



Public Meeting Report

Date: April 27, 2010

Over the past year and a half, the Flood Authority has been developing a basin-wide Comprehensive Flood Hazard Management Plan. The Plan is currently in draft form but the Flood Authority is expected to approve it in June. The Flood Authority asked their consultants, ESA Adolfson, to hold three public meetings on the Flood Plan in early April to gather public comments on the plan.

The Flood Plan was made available on the Flood Authority website and public meetings were held April 5 in Rochester, April 6 in Montesano, and April 7 in Chehalis. Approximately 25 citizens each attended the Rochester and Montesano meetings, while approximately 50 citizens attended the meeting in Chehalis.

This report compiles all the comments received during or after the meetings. Not all comments relate to the Flood Plan, but all comments relate to the work of the Flood Authority. The comments will also be included in an appendix to the Flood Plan. Comments relevant to the Flood Plan will be used to revise the plan.

ESA Adolfson has prepared detailed meeting notes from all three meetings. The notes from the Rochester meeting on April 5 are Attachment 1, the notes from the Montesano meeting on April 6 are Attachment 2, and the notes from the Chehalis meeting on April 7 are Attachment 3. Comments were left on flip charts at the Rochester and Montesano meetings, and those comments are included in Attachment 4. Additionally, citizens were encouraged to write comments on comment forms at the meetings or send written comments by mail or email. All written comments received are included in Attachment 5.

**Attachment 1
Meeting Notes
Swede Hall
Rochester, WA
April 5, 2010 – 6:00 PM**

Commissioner Terry Willis brought the meeting to order at 6:08 PM. She thanked the public coming to the meeting. She introduced herself as a citizen of Montesano, a Grays Harbor County Commissioner, and the Chair of the Chehalis River Basin Flood Authority. She introduced Flood Authority members Brandon Atoch, mayor of Oakville, and Bill Bates, City of Centralia Council. Commissioner Willis introduced other elected officials from Flood Authority jurisdictions who were present: Bill Schulte, Lewis County Commissioner; and Edna Fund, City of Centralia Council.

Commissioner Willis also introduced staff of various jurisdictions and agencies who work with the Flood Authority and were present: Glen Connelly, Environmental Program Specialist for the Chehalis Tribe; Bob Johnson, Lewis County Community Development; Lee Napier, Grays Harbor County Community Development; Mark Swartout, Thurston County Natural Resources Program Manager; Chris Hempleman, Department of Ecology; and Andrea Takash with the Corps of Engineers. These are people who are very important to the process, who come to our meetings and workshops on a regular basis, and who helped put this plan together. Commissioner Willis also introduced staff from ESA Adolfson, consultants to the Flood Authority: Bruce Mackey, Ann Root, and Spencer Easton.

Commissioner Willis said the purpose of the meeting tonight is the Flood Authority's Comprehensive Flood Hazard Management Plan. This is a document put together by a variety of people, including the Flood Authority and its staff members. It is now out in draft form for the public to see, analyze, tear apart, and give feedback on. Commissioner Willis said she hopes everyone will take the time to read through the document and give feedback. We're not doing you a favor, you're doing us a favor. This document will be implemented in your area and this is your chance to have feedback. It's an important step in making the document work.

There are three ways that citizens can comment on the document at this meeting. There will be an open question and answer period to talk with and to us. There will also be listening posts for small group or individual input so citizens can have conversations with Authority members and agency staff. There are also comment forms on the back table for additional questions or comments on the document.

The intent is to put the plan out for comment, receive comments, incorporate them into the document, and have a new draft out in June for the Authority to approve. Commissioner Willis asked if there were any questions about tonight's meeting.

Q – Can I find a copy to take home?

Commissioner Willis said the Flood Plan can be found on the Authority's webpage. Google the Chehalis River Basin Flood Authority and you will find the page.

Q – What is the deadline for comments?

Ann Root said the deadline is April 23rd.

Q – Since the comment period is so short, it's not really a draft document. It's a final document. If we only have two weeks to review it, we don't have enough time.

Commissioner Willis asked how long the commenter would like to have. He requested a due date of May 30th. Ms. Root suggested a full 30-day comment period, until the middle of May. Commissioner Willis requested that comments still be sent in even past the due date. The important thing is to get comments.

Q – Are there two plans? Is this plan only for the proposed levee system, or is it for the dams?

Ms. Root said it was about neither project. It's a general plan for the basin.

Commissioner Willis introduced Karen Valenzuela, Thurston County Commissioner and Flood Authority member. Commissioner Willis turned the meeting over to Ann Root and said there would be time for additional questions after Ms. Root's presentation.

Ms. Root said she would give a brief rundown of the Authority and then explain the Flood Plan. The Flood Authority is an organization authorized by the State legislature in Spring 2008 in response to the 2007 flood and the long history of flooding in the basin. The Authority was established by an interlocal agreement to participate in the development of flood hazard mitigation efforts in the basin. The emphasis is basin-wide. The Flood Authority members are Grays Harbor, Lewis, and Thurston Counties; the Confederated Tribes of the Chehalis Reservation; the cities of Aberdeen, Centralia, Chehalis, Montesano, and Oakville; and the towns of Bucoda and Pe Ell. The Authority has been working since 2008 to identify measures to help mitigate flood damage in the basin. They have funded a number of studies and projects, including evaluating the upstream storage facilities proposed by Lewis County PUD, developing LiDAR digital

elevation models so hi-tech aerial photography can be used to help model flooding, developing a hydraulic model for the lower basin, and conducting an economic analysis for flood protection and ecosystem services.

The Flood Authority has also evaluated floodplain regulations in the basin, funded an assessment of a flood warning system, and coordinated with the Corps of Engineers on the Twin Cities levee project and a basin-wide General Investigation to look at both ecosystem restoration and flood management.

The next step for the Authority is to develop a flood district to take over the role of the Authority and to establish funding for flood mitigation in the basin. One step in that process is developing and adopting the flood plan.

The future plans of the Flood Authority include continuing to fund existing projects and studies, funding the development of an early warning system, adopting the Draft Comprehensive Flood Hazard Management Plan, and forming a flood district. The flood plan is a key part of establishing a flood district.

A flood plan is an examination of the cause and effect of flood related problems, leading to the development and implementation of feasible solutions. That's out of FEMA's language and it's a requirement for funding. A flood plan focuses on managing the hazards of flooding. It considers both structural and nonstructural alternatives.

The Authority developed a flood plan in order to consider problems basin-wide and compile a list of projects to address those problems. The key to the plan is that it's basin-wide. It was used to develop basin-wide goals and criteria for use by either the Flood Authority or a future Flood District. The plan identifies a range of projects and includes strategies for funding future projects and establishing a flood district.

The plan was developed using existing flood plans that individual jurisdictions in the basin already had prepared. The existing plans served as the basis for the basin-wide plan with a basin-wide perspective. We sought input from Authority members and jurisdiction staff to update the plan and make it more useful. We had public meetings a year ago in Chehalis and Montesano where we discussed goals and problem areas with the public.

The flood plan includes goals, general basin characteristics, and a summary of previous studies that have been done, both by federal agencies and local jurisdictions. There is an overview of regulations, federal to local. There is also an evaluation of basin flood characteristics, including historical knowledge of flooding and more recent flood information. Flood problem areas were identified using public input and bringing together existing information about flood damage. The plan also presents mitigation alternatives that can be used to solve flood problems. It summarizes funding options and presents options for forming a flood

district on a basin-wide level and it includes specific recommended actions the Authority has looked at. If you pick up any flood plan, the table of contents will look similar to this because it's required by the federal and state government.

At tonight's meeting, we will focus on two pieces of the plan – where flood problem areas are and what projects are being proposed. Ms. Root showed a map of the lower basin that shows a quick overview of major flood problems. The map showed human health and safety issues along the river. These are places where flooding impacted people's homes and caused damage to people and their property. The map also showed major infrastructure in Montesano and Aberdeen that has been impacted. Ms. Root showed a similar map of the upper basin. This map showed emergency response issues such as access to the hospital. Again, the map showed human health and safety issues along the river and major infrastructure in Chehalis, Centralia, and Oakville. Ms. Root clarified that these maps don't attempt to identify all flood problems, but show major issues throughout the basin.

The plan recommends a variety of mitigation action, including nonstructural measures. Nonstructural measures include: public information, such as providing educational materials on flooding, where it floods, and floodproofing; improving floodplain regulations; planning and data collection, such as modeling the lower basin or doing a study on woody debris and stream gravel; reducing damage to existing structures by doing things such as elevating houses, buying out houses that are repeatedly flooded, and raising road levels so access is maintained during floods; emergency response and preparedness, which includes the early warning system designed by the Flood Authority; and natural resource protection projects, such as restoring natural wetlands.

The other set of mitigation measures are the structural mitigation measures. These involve building something to keep flood waters away from structures. The first category is floodplain protection. Two major projects pursued by the Flood Authority under this category are the Twin Cities project and the PUD upstream storage facilities project. Another category of structural measures is bank protection, which includes stabilizing and providing protection to river banks to keep them from eroding. The third category of structural measure is conveyance capacity. This measure can involve dredging or opening channel migration zones, which are old channels where the river used to flow.

The Flood Authority intends to use the flood plan to bring together all the projects and recommended actions proposed in the basin. It provides a start list of projects for a future flood district. Once a district is established this is a list of projects that can be pursued. Another advantage is that the recommended actions in the plan can be incorporated as part of the General Investigation study being done by the Corps of Engineers. Since this plan was developed using state and federal guidelines, the projects could be eligible for state and federal funding options.

The next step is to solicit comments tonight and over the next few weeks. We did incorporate recommendations from the meetings a year ago. The Authority plans to approve the plan in June. The Authority will recommend that the member jurisdictions adopt the Flood Plan as part of their plans. Once a basin-wide flood district is established, the Flood Plan will serve as the district's plan.

We planned this public meeting in order to ask for comments on flood problem areas and recommended actions. We also welcome comments on any other part of the plan. We will open up this meeting for public comment, then later we will set up stations around the room so you can talk to us at easels. There are comment forms on the back table and a box for comments. There is also an address on the back so you can mail in comment forms. You can also email comments to us. The flood plan, comment form, and information on how to submit comments are all available on the Flood Authority's website, which is maintained by Lewis County.

Ms. Root opened up the meeting to public comment and questions.

Q – I have not read the flood plan, but why is Lewis County PUD interested in dams?

Bill Schulte said the PUD looked into dams to see if it's possible to get hydropower. It appears that the PUD can be involved in less than 10% of the project because most of the capacity of the dam is to hold rain runoff. Unless they make the dam very large, it won't generate power. If the dam doesn't have hydropower, it won't be the PUD's dam. There are actually three parts to the dam project. One part is for flood control. If they make the dam bigger, it could provide instream flows, and if they make it a lot bigger it could provide hydropower. I don't think we can afford hydropower. Once that decision is made the PUD will no longer participate.

Q – I have several questions. The first relates to the levees in Centralia and Chehalis. People here in Rochester and Oakville are worried about the effects to save I-5 and downtown Chehalis and the affect that will have on us downriver. What exactly is the Authority's relationship with the Corps? Who has the authority to say that the project will happen and that these comments will make a difference and be incorporated into actions? To what degree will the Corps make their own decisions about the protection of I-5?

Andrea Takash said the Corps has a policy that it will not build a project if it negatively impacts citizens downstream. If the Corps can't mitigate in some way, they won't build the project. The Corps is currently updating the project to see what the new design will look like based on 2007 and 2009 floods. As to the second question, the State is the local sponsor and, according to the House Bill

that makes them the sponsor, they will not proceed to construction unless they have local buy-in. The Corps won't proceed until the state has that local buy-in.

Q – A lot of the comments on the Flood Plan will relate to the impacts of the Twin Cities project. Will those comments be shared with the Corps?

Ms. Root said the comments will be shared. Ms. Takash said that the Corps works closely with the Authority and attends all their meetings. It isn't the Corps' project, it's the Community's project. Ms. Root said the role of the Authority is to cooperate with the Corps, but it's a State and Corps project, not an Authority project. Ms. Takash said the State is representing the local interest.

Q – How many thousand acre-feet of water are going to come down the river? Also, is there any plan to change the channel at the Mellen Street bridge? Will it be made wider? My third question relates to scouring of fields. The local farmers and many others down here are seeing a higher velocity of flood water that is scouring fields. We plant our crops in September and November and we are getting a severe amount of river speed going across the floodplains that hasn't happened before. Before 1990-1996, it used to be standing water and now it scours.

Ms. Root clarified that the first question relates to water displaced by the levee project. Ms. Takash did not know the answer but offered to consult with a Corps hydrologist and get back to him.

Q – I was born and raised in the floodplain or close to it. Luckily my house doesn't get flooded, but my property, Ford, and horses have flooded. I don't hear anything about WSDOT. It seems like the easiest thing for them to do would be to raise the freeway and not displace water. They should have built I-5 on concrete piling to let the water flow in and out. Instead it holds water. I don't think government can solve everything. There are not many normal citizens not involved in government at this meeting. So is there a vested interest in growing government, or in doing something about the problems we have? I'm not sure why WSDOT isn't involved.

Ms. Root said WSDOT is involved in the Twin Cities project as one of the state agencies cooperating with the Corps.

Chris Hempleman said that WSDOT is the lead for the State in this process.

Q – You mentioned restoration of riparian areas and wetlands. What about reforestation in the upper watershed?

Ms. Root said that, as a general measure, reforestation is outside the jurisdiction of the Authority members. However, that's part of the ecosystem analysis that's

being done. Reforestation is a type of measure but nothing specifically is being proposed right now.

Q – I am curious about the funding for the Flood Authority that's been babbled around in the legislature. What is the status of that?

Ms. Root said that we don't know, and it's still being discussed by the legislature.

Q – On the issue of reforestation, has anyone thought to talk to timber owners in the upper watershed about what they could do?

Ms. Root said it isn't in the current plan because it's outside the Flood Authority's jurisdiction.

Q – Is the flood plan different from the flood maps proposed for Centralia and Chehalis?

Ms. Root said it's completely different. Those maps are being done by FEMA.

Q – The conclusions of that mapping project will impact the plan and what the Corps can and can't do.

Commissioner Schulte said to ask the Corps what impacts the maps will have.

Ms. Takash said that FEMA has announced that they have delayed the maps until August. FEMA does their own maps and the Corps is not responsible for the maps. When the Twin Cities project is at 50% construction, FEMA will redraw the maps based on the levees being in place.

Ms. Root said that the FEMA maps won't affect the plan itself, but it would affect where the line on the map detailing the floodplain is. This impacts what is regulated as floodplain. Some measures may cover a different area than they would have before FEMA updated their maps.

Q – As for reforestation, if the land is in Lewis County, Grays Harbor County, and other jurisdictions in the Flood Authority, why is that not under the Authority's jurisdiction?

Commissioner Willis said it has come up in conversations about what the Flood Authority can look at. In the ecosystem management style, it's better to prevent something from happening than build something later to handle what already happened. One thing to look at is size and location of trees and what affect they would have on a massive rainfall. The Flood Authority doesn't have the authority to walk in to a forested area and put a rule into place.

Ms. Root said that forest management is regulated by the Department of Natural Resources.

Q – The City of Chehalis is one of the members of the Authority. Has there been a conversation about their permitting of commercial development with huge quantities of fill in the floodplain?

Commissioner Schulte said the fill isn't in Centralia, it's in Chehalis. That development is behind a levee, so it isn't in the floodplain. The fill is behind the airport levee which was built by the Corps in 1943-1948. They are allowed to fill behind levees.

Q – I hear a lot about building levees but nothing about dredging. If you get the river bottomed out so there's room to flow, you won't have the problem you have now.

Ms. Root said that falls under the category of conveyance capacity and there are suggestions to do that.

Q – I think Lewis County should be able to build in the floodplain, but they should either build ground level and let the building flood or put the building on pilings so water can go underneath. That way we won't have this argument. Let them build at ground level, and if they know it's going to flood, open up the windows.

Q – In the Great Depression, I lived in South Aberdeen, and if you want to know where water is go to South Aberdeen when the tide is up. Us kids were happy as larks, we floated around on boardwalks and rafts. Our parents didn't complain because the basement was three feet off the ground and the first floor was 13 feet off the ground. Our ancestors had common sense. Now people build in the floodplain and they want us to come rebuild it or buy it out. I think evolution must be true because everyone seems to be getting more stupid. How are you going to control mother nature? That's my observation.

Q – When you talk about areas that are behind a levee, does that include the whole mess between Kresky and I-5?

Commissioner Schulte said that area is in the holes where the levees are and will be. Those are called sacrifice or storage areas. The levee goes from one side of the airport to I-5, but not the other side. Those areas flood consistently and they will continue to flood with the new Corps plan.

Q – The reason I ask is that, to the people who live in Rochester, a lot of the problem seems to be because of basic silly decisions like the building of Yardbirds and the filling in of the floodplain. Every time I drive by and see that big black bird, I say it's an albatross. That area has seen the worst of those problem. It's still a marsh, there are still cattails peeping up. It seems the

cheapest thing to do would be to buy up that property and those places that are falling down and being demolished. If you bought that out you'd have a nice wetland and hiking area. Instead you get proposals to fill in the plain, do stupid things, and build wherever people want. It seems that if you're going to have the Fairgrounds in the floodplain when people told you 75 years ago to get it out of there, and if you're going to keep building buildings in the wrong places, they're going to flood.

Commissioner Schulte says he agrees. Whoever decided to put I-5 where it is should be committed. The freeway attracts business and people started building up on either side. Whoever decided to put the freeway there wasn't thinking ahead, but it's there now. WSDOT has said that to raise the freeway would cost \$100 million, and that doesn't have anything to do with Centralia, Chehalis, or Lewis County. If you've allowed people to build in the past, you'll have to buy them out. It's a very expensive proposal. If it's less expensive than other options, let's do that, but it doesn't appear to be. That's what the plan is, a way to look at all the options and find the lowest cost way. It may not be levees. By the way, in 1972 the Corps said the quickest way to solve the problem was to open Mellen Street, and it may have helped Lewis County but it wouldn't have solved anything downstream. The question is how to come up with a basin-wide solution. If we put a dam between Chehalis and Rochester, Chehalis won't be happy. If the solution is to put in levees and dump water on lower parts of the river, that's not a legitimate solution either. We need to come up with a basin-wide solution.

Q – It seems most of the efforts are with the upper basin. What are the impacts on the lower basin?

Ms. Root said the plan includes projects throughout the basin. There are a variety of projects listed in the plan addressing localized flooding issues in the lower basin. Projects include raising bridges and approaches to bridges.

Q – Does the Flood Plan address how much water comes down the Skookumchuck River, Salzer Creek, Coal Creek, and the Dillenbaugh? If we build levees, Chehalis water can't flow into the usual ponding area, but you will still have a volume of water from the tributaries. If that volume is equivalent to what you got from the Chehalis, you don't have any basic improvement.

Ms. Root said the Corps will be looking at those tributary streams and how they relate to the levees. Ms. Takash said if the levees impact other areas, the Corps will put in pumps. The Corps is also looking at other, smaller potential projects to address tributaries that can be done sooner with less cost. Ms. Root said another piece of the Twin Cities plan is to increase capacity at the Skookumchuck dam. Ms. Takash said the plan calls for an 11,000 acre-foot increase in capacity at the dam.

Q – When you look at the tributaries, if the levee is built to 8 feet but the water comes up 11 feet, would the additional water go over the levee and come downstream?

Ms. Takash said design of the Twin Cities project is not at that point yet. Ms. Root said studies are going on or proposed for the tributaries. The problem is recognized.

Bill Bates said the City of Centralia is looking at putting a weir on Salzer Creek and China Creek to restrict flow into the Skookumchuck and Chehalis rivers. Research is being done. The city is trying to restrict that water and hold it back until it can be released at a safer time. It's a matter of holding water back until it can be released. The City is considering raising Centralia Alpha Road to make a weir and provide a storage facility for high water.

Q – With all the talk of raising I-5, are there any images of how it would be done? Would it be built up on fill, or would it be like a bridge?

Ms. Root said raising I-5 is a concept, but it's not part of any project. Ms. Takash said there's nothing in the works to raise I-5.

Q – So it's way down the road?

Ms. Root said it's not a proposal at this time. Ms. Hempleman said the State is working with the Corps and local jurisdictions to find a plan everyone agrees on. Raising I-5 could potentially happen at some point, but that's not a position the State is in right now.

Q – Raising I-5 is being thrown out as a threat.

Ms. Hempleman said that it is not being used by the State.

Q – I used to work for the Port of Portland. Everything you've done is backwards to what will work. You won't get anything in place. In Fargo, ND they kept raising dikes, and water went up over the dikes. What went on is still going on. In Winnipeg, they built a mile-wide waterway to let water go around. In Grand Forks they had 20 feet of water in town, the gas mains broke, and all the buildings downtown burned.

Q – A lot of people along this part of the Chehalis look with a critical eye upriver to Chehalis and Centralia and to privately owned forests. We're worried about getting the brunt of any flood projects. I live in the town of Oakville. During these flood events Oakville is completely cut off. There is an evacuation route up the hill, but it doesn't lead anywhere. In the 2007 and 2009 events, we had a fairly large window of opportunity to pack and leave. I left in 2007 because of the

power outage but I stayed in 2009. I have two concerns. One is that our window of opportunity to evacuate will get smaller. The other is that water levels will rise. Everyone in Oakville probably has the aerial shot of Oakville at the peak of the flood. The two blocks around my house were an island. The road isn't quite level and it's hard to estimate, but I think it was about 12 vertical inches between the peak elevation of the flood and flood waters at my floorboards. Twelve inches at the peak of the flood requires a lot of water, but a road just northeast of us was flooding with 6, 8, 10 feet of water. You can see places that were flooded with 14 feet of water from the Black River. The other direction, you have the Sickman-Ford bridge. When I came back five days after the 2007 flood, waters were still only a foot below the bridge. When you look down over the bridge when it isn't flooding, it's a long way down. In one direction you have 30 some feet of floodwaters and the other direction you have 14. I'm only 12 inches away from flooding. It's not reassuring. My neighbor across the street had water in her backyard. Oakville is pretty level. We're talking about small differences here and it wouldn't take much. Even with consideration taken of downstream impacts, you can impact huge areas with only a small difference. It worries me.

Commissioner Willis said she understands that issue. She lives at the confluence of the Chehalis and Satsop Rivers. It floods at her house on a regular basis. The extremes can be phenomenal. One thing the Authority is looking at is early notice of flood events. A basin-wide early warning system is high up on our agenda. We need something to tell us that waters are coming and how they relate to floods we've already seen. There are a series of gauges, and we determined how many there are and where they are, and we put a few more in. We're developing a system where you can look on the internet as water comes toward you and determine if it's a typical flood or something more. One thing we've said to the legislators is that the early warning system is a priority and we want it now because it will have a big impact. We saw the difference between how people reacted in 2007 and 2009. The 2007 flood was devastating, and in 2009 people remembered it and we were able to get good information out and help people alleviate damages.

The Flood Authority understands that any deviation in flooding may make the difference between serious damage or none. If we can develop a project that takes away 6 inches of floodwaters, that makes a difference. We're measuring water as it goes clear through the system, not just through Lewis County. We're looking at how the tide affects things. Maybe in Oakville you have one event, but it's another event downstream of the Satsop with tidal influence. The early warning system is one thing we're looking at so people can do their own analysis.

Ms. Root adjourned the open public comment portion of the meeting in the interest of time. Citizens were given the opportunity to give comment and ask questions at individual listening posts or fill out comment forms.

**Attachment 2
Meeting Notes
Montesano City Hall
Montesano, WA
April 6, 2010 – 6:00 PM**

Mayor Ron Schillinger brought the meeting to order at 6:02 PM. He introduced himself as the Mayor of Montesano. He welcomed everyone to the meeting and said public input on the process to develop a good flood plan has been strong and well received. The comments from the initial meetings last February are included in the current plan. He introduced Commissioner Terry Willis.

Commissioner Willis thanked Mayor Schillinger for setting up the meeting. She introduced herself as a Grays Harbor County Commissioner and the Chair of the Flood Authority. She introduced Flood Authority members who were present: Ron Averill, Lewis County Commissioner; Karen Valenzuela, Thurston County Commissioner; Jim Cook, Aberdeen City Council member; and Brandon Atoch, Mayor of Oakville. Commissioner Willis also introduced other people in attendance who have worked diligently with the Flood Authority: Andrea Takash, Corps of Engineers; Chris Hempleman, Department of Ecology; Edna Fund, Centralia City Council; Vickie Raines, Mayor of Cosmopolis; Bob Johnson, Director of Community Development for Lewis County; Mark Swartout, Natural Resource Program Manager for Thurston County; Lee Napier, Grays Harbor County Deputy Director of Community Development; and Antonio Ginatta from the Governor's Executive Policy Office.

Commissioner Willis introduced the Flood Authority's consulting team: Bruce Mackey, Ann Root, and Spencer Easton, of ESA Adolfsen. The Flood Authority held a public meeting at Swede Hall in Rochester last night and there was a good turnout and discussion with the public, who asked questions and voiced their concerns. We hope you will do the same tonight. The Authority has been in existence since May of 2008, so it's important for us to have feedback from citizens. Tonight we will present information about the plan, then we will have a brief Q&A period to ask questions and give comments. After that, we will have listening posts to capture things you have to say. You can walk around, pick up pamphlets, and talk to us as individuals. There are also comment forms on the table if you want to put comments in writing.

The plan is due to be approved in June, so we have a time table. We are holding three public meetings this week and we hope to receive input in the next few weeks. We had a target date of two weeks, but someone asked at last night's meeting for more time. If you provide comment past the due date, we will still do our best to incorporate it into the plan.

Commissioner Willis introduced Ann Root. Ms. Root gave a presentation on the work on the Flood Authority, focusing on the Flood Plan.

[For a detailed report of Ms. Root's presentation, please see the notes from the April 5 meeting in Rochester.]

Ms. Root asked if there were questions or comments.

Q – To clarify, was this just a general overview of the flood plan?

Ms. Root said yes, this was just a summary. The plan lists possible actions but doesn't say what will actually be completed. The levee project is being done by the Corps of Engineers and they have more detailed information about that. The upstream storage dams are being studied by the Lewis County PUD. There isn't detailed information in the plan about either of those two projects, there is only a summary.

Q – So the levee project is part of a Corps plan?

Ms. Root said yes.

Q – When will that come to a head? Will it be approved before the public has a chance to comment on it?

Ms. Root said this is a plan for the entire basin. It includes a list of projects that could be undertaken in the future by the Authority, a flood district, or individual jurisdictions. But those two projects are being pursued separately. At some point they may come together. We don't know exactly when that will be.

Q – I'm confused. You're the Flood Authority, but the Corps has their own authority and the PUD has its own authority to do what they want on the river.

Ms. Root said the Authority has been cooperating with both entities, funding the PUD studies, and cooperating with the Corps. Both projects are included in the plan as possible future options but they are being studied separately.

Q – So you aren't here to tell us specifics?

Ms. Root said that the Flood Authority doesn't have specific information on those two projects.

Commissioner Ron Averill said that this is an overall flood plan which is rather broad. What would happen is that at the point we form a flood district for the basin, this will be their plan. In the meantime it has to be done by individual jurisdictions. The Corps project actually dates back to 2003 and it was at 35%. It has gone to Congress and been authorized. It won't start construction until 2016. Planning is a moving target. Those of us in the Authority have been working with

the Corps and we know what they've proposed, but that's only one project in the basin and it only covers five miles, so there are a lot of other projects.

Q – Up to this point the Chehalis is a natural entity. All these proposed projects are very profound. It's kind of shocking to talk about dredging and opening channels. What about the natural area preserved down at the mouth of the river? How is this controlled flooding going to affect that natural area preserve? This is profound.

Ms. Root said that dredging is one idea in the plan. It doesn't involve dredging the whole river, it's probably just clearing out clogs. That option hasn't been well studied yet. This plan is the list of all the ideas people have had for dealing with flood problems in the area. None of the projects are necessarily happening.

Q – But you said the Flood Plan will be approved.

Commissioner Averill said it's a list of potential projects. Each of them will have to go through an individual approval process. Another project we're working with the Corps on is a basin-wide general investigation study which has been going on since 2000 in Grays Harbor County. We're adding flood mitigation as a purpose of that project. The Corps is working with us on how that plan will move forward. We won't do projects until studies have been completed and we know if there needs to be mitigation. That's all part of the Corps study. This is the conceptual phase of planning, identifying things we might look at. It doesn't tie us to anything.

Commissioner Willis said that one study being done by Earth Economics studies natural things within the system and gives them a value. It looks at possible projects like opening up wetlands or the floodplain. An example of this is the Satsop diking project. If it were removed so more floodplain could be opened up, it might prevent some damage within the system. This plan is a comprehensive list of all the things we could do.

Q – With all due respect, whenever you try to control river systems, there's going to be a loser. I have property on the river and I'm wondering how levees, dams, and dredging will affect us downriver. How will what's going on in Lewis County affect what happens in Grays Harbor? There's no answer yet.

Jim Cook said that the Authority approving the plan wouldn't be an edict. The Authority is composed of 11 jurisdictions and each one has created their own plan. The point of the Authority is gathering information, and that's the point of this meeting tonight. We're getting information about how to make better informed decisions about what direction to go. The Authority doesn't have the authority to say what will be done. It's an advisory group. Any of the 11 jurisdictions can say they don't like the plan and won't adopt it. That's why we're trying to get input from all entities.

Q – I'm associated with the Skokomish Tribe, and everyone here realizes that the Skokomish does flood constantly. The Corps is working on a General Investigation and the Skokomish Tribe is associated. What we have found is that the restoration projects we've been associated with, removing roads and bridges and bringing back wetland functions, have improved flooding. We had the seventh highest flood on record this last year, but the movement of the water out of the system was very fast. Reducing levees helps. We think restoration projects, the removal of dikes, the connection of floodplains, and removal of constrictions is the key elements to have flood waters move out of the system in a natural way. World wide, levees don't work, and we found that to be true in the Skokomish. I was a conservation lead in Oregon and we would have meetings about flooding on the Tillamook. We could look up at dikes and see trees floating above our heads, and if the dike ever broke we would be hammered. If you want to save I-5, then build a span there to allow flood waters to go through and stop building up areas with big business by the roadside. You'll never win the battle by constricting the floodplain.

Q – The planning director for Lewis County says there's no impact from filling in the floodplain. Flood water isn't increased even though they constricted the valley. The City Manager for Chehalis says there's vast potential for commercial development in the floodplain. When we look at this flood study, if anything comes to pass to elevate I-5 or put in levees, will there be no more filling in the floodplain? Or will people still say there's no impact? What would this inhibit or prohibit?

Commissioner Averill said that in the last session, the legislature said that jurisdictions can no longer expand an urban growth area into a floodplain. With the Corps project, once that project comes to 95% design, there will be an area designed to hold water during heavy flooding and there will be no building allowed in that area. The project itself will set restrictions on buildings. Centralia already has changed its flood plan and no longer allows large stores or objects built into the floodplain. The City of Chehalis is talking about areas that are already behind levees when they talk about expanding in floodplains. Unfortunately those are 50-year levees, not 100-year levees. The Corps plan would raise them to 100-year levees. The Corps plan has the assumption that there will be no impact downstream. If there aren't mitigation measures to prevent impacts downstream, they won't build the project.

Ms. Root said that the flood plan is very specific with recommendations for strengthening regulations throughout the basin. Commissioner Averill said that the Twin Cities project includes modification to the existing dam on the Skookumchuck River, which provides protection to Bucoda and Centralia. The project would increase the dam's capacity by another 11,000 acre-feet. That's part of how mitigation will be done for levees.

Q – How were the member jurisdictions of the Flood Authority determined?

Commissioner Averill said that when the Corps project was started in 1997, we had a committee called the Chehalis River Flood Reduction Executive Committee. It included Lewis, Thurston, and Grays Harbor Counties, the Chehalis Tribe, Centralia, and Chehalis. At the time, the project was intended to protect I-5, Centralia, and Chehalis. It was not intended to have any impact up- or downriver. When we had the 2007 flood, the upper river got hammered for the first time in over 100 years and we lost about 1800 head of cattle. Upstream folks are now asking what the project does for them, and the answer is nothing. That is why water retention came into existence. There was \$166 million of damage in Lewis County during the 2007 floods. As a result, we were the ones who proposed that you can't look at anything in this river as isolated to one jurisdiction. It starts at the headwaters and goes to the mouth. It will get there, it's just a matter of when and how fast. We proposed a basin-wide solution to the legislature. In 2008 they passed House Bills 3374 and 3375 which funded the nonfederal share of the Twin Cities project and set up money to look at other provisions in the basin as a whole. We created the Flood Authority out of the old Executive Committee and added other jurisdictions. In Lewis County, the only other incorporated area was Pe Ell. Thurston County had Bucoda, so they were added. The Grays Harbor County commissioner at the time chose Aberdeen and Montesano to be added. Oakville also asked to join. Cosmopolis, Elma, and other jurisdictions are on the river as well, but Bob Beerbower, the Commissioner at the time, said the County would represent them. We were concerned at one point that we'd have 25 people in the Authority and we wouldn't be able to make progress. We said we'd stick with 11 and fix the problem when we go to a district.

Q – The entire length of Cosmopolis runs adjacent to the river. I'm lost that there wasn't more inclusion there.

Commissioner Averill said it wasn't intended for the Authority to last. We only chose the word "Authority" because the legislation called it that. It's not really an authority, it's a cooperative agreement between 11 jurisdictions. The charter out of the legislation was to move toward a flood district, and in the current session of the legislature the bill should provide money to form the district. Quite frankly the Authority would prefer to go away and have a district pick up the job and represent everyone.

Q – On the proposed projects already out there, have you reviewed them to know if there's duplication and if they are going to work together?

Commissioner Averill said the Corps plan is only at 35% design. It's going to finish 35% design in September and at that point we'll have more idea of what the project is going to look like. For the PUD study, we've been working with the Corps to make sure we're using the same formulas and looking at the same things. A biological study needs to be done and we're trying to get funding for it.

We're also looking at wording that the PUD study will work with the Corps to be consistent. If we do show that it's feasible and we can mitigate for the environmental impacts, the project will go to the Corps anyway because they run dams. So we are coordinating.

Q – In this day and age you can't build dams on anadromous streams.

Commissioner Averill said you can if the dam only holds water for 30 days.

Q – The PUD is proposing a project responding to a 100-year event. The storm track of the 2007 event dumped 14 inches of rain in 24 hours in a small area. It doesn't make sense. Storm tracks don't come in the same places.

Commissioner Averill said the mainstem eventually gets all the water. The environmental look will be very heavily studied before we go in this direction. If the study says we can't correct for it, the Chehalis Tribe will make sure we don't do it.

Q – Would the dam provide power?

Commissioner Averill said that when the PUD started the study they wanted it to have a power source, but the PUD is no longer paying for it and the Authority is. We don't care if there is power generation or not, we want to provide protection for those on the river.

Q – That's a bunch of garbage. Have you done anything in the plan to address slides? If those dams were there in 2007, they'd be filled in with sediment. I don't want to live downstream of the dam in that situation.

Commissioner Averill said that's your opinion and it's being studied by geologists.

Q – I read the report. There are fault zones, and they're going to build on seeps. It's a crock of garbage. I don't want to live downstream of this. Dam building is ridiculous. It's not going to solve the problems.

Commissioner Willis said the point is to do more studies and develop a better understanding of what can be done.

Q – Have you seen the slides? I flew the basin and it was disgusting.

Commissioner Willis said that she and Commissioner Valenzuela will fly the basin in a couple of weeks. The Aberdeen World is coming. We're going to go up and look at the whole watershed, including the upper reaches and the Skookumchuck, to see the environment. Some of these same comments were made last night. People want us to look at forestry activities and change what we're doing now.

Q – Why don't you put in the study the amount of damage done by floods in Lewis County?

Commissioner Averill said it was \$166 million.

Q – That would be a good payment for a span over I-5. DOT gave Chehalis an opportunity to build a span but there would have to be taxpayer money put in the pot and Chehalis refused.

Commissioner Willis said there has to be local match with any project, Corps or otherwise. Either the State or local jurisdictions have to serve as a sponsor.

Q – As discussed at last night's meeting, this plan doesn't address upper watershed forest management. There's no discussion of upper watershed logging or anything like that. Also last night it was touched on that raising I-5 is off the table, they're relying on this plan.

Commissioner Averill said that the State is relying on the Corps plan.

Ms. Root said that management of forest practices in the upper watershed is in the hands of the Department of Natural Resources, not member jurisdictions. It has been addressed by the Authority, but it's out of their hands.

Q – We understand the issue with DNR. We also know what happened in 2007 and we know that damage, so that's what the concern is. What would happen with dams in that situation? I would like to have a discussion on the details about the dams. I've heard of proposals on the Newaukum and South Fork and different sizes on the Upper Chehalis. I'd also like to hear speculation on the levee project.

Ms. Root said the levee project is the Corps project and Ms. Takash can give you details. The PUD studies are being done by the PUD. It's summarized in the plan because the Authority is cooperating. You should contact the PUD for more information. Some of the PUD studies the Authority funded are on the Authority's website.

Ms. Takash offered to answer specific questions on the Corps project.

Q – What is it?

Ms. Takash said the Twin Cities project, often referred to as the levee project, includes 11 miles of levees in and around Centralia and Chehalis. It also includes modifications to the Skookumchuck dam to allow for extra storage. 35% design was completed in 2003 and approved by Congress in 2007. We're updating 35% with information from the 2007 and 2009 floods. We anticipate

35% design to be finished in September and it will be unveiled to the public then. We'll have a better sense of what the update has done to the levees then. Another project we have, with Grays Harbor County as local sponsor, is a general investigation looking at the entire basin for flood risk management and ecosystem restoration. That study is in its infancy and it's a great study. There are a lot of ideas we can look at here. We are working on a project management plan to finalize with local jurisdictions.

Q – Are you familiar with the natural preserve set aside in Grays Harbor County? It's a unique estuary. The tide comes in up to the Satsop. It's a unique area. Are you working in concert with DNR and the natural preserve? It almost seems that you're repeating a study that has already been done by DNR.

Ms. Takash said the Chehalis Basin Partnership has done studies. The Corps is taking studies done by the Chehalis Basin Partnership and the Authority into account and seeing what the federal government can bring to those studies. An important point is that the 11 miles of levees are setback levees, which are more environmentally friendly. The project went through a thorough Environmental Impact Statement process.

Q – Will the dam be an open dam? How will fish be able to get up that?

Mr. Cook said that the studies that the Lewis County PUD have done are an initial assessment to determine if there are locations a dam could be placed. They have done a geological study and identified two feasible sites. The article put out by the Daily World said that we will build two dams. These studies are in their infancy and we're developing information to determine if one site would be better than the other and determine what is the best basin-wide solution.

Q – Basin-wide is the key word and that's my biggest concern. I keep hearing about Lewis County. They shouldn't have built Walmart. Any reasonable person, when putting levees for 11 miles that contain the water, asks what happens when the water gets to the end of the levees, where will it go, and will it spread out? If your street is only 75 feet from the river, that's a concern. This plan just says hydraulic modeling. The river will do what it wants to do. The Authority should go talk to the Soviet Union about the rivers they tried to control.

Q – I work in Oakville. I've been through four floods and none have been the same. The 2007 flood was terrible, but if the rainfall had happened in the forest, in Tenino, or on the Newaukum, the dams wouldn't have done a thing. Dams won't solve the problem. The storm track isn't repeatable. We had snow in Montesano last weekend but not in Oakville. Weather systems are different. You can't build dams to protect the whole watershed. If anything came down Highway 12 from I-5, it would encounter a big mound of dirt in the floodplain from our friends at the Chehalis Tribe. They don't have to respond to what I say. We tried to stop the raising of Anderson Road, it cost us \$5,000, it cost them \$10,000 and

we lost, but the floods continue. Those are my comments. I think we're putting grease on a squeaky wheel. It won't exist next time but we'll still have a flood.

Q – I have a dairy farm downstream, and I represent the dairy producers that suffer from flooding. There are three points as it relates to dams that need to be answered first and we're still waiting on some answers. Question one, if you built a dam in the upper basin would it stand up to an earthquake? Two, would it lower the water at Chehalis four feet and Porter two feet and provide a solution for the whole basin? Three, does it have a net positive benefit for salmon in the river? Levees don't provide additional water. If these dams are to mitigate for the loss of upstream habitat, they need to provide better summer flows. This summer we lost virtually all salmon when the river hit 79 degrees. We have no way to fix that right now. An issue I've brought up a number of times is that we have a marbled murrelet designation in this State. The study doesn't look at uplands and logging. Within 35 miles of the coast, you have a de facto law that says that if your timber is 30 inches or wider you need a marbled murrelet study. No one will let them get that big. Our rotation is 37.5 years. If we extended rotation by removing the threat of losing timber, there would be an impact of Weyerhaeuser being allowed to log when the market is good and not when it isn't. Why wouldn't the federal government work with DNR to remove a lose-lose-lose scenario so we can have responsible forest management instead of threatening people with another ESA provision?

Q – To speak in defense of forest land management, the landslides in the 2007 event happened because 175% of normal rainfall happened in 24 hours on the landscape. If that happened in Grays Harbor County along the Wynoochee, the slides would have been up there. If you look in the air, you see slides where they clearcut, where forest land is 35 years old, and where it's 65 years old. When you dump 14 inches of rain, the land starts to move. That's just the way it is.

Q – Are you saying that heavily forested land would be just as likely to slide?

Ron Schillinger said absolutely. Mount Rainier had 14 inches of rain and was heavily forested, and they had slides.

Q – Deforestation is a direct cause of slides, everyone knows that.

Q – You can look at this data and see if slides were on clearcut or mature lands.

Q – Several people have asked about the levees and their impact downriver and I don't think we got an answer.

Ms. Takash said she doesn't know the specifics since we're at 35% design. Mayor Schillinger said that's one of the reasons why Montesano wanted to be at the table. There are two parts to the levee discussion. The first is that we are concerned it would shoot water down to us in a greater volume and faster. The

other is that we believe it would have a negative impact. I was told that the model only goes to Porter, and the maximum flow as a result of the levees could only be increased one inch at Porter.

Ms. Takash agreed that the project stops at the Porter gauge. Because of the 2007 and 2009 floods the hydrologists are updating the model to see how the new flood elevations affect levees and see the impacts downstream and upstream. Once that is completed, we'll have a better answer. We have a policy that we can't build a project if it negatively impacts other areas. We try to mitigate for negative impacts and if we can't we won't build a project.

Q – What does mitigation mean?

Ms. Takash said it can mean several things, including pumps on the levees, raising structures that are impacted, and buying out impacted structures.

Q – If you only take the model a certain distance down the river, are you just assuming it won't affect anyone further downstream? How do you know? The tide comes up to Montesano. Heavy rains, high tides, and wind affect the level of the river too. You have to take the study down further.

Ms. Takash said they look at everything. The levees stop around the Porter gauge, but the study looks at the entire basin clear to the mouth of the river.

Q – But you don't have the answer yet.

Ms. Takash said that we don't. The basin-wide General Investigation will look at projects that will help the entire basin for both flood risk and ecosystem restoration. The Twin Cities project was designed to protect Centralia and Chehalis. We determined that 85% of the benefits of the project are to Centralia and Chehalis and 15% of the benefits are to I-5.

Q – If you build levees higher, water can't access its usual ponding areas so it must be higher on the river side of the levee. It must back up some distance because the levee is there, but it also must mean that more water comes down the river earlier, faster, and in greater volumes because it isn't ponding in Centralia, Chehalis, and Lewis County, unless you put it in a bucket and put it on your back porch.

Ms. Takash said she doesn't have the answer to that question and will ask a hydrologist and get back to anyone who gives her their contact information.

Q – The practical thing the Skokomish Tribe has found over the past few years is that opening the floodplain and allowing water to diffuse instead of backing up causes flooding to be less significant. For the first time, the reservation has not been flooded.

Q – How high will the levees be?

Ms. Takash said that the levees will provide 100-year flood protection. There won't be a standard height, it will vary by flood elevation.

Q – I heard there were 8 feet of water over the airport dike.

Ms. Takash said that she doesn't know specific heights.

Commissioner Averill said we will know specific heights at 35% design. We're thinking 10 feet but it's just a guess for now.

Q – I also heard that if the levee goes in place, they're allowed to fill on the other side.

Commissioner Averill said this is true by FEMA standards.

Q – Then if it does go over the top more water will go somewhere else. If you raise it 10 feet does that allow them to fill more?

Commissioner Averill said it's a question for FEMA when the levees go in. Unfortunately there are many questions that can't be answered. There's no assurance the levees will be considered on the FEMA maps. FEMA told us that on their new flood maps, they didn't consider existing levees because they're only 50-year levees. As a result, those levees don't provide any insurance protection. If they are built to 100-year standards then they will give 100-year protection on the non-water side of the levee. I must admit some frustration. We did not build in the floodplain yesterday, we have been doing so since 1843. When settlers first came in, they put their buildings on the hills. They didn't go into the valley until the railroad came. The railroad came into the valley and people followed. We didn't choose for I-5 to go through the middle of the floodplain but we live with that. We have Chehalis, which has 8,000 residents, and Centralia, which has 15,000, and they do flood and there's huge damage. We have homes that still haven't been repaired from the 2007 flood.

Q – When this work is turned over to a flood district, will they be required to use the plan or will they be able to start over?

Ms. Root said the intention is that the flood plan will become their plan. The Authority will adopt it.

Q – There's absolutely no requirement that they do that?

Ms. Root said there is no requirement.

Q – There have been studies and studies and studies. We've heard about Corps studies, PUD studies, you're doing something, and maybe the new organization will pay for the study again. It's frustrating, especially as losses continue.

Mayor Schillinger said the comment is well taken. The Flood Authority received information about flood mitigation efforts on the Skagit River. They've been going through this and we're following the pattern. You can create a district and do a plan, but it all comes down to dollars and money. If you don't have the money, nothing happens. Whose money will it be? The problem with a district is that when it's formed, will people be happy to be ratepayers

Q – The whole thing is frightening, because all these questions have been asked and there are all these generalities, but the questions really haven't been answered about how this affects anybody. It sounds like it's a given that the levees will be built. If you screw around with the natural systems, you only make it worse.

At 7:32 PM, Ms. Root thanked the audience for their comments and adjourned the meeting to listening posts.

**Attachment 3
Public Meeting
Veterans Memorial Museum
Chehalis, WA
April 7, 2010 – 6:00 PM**

Commissioner Ron Averill called the meeting to order at 6:05 PM. He introduced himself as a County Commissioner for District 1 of Lewis County and the Vice Chair of the Chehalis River Basin Flood Authority. He introduced Terry Willis, Grays Harbor County Commissioner, as the Chair of the Authority

Commissioner Willis thanked Commissioner Averill and said that this is the Authority's third night in a row of public meetings. We met in Montesano last night and Rochester the night before. Commissioner Willis introduced other Flood Authority members who are present: Thurston County Commissioner Karen Valenzuela; Mayor of Oakville Brandon Atoch; Pe Ell Council member Dolores Lee; and Mayor of Montesano Ron Schillinger. Commissioner Willis introduced other attendees who work for and with the Flood Authority: Bob Johnson, Community Development Director for Lewis County; Bob Nacht, City of Chehalis; Mark Swartout, Thurston County; Lee Napier, Grays Harbor County; Kahle Jennings, City of Centralia; Rachel Mescow, Kristin Kerns, and Andrea Takash, Corps of Engineers; Dave Muller, Director of Lewis County PUD; Bob Burkle, Washington Department of Fish and Wildlife; and Chris Hempleman, Department of Ecology. Commissioner Willis also introduced other elected officials, including: Harlan Thompson, Mayor of Centralia; Bonnie Canaday, Mayor Pro Tem of Centralia and Chair of the Chehalis Basin Partnership; Edna Fund, Centralia City Council; Matt Trent, Centralia City Council; and Chuck TenPas, Lewis County PUD Commissioner. The Authority has met regularly once a month since May 2008.

Commissioner Averill said the plan tonight is not to show the Corps Twin Cities project and where the levees are going. Nor is it to give you the Lewis County PUD water retention project. The Authority has looked at those two projects in terms of an overall Flood Hazard Management Plan for the basin. The Authority was formed after the 2007 flood. Previous to that point there had been a committee of cooperation between Lewis, Thurston, and Grays Harbor Counties, the Confederated Tribes of the Chehalis Reservation, and the Cities of Centralia and Chehalis, and it developed out of a study done in 1997 by Pacific International Engineers. That study led to a 2003 plan called the Chehalis River Flood Damage Reduction Plan. In fact the committee was called the Chehalis River Flood Reduction Committee. The plan was written in 2003 and submitted by the Corps. Congress was going to move that plan forward in a congressional bill known as the WRDA, Water Resources Development Act, and from that it would move on and become a project.

Unfortunately, the 2003 bill was vetoed, the 2004 bill was vetoed, Katrina happened in 2005, and the 2006 bill was vetoed. In 2007 it finally got authorized in the WRDA act and it was vetoed but the veto was overridden by Congress. That particular plan is now on the books and there are two steps in Congress to get a project going: authorization and then the appropriation of money. The first appropriation came in 2009 and there was another in 2010. There will probably be another appropriation in 2011. The design phase is in process. All of this was done before the 2007 flood, even the authorization of the project. You need to understand that in those days we were looking at the I-5 corridor and the cities of Centralia and Chehalis. When the committee looked at what to do upriver we hadn't had a storm up there in 100 years. No one up there was interested. The project was oriented to the corridor. The 2007 flood came along and the upper river got lambasted. I don't have to tell you how bad that was. We looked at the Twin Cities project and asked what it will do in the upper basin. That's one thing the Corps is now taking a look at.

Levees are predominantly designed to have the direction of water move so that it prevents damages to certain areas. So we had a study take place in Lewis County sponsored by the PUD and the concept was to look for another alternative that will provide us with protection for the upper basin but also the whole river from the headwaters to the mouth. When you get heavy waters in the headwaters they will eventually make it to the mouth. How fast it gets there is what you can control. There are other things the Flood Authority is looking at and other things being looked at by One Voice. The Flood Authority has funded phase 2A by the PUD which is complete and just last month we funded phase 2B which will look at the economics and benefit-cost ratio and also some engineering. What we're seeing is encouraging.

The other thing that occurred is that in the 2008 legislature, two bills were passed, House Bills 3374 and 3375. They authorized \$50 million in bonding authority for the state and set aside money to fund the local share of any project that might happen in the basin. The bills also put about \$2.5 million aside to look at a basin-wide solution because the Corps project covers about five miles on the corridor. We have been in the process with the Corps and actually Congress has given us some money from the federal side to help start work on a project called the General Investigation study. That study has been funded by Congress and will allow us to look at flood mitigation along the whole basin. We already had a Corps General Investigation in Grays Harbor County to look at ecosystem restoration that the Corps has been working on since 2000 and we are adding flood mitigation to it so we can look at what we can do for the rest of the basin. In the meantime we're looking at how things might fit together.

The Flood Authority stems out of the original executive committee and was extended with additional members. The bill provided money for the Flood Authority to look at mitigation on the whole river and said that money would initially go to a Flood Authority and eventually to a flood district. A flood district is

a municipal corporation whose function is to look at mitigation, operation, and function of mitigation on the river. The Authority has been operating as an interim body until such time as we can start that flood district.

In the Flood Authority we're all elected officials. There's only so much time we can spend on this and we believe a flood district is the way to go. One thing we've done is we've taken a number of projects we've funded to get initial studies going. We gave the PUD \$480,000, we've also done some gauge repairs, and we're working with a company on emergency management notification through the whole basin top to bottom. We've done some mapping, particularly in the lower basin where they didn't have the mapping we had in the upper basin. We're looking at some hydrology in the lower. There are a couple of other projects to be shown to you in this plan.

One of the main things we needed to do was look at a flood plan. Every jurisdiction is required to have this plan. All three counties have one and all of the incorporated cities have one. You have to have a plan to get insurance rates and a number of other things that are required by the federal government when you have disasters. The problem is we looked at these 11 jurisdictions that are part of the Authority but the plans vary widely. Some things fit together but other things didn't. Some things complemented but other things work at opposite ends. We thought the district needed a model plan. We've had our consultant work on this the past two years. The Authority has looked at this chapter by chapter. We've made some changes and we're going to give you the scope of it tonight. We're looking for comments you might have on things that we missed or comments on other ideas you think need to be addressed. Then we will take these comments and we'll come up with a final draft of the plan that we hope will be handed over eventually to the flood district. We will also give it back to the jurisdictions so they can integrate the model plan into the local plans. They will also have to hold hearings and go through the process we're going through tonight. That's what we're doing here. If you're hoping to see specifics of projects tonight, that's not what we're doing.

Ms. Root thanked Commissioner Averill and introduced herself as being from ESA Adolfson. She gave a presentation on the work on the Flood Authority, focusing on the flood plan.

[For a detailed report of Ms. Root's presentation, please see the notes from the April 5 meeting in Rochester.]

Ms. Root introduced Bruce Mackey of ESA Adolfson, who will run the question and comment period of the meeting. Mr. Mackey said we've been asked to put copies of the flood plan in the Timberland libraries, and we will do so. We will be accepting comments for a month. Mr. Mackey asked if there were any questions.

John Hendricksen introduced himself as the chair of One Voice. He said that the presentation tonight was interesting but that the plan seems to be missing an emphasis on flood reduction. People here are not interested in living with flooding. There has been a groundswell of opinion from jurisdictions up and down the basin. So far 11 jurisdictions have passed resolutions emphasizing flood reduction with a primary emphasis on retention. When retention is spoken of, some of you are biting your cheek to keep from laughing. One Voice would like to expand what comes to mind when we say retention. What we're really after is flow volume reduction. That can be done and it is called retention. According to our research and the engineers who are our consultants, it can be done in three ways.

The first is a permanent facility with a water reservoir behind it. The second is to install or produce retention facilities that are open gate facilities. Under that project, you would have a retention facility that would allow the river to flow freely 99.9% of the time until an event starts to build to where the flow rate is above 49,000 cfs. At that point you would start to close the flood gates to maintain flow at 49,000 cfs. As the event wanes you release the waters that have backed up behind the facility at a rate of 49,000 cfs. This is very effective and has been used throughout the nation. The third method is used in Europe and it consists of a series of baffles. This method would use a series of open gate retention facilities built to a predetermined height. When an event starts you close the upper gate. The water rises to a predetermined level that everyone can live with. The second gate is closed when you overflow the first gate, and so on. You reverse the order and open the gates as the event wanes.

There is more than one way to reduce flood events while still having some flow. One Voice is not interested in redirecting the water. All kinds of things can be done. You can have retention at the headwaters of China Creek or Salzer Creek. Upstream storage dams may be the solution, but they may not. There are more ways that might be more acceptable environmentally that will give you the same result. This is where One Voice is trying to head. We don't want to narrow the process to the point where we shoot ourselves in the foot. We want the Corps and the Authority to know that. We aren't going to back down and settle on any solution other than flood reduction. Levees are great and will help, but this flood plan shows that what we have talked about all along is going to work. It gives the levels of water we've had in the last four major events. In 2009 the flow was 49,000 cfs, and the major damage we had in 2007 did not occur. The levees we have in Centralia and elsewhere, the Miracle Mile, and Sunbirds didn't flood. We have proof that our engineers were right, we can hold flow down to a certain level and we'll be in good shape. Whatever you want to add to that is fine, but nothing short of flood reduction is what One Voice is looking for.

Mr. Mackey said it's important to point out that in the planning process we're open to looking at alternatives. In the plan, we're looking at having a permanent form of governance and finance. As Dr. Hendricksen said, this isn't all going to

happen tomorrow. It happens with good planning, information, and some consistency in governance and funding. This plan is a way to look at all of those things. A structural change is one that changes the direction of the water. A nonstructural measure doesn't change the direction of the water but does add some relief. Raising a house, buying out land, all of those things make a difference. The plan is open to looking at that and trying to address things that help human safety and access to business and hospitals in the short term as well as look at alternative methods. All of us have the same goal of reducing hazards and damage of floods in the basin. We want to hear comments about the planning process and things we should be looking at.

Ron Schillinger said that he wanted to follow up on what Dr. Hendricksen said. In Montesano, Centralia and Chehalis are the headwaters. You need to understand that we're very alarmed at Centralia and Chehalis and Lewis County in general because we see you filling in the floodplain. You're filling in our storage dam and diminishing the storage capacity in the headwaters for us downstream. We're not engineers and scientists, we're operations folk and we know that if we have a bathtub of water and you put something in the bathtub the level goes up and where is that water going to go?

Q – Ron said what I was thinking of. When you build in low areas to increase the tax base, you'll suffer the consequence. That's what's happened the last 10 years in Chehalis. There's nowhere for water to go so we have floods. The smaller tributaries contribute to flooding. In the 2009 flood, at the museum, the water was running south to north because the Newaukum was flooding into the Chehalis and increasing the height of the water. There's a lot more to be considered.

Q – I still haven't seen any numbers. People talk about filling the floodplain. It still seems to me like even the Town Center development is a drop in the bucket if you look at the entire floodplain. All the dirt is nothing compared to the water needed to create the 2007 flood. But I haven't seen numbers.

Dr. Hendricksen said Northwest Hydraulics provided the numbers. He asked Dave Muller if he remembered the numbers. Mr. Muller said he didn't remember, but if you fill ten acres a foot deep, you've filled ten acre-feet and we're talking about retention storage at 100,000 acre-feet. Clearly if you build levees you decrease the size of the floodplain much more than you have with fill. Commissioner Averill said that the Water Resources Inventory Area (WRIA), which is the basis of drainage for the river, is 2,600 square miles. It's a lot of land.

Q – I'm a life long resident here. I see the development I was leaning toward what Ron Schillinger said until it was pointed out to me that most of the fill people see is behind the Airport levee. That section was already taken out of the floodplain. There hasn't been a lot of fill in the floodplain outside that levee in my

lifetime. The dirt there is higher than the levees, which I disagree with, but if you look at the amount of water in the last 20 years, the amount of water is contributing more to flooding than the filling. My problem with levees is that they redirect water.

Q – Have you studied why in 2007 it flooded very bad? There was a lot of water, but wasn't there also a lot of debris? Why did we have all the logs, trash, and other things in the river when it came down from Pe Ell? Why were they laying there, what was the cause of that?

Mr. Mackey said there's a lot of history and study of that particular event, but a couple things happened. There was a major snow event first. This isn't a rain on snow basin like the east side of the state. On top of that you had a concentrated rain cell with up to 20 or 24 inches in some places. When you have that much rain on top of the moisture in snow, you supersaturate that ground. There were big torrents that brought down trees and you had such a massive volume of water that things in the river itself were picked up. Logs came down and created log jams at narrow places or bridges. When the water hit, the bridges held it back and it flooded upstream until it hit tremendous pressure. It's a very unique event. Some say it was a 500-year event, others say an 800-year event.

Q – I know we have environmental and fish studies. My family was around here in the 1910s. I have uncles who told me about the flood of 1930, but they had a different way of clearing trash. People cleaned up around the river. When I grew up we called it high water not flooding, because it didn't take out houses. Why would we insist on laying logs along the river? I know we have fish habitat, but we used to anyway. Why do we have stuff laying all over the place? Almost every year it goes over the bank someplace. Why do we insist on not cleaning up the river?

Commissioner Willis showed a document we received last night from a citizen. It indicates that the landslides that happened during the flood in the headwaters happened with a variety of trees with all different sizes and growth patterns. There was no continuity.

Bob Burkle said that document came out of a DNR study released this week. A DNR geologist studied the flood and the landslides generated. Many were generated in clearcuts and logging roads. Commissioner Willis said that she and Commissioner Valenzuela will have a chance in several weeks to fly the basin, including the headwaters and the Skookumchuck, to look at these areas.

Q – I heard that the landslides came from logging operations.

Mr. Mackey said you can find the DNR report on their website. DNR flew the area and assessed the kind of tree cover and the number of landslides that occurred. They occurred because of the tremendous amount of rain that hit.

Q – They were also caused by the 100 mph winds that day.

Mr. Mackey said yes, there were really two storms. Tremendous rain and tremendous winds. DNR's wind gauge broke at 140 mph. He went up in a helicopter after that event it looked like a tornado had gone through the area. It was an amazing event.

Q – Landslides weren't just along logging operations. I flew DNR employees as soon as we could get a plane in the air and we mapped landslides for 5 or 6 hours.

Q – It was such an unusual event. Can you prevent it from happening again? I'm not against dams and water retention, but how would you prevent that from happening. Why do we never talk about dredging the river? I saw the river filling in like a bathtub, flowing ways I've never seen it coming. I've never seen it come so fast. How are we going to keep it from happening again?

Mr. Mackey said one thing the Authority has done is to start looking at various ways to understand the basin better and come up with solutions. This is the second largest basin in the state. It has not only 125 miles or so of the mainstem, but also 2,500 miles of tributaries. Our first step is to understand the hydrology, gather LiDAR data, and develop hydraulic models so we can anticipate floods and figure out how to think about this and see how events occur.

Dr. Hendricksen said he's not for or against dredging, but when One Voice met with Northwest Hydraulics, who work with the Corps and are the gold standard in hydraulics, we asked them if we could have a positive impact by dredging. They said it would be minimal simply because of the elevation drop of the river. It's a unique basin. There's not enough of a drop for dredging to do a lot of good, especially since tidal flow backs up almost to Porter.

Q – I can remember all the floods from 1930 up, and I've talked to people who were here long before that. They said that many years ago they expected and looked forward to high water. They kept a line tied to a big stump and they'd pick the cleanest old growth tree coming down the river, tie a line around it, and that would be their summer wood. They would move things onto high ground and they always expected the river. Old cougar hunters in the 1890s would meet at the top of slides. They've been there for years. When you put 20 inches of rain on this ground it will find its level. 12,000 years ago, down by Vader the earth moved 200 feet up and down in one big movement and we can expect that again some day. The river has been there all these years and its going to flood. When Mother Nature puts on Sunday clothes no one's gonna stop her. Individual storms hit individual areas. You'll have a storm you won't be able to foresee. I'm not in favor of or opposed to dams. We haven't looked into the cost. I built on the hill because I didn't want to have a flood. Do you want me to pay for people who

built in a floodplain? Why should I pay for that when I built on a hill? I can raise grass and the best Doug firs, but I can't raise real crops like you can grow in the valley. If you build a dam, will it make my electricity cheaper? Someone will have to pay for that dam. As you go along with this program you have to introduce and bring along the fact of who's going to pay for it. I don't want my taxes to pay for it because I didn't do it. I live on a hill. Funds were only mentioned twice in this presentation. You have to make that a viable part of any program to make it really worthwhile.

Q – One time, the ice broke up in the Columbia River and piled up on Interstate Bridge in Vancouver. They had to blast it to keep the bridge from going out. When the water dropped because it wasn't coming down the river, all this ice was hanging in the air. It came down to Interstate Bridge and just about took it out. You'll have another ice deal at some point. From 1925 to 1934 there were cold winters. Ice piled up in town 3-4 feet deep and everything froze out. It would take out the Mellen Street bridge. It's a wonder that's still standing.

Q – Floods today are different than they were before. You have acres of roofs and blacktop that let water off fast. There are highways and byways where we used to have gravel roads.

Q – We can point blame all over the place on what causes floods, but we have to worry about what happens when it floods. If everyone built roads to get to hillsides, the hillsides that used to be trees are roofs and blacktop. Not too many people can say they never contributed to a flood. Runoff, logging, and paving all contribute.

Q – The problem is there are too many people.

Q – I live in Boistfort. I survived the flood and the house I was in had nine feet of water. I contemplated death by drowning and I didn't like the idea. It seems to me that you and the Authority have shouted long and loud about having basin-wide solutions, and yet here we are talking about localized problems. Sure those problems lead to what could be an area-wide issue, but I think if you're serious about basin-wide solutions you can't have one person from Montesano saying that we can't build in Chehalis. You have to deal with the whole basin. If we took care of things at our end, he'd be okay. If that's true, then think in terms of the whole area as you have said you want to do. That being said, the only area-wide solution that I see so far is the proposal put forth by the PUD. It will deal with the whole area. And from what I have read of the Corps material, that will not. None of that will. So I would ask you to get back on track and let's get something done.

Q – Another point I forgot, when the ice came down the river, there used to be thousands of houseboats on the Willamette. The ice took out the docks in Portland. Steamwheelers and paddleboats are helpless in the ice. That ice took everything out, there's probably nothing you can do. It will take out bridges.

Q – I would ask that the Authority please get the public's interest in water retention into their plans. It seems like it's been evaded or omitted or left out but the public has been very clear that water retention is the first priority in looking at studies for flood control and the Authority is supposed to be for flood control. I just want to express my wish that they would listen to what the public wants and weave water retention into the plan and make it a priority.

Q – We're discussing flooding in Portland here, I'm not sure why. But we just went by the dam at the headwaters of the Willamette. They don't seem to have a problem in Portland anymore. There are dams on the Columbia and they don't seem to have problems there.

Q – How well does the Wynoochee dam work?

Commissioner Willis said that some days it works really well and other days it doesn't.

Q – Is it a flood control dam or a power dam?

Commissioner Willis said it started as flood control with a power element. As they ran the power element of the dam, they had to keep more water behind the dam. So when we got a flood there wasn't enough room to store it, or they were able to store it for a while but had to dump it during the flood. In one major flood they wiped out most of the homes up against the freeway at the bottom of the Wynoochee. The dam was eventually bought by the Corps. Now it seems to be under slightly different control and we haven't had too many issues.

Q – The key component is that it was managed for flood control, not power generation. The focus of the PUD plan is flood control, not power generation. There are flood control dams everywhere and they work.

Bob Burkle said that one of the structures talked about earlier by One Voice is like the Mud Mountain dam on White River. They have a real problem because they have a hole in the river that they didn't originally. Mud Mountain operates well most of the time but the last few years the same thing happened that is going on here. Glaciers have retreated 30% so there is more area in Mt. Rainier for rain to hit and the last couple of times it flooded there they had to dump water out of Mud Mountain quickly. Pacific flooded badly. The point is that flood control sounds really good but it doesn't work all the time. There are cases where control will come and bite you. You have to be careful.

Ms. Takash clarified the issue of Mud Mountain dam and flooding in Pacific. In January 2009, we released flows to make room in the reservoir behind Mud Mountain Dam for an upcoming forecasted storm. We had released the same flows in 2006 without these impacts. When we found out about the flooding in

Pacific, we slowed the flow out of Mud Mountain Dam. The apparent cause of the increased flooding is a substantial change in channel capacity. The White River is a very dynamic river system. It's different from the Chehalis.

Q – Everyone dwells on the one time flood control doesn't work, but think about how many floods have been stopped. Look at how much money has been made in the Kent area since farmland has been filled. They're making millions of dollars because they have the Howard Hanson dam. Think of how many floods they've been safe from.

Q – We want a perfect solution but we'll settle for any solution.

Q – Think about what we've discussed this evening. We were told we were here to discuss their plan. We're actually discussing what we've been trying to discuss for two years. That's flood control. That's what we've asked them to do. It has been done in this bureaucratic plan. What people here are saying to the Authority is that they're interested in preventing and controlling floods. It was mentioned, but you may not have heard it, that the legislation called for a flood control authority but when it was formed it became just a Flood Authority. We said we wanted a way to control flooding. Most of you have been asking this same thing. I have no idea how this information will end up being a comment on the plan, but as best I can tell most of the people here are not commenting on your plan, they're saying again what was said two years which is that we would like you to emphasize flood control.

Mr. Mackey said that the plan is only part of what has been done. The Authority was charged with doing exactly what you're suggested. They've sponsored \$500,000 to study and support water retention. They have also spent money on hydraulic modeling and LiDAR which are important to moving water retention forward. They have also looked at other options. We need to be careful before saying the flood plan is all the Authority has done. They're interested in the same things you are. They're putting together an organization and funding work to find the answers you're looking for. They've funded the PUD study more than any other money that has been provided.

Q – The things you've discussed and spent the most time on will all change if you put in water retention.

Commissioner Averill said water retention is exactly what we're studying.

Q – This is an interesting irony in that you're asking us to comment on a plan that no one has seen. What you're telling us is that you don't care to have comments on the plan. You're holding meetings for the sake of looking good.

Mayor Schillinger said that the Schillinger family has been to Germany. You can go all the way up the Rhine River on both sides. It doesn't flood because they

have water retention. They pay big taxes, they have no property rights, and they do whatever the government says to do. Here we try to work from the bottom up. Here we do have property rights. We have other concerns and everybody, even those from Montesano, get to have a say in the process. It's a truly bureaucratic process and it's costly. There have been things that I didn't like. But it's still awfully good in the long run to do this. This process weighs all the considerations. Last night, Commissioner Averill got uncivilly chastised and criticized by the lower basin for the fact that filling in the floodplain is even allowed up here because that's a no-no downstream. Having these discussions and considering environmental, fish, and power impacts to storage is an important part of the overall discussion.

Q – My question is when do the studies end and something actually begin to happen? The studies have been going on for 100 years. They had studies on flood control and nothing is happening. When do the studies end and the action start going? We should let the PUD do it and get this problem solved.

Commissioner Averill said if he had \$330 million he'd build the dams tomorrow. He believes in water retention. But even if he had the money he couldn't build the dam because some people don't believe it's the solution. They claim it will hurt the fish and the environment and it won't be stable. The only way we can prove them wrong is to do the studies. Unfortunately it takes time. The Authority has funded two projects already and we're trying to get money to fund the really essential study the Tribe wants to see, which covers the biological and environmental impacts of dams. We believe that those studies will show that we're right and we should go ahead. But I don't want to leave anyone with the impression that we don't have to do the studies. We have to have them so we can get the approvals. It's not me building the dam. The Department of Ecology will have a say. WDFW will have a say. We're trying to help out. We're not against water retention. We've already started to fund it. But I can't promise I'll start building it tomorrow because we have to prove that we can do it.

Also, this is a huge basin. What I've got in the upper river is different from the middle river and the bottom of the river. We know what the problem is with the Willapas and water coming down the tributaries from the West. We also know that we have storms in the East basin that have created a different problem. The 2007 and 2009 floods proved that to us indubitably. We have to look at China Creek, the Newaukum, Coal Creek, and Salzer Creek. I have seen the Corps plan I'm not happy yet with the Salzer solution.

Ms. Takash said the Salzer Creek portion of the Corps plan is not finalized.

Commissioner Averill said we have to think about our friends in the rest of the basin. What is Bucoda going to do if we don't fix the Skookumchuck problem? What is the Tribe going to do if we don't fix the problem of the flow coming from the Chehalis and Black Rivers? We have different problems throughout the

basin. We can't solve them all at the same time. We agree that retention is a first step to look at and work for. It reduces flow from the top of the river to the bottom. We've had a sit down session with the Colonel from the Corps and we showed the two dams that we're proposing on the mainstem and the South Fork of the Chehalis and we looked at the Skookumchuck and Wynoochee dams. The Colonel said that if he had all those dams, he could provide good control on the river system. There might be other things we can do. We know you need project. We've been trying to do projects since the 30s. We're trying to put something together so we can get there and actually do something. We're working really hard on your part that saves the upper basin but we also have to look at the bottom of the basin and what we're going to do to help them. Those projects will come later. It's going to be a long term project. The Authority was not meant to last this long. We thought we'd have a district by now. Our next chore is to move to a district so people in the business of solving flooding are in control of this instead of part-time politicians.

Q – I have a property I own next to Kmart in the Town Center area. I also have friends downriver. I wonder how many people downstream drive on the freeway and think the fill material brought in there has been a big detriment to them downriver. I say that because it took me a long time to realize that the dike between us and the river makes filling on the freeway side, where Town Center is, a nonevent to downriver people. I have friends who run the building departments and I know when I put a house in the floodplain I have all these regulations. I have to let water run right through and we have to put trap doors into foundations. I wonder just how much there is that people downriver think we're doing wrong because I don't see it. I don't see where we're putting in all this fill currently. From a self serving standpoint, for the Corps to build up dikes to a higher level, that works pretty good for me. It could make my property at Town Center pretty good, but it doesn't help my friend Julie who lives on the other side. I'm a fan of trying to figure out how to do retention so we can control the flow. It seems like that's the only one that can do anything for all of us.

Q – I've been involved since the Authority was formed. There are a lot of good people on the Authority who work hard. As a citizen looking in I've been there and seen the public comment. When we first brought up water retention, it was several months before we got the money and we only got a little bit so we couldn't do all the studies at the same time. We had to wait four or five more months to get more money. Now it will be another big holdup because we don't know if we will get more money. That's where the citizens are getting frustrated. I see both sides of the story. When we say let's get this done, let's dedicate ourselves to getting it done and stop piecemealing it.

Mr. Mackey said that it is time to adjourn the meeting to listening posts so people have a chance to speak one on one. He adjourned the meeting at 7:44 PM.

Attachment 4 Flip Chart Comments

Rochester – April 5, 2010

- Reforestation – tree farms store water.
- Stop building in the floodplain. Chehalis, Centralia, & Tribe.
- DOT plans to resurface SR 12. This will increase flooding, Rochester – Oakville communities. It will raise SR 12 3". Will there be mitigation?
- Early warnings should tell people flood water is really sewage water.
- Lots of small fires to put out for CRBFA plan, more community support?

Montesano – April 6, 2010

- Programmatic environmental review is needed.
- Dredging in flood times is not the answer.
- Floodplain management is critical and floodplain outside the levee system needs to be left as floodplain. Is filling on I-5 on the protected side or the river side?
- Filling the floodplain takes away downstream capacity.
- Centralia and Chehalis should move development up the hill.
- 205 project at Cosmopolis for replacement of damaged dam.
- Has the Authority worked with DNR?
- How would an increase in harvest age impact water runoff? Can we take a basin-wide approach on forested land?
- Can we remove the incentives to log early?
- What would happen if we start at the bottom of the basin and open up bridges and roads to let more flow go downriver?
- China coal burning seeded clouds in 2008 – study by UW.
- Need to look at gravel management. Can we remove gravel bar centers?
- Manage current dams to time release of water to minimize flooding on the mainstem.
- Agricultural practices can help keep topsoil from getting washed away.
- "Man will never reach his full potential because of meetings"
- Tax breaks for farmers that do not build in their farms.

Attachment 5 Written Comments

Written comment – Montesano meeting:

- 1) According to USGS data on the Chehalis River, only 5% of the river flow at Grand Mound comes from the Upper South Fork of the Chehalis. How will construction of a dam on the South Fork of the Chehalis provide a significant tool for flood control down stream?
 - While the South Fork Dam would provide effective flood control for the small handful of farmers in the Upper Boistfort valley, what is the cost to the overall public for the good of a very few farmers who farm in the flood plain?

- 2) The forested portion of the South Fork of the Chehalis River has a regulatory requirement to leave 200' of timber on each side of the stream to provide shade and cool water temperatures. It is classed a "shoreline of statewide significance". The forested portion of the river has cobble/gravel type stream beds that are good spawning habitat. This is the area that would be inundated by the South Fork of the Chehalis project. Just below the proposed South Fork Dam site the river flows into Ag lands with little or no forested buffer and largely mud bottom river channel.
 - How can this project be good for fish?
 - Will there be a fish ladder placed on the proposed dam so anadromous fish can get to the upper South Fork spawning beds? If not where will the Salmon and Steelhead spawn? What percentage of the spawning beds in the Chehalis System would be cut off or inundated by the water retention projects?
 - Does it make sense to dam the good part of the river so that some of its cool water can be dumped to the bad (lower) part of the river in the summer? Isn't this just making both parts of the river bad?

Comment form – Chehalis meeting:

You should be embarrassed about the money spent on consultants. Nothing personal to ESA Adolfson. You're just milking the cow while she stands there!

Written comment – Chehalis meeting:

Here are some questions that need to be answered in development of your comprehensive plan:

- From what I can tell (there is zero data in this study to indicate the total area and flow of the entire Chehalis River system, just the ac-ft and flows for the two proposed dams), the avoided flow from these two dams is miniscule (less than 2%?) of the total flow – how can that reduce the flood levels by 2-3 feet at Grand Mound? Nonsensical...
- Doesn't the list of assumptions for reduced flooding potential also **assume** that the levees hold? Have you analyzed the "benefits" from these dams if the levees fail anyway – what is the B/C ratio if this happens? This proposal implies that these dams are "in lieu" of raising I-5 but that is not a solid assumption, as the freeway could still be under water once the dams are built if we get a 2007 storm and/or the levees do not hold, regardless of the piddly 40,000 ac-ft. that the So. Chehalis dam might hold back?
- Entire economic analysis assumes trends in "benefits" to continue an accelerating curve based on economic numbers from the 90's and early 2000's. We have undergone a serious economic drop since 2008 and it is ridiculous to just continue the optimistic trend lines from 2000 on upward when we know that home prices and employment have not climbed since 2008 but declined sharply.
- Throughout our region/country there has been a call to "tear down dams" in order to benefit fish habitat—yet, this study shows a very optimistic **benefit** to fish by constructing these dams and no cost for loss of fish habitat on the 80+ miles of streams above the dams that is now blocked from upstream passage – who is right, you can't have it both ways.

The bottom line is "how can you recommend a comprehensive plan without accurate scientific data to support the costs and environment impacts?" This SHOULD not be a process in which a plan is suggested WITHOUT detailed environmental information. The information provided in the PUD study is not accurate and misleads our community of the "benefits" without scratching the surface of the environmental impacts. Do not lead our community to believe the options in the Plan will work unless you know that it will. Making broad suggestions based on inaccurate information only hinders the process of finding scientific solutions to flooding and neither the 35% completed Corps levee study NOR the PUD Study can be considered viable options at this point...we are wasting valuable resources and confusing our community.

Written comment – Chehalis meeting:

1. The cause of flooding in the Centralia/Chehalis I-5 corridor is a combination of nature and the stupidity and greed of our county and city officials whom have designed and authorized the filling of low land areas to increase the number of businesses which in turn increases the tax base.

2. Water, like man, will take the path of least resistance. It is time for man to correct the actions that increased the probability of catastrophic floods in the future.
 3. If the powers in place at the local and state level hope to keep the potential of the twin cities economy prospering, sacrifices will be required.
 - a. Restrict all and any future building in the designated flood zone.
 - b. Consider the areas south of I-5 exit 71 and north of I-5 exit 82 for future expansion.
 4. Give serious consideration to controlling the rivers by dredging the Chehalis, Newaukum and other rivers that empty into the Chehalis River. Use the dredged material to build up the banks of the rivers and use the banks as walking and bicycle trails. The environmentalists can go climb a cactus. I do not see any of their tax dollars coming into Lewis County. As for the fish, they can be replanted and probably would recover and increase on their own within a few years.
 5. Water retention by the use of Dams has been used to control flooding for hundreds of years. The benefits of flood control, irrigation and the possibility of Hydro Electric power derived from dams would be a plus for generations to come.
 6. The proposed system of dikes to protect the properties in the flood zone along with the I-5 corridor does nothing for all the other flood zones along the Chehalis River. Get it done the right way, all the way the first time.
-

Emailed comment – received April 5:

Flood control dams only moderate average high waters. When it's really flooding they fill up rapidly then release the same flows as enter. Dams require complicated and expensive fish passage structures while flooding critical areas for spawning. The proposed dams would have a serious negative influence on salmonid populations.

The first "riffle" downstream of the Centralia flood zone controls the upstream water elevation for over ten river miles. It is this natural bedrock formation that does not allow the river to erode downwards, causing the Centralia/Chehalis area to puddle badly. The location is about 0.5 miles below the mouth of the Skookumchuck, near Chehalis River Mile 66.

This single riffle could be removed and would lower the Chehalis River by three feet in the severe flood zone. My spawner surveys have not shown use by salmonids at this location.

The lower Chehalis has massive inflows during floods from the Wynoochee and Satsop Rivers. Low gradients and high tides back waters up for miles. Dams and dikes upstream will do little for that situation.

I did not see any details as to the proposed Dam locations or exact storage volumes to be able to evaluate their potential effectiveness.

Thank you for reviewing these comments. I was reviewing HPA's & FPA's in this basin from the early 1970's and have been the WDF, WDG, WDW, WDFW fish bio in this basin for over 20 years.

Emailed comment – received April 7:

I attended the Flood Authority's public meeting in Montesano on April 6, 2010. I spoke briefly with the consultant making the presentation after the group ended the main part of the meeting. My question was about environmental review of the plan under the State Environmental Policy Act (SEPA).

First, I am asking whether there has been a determination that the plan is categorically exempt from SEPA, and if so, where that statement can be found.

Second, I am asking when there will be a non-project environmental review done under SEPA, of the entire river basin plan. There was some discussion from staff at the meeting last night, that individual jurisdictions would be responsible for environmental review of individual projects when and as they are undertaken. That is not my question. The SEPA statute, as the following excerpted language from state Ecology's SEPA handbook sets forth in the postscript, contemplates that large connected actions are to be reviewed under SEPA at the non-project stage, so that the impacts upon the entire affected area can be considered before individual projects are commenced. I believe that a great deal of the questions that were posed last night, went to this issue of questions about potential environmental impacts within the entire basin.

Many of the elements of a nonproject SEPA review have already been accomplished as part of the draft plan preparation. What appears to be lacking however, is any discussion of environmental impacts of the various alternative actions, or groups of actions, included in the plan.

I suggest that the final plan include a statement of SEPA compliance (or categorical exemption) drafted by DOE, and a further discussion of procedural compliance for non-project SEPA review in future if it does not occur at the stage of adoption of this plan. Individual jurisdictions adopting this plan subsequently will have neither the ability, nor the responsibility, to look at SEPA implications for the entire basinwide plan. If this nonproject SEPA review will be the responsibility of any future flood district authority, then that statement should be included in this plan so that the public understands when and how basinwide nonproject environmental issues will be addressed.

Thank you for the opportunity to comment.

Emailed comment – received April 20:

Please consider the following:

Your report indicates that the Legislature appropriated \$2.5 million for your work to study flood-control options. Yet, only \$ ½ million has been spent on engineering studies. What portion is that of total expenditures? It is my understanding that expenses now have reached the neighborhood of \$3 million. If that is true, then “necessary” engineering expenditures represent only 16 and 2/3rds % of the total. This is simply unacceptable.

The “flood group” has indicated it wants a “basin-wide” approach to dealing with flooding issues. Yet, this is not possible, because there are no members who represent the total area. Each member represents only those constituents who elected each; i.e., city councilors represent only those who elected them, county commissioners also. Thus, you simply MUST move rapidly toward the formation of a body that does represent the total flood basin, and that body must also have taxing authority, which the current group does not have.

Your proposed Flood Hazard Management Plan is far too broad in scope and language, particularly the nine goals listed on page 11. There is nothing in the language here to suggest specifically how any of the goals would be accomplished. Thus, your plan is more of an academic exercise than a practical plan for flood mitigation. Let’s get back to solving the real problem – that’s mostly an engineering problem and it needs to be “solved” mostly by engineers, not by politicians or by politically-motivated environmentalists.

Mailed comment – received April 22:

Dear Ms. Willis:

The following comments are being submitted to the Chehalis River Basin Flood Control Authority on behalf of the grass roots public group One Voice, representing over 500 people, businesses and community leaders in Lewis, Thurston, and Grays Harbor counties.

As you are aware One Voice supports a basin wide flood control solution that protects citizens from Pe Ell to Hoquiam. Our comments focus on three main areas; 1) One Voice position on basin wide flood control plan, 2) clarification and additional information relating to public comments at the Flood Authority public meeting April 7, 2010, and 3) comments on the Draft Chehalis River Basin comprehensive Flood Hazard Management Plan.

Basin Wide Solution

One Voice supports a basin wide flood control solution that protects citizens from Pe Ell to Hoquiam. Currently there are fundamentally on two projects being considered that will provide meaningful flood control; 1) the Corps Twin Cities Project, and 2) the Water Retention Plan for two dams on the upper Chehalis River.

One Voice supports timely and complete study of the Water Retention Plan as it provides the only basin wide solution. One Voice supports reauthorization of a significantly different Corps of Engineers Twin Cities project with retention as the primary element and levees as a secondary element. Making water retention the primary focus for flood control on the Chehalis River is now the preferred solution supported by Resolutions passed by the City of Chehalis, Lewis County Board of Commissioners, Centralia-Chehalis Chamber of Commerce, Fire District #13, Pamona Grange, City of Pe Ell, Airport Board, Port of Chehalis, Port of Centralia, and Lewis County Economic Development Council. There is a clear consensus that flood control should be basin-wide, having water retention as its principal component.

Water retention could take the form of a multipurpose project as has been proposed by Lewis County PUD, which would provide large structures to capture flood waters during winter months and also store water in late winter and spring for summer flow enhancement and hydroelectric generation. An alternative would be to construct flood control dams that would be designed with a normally open gate feature that could be closed during flood events. This would provide flood control but would not provide summer flow enhancement or hydroelectric generation. This latter approach would presumably have less environmental and fisheries impact but would also not provide for summer flows enhancement that could improve fish habitat and water quality.

Comments at April 7, 2010 FA Public Meeting

There were many comments made at the public meeting on Wednesday April 7, 2010 at the Chehalis Veterans Museum. One Voice submits the following to clarify and to supplement public comment and information that was noted at the meeting related to three statements; 1) slides in the upper water shed occurred primarily in clear cuts and along roads, 2) dams do not always provide flood protection, and 3) tax burden.

In response to public concern of why logs and debris can't be removed from stream beds as was historically done, a representative of the Washington Department of Fish and Wildlife commented that the slides in the upper basin during the 2007 flood were primarily on clear cuts and along logging roads. A member of the public countered by indicating that he had flown the upper basin after the 2007 flood and that the slide areas were distributed over multiple types

and ages of forest. One Voice notes that in a related event, November 2006, over 13 inches (less than the 20 inches in the Willapa Hills in December 2007) of rain was reported in the upper Nisqually and the upper Cowlitz, and there were significant slides and flood damage downstream. The pertinent observation here is that there is no logging in either drainage as both areas are federal National Park properties. Furthermore, clear cuts were much more prevalent and widespread 50 and 60 years ago in the upper Chehalis than today. One Voice encourages that the whole story be reviewed and taken into consideration and that particular elements or unsubstantiated statements not be given undue weight.

A second opinion that was expressed (including by the Washington Department of Fish and Wildlife representative) was that water retention dams work sometimes (but not all the time) indicating that there has been flooding on the Wynoochee with the flood control dam and on the Puyallup with the Mud Mountain dam. Again this is only part of the story. The pertinent question here is how much were these flood events reduced because of the presence of the flood control dams and how many times since the construction of the dams have the basins downstream been saved from flooding. There was also discussion about the flood events on the Chehalis in the 1930's, 40's and 50's and how people were able to cope with those floods. The important distinction here and with the noted flood control dams is that prior to 1987 the largest flood of record on the Chehalis was in 1972 with 49,000 cfs at Grand Mound. Since 1986 there have been four flood events over 50,000 cfs, 1986, 1990, 1996, and 2007, at 51,600, 68,700, 74,800, and 79,000 cfs respectively.

We note that while the upper Nisqually and Upper Cowlitz flooded severely in November 2006, both basins downstream of the dams had less damage than would have occurred had the dams not been present. In addition to the Cowlitz and Nisqually Rivers there are multiple river basins that are protected from flooding with water retention dams, for example; 1) the Columbia River has had no significant flooding in Portland since 1949, 2) the Kent Green River Valley since the construction of Howard Hanson Dam, and 3) the Sacramento Valley since construction of series of dams including Shasta dam.

Taxation

Finally, there were some expressions of concern as to tax burden to be borne by people not affected by flooding. One Voice believes that the Authority has provided little or no information to the general public regarding the effect of flooding on all citizens in Lewis, Thurston, and Grays Harbor Counties. The disruptions caused by flooding regularly affect the economic activity of each of the counties, although to a lesser degree in Thurston than in Lewis and Grays Harbor. Recently FEMA has been active in flood prone areas, such as Skagit and Lewis County by redrawing 100 year flood maps, which significantly increase both the floodplains and the floodways. These FEMA maps may result in

extraordinary reductions in property values within the floodways, shifting significant tax burdens on remaining tax payers. The Authority should be making clear to all the residents of Grays Harbor and Lewis Counties that each tax payer has an economic stake in flood control.

Draft Chehalis River Basin Comprehensive Flood Hazard Management Plan

Generally One Voice believes the development of the Comprehensive Plan has been an unnecessary and costly effort that has not materially moved the Flood Authority toward development of a basin wide flood control plan. Unfortunately, the Flood Authority has not acted in accordance with its original purpose of developing flood **control**. Instead, it spent most of its money **reacting** to flood events. As we noted above, there are only two meaningful flood control projects being considered by the Flood Authority at this time, the Corps Twin Cities Project and the Water Retention Dams on the upper Chehalis and the Comp Plan has done little to assist in development of a basin wide solution.

The Flood Authority has spent two years and \$2.5 million and has very little to show for this time and money. Early warning systems are nice and can help with emergency warning and notification, however, they do nothing to prevent or control flooding. Ecosystem models also are nice but again do little to further the flood control plan for the basin. In the mean time, citizens in the basin continue to put up with the threat of flooding which on average has historically occurred once every five years. The Flood Authority has haltingly spent approximately 20% of its funds on water retention studies. Instead of decisive action, vacillation and delay have plagued the Authority. One Voice requests that the Flood Authority move forward expeditiously with funding for the Phase III Fisheries and Environmental studies at the earliest possible date and not delay approval for months at a time like occurred with approval of funding for both Phase IIA and Phase IIB. Time is of the essence.

In addition to the responsibility of the Flood Authority to develop a basin wide flood control plan, it was tasked with the responsibility to form a Flood Control District. One Voice does not believe this to be a monumental task. Lewis County has a Flood Control Zone District for the Chehalis River Basin. Grays Harbor and Thurston County can also form Flood Control Zone Districts and the three counties can then develop an interlocal agreement for governance of a Chehalis River three county Flood Control Zone District. This should not take 6 to 12 months and more than one million dollars to accomplish.

Following are specific comments on the Comprehensive Plan.

Section 4: Previous Studies

1972-82 Corps: Levee in Centralia and Chehalis and along Skookumchuck River. The Comp Plan refers to support for the Corps levee plan by the City of

Centralia, however it does not note that a public meeting in 1980 in Centralia resulted in local public opposition to the levees and the formation of Friends of the Skookumchuck committee to oppose the levee plan for property rights, aesthetics, river access, and environmental reasons.

2007 Corps Twin Cities Project: The Comp Plan indicates the Corps beginning construction in 2014, however does not indicate when construction will be completed. Furthermore, Corps representatives noted at the recent public meetings that construction will not begin until 2016 with completion sometime in 2023 or 2024. This date should be updated and the Corps should provide information on the reason for the delay.

Section 5: Basin Flood Characteristics

Flood Damages: This section of the Comp Plan appears to be incomplete. The costs appear to not include many major cost items; such as transportation corridor closures, private property damages, emergency service response costs, or public property damages. One Voice believes that there is much information available from the 2007 flood and these figures should be included in the report. Lewis County alone tabulated costs at over \$165 million and one Chronicle newspaper article indicated an estimate of total damages at nearly \$500 million. We suggest review and inclusion of all costs tabulated by local jurisdictions and other reports that have been prepared on this topic, like the Lewis County, 2007 Flood Disaster Recovery Strategy dated April 2009, that was prepared by the Seattle Region X office of the Economic Development Administration.

The historical flood flow Table 5-6 shows the 100 yr flood event at 56,000 cfs at Grand Mound, source 1981 FEMA. Table 5-3 shows the 1990, 1996, and 2007 flood flows at Grand Mound far in excess of the FEMA 100 year event. Clarification is needed.

Section 6: Flood Problem Areas

The Comp Plan lists Problems Identified by the public at the meeting, February 11, 2009 in Chehalis: This list includes a number of issues identified by the public ranging from road obstructions to debris and mud flow. However, a recurring comment/theme made by several members of the public was the concern that there are too many meetings, committees, and studies, and no substantive progress on a basin wide solution. The Flood Authority was encouraged to move forward with a meaningful basin wide plan and not repeat the practice and process of all committees and the Corps in the past with years of study and no action. The public in February 2009 asked for action and they are asking again over a year later. It is time to move ahead with water retention and solutions not just more meetings and talk. At the Chehalis meeting the public expressed disdain for years of no action and this comment is not included.

The Authority appears to have a degree of deafness when it comes to water retention. Clearly water retention is disfavored by at least two of the Authority members. As a result, it appears that the Authority finds it easier to prepare bureaucratic plans, rather than tackle flood control. If, as it appears, the Authority is unable to pursue flood control, the Authority can never reach the goal set for it by the Legislature. The Resolutions passed by numerous public and private entities request water retention. The Authority does not appear to be following the public's direction. One Voice is concerned that the Authority is pursuing a "we know what's good for you" approach. If so, the Authority is doomed to the same failure which has met each previous attempt at flood control on the Chehalis river.

Section 9: Recommended Actions

The Plan includes a list, table 9-1, of recommended actions from local jurisdictions and from public input. The public has repeatedly expressed interest in the full investigation of water retention dams for flood control for the basin wide flood control solution and this item is not on the list. Not only should water retention be added to the list, it should be at the top of the list because it provides protection for the entire Chehalis River Basin.

One Voice appreciates the opportunity to comment on the Comprehensive Plan and on the activities of the Flood Authority. We are available to discuss these comments and any other questions you may have.

Sincerely,
John Hendricksen
One Voice, Chairman

Emailed comment – received April 23:

Thank you for this opportunity to comment on the above referenced flood plans.

FOGH is a broad-based 100% volunteer tax-exempt 501(c)(3) citizens group made up of crabbers, fishers, oyster growers and caring citizens. The mission of FOGH is to foster and promote the economic, biological, and social uniqueness of Washington's estuaries and ocean coastal environments. The goal of FOGH is to protect the natural environment, human health and safety in Grays Harbor and vicinity through science, advocacy, law, activism and empowerment.

While we understand and sympathize with the citizens of Centralia, Chehalis and surrounds and the travelers of I-5 as they pass through the area, we are very concerned about the downstream effects of the proposed modifications. Since all activities in the upper reaches of the Chehalis River Watershed, ultimately affect the waters "downhill", we are concerned about the impacts to our

riverbanks, estuaries, water quality and quantity and ultimately our ocean beaches and marine resources.

We are concerned that there doesn't seem to be a clear discussion of the effects of sea level rise and how it might impact some of the water levels downstream. The Intergovernmental Panel on Climate Change (IPCC) looked at sea-level rise scenarios which ranged from a 3" rise in global average sea level by 2025 to a 27.3" inch rise by 2100. The life of the proposed projects are approximately 35 - 50 years. Assuming a 2" sea level rise in the lower WRIA what would be the effect of the levees and/or dams as proposed? What would be the potential shift in the extent and diversity of the coastal marshes, swamps, beaches and other habitats? To what extent would the proposed projects exacerbate the loss of tidal flats, inland fresh marsh, salt-water inundation of tidal swamps and inland aquifers?

How will the proposed projects move or remove water from the natural cycle? What changes to instream base flow and drought conditions have been studied? What impact would a change in the upper WRIA have on the lower WRIA? How will the life cycles of certain fish and mammals be affected by the change of water regime? How will this affect Tribal concerns and treaty rights? There are two major native populations that will be affected by these proposals, what are the concerns of the Quinault Nation and the Confederated Tribes of the Chehalis and how will they be met? What will be the effect of these proposals on local and downstream aquifers?

The loss of wetlands and building in the floodplain has long been understood to have considerable impact on the quantity and quality of water. What present zoning and building ordinances are in place to prevent and/or minimize the loss of these assets? What plans have been made to inventory the remaining wetlands in the study area? What plans are in place to mitigate for the loss of wetlands future and past?

In addition, we are concerned about the timing of waters that may be "fast-tracked" out of the upper WRIA reaching the cresting streams of the lower WRIA. What would be the flooding potential to those properties on the lower WRIA?

This is a very complicated process that is being proposed and it is important that the solutions for one don't negatively impact others. We look forward to hearing back from you about these concerns.

Sincerely,

R.D.

Arthur (R.D.) Grunbaum
FOGH (Friends of Grays Harbor)