

**Chehalis Basin Partnership Water Quality Committee  
Grays Harbor Administration Building  
Montesano, Washington  
February 12, 2009  
9:30 a.m.**

**Draft Minutes**

**MEMBERS PRESENT:**

Janel Spaulding, Grays Harbor College/Chehalis Basin Partnership  
Dave Rountry, Department of Ecology (DOE)  
Bob Amrine, Lewis County Conservation District  
Ron Schillinger, City of Montesano  
Teri Franklin, Citizen, Grays Harbor County  
Joel Green, Grays Harbor College  
Don Loft, The Evergreen State College/Grays Harbor College  
Nathan Valentine, The Evergreen State College  
Valerie Gow, Puget Sound Meeting Services

**Call to Order, Introductions and Changes to the Agenda**

Janel Spaulding called the Chehalis Basin Partnership (CBP) Water Quality Committee (WQC) meeting to order at 9:46 a.m. Everyone present provided self-introductions.

There were no changes to the agenda.

**Presentation of Water Quality Data and Analysis**

Don Loft reported the briefing will include two presentations. The first will be analysis completed by the Confederated Tribes of the Chehalis Department of Natural Resources (DNR) data and the second will be on progress to date on data involving more focused research around the Chehalis/Centralia area in some creeks and streams.

Mr. Loft reviewed a list of members who were involved in the analysis. Mr. Loft said he completed the dissolved oxygen (DO) analysis, Sandra Warren completed the temperature analysis, Nathan Valentine performed the fecal coliform analysis, and Phillip Spencer completed the pH analysis.

The data is from the tribe's DNR. At the time of the analysis there were 93 sites. Today, there are 95 sites. The data range is from February 25, 1992 to November 1, 2006. The Thurston County sites data range is from 2006 to July 2008.

Mr. Loft outlined the area of the Chehalis basin encompassing Water Resource Inventory Areas (WRIAs) 22 and 23 and the 93 monitoring sites within the basin. Eleven sites were selected for analysis based on the highest violation of water quality standards as well as the lowest for comparison purposes. Because of limited resources, limited analysis was completed on turbidity.

The standards used for dissolved oxygen included:

- Less than 8 milligrams per liter considered to be in violation.

The number of sites reflecting less than 8 milligrams was used to create a percentage by dividing it against the overall result parameter for dissolved oxygen. The highest percentage of violations occurred in the Black River over 67% of the time at site #2237. The lowest reading was at Wishkah River at site #3263 at 6%. A mean of the data was taken from July 1992 to April 2008. Quite frequently the data fell below the standard

**Chehalis Basin Water Quality Committee Draft Minutes**  
**February 12, 2009**  
**Page 2 of 8**

established for the analysis. A trend line reveal conditions are improving over time from the timeframe of November 2006 to April 2008.

Mr. Valentine said the temperature standards are established by Department of Ecology (DOE). Temperatures greater than 9 degrees Celsius are in violation. The sites were ranked by percentage of time in violation. The highest percentage of violations was in the Skookumchuck River at 68.3% of the time. The lowest was at Waddell Creek at 20%. Waddell Creek experienced several temperature spikes in July and August 2007.

Mr. Valentine reported on data results for fecal coliform. Greater than 50 coliform units per 100 milliliters is a violation. The highest percentage occurred at Salzer Creek at 25.88% of the time at site #1322. The lowest percent of violation was the Chehalis River at Pe Ell. There were some other zero percent sites. He displayed a timeline for the percentage of violations. Mr. Loft said spikes occurred in May and June in general as well as in October. Those spikes were fairly consistent over the years.

Mr. Amrine asked why 50 units rather than 100 units were used as 100 units are considered Class A water. Mr. Loft said 100 units per 100 milliliters is the high standard based on the standard scale. At 100 units, action would be needed. The goal is to test water to ensure bacteria levels do not exceed 100 units. Mr. Rountry said the standard used in the Total Daily Maximum Load (TMDL) analysis for the geometric mean water quality standard for bacteria is 100 units. It could be adjusted downward for more protective 90th percentile criteria. The 50-colony number that the team used is more protective.

Mr. Loft reported that the original database analysis was originated by Randy Lehr at Grays Harbor College. Mr. Lehr set the standards for analysis. The goal is converting data into a GIS map, which will include rankings by color to reflect percentage of violation. The goal is to provide a visual representation of which sites are in violation most of the time. Mr. Rountry said the 50 units used in the analysis could be considered the yellow light warning system. However, if there was a need for compliance follow up, the threshold would be 100 colonies. He suggested avoiding interpreting the data as a site that is at risk of compliance or enforcement action, but rather as a management tool to help focus attention before site conditions decline.

Discussion ensued on changing "violation" as it may be too inflammatory and using "percentage of interest" rather than "percentage of violation."

Mr. Loft reviewed pH data. The analysis used a range of 6.5 and 8.5 to determine healthy conditions of the water body and calculated the number of times it was outside the ideal range and ranked it by percent of time in violation. The Satsop River was the highest at 68% of the time. The lowest was on the Chehalis River at site #4144 near Oakville. The Satsop River site is near I-5. Mr. Loft offered a disclaimer on the pH data because there were some extreme anomalies in the data. The tribe indicated problems with the pH meter and consequently the results may not be accurate. The team is reexamining pH and may eliminate a large portion of data used. Some data is from Thurston County, which could be considered accurate. However, most of the data will not be considered.

Mr. Loft reported on two sites of interest along the Chehalis River at site #1112 with a violation of DO over 20% of the time and 7.7 miles down the river, site #1181 was in violation at 50% of the time, which represents a substantial drop in DO over a small stretch of river passing through Centralia and Chehalis. Further analysis on the two sites included taking the mean for site #1112 with a data range from 1992 to 2008 and the other site of #1181 near Centralia. Temperature reflected a normal distribution as anticipated with higher temperature levels in the summer and lower temperature in the winter. As the temperature of water increases, DO disperses back into the air. As it is colder, water tends to hold DO longer. Consequently, as temperature rises, DO levels decrease.

## **Chehalis Basin Water Quality Committee Draft Minutes**

**February 12, 2009**

**Page 3 of 8**

Mr. Loft referred to the range of data for site #1181. Most of the violations occurring in 1994, 1996, and 2001 appear to stabilize in 2006, 2007, and 2008 and are under the standard. Site #1112 is where the river enters Chehalis and site #1181 is where the river leaves Centralia. He displayed a curve comparing DO to temperature. DO was higher in August, which is unusual as the temperature was also higher. He said he overlaid the data and looked at DO at #1112 at 20% and #1181 at 50%. He noted the team's work is still in progress as members are still examining all the sites and haven't mapped all wastewater treatment plant sites and other types of influence on the river. A survey of Salzer Creek and Cole Creek was conducted for changes in DO over that section of the river. Mr. Amrine noted the Dairy Gold plant stopped production of cheese in 1998. It is now a surplus plant. There were many problems when the cheese plant was in production. That's why the dairy had to install its own treatment plant. Mr. Amrine said he hasn't been involved with the dairy for the last 15 years. Mr. Loft said he assumes the dairy monitors its effluent. Mr. Amrine advised that the dairy should be as the dairy has MPS permits.

Mr. Loft reported on another project he is working on with another team of students. The team did not discover anything unusual to cause DO based on temperature, fecal coliform, or pH per se over that stretch of the river. He said he also reviewed turbidity data, which appears to increase slightly over the distance. There are some other factors in between the two sites that are causing the drop in DO. Mr. Amrine suggested reviewing the gradient because it takes some time for water to travel from Chehalis to Centralia. Mr. Loft suggested taking a boat ride up and down that stretch of river to ascertain where storm drains or wastewater influences may be present.

Mr. Rountry said another observation involves the City of Centralia discharging from its treatment plant downstream of the area of concern and below the mouth of the Skookumchuck River. Formerly, Centralia would have been contributing an additional pollutant load to that stretch of the river. However, for the last two years, the City has not been contributing any loads. Other nonpoint stormwater inputs could be a factor.

Mr. Loft said another comparison was completed on the Black River. On-the-ground surveys will also be needed on the Black River.

The team visited Centralia/Chehalis last week and is scheduled to visit Westport for a survey next week for work on fecal coliform.

The meeting was recessed from 10:21 a.m. to 10:29 a.m. for a break.

Mr. Loft reported that with the same standards and methods of ranking by percent of violation, he took each of the water quality parameters of DO, fecal coliform, temperature, pH, and turbidity and also included a number of records to look at how much data is involved in making the determination of the percent that was identified. He outlined the survey point sites along the main Chehalis River and streams and rivers contributing to the river.

Mr. Loft shared results of DO, fecal coliform, and temperature out-of-compliance rates at various sites within the survey area. Mr. Amrine commented that many of the areas are open and many are channelized. Mr. Loft said team members surveyed and walked the dike at Salzer Creek to see how the creek was diverted around the dike. Coal Creek enters into Salzer Creek. He acknowledged that there are many channelized areas. Mr. Loft offered to follow up with Mr. Amrine on many of the sites and some of the factors that may be contributing to the results.

Mr. Loft displayed a map of areas of interest and described some of the results and why some of the numbers may be higher or lower.

## **Chehalis Basin Water Quality Committee Draft Minutes**

**February 12, 2009**

**Page 4 of 8**

Mr. Loft identified the field survey team who conducted the field survey. Blue dots on the map represent sites the team visited. GPS coordinates were taken for each site. Several surveys were completed along the lower part of Salzer Creek. The team began on Coal Creek and observations included the site as located on a floodplain dominated by riparian grasses at the edge of the Chehalis City limits with proximity to two private residences. Pipes observed were draining unknown water sources into a section of the creek located in a relatively disturbed area by the side of a moderately traveled section of road. Water is murky possibly due to recent precipitation. Additionally, as Mr. Wiltzius had stated, it could be due to the proximity to the road.

The team traveled from that site further up where a tributary to Coal Creek is located. The team will revisit the area and travel further up to take some samples. The site was a weaker current than the previous site with a culvert channeling the smaller stream into the site in close proximity to pasture land. There were fair conditions with moderate roadside disturbance.

The team then traveled into town to site #3, which is a highly disturbed site off the side of the road with sewer lines running horizontally over the bank of the stream and water extremely murky with unknown pipe releasing water source into the stream. Some samples were removed but not available for testing at the lab because of timing.

Other sites visited by the team included the dike area where Coal Creek enters Salzer Creek. Some erosion was discovered behind the dike where floodwaters likely overtopped the road. A site located under the railroad trestle at the far end of the dike located outside the Chehalis fairgrounds was marked for future interest.

Another site that is also surveyed by the tribe is site #1379. The team took some samples and observed the site. The area is heavy pastured/farmland with Scotchbroom present as well as resident cows. There is an area near the channel where cows had access to the creek.

Another site had a strong fecal odor in the area that was located along the road in a relatively disturbed area at the edge of a residential yard. Some samples were obtained, but no results were processed because of the timing issue. The plan is to check out tributaries that may be contributing factors. China Creek, Skookumchuck, or Lincoln Creek have not been visited at this point. The field team plans to continue site visits and surveying.

Mr. Green asked about the team's plan for continued surveying. Mr. Loft said the team meets each Wednesday at 4:00 p.m. to discuss plans and activities. The team is seeking funding sources for when the team does identify a site of interest; funds will be available for a project. At this point, the team is conducting field surveys and identifying potential sites.

Ms. Franklin asked whether any of the data has been compared with rainfall data. Mr. Loft said not at this point. The effort is a work-in-progress. Results will be compared with heavy rainfall as well as seasonal rainfall.

Ms. Franklin pointed out the difference in rainfall from continual rain to torrential downpours the area is experiencing in recent years.

Mr. Rountry suggested seasonal data could also help focus potential management actions. Mr. Loft said he also would like to break down the data to determine what's occurring during salmon runs. Mr. Rountry said there are many complications in how water quality standards can be implemented in the area over time. For instance, there is a window from May to October in the critical area of the Centralia reach where there is a greater tolerance for lower DO levels. There is recognition that lower flows and higher temperatures are part

## **Chehalis Basin Water Quality Committee Draft Minutes**

**February 12, 2009**

**Page 5 of 8**

of the reason for some of the water quality issues. Seasonality is definitely a part of the picture. Mr. Loft said the objective at this point is to broadly identify sites of interest for possible focus and follow up.

Mr. Loft commented on the magnitude of the work and the support available to complete the work. Mr. Schillinger encouraged Mr. Loft and his team to continue the important work. He inquired about the availability of personnel from DOE assisting in the effort. Mr. Rountry acknowledged that resources are limited within the department. Some resources could be available on a limited site-specific basis for sampling and some data interpretation, but not on the level of the work being undertaken by Mr. Loft. Mr. Loft said he's committed to improving water quality and sees the issue as a serious problem for future generations. The field team is also very committed to the effort and the team is looking for potential sites for a micro or bio remediation to improve water quality. Once water quality is compromised in larger bodies, such as lakes, estuaries, and the ocean, it's difficult to mitigate. The areas of focus are those areas between point sources of pollution and the mouth of the stream or channel. If there are locations for adding constructive wetlands to filter contaminants before it hits the estuaries, it might be possible to stop the huge contribution of toxins to the ocean.

Ms. Franklin said people are not concerned about protecting wetlands, as they should be. Mr. Loft said the lack of concern can be attributed to lack of education. Wetlands are here for a purpose as they filter toxins and recharge groundwater. Wetlands are disappearing at an alarming rate because of development. Protecting current wetlands is important because more will need to be created. Ms. Franklin noted that it's also difficult to create new wetlands as it takes many years for a wetland to become effective.

Mr. Amrine asked whether the team has monitoring equipment. Mr. Loft said the team has access to The Evergreen State College lending lab. Grays Harbor College also has flow meters that the team would like to borrow. Mr. Green said he was unable to locate a complete flow meter to lend to the team.

Discussion followed on where the samples are processed. Mr. Loft said funding is needed to complete sampling in a lab. Mr. Amrine suggested contacting Mr. Wiltzius as the City of Chehalis has a lab. Mr. Green suggested the committee should continue discussing funding needs and available funding sources to assist the team. Mr. Schillinger offered the team a flow meter as well.

Mr. Loft said the team will write a report on its findings as sampling and surveying continues. Mr. Green offered to assist the team in priority typing.

Discussion followed on funding availability through the stream team and the potential to purchase equipment at some point once the stream team is established. The equipment could be checked out and used by a variety of users as well.

Ms. Franklin inquired about the status of Mr. Lehr's watershed survey. Ms. Spaulding said the survey was discussed by the committee and the Steering Technical Committee (STC). The primary concern is the cost involved. The STC agreed to keep the survey on the shelf and seek future funding. There were also some concerns about the length of the survey. The cost of distributing the survey as well as the time it would take to complete the survey are the two primary issues. Ms. Franklin offered a suggestion of using the assessor databases for parcels within the Chehalis basin and pursue a mailing to every 10<sup>th</sup> parcel to complete a random mailing. She offered to contact and deliver the surveys to each participant. She mentioned the land use survey for Grays Harbor County she completed in 1997 involving a personal visit to each parcel in the county except for forestland. She offered to talk with each survey participant because of the importance of the survey to the Partnership. Ms. Spaulding added that many volunteers have also contacted her to assist in different efforts.

## **Chehalis Basin Water Quality Committee Draft Minutes**

**February 12, 2009**

**Page 6 of 8**

Ms. Franklin said completion of the surveys would assist in securing more funding for the Partnership as well as increasing public awareness about the importance of water quality within the basin.

### **Terry Husseman Grant Solicitation from the Department of Ecology**

Ms. Spaulding provided members with a copy of the Terry Husseman Grant application. Completed applications are due on March 4, 2009. Projects are limited to a maximum of \$50,000. The Centralia Stream Team is applying for the grant for trash clean up, removal of blackberry and canary grass, and a stream walk survey. The Stream Team's next meeting is in Centralia on February 16, 2009 at 6:00 p.m.

Mr. Rountry said the grant is offered approximately twice a year. Two different projects funded through the grant included seed money for the Chehalis Basin Education Consortium for outreach for grades one through twelve projects. Another project included a blend of funding including Husseman funds for large woody debris installation in the Wishkah River.

Terry Husseman was the former Deputy Director of DOE. He passed away approximately eight years ago. Mr. Husseman was devoted to environmental quality and protection. The funding is from a portion of penalties for water quality violations. The funds are managed as part of the Coastal Zone Management Program under the Shorelines and Environmental Assistance Program in DOE. Chris Hempleman's program administers and manages the grant. The applications are reviewed by a team of individuals at the regional office. He suggested contacting a local agency advocate, such as him, as soon as possible for projects. Restoration work is the focus of the grant. However, there can be exceptions.

### **How to Develop and Conduct Second Annual Review of Progress on Water Quality Protection Work**

Ms. Spaulding referred members to several handout materials.

Mr. Rountry reported a review of water quality protection activities occurred in September 2007 with completion of the review in early 2008. The focus was to review the activities completed by different organizations and individuals. There is an administrative obligation to follow up and review as part of the TMDL implementation progress report. Additionally, it was important to document the reviews as it feeds into the goals and the objectives of the Chehalis Watershed Plan, Detailed Implementation Plans (DIPs), and the issue papers for the watershed plan. Mr. Rountry said he undertook a review in preparation for the discussion to determine what the committee should accomplish. He suggested reviewing what can be improved, if there are gaps that need to be filled, and ways to improve the review to ensure they are purposeful and true to the objectives of the watershed plan and the TMDL water cleanup goals. The information also helps to inform DOE so that the department can inform local governments, regulators, agencies, organizations, and partners assisting in implementing watershed quality protection to instill knowledge and understanding in joining in the cause to be that frontline water quality protection steward. It's a very clear goal in the watershed plans and the TMDLs, and to put citizens, landowners, and businesses on the frontline in stewardship actions for maintaining and improving water quality. The goals for the reviews are broad, but basically involve people and maintaining stewardship actions while adding momentum. Much has been accomplished during the review process last year. However, there are several areas where the objectives were not achieved. There is a very important aspect of the review that is required within the watershed plan and the TMDL process to simultaneously compare water quality conditions with what is known about implementation actions. It's that view that helps focus attention on a given area and helps to establish priorities for the next steps or to acknowledge some positive actions because of deliberate work.

Mr. Rountry referred to Mr. Schillinger's question about what DOE has to offer on the level of work Mr. Loft and his team are undertaking in collecting, assembling, analyzing, interpreting, and providing the information in a state of the river report. DOE hasn't been able within the Partnership or the subcommittee level to undertake a simultaneous comprehensive review of an overlay of implementation actions with water quality

## **Chehalis Basin Water Quality Committee Draft Minutes**

**February 12, 2009**

**Page 7 of 8**

conditions. It's a goal by merging the GIS project with the water quality data project. However, the outcome hasn't been obtained at this point, but headway has occurred through Mr. Loft's efforts. Mr. Rountry said he's requested support from DOE's Environmental Assessment Program as a fallback to consider providing a review service. He said he formulated a draft project request. The main purpose of the request is to identify areas specific where a focused TMDL study should be initiated, such as in 303(d) listings in areas where there hasn't been any focused attention and where it is now a priority for whatever reason. Nobody within the Chehalis basin has contacted him about hot spots or specific project requests for TMDL studies. Much work has been accomplished across the watershed, such as completed TMDLs and action plans. Currently, the basin is in the implementation phase rather than the study phase.

Mr. Rountry circulated a copy of the project request for effectiveness monitoring review. The project scope is to utilize existing data provided by the Partnership and overlay that with information that can be obtained on a site-specific basis where implementation has occurred. The information will provide a subjective review on the status of water quality efforts within the basin. The deliverables are negotiable, but there is an expectation in each TMDL to complete an accountability review.

Mr. Amrine said the review might reveal areas where water quality was degraded but has continually improved and remains good. It might be possible to visit those sites to ascertain what was done to improve water quality. At the same time, there are some areas where implementation activities have occurred but water quality continues to worsen rather than improve. There are many activities that have improved water quality.

Members discussed the importance of having landowner cooperation, educating youth, who in turn help educate parents, and work completed years ago that is beginning to result in improved conditions.

Mr. Rountry said since the last review, there have been several opportunities for using the review information to include quarterly updates to a TMDL electronic database and in a 10-year review to the plaintiffs who filed a lawsuit against DOE and the Environmental Protection Agency (EPA) about the lack of TMDLs and follow through. He shared a copy of the 10-year review to the plaintiffs for WRIAs 22 and 23. Information includes the Grayland Ditch pesticide reduction project, which is part of the Chehalis basin that drains to south Grays Harbor. The other pages focus on work and results in the Chehalis basin. Information from progress reviews is put to good use.

Mr. Rountry said the questions to ask include:

1. What went well that should be continued?
2. What didn't go well that might be considered differently?
3. Are there any different or new outcomes to consider that might affect the direction the committee takes?

Mr. Rountry referred to Table 2, which is an attachment to the TMDL Implementation Plan comprised of a coarse listing of the pollutant source, responsible agency, action for resolving the issue, status/schedule, and funding. There is a gap in the table where some of the entities did not provide a report even after multiple requests for information. The questions are not asked to be punitive, but to learn what can be done better and what the obstacle is for moving forward. It's a question the committee should be asking. The Partnership took some bold steps to seek the information and the response was tremendous from 99% of the entities and organizations, as well as, from some parties that are not included on the table. However, three to four of the entities identified within the table that have made previous commitments for implementation did not provide any information on the status of any activities. That information represents a gap that is somewhat frustrating. The goal is closing that gap. Mr. Rountry asked for ideas on how to close those gaps.

## **Chehalis Basin Water Quality Committee Draft Minutes**

**February 12, 2009**

**Page 8 of 8**

Mr. Schillinger suggested personal contact might be required.

Ms. Franklin commented on the difficulty of obtaining involvement on the committee by DNR. DNR needs to be represented on the committee.

Mr. Amrine shared that often referrals to the conservation district from DOE are effective. The conservation district works with the landowner and helps prepare a plan, with most of them adhering to the plan to avoid paying fines. It's been very effective for the district as many of the landowners return to the district for assistance in preparing other plans or help in resolving issues.

Discussion followed on the September 2007 workshop and the possibility of scheduling another workshop as a way to obtain missing information. That workshop was very successful.

Mr. Amrine questioned why all cities are not involved in stormwater. Ms. Franklin commented that representatives from the cities of McCleary or Elma have never attended any meetings. Mr. Rountry said one of the reasons some of the cities are not identified on Table 2 is because it is a TMDL-centric table and there was no stormwater discharge analysis from some of the smaller cities, such as McCleary and Elma.

Members discussed the importance of wetlands and development occurring within wetlands impacting streams and rivers. Mr. Loft spoke on the need for development to contain stormwater within the property through the use of roof gardens, rain gardens, and bioswales by buffering runoff water to the extent possible. Another benefit is populating those gardens and swales with plants to absorb toxins. Development should never occur in wetlands, but if it must, there must be policies in place to contain stormwater through the creation of buffers.

Mr. Rountry offered to arrange another workshop/roundtable similar to the one held in September 2007 and begin collecting information from entities that are willing to share the information. He suggested committee members could personally visit some of the entities and individuals as well. He offered to coordinate a date with Ms. Spaulding and Ms. Napier to avoid any possible conflicts. The committee should have more discussion about gathering more geographic level information on implementation actions so spatial coordinates can be obtained for a review. That will help make the review more meaningful.

### **Adjournment**

With there being no further business, the meeting was adjourned at 12:19 a.m.

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