

**Flood Authority Work Session
Veterans Memorial Museum
Chehalis, WA 98532**

**November 19, 2009 – 9:00 A.M.
Meeting Notes**

1. Convene Work Session

Chairman Averill called the meeting to order at 9:15am.

2. Introductions

Board members and audience introduced themselves.

Chairman Averill stated the governor is moving Keith Phillips to another department and Antonio Ginatta will be doing the oversight for the Flood Authority.

Mr. Ginatta stated we are not losing Keith but he will be working on energy more closely. Mr. Ginatta has been working on homeland security and looks forward to working with the Flood Authority.

Mark White circulated an article on Katrina that was published in the NY Times.

Chairman Averill stated we would like to hold a work session in December. There are a number of items to work through before the regular meeting. Two of those we will discuss this morning. One is funding options for mitigation measures. The flood control districts in the RCW are relatively small and located within a county. We recognized we would need some changes in legislation and some of those changes have been made already. Mr. Mackey is looking at a flood control zone district which is a little different and he will introduce that to us. As we move toward whether we want to take a district to the voters, we want to make sure we have all the information there is to take to the voters.

Another issue is the GI basin wide problem. We have asked ESA to help us in that process, which means we need to change our agreement with ESA in terms of deliverables and cost changes.

In December Commissioners Willis and Averill met with Keith Phillips and Congressman Baird and the governor's office is interested in looking at a neutral agency, the Washington State Academy of Sciences. The intent is to have a neutral party look at the various proposals to see how they fit together. We are looking at this but we will look at it more concretely in December.

Mr. Mackey met with Dave Batker, Earth Economics, and the regulatory work group met on November 17 and finalized an agreement. There could be Phase II B funding and there was some discussion on a district formation. Also, the Governor's office, Flood Authority and Keith Phillips met to look at a joint proposal. There is pressure on the Twin Cities project moving forward and also the timing of proposed water retention projects. If things need to be adjusted, can they be adjusted in time? Perhaps a joint project proposal could be looked at by an independent group to see what the feasibility is and how it impacts those projects. That is in the formative stages. Mr. Mackey is working with Mr. Phillips and has contacted the Academy of Sciences. There will be more information in a week or so.

Commissioner Willis stated she sat in on the meetings. When talking with the Academy, she would like to know the different things they can look at. She asked if we can we get a detailed list of what they would have expertise in and what they can look at specifically.

3. Funding Options

Mr. Mackey stated ESA Adolfson offered to look at funding options for districts in the future and Ann and Spencer drafted a new chapter in the plan. Ann will go through the options they looked at. Bruce will go through the work he has done comparing the zone and district, timing and costs and decisions that need to be made.

Ann Root presented a PowerPoint on the new chapter. She went through the background and why this chapter was prepared. Funding options include: a) Internal funding options, primarily for local jurisdictions; b) external funding sources; c) federal and state grants and loans; d) basin-wide options.

a) Internal funding options:

- Developer contributions (drainage dev fees; construction in lieu of fees)
- River Improvement Fund
- Drainage Districts
- Local Improvement Districts

There are levee and dike districts in some jurisdictions.

- Surface Water Utility (storm water utility is the same) most cities have these; not all counties have them.
- County Revenues (current expense fund, road fund, real estate excise tax, debt financing)

The Chapter has more details on how to use each of these.

A question was asked about the population threshold for runoff requirements. Ann stated she will check.

b) External Funding Options Prevention

- FEMA and grants/loans - require application process; some are competitive, some are not. Most require an approved comprehensive flood mitigation plan.

Commissioner Willis stated if we are writing something as a Flood Authority, she would like to get rid of the word "control" because no one controls floods. If someone else is attaching that word, leave it there, but if we are writing new language, she would like that word taken out. We mitigate for them; we clean up after them; we live with them; we do not control them so we should not imply that we can do that.

c) State Grants: Flood Control assistant account program (DOE); Centennial Clean water fund (DOE) and water pollution control revolving fund (DOE).

External Funding Options Recovery:

- Stafford Act (FEMA)
- Farm Program (USDA)

- Hazmat Mitigation grant program (Commerce)
- Public Works Trust Fund (Commerce)
- Emergency Relief Funds (WSDOT/FHA)

d) Basin-Wide Options Flood Control District:

Main options used on basin-wide basis: (the correct chapter is RCW 86.09, not 86.39)

- Established by voters within the district boundaries
- Governed by elected board of directors
- The purpose is investigation, planning, construction, improvement, replacement, repair or acquisition of a variety of funding options

Flood Control Zone District, RCW 86.15:

- Established by petition of 25% of voters or action of BOCC
- Governed by board of supervisors
- The purpose is to undertake, operate or maintain flood control or storm water control projects (the variety of funding mechanisms is found on pp 19-20)

Funding Source Evaluation

Evaluation Criteria:

Equity
Stability
Control
Adequacy
Relatedness
Ease of implementation
Restrictions
Acceptability
Legality
Basin-wide applicability

Ms. Root showed the matrix of *Adequacy of Internal Funding Source and Various Uses* and the matrix of *Evaluation of Funding Mechanisms*.

Ms. Root asked for questions; there were none.

Mr. Mackey stated he had researched differences between flood districts and flood zone districts. He will leave a summary document that the members and audience can peruse. Mr. Mackey went to MRSC who had a table with the flood control district and the zone district side by side. It was a little outdated and there was some information missing, and he put background together if someone asks about specific legislation. Mr. Mackey found no flood control district in the state.

Mr. Mackey went through the outline.

An Interlocal agreement is a huge piece and either a zone or a district will require this document.

Chairman Averill stated this issue is why the legislation was submitted to the 2009 session. A district specifically requires that the voting be by property owners. If districts are small, it is not as difficult to

find out how much property someone owns for the votes they can have. When you have a three-county district and the population is large, that type of voting formula is too complex. The legislature did change that so that three or more counties can vote on it by registered voters within the boundaries.

Mr. Mackey stated the reason for multiple counties in the district was because the RCW mentions if there is a river and it is the boundary of two counties, you may want to include both of the entities along that river.

Chairman Averill stated when there are three counties the district requirement is for three commissioners maximum. We think it would be best to have 5 commissioners with a representative from each county; the largest two jurisdictions having two. Senator Swecker looked at that to include the Tribe. Another change was to accommodate the Association of Washington Cities insofar as they have someone on the board so their interests can be considered. Our thought was: three commissioners from unincorporated areas; two from incorporated areas. We would have to do the same type of thing if we decide on a zone to allow for a better form of equity in a large district with three or more counties.

We did not want the county commissioners to be on the flood district. We wanted a body with a full-time responsibility of running the district/zone.

Mr. Glenn Carter stated a concern was to make sure there is no liability as a district. He is concerned that the board is held responsible for flood control. A zone creates a separate entity that has separate commissioners that make their own decision, re: decisions for insurance, etc. If we go to a district, it is possible to achieve that if you have elected supervisors.

Mr. Mackey stated both are public corporations and you can have an individual entity and you can have elected supervisors to run the boards in both the District and the Zone.

If a county has a Boundary Review Board (BRB), forming the district must go through the BRB. That could affect the timing. Mr. Mackey referred to handout: Flood District Formation. Two counties have set up flood control zone districts. He also talked to someone who put together a King County flood control zone district. Advice from all, as seen on page 2, is you need professional help regarding finances, legal advice, and economic issues. They suggested an advisory committee and that committee should participate in the formation of the district and continue after the formation. The formation is a one or two year process and you need an interlocal agreement. They all suggested an economic analysis looking at direct and indirect benefits. A zone requires the political support to show the benefits. This is important for rates and charges. Depending on how you want to go, rates require a tremendous amount of analysis and it has to be done to set up a district. If you add up those figures it will take up to \$1million and up to two years. That is why the \$1million was added to the budget.

Chairman Averill stated once formed, the district is out there until it's decided by authorities that it should no longer exist. It may be formed to do a particular project but what if another project is needed? We knew we would need to identify projects for voters, but he did not think we had to constrain the district to do those projects presented to the voters originally, and only those projects.

Mr. Mackey stated a district cannot be formed unless you identify projects.

Commissioner Valenzuela agreed that the zone district would be easier and cheaper.

Commissioner Willis stated for the zone we were given the option to have elected supervisors if we choose. Can we also put in other parameters, such as voting the zone in or out? According to this the commissioners can form the zone without a vote. Instead of the commissioners putting it in, could the constituents vote it in?

Mr. Mackey stated it can be initiated by the legislative body or 25% of the voters by petition, but that would put it back to the commissioners. The petition says the BOCC now has to consider it.

Commissioner Averill stated a public advisory vote can be used; it is not that the BOCC gave up the option to make the decision

Mr. Mackey stated he is trying to bring the issues to wrestle with for a flood district. What we could do is go back to one of these professional people and ask them to address the Flood Authority or get a legal analysis from someone who deals with it. He is trying to bring it forward now because we have put a request in to the governor's office for money in the supplemental budget. The original bill was an appropriations bill and this request will need to be re-appropriated funds. Mr. Mackey is looking at the timing issue. If you decide which way you want to go by January or February, or when the budget comes out, and you know you have gotten the supplemental budget, there is timing there to put together the organization you will need and you can use the money in the supplemental budget.

Commissioner Averill stated each county has an attorney. Why couldn't we use in-house expertise?

Mr. Carter stated if there are lawyers out there who have worked on these districts, you should hire those people because they have the expertise.

Mr. Mackey stated the state is funding this and he does not know if there is a link to use the Attorney General's office; there might be.

Chairman Averill stated this information has been very useful and we need some time to study it. His concerns are that it was purposeful in the minds of the counties and the Tribe, that we wanted the body to have its own officers and that the county commissioners would not be the managers or the board. The larger the board, the more difficult it is to make decisions.

Mr. Mackey asked how successful would it be to form a district to get voter support. If you did not get voter support then forming a zone is not an option.

Commissioner Valenzuela would like to have Senator Swecker continue working on the bill.

Chairman Averill stated Senator Swecker knows this is out there. We need to make a decision whether or not he should resubmit the bill.

Mr. Mackey stated there are some critical questions you can ask. If you want to pursue a zone, you need to answer the questions about future projects.

Chairman Averill stated the law puts the formation of a district or zone in the hands of the County Commissioners. While three of us represent the commission, we do not represent the whole body. The new legislation was made by all the commissioners and the Tribe. If we are going to change that we need another joint meeting to discuss this so a decision can be made.

Commissioner Willis stated the governance needs to be nailed down. Language is changing and it needs to be very clear. The people who are responsible should not be connected to the county.

Mr. White stated you want to build the district but make sure nothing can touch the county assets if something goes wrong. As a citizen, that bothers him. If you are not afraid of building this, why wouldn't you take responsibility?

Chairman Averill stated from a legal standpoint, the state and feds are immune from being sued but the cities and counties are not. The idea is that we set this up in a separate municipal corporation that would need to be adequately insured so if something goes wrong, we can cut the cord at the entity rather than going for the deeper pockets. We want to provide ourselves some protection from those suits.

Mr. Carter stated on this kind of a liability, it is hundreds of millions of dollars and the county may need to cut other services.

Commissioner Willis stated we commissioners do not have time to put in the time for this district. If we are not making those decisions, she wants to make sure there is a distance between the county and those who make the decisions. All decisions need to be given to the voters. She does not want someone making decisions for the county over which she has no control. Once the district is formed, then the Flood Authority no longer exists.

Chairman Averill stated if we went with the zone, we could form it or get a petition of 25% of the voters; that would be the cover for forming the zone.

Mr. White stated we need to stand behind it.

Mr. Mackey stated you need to have a public process and an economic analysis to show people how it is going to work.

Mr. White stated we need someone to talk to us who knows it inside and out.

Mr. Mackey stated maybe someone could talk about their experience. Out of that if you decide there are specific questions, we could ask for specific legal advice. For example, if you are thinking about a district, do all these projects have to be considered ahead of time?

Commissioner Willis stated a district could be just two projects: the dike and the retention dam.

Mr. Mackey stated you would also want an organization to help mitigate flooding and not just associated with the two projects. You could give that to the lawyers.

Commissioner Valenzuela would like a conversation with those two experts. Perhaps Mr. Mackey can get them to volunteer their time to come.

Chairman Averill asked if we can put that on the December or January agenda. This is a short legislative session. He will talk to Senator Swecker. Commissioner Valenzuela suggested perhaps Senator Swecker could come to the work session.

4. Break

The meeting recessed at 10:54, reconvening at 11:10.

5. Proposed General Investigation Budget Amendment

Chairman Averill stated the Flood Authority needs to incorporate the new GI Project Management Plan amendment which is outside of the contract with ESA. Mr. Mackey has done work on what the Flood Authority needs for support from ESA and the funding that would be required.

Mr. Mackey stated ESA has tried to be flexible. They have added a chapter in governance and finance and participated in the open houses. He is concerned that he is being asked to do things that he cannot do with the current budget. ESA has taken an active role in the GI study. He looked at the number of meetings as well as the time spent for each meeting and there are other groups to include. He has put in time for technical support (Dave Carlton) and anyone else the Flood Authority may need. The budget comes in at about \$79,000.

Chairman Averill stated it would be helpful to cover what ESA contracted for this year.

Mr. Easton stated it is just under \$400,000 for this year. Deliverables include: facilitate work sessions, BAC meetings and business meetings; work on the flood plan; public meetings on the plan; ripe and ready projects coordination; and Dave and Linda as sub-consultants.

Mr. Schillinger stated he has no hesitation in saying the task that we have is huge and it is not a short term project. Until the district is formed, the Flood Authority is trying to wade through everything. The GI study is very important and without ESA's presence and guidance we'd be back at square one. He appreciates the expertise and facilitation expertise ESA has brought to the table and believes the Flood Authority should come up with the money.

Mr. White asked if we are going to pay someone to go to the meetings, will that eliminate the BAC. How many people do we need on the GI?

Chairman Averill stated anyone can come to the meetings; someone has to do the work; write the reports, do the research, etc.

Commissioner Willis stated there is an element of fiscal responsibility for our staff. The funding is coming out of the Flood Authority appropriation, not the Chehalis Basin Partnership.

Chairman Averill asked if there is another adjustment to make beyond this.

Mr. Mackey stated the one he sees coming is the joint study. The timing is further out and if we get money from the supplemental budget we could use some of that. Hopefully we are budgeting for that work program.

Chairman Averill stated this item will be introduced to the Flood Authority members this afternoon and then we can start preparing the documents that must be approved by the Flood Authority and the LC BOCC to pass in December. The support we get from ESA in research and documentation is very important to the Flood Authority. When we originally developed the budget we did not include the scope of work done by ESA for the public sessions - both preparation and material and spending time at the meetings. It is money well spent. We need to supplement the original appropriation for ESA's continued support.

6 . Adjourn

As there was no other business, the meeting adjourned at 11:27 A.M.

**Chehalis River Basin Flood Authority
Lewis County Courthouse
351 NW North St.
Chehalis, WA 98532**

**November 19, 2009
Meeting Notes**

Members Present: Ron Averill, Lewis County; Jim Cook, City of Aberdeen; Karen Valenzuela, Thurston County; Terry Willis, Grays Harbor County; Ron Schillinger, City of Montesano; Patrick Sorensen, City of Centralia; Chad Taylor, City of Chehalis; Mark White, Chehalis Tribe

Members Excused: Dan Thompson, City of Oakville; Aurora Lopez, Town of Bucoda

Members Absent: Dolores Lee, Town of Pe Ell

Handouts/Materials Used:

- Agenda
- Meeting Notes from October 15 Business Meeting
- Ripe and Ready Studies Report
- Supplemental Budget Request
- Proposed ESA Adolfson Contract Amendment
- Expenditure Review
- Upstream Storage Feasibility Analysis
- Shannon and Wilson Geologic Report
- Shannon and Wilson Geotechnical Report
- Draft Chehalis River Water Retention Structures Scoping Document and Proposed Studies
- Draft Chehalis River Water Retention Project Phase IIB Feasibility Studies, Scope of Work and Estimated Budgets

1. Call to Order

Chairman Averill called the meeting to order at 1:36 P.M.

2. Introductions

Board members and audience introduced themselves. Mr. Antonio Ginatta will be taking Keith Phillip's place working with the Flood Authority.

3. Approval of Agenda

A correction on the agenda was noted: The last meeting was held on October 15, not October 17, and there was no work session. Without objection the agenda was approved with the correction.

4. Approval of Meeting Notes from October 15, 2009

Chairman Averill stated without objection the meeting notes from October 15, 2009 would be approved. There was no objection and the notes were approved.

5. Public Comment

There was no public comment.

6. Reports

a. Chairman's Report

Chairman Averill briefly summarized the morning's work session which included discussion about a flood control district versus a flood control zone district, and a budget amendment to the GI Study.

He stated a goal of the Flood Authority is to create a flood control district. The Commissioners of all the counties and the Chehalis Tribe have been working on this and have gone before the Legislature to get changes to the RCW regarding flood control districts: Chapters 86.09 and 85.38. Mr. Mackey has done some research in this regard and has asked the Flood Authority whether the flood control district is the best option or if it should look at a flood control zone district, which comes under RCW 86.15. Chapter 86.09 deals with smaller districts and the legislation dates back to 1937. There are some difficulties within that legislation on how a larger flood control district might operate.

Mr. Mackey's report illustrates that the Flood Authority needs to take a deeper look at the two options and he has been asked to bring some experts to discuss the options with the Flood Authority. The members at the work session were asked to review the issues to be able to discuss it further at the December meeting. Copies of the materials will be sent to the members electronically.

Chairman Averill stated the General Investigation Study was also discussed at the morning work session. The Chehalis Basin Partnership has been working on a study since 2000 and when funding became available for flood mitigation and a GI study the Flood Authority met with the Basin Partnership and agreed to piggyback on the existing GI study and add more details for flood mitigation.

As part of that process, the Flood Authority has asked ESA Adolfson to assist. That is taking quite a bit of time as well as requiring new deliverables from ESA Adolfson. There are costs involved and discussion on that will be under Item 9 on today's agenda.

Chairman Averill reported that he, Commissioner Willis, Keith Phillips and Congressman Baird met recently. As we look at the Twin Cities Study and a decision date in late 2012 or early 2013, along with the role of water retention and how the two might cross, the Governor's office is proposing that we have an independent study institute of the State of Washington look at where we are going. The Washington Academy of Sciences has been recommended to review our work and give us some indication of feasibility of how the two might fit together so when a decision is made scientific evidence will play a part. The Governor's office will be funding the review and there will be no cost to the Flood Authority. Currently this is in the discussion phase and there should be more information at the December meeting.

During the open houses conducted in September, about 25 people left comments and the Flood Authority and the Corps of Engineers are working on getting a preliminary response to those individuals. The Corps has drafted a letter to which the Flood Authority has suggested revisions. A final draft will be available soon.

The PUD supplied electronic copies of recent reports and studies which were sent to the Flood Authority. These included a Geological Reconnaissance Study and a Geotechnical Report, a scoping document and proposed studies, and the Phase IIB feasibility study. These will be discussed later on in the agenda.

Mr. Schillinger asked what action is required for the Flood Authority to encourage the Commissioners from the three counties to discuss the flood control zone district or flood control district.

Chairman Averill stated this is something that does need to take place and he will work on trying to make it happen, possibly in December or January.

b. Member Reports

Mr. Taylor requested a memorandum and Chehalis City Resolution be put on the agenda for the December meeting for discussion. The subject is a request for a more in-depth look at some tributaries by the Corps of Engineers to possibly include in their scope of work for the Twin Cities Project.

Mr. Schillinger reported that drainage that goes through Aberdeen to the river, what he refers to as urban flooding, has been an issue for several years. The council funded a \$300,000 project to move water out of and around the impacted area. This was funded by a loan from savings to be paid back over a 20-year period through a storm water fee paid by city residents. He stated the project worked well during the recent heavy rains.

c. Correspondence

A progress report to the governor was distributed to the Flood Authority members, signed by Commissioners Averill and Willis.

d. Facilitator's Report

Mr. Mackey stated the final regulatory workshop had been held and there will be a report from that group at next month's meeting.

Mr. Mackey has been researching the flood district options which he presented at the work session this morning.

ESA Adolfson has been working on the basin-wide GI study. Another meeting will take place on Friday, November 20, 2009 to review the draft sections 1-3. It is anticipated that sections 3-6 will be received shortly and work will continue on those.

Mr. Mackey has been working on the joint project analysis with the governor's office, Commissioners Averill and Willis and Congressman Baird's office.

An updated supplemental budget will be presented later in the agenda.

e. State Team Report

Mr. John Donahue stated discussions have continued with city managers and staff of Centralia and Chehalis regarding the Twin Cities project.

The Corps of Engineers have met with Trans Alta to discuss options, particularly a siphon option. The State provided information on that issue.

The Twin Cities Coordination Team could be convened possibly in December. Mr. Donahue is working with Mr. Goss on a potential agenda for that meeting.

f. Corps of Engineers Report

Mr. Goss stated there will be a meeting on Friday in Olympia to discuss the Project Management Plan in depth.

Mr. Goss stated Ms. Andrea Takash would talk about responses to comments from citizens at the open houses.

Ms. Takash stated there were about 27 comments from individuals at the open houses. Chairman Averill's comments will be included in the Corps' letter to these individuals. A point of contact for the Basin Partnership is needed and the letter will be ready for final approval. In order to expedite the letter the Corps and the State intend to sign it at the Project Manager level and then it will be signed by the Flood Authority and the Partnership. Ms. Takash would like to get the letter out in the next couple of weeks. There were actual questions included in the comments and the Corps will follow up on those. Most of those questions had to do with the levee design. There were requests from a couple of people on how to prepare for flooding and Ms. Takash contacted those people personally and gave them contact information.

Chairman Averill suggested he sign the letter for the Authority to expedite the mailing. He stated the letter is basically thanking the people for making comments. He was happy to hear the Corps responding directly on some recommendations to their project. Commissioner Willis requested receiving a copy for review.

g. Lewis County PUD Report

Mr. Muller asked to postpone his comments to later in the agenda.

OLD BUSINESS

7. Ripe and Ready Studies Report

Mr. Mackey referred to the Ripe and Ready report included in the member packets. He stated the sub-committee met on the feasibility study and has some recommendations and a presentation from the consultants which will be heard later in the meeting.

There is no change on the Skookumchuck.

ESA Adolfson has been working with Ray Walton on the early warning system and is scheduling six community meetings from November 30 through December 2.

Mr. Mackey met with David Batker on Ecosystems Services who will be at the meeting in December to brief the Board.

The LiDAR contract has been approved and the details have been completed. They are cleared to fly as soon as weather conditions allow.

The last item is the General Investigation, and work is continuing. A budget item will be reviewed later in the agenda.

Mr. Taylor inquired about the early warning system and stream gauges. He asked if there is a program in place to alert citizens by phone of imminent flooding.

Mr. Mackey stated when he worked with West Consultants, he emphasized that we need an emergency management system, not just a gauge and technical fix. They are looking at things that can be implemented so that there is some type of failsafe system to get technical information to individuals in a timely manner.

Chairman Averill stated Lewis County has a "Code Red" which is a dial system that is the opposite of 911. It allows warning notices to go out over the telephone. The down side is that it picks up land lines that are in the phone book that are not blocked and does not pick up cell phone numbers. Public service advertisements have commenced to encourage people to sign up for "Code Red" to call their cell phones.

Mr. Mackey stated the first six meetings with West Consultants are to determine community needs.

Commissioner Willis stated Grays Harbor County has a similar mechanism which works on the telephone and can go through e-mail as well. While it is not perfect, it is getting better all the time.

Commissioner Willis stated river gauges are extremely important as part of the emergency system. One of Grays Harbor County's gauges is in jeopardy due to lack of funding. It was taken out of the Sheriff's budget for 2010 and that needs to be pursued so a gauge is not lost due to a funding issue.

Mr. Taylor asked what the cost is for that gauge.

Commissioner Willis stated the County's share is \$8700 for that gauge. She pointed out that there are a lot of gauges in the County. She does not think this is a lot of money for the protection it brings; however, due to extreme budget constraints this gauge is in jeopardy.

Chairman Averill asked Ms. Shirley Kook, Utility Engineer, about the funding of gauges in Lewis County.

Ms. Kook stated of the ten gauges in the Chehalis Basin, the county's share is about \$38,000 for all ten.

Mr. Taylor stated he hopes the Flood Authority would look at this type of thing for helping the County's neighbors.

Chairman Averill stated this is something that would be looked at. Also, West Consultants is working on the state-wide warning system and some things may get to the legislature as a result of that report.

Mr. Cook stated Aberdeen has recently installed an all hazard alert system, which is a voice activated system that was originally set up as a tsunami warning system.

8. Supplemental Budget Request

Chairman Averill stated this subject was discussed at the November meeting. The funding that was provided by the legislature for the Basin-Wide study and the Flood Authority will be mostly obligated by the end of June, 2010. It does not appear that a flood district or zone will be in place to take over at that point and therefore a request needs to be made to the Governor for funding to continue past June 2010.

Mr. Mackey stated the request is an update of what the Authority received in October. The supplemental budget request will go to the governor's office. The original budget was an appropriation bill and this will go through as a re-appropriation, indicating that these funds will be available to the Flood Authority. It will provide for facilitation of the current activities and includes \$1million for research and implementation of a flood district governance and finance formation. It will also include a \$750,000 addition for projects. If the Flood Authority decides on the early warning system, for example, or Phase III on the water retention studies, this would reserve money for your discretion for the next fiscal year.

Chairman Averill would like the Flood Authority to give Mr. Mackey authorization to move ahead with the request to the governor's office as we are running into the preparation for the next legislative session which starts the second week in January. The governor's budget needs to be submitted to the legislature in December and, therefore, there is some urgency to get this under way. Chairman Averill asked for the approval of the Authority to have Mr. Mackey move ahead with this. Without objection, it was approved.

Mr. Schillinger stated the City of Montesano very much appreciates the help of ESA Adolfson. Without their facilitation, reports and studies we would still be back at square one.

9. Proposed ESA Adolfson Contract Amendment

Chairman Averill stated when the original contract with ESA Adolfson was negotiated it was not known that a series of open houses would be held. In the first series of open houses with the Corps the Flood Authority relied heavily on ESA. They put together a brochure, arranged with the Corps, the PUD, the Partnership, Authority, USGS, FEMA and others to attend. There will be more open houses in 2010 and that type of issue needs to be supported. They have coordinated meetings regarding the GI study and none of these things were considered in the original contract.

The details on this issue were discussed at the work session and there is a document in the member packets with a table that shows the proposed amendment for the basin-wide study. The total is about \$79,000. Chairman Averill stated the Authority needs to approve the drafting of a resolution for the contract amendment, to be presented at the next meeting for approval and subsequent approval by the BOCC of Lewis County, acting as lead agent.

There was no objection.

NEW BUSINESS

10. Expenditure Review

Mr. Mackey explained the expenditure review in Mr. Johnson's absence. The amount under consulting services is twice as high as usual because of the billing cycle. Last month that column showed zero and this month it shows two months' expenses.

Mr. Schillinger asked why the last column shows a negative balance under consulting services.

Mr. Mackey stated there is money for consulting services and money for studies. The consulting services column includes survey work that was done by Elway, and there are some fees for the prosecuting attorney included.

Mr. Taylor asked why the prosecuting attorney is being paid.

Chairman Averill stated it is principally for advice given on a number of projects, including contracting.

Mr. White asked how much money that is. Chairman Averill stated he did not know but he could get that information.

Commissioner Willis stated she would like to see exactly where the money is being spent. She asked if each column could be itemized.

11. Upstream Storage Feasibility Analysis

Mr. Dave Muller summarized the PUD water retention process. In early spring the PUD approached the Flood Authority with a proposal for water retention on the upper Basin. The scope of work and budget for that project was about \$500,000 dollars. The Flood Authority thought it was best to divide it into two parts and Phase II Part A was authorized. Today consultants will give a report on Phase II Part A. There are four documents that will be discussed: a geotechnical report, a geological report, a scoping document of the fisheries and environmental, and the scoping and budget layout for Phase II Part B. Mr. Muller stated these documents are available on the Lewis County website and on the PUD website, www.lewiscountywa.gov and www.lcpud.org respectively.

Mr. Bill Laprade, Shannon and Wilson, explained two of the studies, the geology study and the geotechnical study. The studies included gathering all literature regarding these subjects, putting geologist out into the field for two weeks looking at rocks and soils and studying aerial photos provided by land owners. Seismic refraction geophysical work was done to look into the ground; no drilling was done.

There are two sites being considered. One is on the main stem of the Chehalis River about a mile south of Pe Ell, and the second is on the South Fork, where the South Fork diverges back up into the hills to the west. Both are in narrow valley constrictions, which is ideal for dam sites. Moving the dam upstream limits capacity and moving it downstream puts it in open flood plain which would require very wide dams with very deep foundations.

Mr. Laprade referred to illustrations in the reports showing the various rock layers at the sites and landslides, both shallow and deep. Landslides can be affected by a falling and rising reservoir, therefore they need to be mapped out and studied.

Shannon and Wilson spent time in the field with the geotechnical engineers who are experienced in dam design and construction. We do not see any fatal flaws as far as being able to build a dam on these sites.

Mr. Laprade stated impervious materials, such as clay, would be needed. NRCS soil survey maps were used to identify fine grain, cohesive soil. The thickness of those soils is unknown and without drilling we cannot tell what the volumes would yield. For the exterior of the dam we have plenty of sources for

hard rock. A question came up whether or not a roller compacted concrete dam would work at either of these sites and it is our opinion that it would only work at the main stem because of the steep slopes and it could be notched into that area. The South Fork slopes are too flat to make it economical for a roller compacted concrete dam.

Faults and earthquakes are other issues. There are three sources of earthquakes in this area: the Cascade sub-duction zone, a deep sub-crustal earthquake (such as the Nisqually earthquake, which is deep and does not affect the surface too much), and a shallow crustal earthquake. The latter start at the Canadian border and come down to Olympia. There is a Doty fault but has not been studied chiefly because it is in a rural area. Mr. Laprade understands USGS will be studying the Doty fault in the next year. It is believed by other geologists that this is the same regime and is probably an active fault the same as that coming into Olympia. "Active" means active within the last 10,000 years.

Seismic engineers looked at how earthquakes would affect the structures. The Doty fault is 8 miles north of the main stem site and 18 miles north of the South Fork site. In spite of the Doty fault being closer the actual controlling earthquake would come from the offshore magnitude that would be on the sub-duction earthquake. We found one area of broken rocks along the river that indicate an ancient fault and believe this will prove to be something that broke up the crust. They are 10-20 million years old.

Mr. Schillinger asked if Mr. Laprade knows when the last dam was built in Washington.

Mr. Muller stated the PUD built the Cowlitz Falls dam in 1991.

Mr. Schillinger stated there are problems with the Howard Hanson dam and asked if these soils and rocks are similar to that dam.

Mr. Laprade stated there are some rocks that are the same, such as the volcanic rocks and there are some landslide materials. The south abutment of the Howard Hanson dam is in sound bedrock. On the right abutment the entire mountainside is a landslide. The slope of the river was formed by the collapse of the mountainside and there is alluvium underneath. From what we have seen for our site this is not the case. There is landslide debris but there is sound rock underneath.

Commissioner Valenzuela stated there had been a public comment that many dams are being breached and we seem to be going against that tide.

Mr. White stated he has a list of every dam built in the US and those that have been torn down, etc. He stated about 270 dams within the last fifteen years have been torn down, so we are going against the tide.

Commissioner Valenzuela thought everyone should have this information.

Mr. John Blum, EES Consulting, summarized the fisheries environmental scoping document. Phase II A has been completed. We gathered existing information, consulted with the resource agencies and the Tribe, identified data gaps and started to identify some of the potential studies.

We sent out the initial scoping document before the meeting on June 25 which involved the shareholders, stakeholders, the Tribe, and state and county agencies. We identified that there would be some gaps and that there was some information that needed updating or was incorrect. All the comments and corrections are incorporated in the document distributed for this meeting. This is the most current information, and there are still some data gaps.

We reviewed information in five areas: water quality, water quantity, fisheries, in-stream flows and river process sedimentation.

Water quality information was available from DOE, the Chehalis Tribe and Grays Harbor College. Regarding water quantity, there is an extensive system of gauges in the Chehalis River; many are in major tributaries, some are on the main stem. There are some gaps in that there are four on the main stem that are stage only: they only tell how high the water is. They don't tell you how much water that relates to. For an early warning system, that's what is needed. Some gauges are funded but only operate for part of the year and that information is not available on a 24-7 basis.

As for fisheries, the Chehalis has anadromous fish, those that spawn in the stream and then leave the river to rear and then return again. There are a couple of types of Chinook, there is Coho, chum, sockeye, two types of steelhead, two sturgeon, lamprey. These do not include the resident fish. When we do our analysis and we are looking at impacts, there is spawning going on in every month except August for different species which makes this a very complicated system.

Chinook, Coho and steelhead all go above the main stem where the facility would be. It does not appear that the Chinook get as high as that in the South Fork but the steelhead and Coho do go higher.

In-stream flow studies quantify what the changes in habitat are. We have used IFIM which looks at habitat versus flow. We looked at existing in-stream flows that were done on the Chehalis system, and although there have been some done in the tributaries, there has only been one done on the main stem or the South Fork and that was done by DOE and Department of Fish and Wildlife.

The other area we looked at is processes and geomorphic process and sediment routing. We could not find any information downstream of the proposed reservoirs as far as river process and sediment transport. We know some work has been done above that point.

From the information we gathered, we looked at the primary issues that will be involved with this project. With water quality, the issues were high summer temperatures and low dissolved oxygen in the main stem of the Chehalis.

Water quantity would be affected by this project. The main issues were peak flows and bank full flows, which is the flow that causes things to move and revitalizes the channel. We need to look at how the low flows will be affected during the summer period. We also have to look at the effects on water quality because it can affect temperature, and flow is a vital component for fisheries habitat. We need to look at how the water will affect sediment transport.

The report details all of these issues. We have identified areas that are important and need to be looked at. Phase II B will be the actual scoping and study plan development.

Mr. White stated the sub-committee talked about sending this to DOE for a third party review. He would like to see this happen; if there is a problem, this project should not go forward.

Commissioner Schulte summarized the sub-committee meeting of November 12. The same briefing that the Flood Authority heard today was given by the consultants. After discussion, Mr. White recommended using the remaining resources to expand the engineering and economic portion of the PUD study and give what we have to Ecology to determine if additional environmental or engineering work needs to be done or if there is a fatal flaw. We recommended going forward with two parts of Phase II B which is for economic and engineering. From the original draft of this study we would like to add conceptual drawings and conceptual cost and a schedule.

The sub-committee's recommendation is to drop the environmental studies out of Phase II B and just do the economic and engineering, and take the environmental element to Department of Ecology. The members discussing this was Mark White, Karen Valenzuela, sitting in for Terry Willis, and Bill Schulte.

Chairman Averill stated we are not abandoning the biological study. If we get the supplemental budget it will provide additional monies with which to better identify the biological studies cost and add it as a third project.

Mr. Muller stated the sub-committee spent a lot of time on going through the detail of the geotechnical study and fisheries study. The Phase II B scope of work is \$230,000, the second half of what was requested in the spring. With the direction of the sub-committee, the revision just mentioned, the focus will be on using the geotechnical information to refine the engineering for conceptual drawings for the two sites. One of the key priorities will be to look at the project operation based upon the storage for floods. The priority is flood control, or flood mitigation, and the second priority would be to look at summer flow augmentation; the secondary aspect would be hydro. The flood mitigation plan for the basin is what the PUD has been focusing on all along.

At the conclusion of the engineering aspect, there will be no cost numbers and that will feed into an updated benefit cost analysis that would follow the Corps's principals and guidelines for projects like this. We hope to work directly with the Corps so we get that information right. The study area would be broader than the project studies have been in the past. We would look at the entire basin from Pe Ell to Aberdeen and a secondary analysis would be done on the environmental that would focus on looking at the environmental benefits and costs and work closely with Earth Economics to better define the environmental value to the basin.

The budget for the engineering is \$105,000 and the budget for the economic benefit analysis is \$125,000. At the direction of the sub-committee, the \$60,000 to further refine the environmental studies, we moved those items to the other two. We wanted to spend more time on coordination with the Corps and spend more time with Shannon and Wilson and the engineers on the geotechnical element on dam design.

Regarding Commissioner Valenzuela's comment about building or tearing down dams, the PUD has been involved with the western climate initiative through the State of Washington and western governors to address climate change. In the last couple of years there has been quite a bit of discussion about additional water storage because of the concern that there will be less water available due to climate

change. Washington has been studying some sites in eastern Washington for additional water storage because of the water shortage issue.

Commissioner Willis asked Mr. Muller how long it took to get through the permitting process on the last dam that the PUD built.

Mr. Muller stated it was a hydro-electric dam and it took about ten years. If this is a flood control project, and if there is no hydro, you would not go through a federal regulatory process.

Commissioner Willis asked if there were lawsuits involved.

Mr. Muller stated there were none that involved the PUD. There was a lot of discussion with DOE and the SEPA process as well as the NEPA process. There was opposition from rate payers thinking their rates would go up and there was a group in the upper Cowlitz area that was concerned about increasing flooding above the dam.

Chairman Averill stated the next step is to prepare a resolution that the Flood Authority would receive at the December meeting, in terms of proceeding with Phase II B and specifically how we can do that as a precursor for going to the Lewis County Commission for approval.

Mr. Mackey stated the Flood Authority is currently working on the General Investigation study and putting together the Project Management Plan. Until that is signed, there is a question about whether or not things like this would count as a match. Once the PMP is in place and this project is listed, it would be counted as a match. He cautioned the Flood Authority to be sure it is cognizant of the timing and realize the opportunity might be lost if you move faster than you could get match for it under the GI plan.

Chairman Averill stated that is a point well taken. At least we can prepare what it will look like and review it. A decision does not need to be made yet.

12. Confirm Next Meeting and Board-Requested Topics

The next meeting will be December 17 from 1:30 to 3:00. There will be a work session from 9:00 to 11:30, location to be determined.

13. Adjourn

The meeting adjourned at 3:21 P.M.