Chehalis Basin Partnership Water Quality Committee
Grays Harbor Forestry Building
Montesano, Washington
March 13, 2008
9:30 a.m.

Meeting Summary

PRESENT:
Terry Willis, Citizen, Grays Harbor
Teri Franklin, Citizen, Grays Harbor
David Jarzynka, Briggs Nursery
Lee Napier, Grays Harbor
Patrick Wiltzius, City of Chehalis
Harry Pickernell, Confederated Tribes of the Chehalis Reservation
Randy Lehr, Grays Harbor College
Valerie Gow, Puget Sound Meeting Services
Samuel Iwenofu, Quinault Indian Nation

Call to Order, Introductions and Changes to the Agenda

Terry Willis called the Chehalis Basin Partnership Water Quality Committee (WQC) meeting to order at 9:41 a.m.

Everyone present provided self-introductions.

Long Term Water Quality Monitoring – *Overall Project Status Report/Discuss Locations for Placement of Long-Term Water Quality Monitoring Probes*

Ms. Willis commented on last month's meeting and the committee's work with Dave Rountry, Department of Ecology (DOE), to update the Detailed Implementation Plan (DIP). One of the missing elements for updating the plan is the habitat element. The committee discussed the issue as Bob Amrine, Habitat Work Group committee chair, was also in attendance. The committee wants to pursue discussions for including the habitat element.

Randy Lehr provided information on the Water Quality Monitoring Program's next phase to install seven long-term water quality monitoring probes throughout the basin to monitor water quality in one-month increments. The probes will be programmed to collect samples at 15-minute intervals for a suite of different water quality parameters with the exception of fecal coliform. Water quality parameters include pH, conductivity, turbidity, dissolved oxygen (DO), temperature, and a pressure sensor to measure water depth. The goal is strategically placing the probes. One suggestion is to locate them near US Geological Survey (USGS) real-time flow monitoring stations.

One reason for placing the probes at USGS flow stations is to provide a better opportunity for modeling results, such as modeling upstream the overall cumulative impacts of changes in water quality in the basin. Knowing the details associated with flows in conjunction with the details of the water quality parameters will provide a good predictive model of the source of the issue(s) and impacts downstream. The approach has been used in a number of different locations across the country. Mr. Lehr said he's worked on a smaller and similar project in Minnesota for real-time monitoring.

Mr. Lehr reviewed the proposed locations of the probes on a map:

- Humptulips USGS gauging station
- Lower Satsop USGS gauging station
- Main stem of the Chehalis at Adna USGS gauging station
- USGS gauging station at Newaukum
- USGS gauging station at Skookumchuck
- One station in Scatter Creek
- One station in Waddell Creek in the Black Hills

Mr. Lehr said there is an expectation of natural cycles associated with increases in turbidity during winter months with heavier rainfall. At the other water quality monitoring sites, one of the goals is to understand background changes that are occurring throughout the basin. The Scatter Creek site was selected because of Thurston County's groundwater monitoring program at a number of sites located throughout Scatter Creek. The addition of the real-time monitoring probe in conjunction with the county's efforts will provide a better picture of the connections between nutrient levels instream and the influence of groundwater and upstream sources.

The other sites were selected based on proximity to USGS gauging stations to give a better picture of predictability for understanding the overall modeling aspects as well as to be located within representative subbasins that have differing types of land use.

Mr. Lehr noted that all the parameters measured under current Water Quality Monitoring Program sites reveal water quality exceeding water quality standards some percentage of time.

Mr. Lehr advised leaving the probes in place for a minimum of one year to measure variations during rainy and dry seasons of the year.

Sam Iwenofu asked about ways to install the probe to reduce the likelihood of vandalism. Mr. Lehr advised it's one reason for locate next to the gauging stations as it will be less conspicuous next to a station that has been in place for some period of time. It's not possible to prevent probes from vandalism. Teri Franklin asked about insurance coverage for the probes. Mr. Lehr said he's unaware of how to insure probes. Mr. Iwenofu shared information on vandalism of insured equipment owned by the Quinault Indian Nation. However, seeking insurance compensation is not necessarily easy, as the tribe has been pursuing replacement for over a year.

Discussion followed about the theft of farm equipment, vandalism, and theft of large construction equipment.

Ms. Willis commented that USGS will need to change it gauging stations because of rock and debris buildup from the December flooding. The USGS gauges only measure flow and height of water. Mr. Lehr said the probes will read the depth of water but not the speed of flows. He indicated another concern is dealing with the probes during high water levels when large woody debris floats downstream, which may damage or dislodge the probes. Others have attached the probes to large cinder blocks. However, the areas were generally lower discharge areas than the Chehalis basin. Mr. Lehr said most of the USGS gauges are located near bridge crossings.

Ms. Willis asked whether data collected under the Water Quality Monitoring Program are available online. Mr. Lehr said not all the data are available online at this time. However, Mr. Narendran Kodandapani is activating a new component to the GIS website. The tool enables users to access and turn different data layers on and off. The user clicks on a particular data point and then can turn on different data layers that

have been captured for that particular data point. The water quality database is still under development. The GIS Clearinghouse website will enable the user to query different water quality parameters at particular testing sites. The website will eventually provide averages and the range from minimum and maximum values for sites. The information will be shaded in different colors to correlate to Washington State standards.

Mr. Lehr said currently, the GIS website has 25 layers that are largely related to water quality and fish habitat. The TMDL listed sites are included and their respective listing as well as all the habitat projects from the Washington Department of Fish and Wildlife (WDFW) database to include culverts, natural fish barriers, restored culverts, outputs from the EDT model, and fish distribution of Coho, Chinook, etc.

Mr. Pickernell arrived at 10:15 p.m.

Ms. Franklin asked whether there has been consideration for accessing the Department of Natural Resources' Forest Practice Application Review System. Mr. Lehr said he has been considering which database would be best to use to obtain soil information.

Mr. Lehr reported in the spring Mr. Kodandapani is teaching a class on remote sensing. The goal is to develop several land use cover projections for the Chehalis basin, such as identifying the different types of land use.

Mr. Lehr reported the GIS Clearinghouse website address is gis.ghc.edu.

Ms. Willis asked about remaining funding availability and future needs. Mr. Lehr advised that there is funding through June 30, 2009 for the Water Quality Monitoring Program. For the GIS website, funding is available through June 30, 2010. Mr. Lehr said it's important to build on the water quality data to obtain an overall picture of water quality. He said he would like use the portable systems at some point in the future on other areas to identify specific sources of water quality problems. It will be important to move the stations from different areas to determine what areas are contributing to water quality violations, which should inform the most appropriate way to address the problem.

Lee Napier asked whether at that point the effort will be close to inventorying high quality waters. Mr. Lehr agreed and shared that Mr. Kodandapani is working with students on an interpolation technique, which is basically an instream modeling effort to look at various levels of water quality data points of a water body to determine the geo-statistical analysis of the relationship between the sites. It will create a data layer of a color-coded line system that conveys the extent of stream miles that are impaired, which will provide an overall inventory of healthy waters. As work progresses on the project, TMDL projects, land use, habitat quality, stream size, and other data will be integrated with the data for completion of statistical analysis. The interpolation project underway by Mr. Kodandapani is in the beginning stages. During the next quarter, the focus of the remote sensing class is to generate a land use/land cover map.

Ms. Napier referred to authoring articles for the *Drops of Water* publication and inquired whether the timing is appropriate to include an introductory article on the Water Quality Monitoring Program. Mr. Lehr advised that he will follow-up with Mr. Kodandapani on what is realistic to release for publication.

Patrick Wiltzius offered a suggestion to include an article on the Partnership's efforts during the last several years.

Discussion followed on the release of water quality monitoring data. Ms. Napier advised that requests for data should be to the contracting authority, which is Grays Harbor College for the water quality testing results. Ms. Willis suggested developing a procedure/policy on how the information is released before a request becomes an issue. Mr. Lehr said the contract stipulates data will be uploaded to DOE's Environmental Information Management (EIM) database and then could be released publicly. Ms. Willis suggested developing written guidelines for the Partnership on how requests for information will be handled.

Mr. Lehr shared information on a video of the Chehalis Basin he created using Goggle Earth in a fly through scenario.

Mr. Lehr responded to questions on the modeling by Mr. Kodandapani and described how GPS will be utilized to determine land use classifications.

Mr. Iwenofu commented on the studies underway through the Water Quality Monitoring Program, Thurston County's groundwater studies, and potential work by the USGS, and how all the efforts will provide a comprehensive picture of the basin.

Ms. Franklin referred to the moratorium and the aquifer study and whether the City of McCleary is informing the college on the status of current progress. Mr. Lehr and Ms. Napier said information has not been shared at this point likely because there isn't sufficient data to share. Ms. Napier reported Grays Harbor County has implemented a moratorium near the Wildcat Creek Aquifer. The county has been working with the City of McCleary and residents to determine a solution. It has been determined that development regulations are needed to protect the aquifer. The county has a grant contract with the Department of Community, Trade and Economic Development (CTED) to craft development regulations as well as development of the Critical Areas Ordinance countywide in some areas and specific to the McCleary area. June is the deadline for a draft ordinance. Because of the unique issue occurring in Grays Harbor County, Ms. Napier said she asked the consultant to provide a presentation to one of the subcommittees of the CBP. The consultant is Jim Arthur.

Ms. Willis said she was under the assumption that Mr. Arthur was hired to conduct some groundwater studies. Ms. Napier said Mr. Arthur is contracting the work. Ms. Willis asked whether information on the aquifer will be available by June. Ms. Napier said Mr. Arthur is subcontracting with a hydrogeologist and should meet the deadline.

Ms. Franklin questioned the deadline for the county's critical areas ordinance. Ms. Willis commented on the status of the critical areas ordinance, which was scheduled to be released on the web. She said during a Farm Bureau meeting, there was an announcement that the draft ordinance was completed and available for public review. She said she called Brian Shea, Grays Harbor County Planning and Building Division Director, about the status of the ordinance approximately one month ago. She said she was informed the ordinance will be on the internet within the next several weeks.

Ms. Franklin provided historical information on the McCleary aquifer and her efforts over the last 10 years to prompt officials to look at the issues surrounding water supply from the Wildcat Creek Aquifer.

Discussion followed about whether there are multiple layers within the Wildcat Creek Aquifer.

Ms. Willis asked if the information will be supplied to Mr. Lehr as part of the flow of information to the water monitoring project.

Ms. Willis asked if the conversations at the last Steering Technical Committee meeting concerning the work by USGS can play into the aquifer issue. Mr. Lehr said it would be beneficial to have corresponding well log information to ascertain percent changes in well levels, which could create a data point for a specific well to ascertain a percentage of water level comparison over several years. It would however, require some continuous monitoring. Ms. Willis said USGS indicated they would undertake the same process if they are contracted. Mr. Iwenofu offered that DOE may also have well log information. Mr. Lehr said DOE has the initial well logs, but generally does not have follow-up information.

Mr. Lehr commented that based on the exchange of sufficient well data over time, it's fairly easy to ascertain the likely drivers causing changes in water levels.

Mr. Lehr said he envisions the water quality data as the foundation for addressing changes in water quality, such as management goals that should be implemented. One of the ways it's approached is based on the percent violations of water quality standards and the goal to be attained for water quality. The goal is to identify what everyone would like in the long term for water quality within the basin.

Ms. Willis cautioned against publicizing a target without first analyzing what will be sacrificed to attain water quality. The goal of the Partnership was not to just pursue good quality water at the expense of harm to businesses, families, fish, and recreation. Mr. Lehr said the goal of the TMDL program is to determine what should be the optimum water quality goal. Once the goal has been identified, the next step is implementing measures to achieve the goal. The question then generally becomes how quickly to work toward achieving that goal. There are different techniques such as through economically driven credit trading systems with the idea of identifying the optimum state of water quality and drivers of water quality impairment and then developing economic development incentives that will help facilitate changes leading to better water quality in a given area. Currently, the Environmental Protection Agency (EPA) considers market-based incentives as a way to facilitate economic vitality while working toward water quality goals. That is the goal of the TMDL Program.

Ms. Willis said the original TMDL that involved the committee occurred when DOE established parameters and targets of a particular reach or creek. However, the TMDL did not identify the starting goal and the goal was based on sporadic water testing compared to the over 80 sites tested under the Partnership's Water Quality Monitoring Program. That's one reason for the establishment of the Water Quality Committee. The committee asserted that new testing numbers were needed for the TMDL to establish new goals.

Mr. Wiltzius said another factor is balancing water quality versus water quantity. When the river is at its lowest level, Chehalis is removing its affluent that is being treated to drinking water standards or better. The issue is whether that makes sense. Those decisions need to be made. He suggested another factor that needs to be considered when the water quality data is analyzed is determining what is natural that should be subtracted from the equation. There is natural turbidity within the system when heavy rains occur. It's the mechanisms of how to get to the goal point that leads to the disagreement.

Ms. Willis said the issue relates to the Mr. Rountry's discussion on the DIP and including habitat as part of the DIP for the TMDL. Habitat was not included. She said she is unsure whether DOE doesn't include habitat for a reason. Mr. Lehr said WDFW is the agency that deals with habitat. Ms. Willis said this is one reason for the discussion.

Mr. Lehr said the GIS Clearinghouse will eventually be an integration of the different data from independent projects. WDFW is largely concerned with fish distribution and fish habitat. DOE is largely

concerned with water quality and water quantity. All the data resides in different databases and all the agencies are developing different tools for online access. The GIS Clearinghouse goal is for a person to access the site and integrate all the data layers from all independent projects.

Ms. Willis said the question pertains to whether the habitat segment works into the DIP as a water quality issue. That was discussed at the last meeting. She agreed habitat should be included because of the problems with the river system. She said she has a meeting scheduled with DOE representatives to visit the river bank and view the problem of buildup of rocks and a slumping problem on the other side of the river bank, which is a creating a pollution problem. Mr. Amrine had commented that he believes that pollution in the water and habitat should be considered jointly, as well as invasive species and log debris.

Mr. Wiltzius agreed they are interrelated and eventually should be combined, but questioned whether now is the best time to do so. Including habitat within the DIP without really knowing how it interrelates and its impacts may cause problems later.

Ms. Willis commented that the DIP folds into the Watershed Plan. Ms. Napier confirmed it's part of the effort to improve water quality.

Mr. Lehr shared that he has been working with a fish habitat work group at WDFW. The group is looking at prioritizing projects for restoration. The group's major limiting factor is understanding the overall quality of habitat in specific regions. The group is working on databases to articulate the physical habitat, such as rocks in the stream as well as integrating water quality data as a way to prioritize overall quality of habitat. He described the challenges associated with the process.

Mr. Pickernell left the meeting.

Ms. Willis asked Mr. Wiltzius about the type of information necessary if habitat is included within the DIP. Mr. Wiltzius said the DIP has goals and deadlines and he wants to avoid the inference that habitat is causing water quality problems, which might cause the Partnership to make a commitment to solving the problem when all the parameters and impacts of habitat are unknown. He agreed with including a general statement within the DIIP that there is an interrelationship between the two that needs further investigation.

Ms. Napier said the Habitat Work Group has its own strategy and suggested habitat should remain a focus of the Habitat Work Group.

David Jarzynka recalled that a similar discussion occurred several years ago when work first started on the DIP. He agreed that opening up the DIP is not advisable and adding another variable at this point is not recommended. He agreed it's an item to address in the future. Ms. Napier suggested it may mean a statement of referencing the Habitat Work Group and their efforts.

Ms. Franklin asked about resources for controlling some invasive species. Ms. Napier advised her to contact Nancy Ness at the Noxious Weed Board. In the Chehalis basin there is a group involved in noxious and invasive species as well as the Nature Conservancy taking a lead role in working in several areas. The Habitat Work Group has been supportive of the efforts.

Mr. Iwenofu reported the tribe secured a grant from the Department of Interior for knotweed eradication. The program has been underway for three years. It's been difficult to eradicate the weed.

Next Meeting Topics, Closing Comments, and Suggestions

The May's Partnership meeting includes the presentation on the status of implementation activities because of the May meeting focus on students from the Water Quality Monitoring Program. The meeting is on May 23, 2008. There will also be a logo contest.

The next meeting of the committee is on April 10, 2008. The next meeting could include planning the Partnership's presentation on water quality implementation activities, which will be coordinated by Mr. Lehr and Mr. Rountry.

Mr. Wiltzius inquired about the schedule for installing long-term water quality probes. Mr. Lehr said the contract has been signed and he anticipates several months before the probes are installed.

Discussion followed on reviewing probe site locations after a year.

Ms. Napier reported on the need for project reviewers for the Habitat Work Group grant projects on May 15 and May 16, 2008 during project site visits and a final review on August 8, 2008.

Adjournment

With there being no further business, Ms. Willis adjourned the meeting at 11:40 a.m.

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