me was at about the fourth home. This was the home of an Hispanic couple with two young kids. They had just built a modest home on land they had purchased that had been part of a very old dairy farm west of Adna. The land had never flooded but in 2007 their new home had 3 feet of water. I was assigned to go through the belongings in the bedroom to make the two piles. Imagine how exhausted and desperate you would have to be to invite a stranger into your bedroom and ask him to go through your belonging to make these two piles. It was at that moment that I dedicated myself to finding a solution so that this kind of terrible event would not occur again.

The floods of 1990, 1996 and especially 2007 were of such enormous magnitude and so devastating to so many families and communities in the Chehalis basin that it is really impossible to fully describe the impact then and still today.

I am grateful to the Ruckelshaus foundation for the time and effort spent putting together its report on the Chehalis basin flooding. It is a very valuable contribution to understanding the issue. My comments on the report principally focus on page 4 in the description of the impact of the dam on the fishery. The Anchor report did not, as the report suggests, predict a 22-44% increase in Chinook spawners in the upper basin. Anchor predicted a 120-140% increase from a current number of approximately 300 upper basin spawners to almost 800 with an optimized multi-purpose dam. The Anchor report opines that with increases in Chinook and decreases in Steelhead and coho in the main river channel, taken together, there will be an increase in spawning salmon of 50 fish. Anchor estimates that late summer flows in the upper basin would increase from 30 cfs to 170 cfs. State and federal fishery and environmental agencies have, for decades, been concerned with the negative impact on fish from low flows in the upper Chehalis. I believe that the report should include some of this context and explain how flows can be improved and temperatures can be lowered by a multi purpose dam.

Also, the report gives data from WSDOT estimating the number of homes and businesses that would be protected and those that would be further harmed by building the I-5 flood wall. If that is worthy of note then an estimate as to the numbers of homes and businesses that would be subject to less flooding with upper basin water retention should also be included – and that number will be in the thousands. – J. Vander Stoep

Instead of being short sighted and putting a bandaid on the flooding problem down here, I am in favor of solution 3 (Combination 3) is made up of a dam on the Chehalis Mainstem, the Airport levee improvements, and flood walls and berms to provide additional certainty about protection of Interstate 5. As with the other example project combinations, improvements to the Skookumchuck Levees, and modification of the Sickman-Ford and Wakefield Road (South Elma) bridges are also included. Combination 3 would provide the most robust flood mitigation of any of the project combinations – providing flood mitigation throughout the mainstem Chehalis including in the Twin Cities from the dam and protecting Interstate 5 with floodwalls and berms. It also is expected to be one of the most costly of the project combinations if the bypasses cost less than the $245 million estimate for the dam. Outside of the Twin Cities area Combinations 2 and 3 would have very similar benefits to each other, with substantial water surface elevation reductions in most locations. Within the Twin Cities there would be some differences as the I-5 flood walls and levees would cut off some flow paths leaving areas downstream of these protected and areas upstream with slightly higher water levels then if the flood walls were not present. This increases the certainty of protection for I-5 and likely would provide some additional flood mitigation benefits in the Twin Cities areas. These benefits have not yet been quantified. As in project combinations 1 and 2, targeted bridge modifications and Skookumchuck levee work would provide additional localized flood mitigation benefits in those areas. Which promises to give the most protection to the most people, infrastructure and businesses in this area. This problem has been studied to death and it is way past time for concrete action to be taken.

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9 August 2012

Our Story for your Draft Report dated 16 July 2012

What is special about the Newaukum River?

Our section of the Newaukum River is close to I-5 and Chehalis but still rural in nature.

What would I highlight to an out-of-town visitor?

This is the place to be if you like a rural setting. It is complete with a dairy farm, a beef cow ranch and a meandering river with fish in it. Bald Eagles nest in the area while Blue Heron, doves, killdeer, rabbits, coyotes, songbirds, and other wildlife honor us with their presence. Hay fields dot the roadsides. It is peaceful and quiet at night. Vegetables and fruit trees are easily grown. It is a natural country setting.

What do I see as the future of the area?

The major commercial development will continue to be along I-5. We should be left alone since we are not in the UGA but are in the floodplain.

What are the strongest memories of the major floods over the past two decades?

Being prepared every year for a flood lessens the consequences. Seeing a 20 foot long 2 foot diameter log float along Hamilton Rd 20 feet from our house. Using water to clean out the silt left from the flood waters from all the out buildings. Keeping the two submersible pumps in our basement running continuously for 35 hours to keep the water level to 1 foot in our daylight basement when the flood waters outside were at eye level on the basement windows. We have never lost electrical power or telephone service. Using our rowboat to take tons of grass and weed debris off the New Zealand fencing around the pasture. Having to journey to the carport to feed horses standing knee deep in flood waters for two days. Discovering that the fast flowing flood water current picked up part of the asphalt roadway by our house and deposited it ten feet inside our pasture. Being able to share the experience with each other.

Tell us more

My wife and I have lived here for 26 years. We have had a flood on the Newaukum River by our location every year. Some are minor Phase I and Phase II while 1990, 1996, 2007, and 2009 were major. All are still minor inconveniences when compared to the beauty and peacefulness of the area at other times. Come by in the spring, summer, or fall and see what the area looks like and everything that is growing. We are prepared every year for flooding. This minimizes the effects. We are able to have farm animals and tend to our vegetable garden and fruit trees. It is still country living. I would like to make some observations:

As I have stated at meetings and in writing before, I feel a dam on the Upper Chehalis River is not the correct choice because it would be stationary on the Upper Chehalis River. You own draft lists 3 examples and Larry Karpack's presentation at your meeting on 14-15 June 2012 showed 10 examples of major rain events. They show that major rain events are scattered all over the Chehalis River Basin. Dam proponents have not addressed this issue. Even if the majority of the rain event occurred behind the dam site, the dam would be less effective the higher the retained water level was at the beginning of the rain event. The dam would be useless if the rain event was below the location. This is my major objection. The cost is very high with or without hydro and as stated above; it may or may not have any effect on flooding downstream. You must also add to the cost any mitigation projects that would have to be accomplished such as for fish habitat as a dam would permanently alter the land and river

downstream. Now add the fact that the town of PeEll is only 2 miles downriver which means any breach on the dam would give the town no time to evacuate. The Chehalis River Basin Flood Authority has over a hundred varied projects on their list that are scattered throughout the Basin. I would rather see ALL of them completed FIRST. Natural projects like the Horseshoe Bend (Oxbow) that the Chehalis Tribe funded on the Newaukum River in 2000 to temporarily store flood water would be my first choice. Another natural project not even listed but that used to be the pet project for the Lewis County Government when the COE Twin Cities Project was proposed is the Hamilton Meadows Project. Unlike the Scheuber Road Bypass, this project would temporarily store flood water next to State Route 6 and then release it after the river level went back down. I would like to see any project that works with Nature instead of trying to conquer it. Anyone can look at our land at 470 Hamilton Rd, Chehalis, WA to see natural ways to temporarily store flood waters. I also hope that more wetlands will be established throughout the Basin as another natural way to absorb the flood waters.

-Glenda Smell

Alternatives Draft Report.

So now what do we do about this flooding problem. Sounds to us like this problem has been getting worse and worse. Should we continue with practices that contribute to the problem or start fixing some of them???

After reading your report we have come to some conclusions.

First a "Basin Wide" solution does not nor will ever mean focusing on the twin cities area. Though this area has its fair share of problems they are only part of the solution.

Second, a dam, really??? We are in an era of dam removal not dam creation. Plus in "potential concerns associated with the water retention facility" you don't list certain problems such as:

- Large amounts of mass wasting deposits from the 2007 floods still exist upstream and the sediment and gravels associated with those deposits are slowly being carried down stream. Eventually, a facility will fill up with sediments (like Mt. St. Helens first diversion dam).
- Dams prevent sediment transport which can have dire effects on downstream habitat (see first bullet).
- Dams reduce flows and limit downstream transport of sediments, which effects a rivers carrying capacity for flood waters. For example, the North Fork Cushman dams effect on the Skokomish River contributed to the build up of gravels downstream, gravel bars are higher than the river's flood plain and aggradations of sediment and gravels cause the river to go sub-surface during summer low flows which reduces fishery potential. The Skokomish River is the most flooded river in the state (dams where the problem—not the solution).
- What about an earthquake? A recent report suggests that we are overdue for a 8.0-9.0 magnitude earthquake by about 500 years. A dam is defiantly not worth the benefits of flood relief if it bursts and a 30ft wall of water heads down the valley. Does your cost/benefit analysis factor that in???

You state, a large amount of mitigation will be required for a dam. Why not mitigate without making the dam! Why don't you get rid of fish barriers that restrict the flood plain and increase the potential of flooding. Set back levees allowing a large flood plain in the twin-cities area might help!

Still, why build more levees at all? There are plenty of examples that show how levees fail in their initial purpose, flood control. Often, gravel will fill the stream or river channel between the levees. So, many times a river will be dredged causing additional sediment to fill the channel after dredging (a continual process which ultimately cost thousands upon thousand's of dollars). Or conversely—no dredging occurs and the river elevates itself above the flood plain which causes the need for a higher levee to keep the river within it's channel. We have seen how well that works in the massive flooding in the Dakotas where levees elevated above agricultural land and cities broke causing massive damage to crops and entire cities. In our area, the Skokomish River has had flooding problems for many years. The Skokomish Tribe

believed the best way to reduce flooding was to remove existing dikes in the estuary, removing confining bridges and connecting wetlands which would allow flood waters to spread out and move faster out of the system. It seems to be working! So, how about letting the flood plain be a flood plain, move the people out the best you can and remove blockages and other impediments to the river, like the Skokomish Tribe has done, except they didn't have a Flood Authority. The Skokomish River has a committed Skokomish Watershed Action Team made up from the local community, Tribal, and county members, working on programmatic solutions for the whole basin (without taxes).

Basically what we are saying is "Local Projects and Programmatic Approaches: Another Way" is the way to go for the whole basin. It adds up,! Doing the right thing for the watershed is not constricting and damming.

Last, but not least, we need better forest practices. Remember what caused the massive landslides in the upper Chehalis? Rain of course--but specifically in the Chehalis headwaters, 1,614 landslides were considered to initiate off of managed forest lands: 547 in clear-cut's (0–5 years), 104 in young stands (5–15 years), 403 in sub-mature timber (15–50 years), 0 in mature timber (50+ years), and 560 near forest roads (DNR OPEN FILE REPORT 2008-5).

Thank you for the opportunity to comment. Please include this in the final Basin Flood Mitigation Alternatives Report.

Sincerely,

-Jarred, Kim and Ron Figlar-Barnes

I write to you today regarding the flooding that affected my family in December 2007. We were woken up very early in the morning from a friend of ours that lived on Ceres Hill in Boistfort asking if they could come to our home with their children to escape the water approaching their house. It was quite a startling phone call but it did nothing to prepare us for the nightmare that would descend upon our life approximately 6 hours later. In between that phone call and 2:00 p.m., we managed to evacuate our dairy calves from their hutches (they would have all perished), disconnect and move milk pumps to "higher ground" (not high enough), chain our propane tank to concrete posts, and evacuate our 3 children to a different location. We watched as the water entered our home at about 4:00 p.m. and the water leave our home at 7:45 p.m. My husband, hired hand, and myself slept in the attic of our residence, listening to the evacuation helicopters fly the valley all night. We woke up to a nightmare, a nightmare I never want to repeat. Through the generosity of family, friends, and strangers we were able to rebuild our home and dairy.

I share this story because flood mitigation is crucial to the survival our our dairy, our family, and our community. We need action now and we need to look at all options. We live in the Upper Chehalis River Basin. The most logical flood mitigation solution for our area in Adna is the water retention project above Pe Ell. Any of the other levy solutions proposed so far will do nothing to help our area. In fact, it will probably make our flooding worse. I understand this will not help in the lower part of the basin, that is why I ask the Governor to embrace the plans that includes several different components. I come from an area that has used several different options together to solve flooding (Napa, California). I know by now the Governor must understand there is not a "Silver" Bullet that will solve every issue and area of flooding in the Chehalis Valley. Please include the Water Retention Project above Pe Ell as a critical component of the flood mitigation project. My family, my 3 children, my dairy, and my community can not live through another catastrophic flood like December 2007. I thank you for your time and look forward to hearing from you. If you have any questions, please do not hesitate to contact me. I can be reached at 360-748-7011.

Michelle Schilter

Sun-Ton Farms

Adna, Washington