

CHEHALIS BASIN PARTNERSHIP
Chehalis Tribe "Lucky Eagle" Casino
Rochester, Washington
November 16, 2007
9:30 a.m. – 12:30 p.m.

Meeting Summary

MEMBERS & ALTERNATES PRESENT

Bonnie Canaday, Chair, Mayor Pro-Tem, City of Centralia
Chanele Holbrook-Shaw, Citizen, Thurston County
Ellie McMillan, Chehalis Basin Fisheries Task Force
Debbie Carneveli, Department of Fish and Wildlife (Alternate)
Kahle Jennings, City of Centralia (Alternate)
Lee Napier, Grays Harbor County (Alternate)
Terry Harris, City of Chehalis
Patrick Wiltzius, City of Chehalis (Alternate)

Lyle Hojem, Citizen, Lewis County
Ann Wick, Department of Agriculture
Terry Willis, Citizen, Grays Harbor
J Roach, Citizen, Thurston County (Alternate)
Dave Rountry, Department of Ecology (Alternate)
Mark White, Confederated Tribes of the Chehalis (Alternate)

OTHERS PRESENT

Dave Vasilauskas, City of Chehalis
Bill Schulte, Lewis County Farm Bureau
Theresa Julius, GHCPG
Valerie Gow, Puget Sound Meeting Services

John Penberth, Citizen
Jerry Louthain, HDR
Nadine Romero, Thurston County

GENERAL PARTERSHIP BUSINESS

Welcome, Introductions and Roundtable Comments

Chair Canaday called the meeting to order at 9:36 a.m. Everyone present provided self-introductions.

Discuss and adopt draft-meeting summaries for October 26, 2007

The Chehalis Basin Partnership approved the meeting minutes of the October 26, 2007 meeting as presented.

Nomination of Officers

a. Chair

Mark White called for nominations for Chair.

Lee Napier moved, seconded by Ron Mael, to nominate Bonnie Canaday as Chair. Motion carried.

Lyle Hojem moved, seconded by Terry Willis, to close nominations for Chair. Motion carried.

Bonnie Canaday was elected as Chair unanimously.

b. Vice Chair

Chair Canaday called for nominations for Vice Chair.

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J Roach moved, seconded by Terry Willis, to nominate Mark White as Vice Chair. Motion carried.

Lyle Hojem moved, seconded by Ron Mauel, to close nominations for Vice Chair. Motion carried.

Mark White was elected as Vice Chair unanimously.

SPECIAL PROJECTS AND PRESENTATIONS

Hydrology 101

Ms. Napier introduced Nadine Romero, Hydrogeologist, Thurston County, who provided an introduction on Hydrology 101.

Chanele Holbrook-Shaw arrived at the meeting.

Ms. Romero described her professional background and the format of the presentation:

1. Physiography of the Chehalis Basin
2. USGS Seepage Study
3. General Hydrology & Hydrogeology
4. Importance of Seepage Study

A map illustrating the physiography (physical geography) of the upper and lower Chehalis Basin was displayed. Ms. Romero reviewed physical characteristics. The lower Chehalis Basin is approximately 1,300 square miles and the upper basin is approximately 1280 square miles. Some of the key peaks include Capitol Peak at 2,659 feet, Minot Peak at 1,600 feet, and Little Onion Peak at 2,664 feet. Grays Harbor contains a large continental shelf and continental slope. A subduction zone lies beneath the entire basin. It's important to understand the basin's geology to determine how water flows through and out of the basin, and how aquifers are connected to the Chehalis River. Key geology elements consist of basalt and coal beds sandwiched between volcanic sediments and sands. The geology is not typical to glaciated areas found within Puget Sound.

Ms. Romero reported she is undertaking some work in the Scatter Creek system and is familiar with the geology and has been building geologic cross sections of the region. DNR geologists are building new Maytown geologic mapping units in the Scatter Creek area. The Chehalis Basin has a subduction zone approximately 8 miles from the coast of Grays Harbor. Within the Capitol Peak region, the area is uplifted with basalt of approximately 55 million years ago. The geology of the region is very important. There are many different kinds of hard rock (volcanic) littering the basin in contrast to other basins that are dominated by Vashon glacial sediments. The Chehalis Basin is dominated by rocks that range from 22 million to 55 million years in age.

Ms. Romero reviewed the location of United States Geological Survey (USGS) gauges at river mile 18, river mile 33, and river mile 60. Some of the gauges have 78 years of record. She indicated she was able to obtain data depicting high and low flows over time. The basin, as it crosses over Minot Peak and travels south into the area known as the Willapa Basin, is not part of the upper and lower Chehalis system. The Grand Mound river mile 60 gauge represents 895 square miles of the basin. At Porter, river mile 33.3, the area is 1,294 square miles. The Satsop gauge at river mile 18 represents 1,760 square miles

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of the basin. The elevation of the Grand Mound gauge is 123 feet, at Porter it's 24 feet, and Satsop it's less than 3 feet above sea level.

Average monthly flows taken in January 2006 include:

- Grand Mound = 13,610 cfs (cubic foot per second)
- Porter = 18,270 cfs
- Satsop 31,500 cfs

Average monthly flows taken in August 2003 include:

- Grand Mound = 168 cfs
- Porter = 335 cfs
- Satsop = 559 cfs

Peak storm flows taken in February 1996 include:

- Grand Mound = 74,800 cfs
- Porter = 80,700 cfs
- Satsop = 78,100 cfs.

Generally, during peak storm flows, there is an inundation of water that is absorbed by the valleys. To a large degree, peak flood flows are absorbed by sand units and gravel as it flows toward the ocean.

Mr. Mauel asked whether it's possible to examine historical low flows in the basin during the August timeframe. Ms. Romero said she could assign the task to some of her students.

Ms. Romero reviewed an illustration of the USGS data for gaining and losing reaches in cubic feet per second along the basin. The largest gain of 76.9 cfs occurred near the area of the Grand Mound gauge located above the entry to the Black River. The greatest loss is -66 cfs.

Terry Harris asked whether reaches in the river cause disparity in flows. Ms. Romero said the flow is measured across the river. The seepage study was conducted over a three-day period. Sometimes the hydraulic gradient slows down which may affect a flow change. However, a loss of -66 cfs is substantial.

Ms. Romero reviewed the geology of the basin and basic concepts using an illustration of the Chehalis River late summer flow seepage study showing a gaining reach. A gaining reach is a section of the river where the area gains groundwater. Typically, there are 25 measuring flow points across the river. She described how groundwater enters the stream through various types of groundwater flow paths and hillside springs.

Ms. Romero described other methods of measuring river flows in addition to the USGS Seepage Study. Flow paths may also have longer travel times especially in hill hydrology. Topographic elevation of water is a driving force and it can push water up in the basin. There appears to be quite a bit of banked storage within the system, which will be analyzed.

Ann Wick asked about the area near an estuary and the effect of saltwater or tides on a gaining or losing reach. Ms. Romero replied that it has much impact. Sometimes the gaining reaches can reverse

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themselves. Changes can occur at each measuring point depending upon the day of a month. Tidal affects results in additional hydraulic pressure, which will slow river water and increase its rise. After the Satsop gauge, USGS has another gauge that measures tidal action.

Ms. Willis pointed out that there can be thousands of flow paths within the system.

Ms. Romero addressed questions about flow path time of travel that can range from one year to 100 years. She explained how groundwater can be age dated through analysis to document time of travel of flow paths. Mr. Roach referred to isotope and asked when the decaying process begins. Ms. Romero explained how carbon dating is undertaken with many different methods available for carbon dating water. The world of isotope analysis has expanded substantially allowing for more accurate age dating.

Ms. Romero reviewed wells within the aquifer and how thousands of wells can impact the system. Some wells located in the Scatter Creek area are only 25 to 50 feet deep.

Ms. Romero reviewed an illustration of the Chehalis River losing reach. The USGS Seepage Study revealed five systems where the basin is losing water to the water table from the river. These areas may be naturally transmitting and absorbing flood flows.

Ms. Willis asked about the length of time to see effects from wells within the areas of the losing reach. Ms. Romero said wells will pick up some of the flows but it may not impact the system unless there are hundreds of wells within the system. She explained how large volume pumping wells will eventually impact time of travel, but it's dependent upon the pumping rates and the number of active wells. Ms. Willis referred to new housing developments and noted it may take several years for impacts to the system to occur because of time of travel.

Ms. Romero addressed questions on how wells will eventually impact and reduce instream flows to the river. Reclaimed water is a beneficial use because it feeds groundwater systems. The goal is to optimize use of water, such as examining large pumping wells and their location. Groundwater modeling documents time of travel and how much draw down occurs in a three-dimensional picture. Groundwater modeling is another tool for prediction and planning that many jurisdictions are using.

Discussion followed on the different types of fossil waters. Debbie Carnevali asked whether it's possible to recharge fossil water after withdrawal. Ms. Romero said it would take time as fossil water typically doesn't move through the system as well. Once a system of fossil water is drained, it generally is not replaceable, especially in sandstone systems which collapse after withdrawal of the water.

Ms. Romero described artesian wells. A true artesian well is a well located in a gaining reach with the water level higher than the river level. Essentially, an artesian well has a short pipe with water flowing out of the well, such as the well located in the Diamond parking lot in downtown Olympia.

Ms. Romero reviewed the importance of the Seepage Study. She reviewed the Scatter Creek analytical model and how the model was developed. She displayed an illustration of geologic cross-section of Scatter Creek from Tenino to the Grand Mound vicinity. She said she was able to map well water levels throughout the system and calculate the flow into that section of the Chehalis reach at 58 cfs. Groundwater contribution to the Chehalis River from the Scatter Creek system is approximately 60 cubic feet per second, which matches with the seepage study. The study is important because it defines groundwater contribution in the low flow months of September and August.

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Ms. Romero displayed a piece of basalt rock and described how rock formations contribute to a complex drainage system within the Chehalis Basin. The challenge to the USGS is defining the geology of the basin to build a good model to show how the basin flows, discharges, and recharges.

Ms. Willis said the CBP has discussed building a model for the Chehalis Basin. She asked about pursuing the project and whether Ms. Romero has any suggestions for pursuing the model and how it could be utilized. Ms. Romero agreed such a project would be extensive. She described her experiences with reviewing municipal models that the cities are undertaking to develop new future water supplies. She cautioned that before numerical modeling is undertaken, it's important to first spend time on learning the geology prior to developing numerical models.

Ms. Holbrook-Shaw commented on the depth of wells and said near the headwaters of the Macintosh on the ridge above Tenino, there are two 700 foot wells. She asked whether the owners are attempting to bypass the elevation to reach the Scatter Creek aquifer. Ms. Romero said if the wells are on the ridge, which is approximately 2,000 feet high, they are located in volcanic rock and it's likely they are not tapping into the Scatter Creek aquifer.

Ms. Romero addressed questions from several members regarding the type of water found in some wells and whether geologic data for modeling is available. Ms. Romero reported on efforts for defining the geology of the Maytown area into a part of the Chehalis, which is one small part of the process. Well logs are another component of the study. DNR geologists will likely use the work of Art Snavely, who mapped an 800-square mile of the Chehalis Basin for energy in America in 1958. USGS might also run some geophysics across the river to locate bedrock to build a more accurate model. There are simpler and cheaper techniques that are now available. However, much work remains to be completed.

Ms. Romero addressed a question on water injection for storage.

Ron Mauel asked why he is obtaining saltwater from his well. Ms. Romero said it's likely from sandstone. She described the different rock and soil layers and how some drilling can hit pockets of salty and brackish water.

Ms. Napier reported the review was provided to members because the Partnership is working with USGS. USGS is assisting the Partnership with its long-term scope of work for analyzing the connection between river flow and groundwater levels. USGS is also providing suggestions on spending the balance of \$90,000 legislative appropriation.

Ms. Napier said USGS will attend the December meeting on the future scope of work. The Quinault Indian Nation (QIN) has also conducted some assessment work independently by contracting with a professor from the University of Washington. The QIN wants to share the information at the December meeting. She recommended the Partnership should consider the work of the QIN in terms what the Partnership will be doing in the future to piece the two together. She said she is working with both the USGS and QIN representatives to present information jointly at the December meeting.

Status Report Regarding Grants and Work Plans

Ms. Napier reported the legislative appropriation budget for the task to analyze the connection between river flows and groundwater levels was increased. *Note, the total amount of the appropriation was not*

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increased. She said she and Randy Lehr recently met with Dave Burdick who is the DOE's contract officer for the legislative appropriation. A scope of work was submitted to DOE. The start date is November 1, 2007. The appropriation is considered capital funding that can be carried over to next year. The contract has five tasks to include the Watershed Coordinator, GIS Clearinghouse, Coordinated Water Quality Monitoring, work of USGS, and the staff support to administer the EDT model. Four of the projects will be managed by Grays Harbor College. Ms. Napier recommended reducing the bureaucracy related to the funding by having DOE contract directly with Grays Harbor College. For fiscal accountability, an agreement between the Partnership and Grays Harbor College will be developed for completing the tasks.

Ms. Napier reported in October, the Partnership sent a letter to DOE about the replacement for Steve Craig, who retired from DOE. She reviewed DOE's response to the letter and the plan to hire a watershed lead to assume Mr. Craig's position on the CBP by mid- to late-December. In the interim, Dave Rountry will fulfill some of the responsibilities of Mr. Craig's position. DOE has a short list of candidates to fill Mr. Craig's position. DOE has asked Ms. Napier to serve on the interview panel at the end of November or early December.

Ms. Napier referred to the Water Storage Workshop on November 2. The workgroup reviewed recommendations from the 2003 report. The goal was selecting three projects for further feasibility and analysis. The group selected two large projects. Previously, grant funding was submitted to DOE. The first task in the grant application was developing a list of candidate projects to move forward to the next task of feasibility and design. DOE had some concerns about funding that approach by the grant because in 2003, grant funding was provided to develop the project list. In an effort to revive the 2003 report, it is necessary to undertake the process of reviewing the list of projects and select two projects. Using Phase IV funds, John Kleim was contracted to facilitate the discussion. The Steering Technical Committee (STC) meeting will include a discussion on timing as the funds from DOE are capital funds that can be expended over a length of time. The contract will be between Grays Harbor and DOE on behalf of the Partnership.

Review Draft Letter to Governor Gregoire

Ms. Napier reported members received a draft letter to the Governor. Mr. Craig suggested including the fact that the Partnership received a debriefing from the Environmental Protection Agency (EPA). The letter to the Governor is for supplemental funding to help fund the Coordinated Water Quality Monitoring Program.

CBP Governance

Kahle Jennings provided a copy of his slide presentation. Mr. Jennings reported Bill Jarocki, Director, Environmental Finance Center, Boise State University, provided assistance on the presentation.

Boise State University receives funding from the EPA to help local planning groups, similar to the CBP, in their respective planning processes. Mr. Jarocki has worked with the Partnership previously to develop a prioritization /tracking tool, which is now used by many organizations across the nation. The advantage of working with Mr. Jarocki has afforded the Partnership with being in a role to receive continuous assistance. Mr. Jarocki attended the last STC meeting and developed the presentation on organizational governance. Earlier in the year, Mr. Jarocki provided a presentation on governance to the SBP focusing on a non-profit organization. Consequently, there was some reaction about putting the "cart before the

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horse” and that there may be a need to have discussions on different options of governance and the process for selecting the appropriate type of organization. The STC has been discussing the issue over its last several meetings. Mr. Jennings reported the presentation will cover a proposal on selecting the appropriate government structure and the process for that selection.

STC members discussed possible government structures such as special purpose districts, council of governments such as Thurston Regional Planning Council, status quo, having the Legislature designate a formal watershed council, or a non-profit foundation. The issue is which structure will work best for the Partnership.

Mr. Jennings reviewed several slides on the transition from planning to implementation. In the planning stages, there is a reduction of the broad mission statement to the very specific tasks that need to be performed. This requires broad thinking and representation of points of view that are accommodated in the policy making which becomes the implementation plan, which the Partnership has undertaken during the last six to seven years. The Partnership is now moving beyond that transition point into implementation. As the organization moves from the emphasis of planning to the implementation of the plan, the role of the Partnership changes. Implementation of the plan is a business-like function detailing the actions and resources needed to accomplish the mission, which is bound by the prior work and the policy decisions. The organization still needs oversight, but the specific work of the group is an executive and management responsibility.

Mr. Jennings reviewed a list recommended by the STC on what the organization should do:

- Provide continuity for implementation of the strategic plan – could be long term.
- Provide a level of independence form the influence of any specific interest groups or any single member of the group.
- Have the ability and capacity to acquire and manage resources including but not limited to hiring, contracting, and fiduciary activities.
- Develop and provide organizational advocacy and public education functions.
- Have the ability to receive and manage donations – offering tax deductibility for private individual and corporate donations
- The organization should have the ability to orchestrate the action of the CBP member entities to leverage the potential of the individual members toward the common goals of the CBP.

Mr. Jennings reviewed common denominators:

- Executive management.
- Ability to handle administrative functions.
- Ability to provide fiscal responsibility and oversight.
- Policy creation and guidance (usually by an executive committee or board of directors).

Work to date did not generate specific information about organizational structures of watershed protection entities. Nevertheless, accepting a “cookie cutter” approach doesn’t guarantee a good fit for the CBP. The STC believes that the proper development of organization design options follows from the use of an organization/benefit matrix

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Mr. Jennings reported the STC recommends an approach to answer the question regarding what form, or type of organization, best fits the needs of the CBP. Mr. Jennings reviewed the matrix that includes identification of the different functions followed by a process of taking each of the different organizational structures and matching the best organization based on costs and benefits of each one.

Mr. Jennings requested members consider the recommendation for the approach, whether there should be a modification to the approach as well as reviewing the list of functions for possible additions and/or deletions.

Mr. Napier said the STC also discussed hiring a consultant to assist in the work. Mr. Jarocki has indicated he may be able to fulfill that role.

Ms. Willis asked whether the proposed process is similar to the same process the CBP used in defining the tasks. Ms. Napier said it's different in the sense that it is a comparison process. Mr. Jennings pointed out it may not be as complicated and it's likely it will become clear once the Partnership undertakes the process of matching the organizations with the functions revealing that one or two meet all the functions. Ms. Willis cited the complication of defining the tasks. It appears this process will not be as complicated.

The Chehalis Basin Partnership agreed to move forward with the proposed process.

Mr. Jennings asked members to review the list of what the organization should do and requirements of the structure and provide feedback.

Ms. Wick suggested including "respect the interests of specific groups" in item 2 of the list of what the organization should do. She suggested it's important not to ignore small interest groups' valid concerns. Mr. Harris added that it's important to not let any one cause, organization, or individual dominate the process. The two points of respecting and providing a level of independence from the influence of any specific interest group or single member are necessary but should be independent of each other.

Mr. Rountry suggested including another bullet stating, "Allows for maintaining the cultural and social integrity of the Partnership." He suggested it's a core value or a principle in the way the Partnership operates. Mr. Jennings suggested it speaks to preserving the working relationships that have been established.

Mr. Harris suggested Ms. Wick's recommendation would be better covered in an issues statement of what the Partnership is trying to accomplish and how it goes about accomplishing its goals.

Mr. Jennings acknowledged the feedback and noted the Partnership had a difficult time of working through a difficult environmental of different interests and priorities. All members understand that room is needed for disagreement at times without losing sight of the common goal the Partnership has created.

Ms. Willis suggested including an option to pursue donations in addition to receive and manage donations.

Mr. Jennings invited everyone to attend STC meetings. The STC is an advisory committee to the CBP. Ms. Napier reported the next STC meeting is on December 6, 2007 at 9:30 a.m. at the Department of Fish and Wildlife office at 600 Capitol Way North, Olympia. Members will prepare for the CBP's December meeting. USGS representatives will also attend.

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Next Meeting

The next meeting of the CBP is December 21, 2007.

The agenda includes:

- USGS Proposal – Long-term scope of work and expenditure of the balance of the legislative appropriation
- QIN Presentation

Ms. Willis reported the next meeting of the Water Quality Committee is on December 13, 2007. At the last meeting, members and Randy Lehr selected 13 new water quality monitoring sites. Mr. Lehr reviewed different layers of the GIS Clearinghouse data. Mr. Rountry provided an update the TMDL Study and implementation efforts to date.

Mr. Mael reported he is stepping down from his position on the CBP. He thanked the Partnership for its efforts and he believes it's headed in the right direction. The Farm Bureau is becoming active in other activities to include working closely with Farm Bureau Presidents in Grays Harbor, Pacific County, and Thurston County. The Bureau is stepping up its activities to retain local farmers and keep them in business. Water is a big issue in each of the counties. He encouraged everyone to continue working together. Mr. Mael introduced his replacement, Bill Schulte.

Mr. Mael cautioned members about the Farm Bureau's focus to avoid positions that could result in a possible lawsuit.

Discussion ensued about transfer of water rights and the importance of agriculture retaining and obtaining water rights. Ms. Willis shared that she recently testified about a transfer of water rights and the importance of considering water rights for agriculture.

Adjournment

There being no further business, Chair Canaday adjourned the meeting at 11:52 p.m.

Prepared by Valerie Gow, Recording Secretary/President
Puget Sound Meeting Services