

**Chehalis Basin Partnership Water Quality Committee  
Grays Harbor Forestry Building  
Montesano, Washington  
September 11, 2008  
9:30 a.m.**

**Meeting Summary**

**MEMBERS PRESENT:**

Janel Spaulding, Grays Harbor College  
Teri Franklin, Citizen, Grays Harbor County  
Ron Schillinger, City of Montesano  
Lee Napier, Grays Harbor County  
Dave Rountry, Department of Ecology  
Harry Pickernell, Confederated Tribes of the Chehalis Reservation  
Patrick Wiltzius, City of Chehalis  
Don Loft, The Evergreen State College  
Brady Engvall, Citizen, Grays Harbor County  
Jeff Nelson, Environmental Health Division, Grays Harbor County  
Garrett Dalan, Environmental Health Division, Grays Harbor County  
Danielle Gardea, 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 9:40 a.m.

**Presentation of the Chehalis Poplar Tree Plantation and Chehalis Regional Water Reclamation Facility**

Mr. Wiltzius reported he previously provided the presentation to the Pacific Northwest Clean Water Association (PNCA). Mr. Wiltzius provided a brief history on the plantation. In the 1990s, a Total Maximum Daily Load (TMDL) Study was conducted by Department of Ecology (DOE). The study revealed there was no capacity available for the City of Chehalis, Dairy Gold, and the City of Centralia in that portion of the river. There were legal actions resulting in a consent decree requiring discharge limitations into the river during certain periods of the year. The agencies were required to comply within eight years. The old treatment plant was located in the floodway and was over six years old. The City proposed options including approaching the City of Centralia or finding ways to use reclaimed water. The City decided to build a poplar tree plantation and use reclaimed water for irrigation.

Mr. Wiltzius described the benefits of poplar trees.

- Poplar trees are fast growing.
- Leaves have large surface area aiding in evaporation.
- Straight trunks are beneficial for lumber products.
- Large nitrogen demand.
- Wood can be used for biomass, chips for paper, furniture, and plywood.

Poplar trees utilize more water than most crops. The City has 175 acres of trees, using 175 million gallons of water per growing season.

The trees are harvested at approximately 15 years. The current crop is five years old. Harvesting will occur on a rotational basis before 15 years. The growing season for irrigation is from April to November. Permits

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require nonuse of the river when flows are below 1,000 cubic feet per second (cfs). During winter when there are no leaves, the plantation infiltrates Class A reclaimed water. Currently, the plantation is producing Class A biosolid products sold to farmers for \$1 a yard.

The trees produce a tall dense structure and can provide a visual and/or odor barrier as well.

Mr. Wiltzius reviewed the design of the plantation.

- The plantation is sized to handle 3.5 million gallons of water a day.
- The plantation is 250 acres with 176 acres planted in trees.
- The plantation is divided into 11 different management units.
- Approximately 40,000 trees were planted in 2004.
- There are nine different hybrid varieties for disease control.
- The plantation includes a maintenance road for logging during harvest time.
- Several roads are designed as impoundment berms for water storage during the winter.

Mr. Wiltzius displayed a slide showing the layout of the plantation and the location of the buildings and trees. The property was purchased from a landowner who used the property as a working farm. The barn and the silo on the property were demolished. Fencing and existing trees were removed and the site graded and leveled. The City installed underground irrigation manifolds, constructed a maintenance building, fencing, and roads.

Mr. Wiltzius reported a large concrete slab was removed from under the barn. Trees planted in that location are not doing as well as the area where cattle were stored. After purchase of the farm, mitigation was necessary because of the historic significance of the property. The property contained approximately three acres of large oak trees. Concerns were conveyed from the Chehalis River Council regarding the loss of the oak trees. The City retained oak trees with a circumference of 16 inches or larger on the property. A covenant pertaining to a portion of the property required retention of the "Pow Wow" tree or "Sacred Tree. Stories surrounding the tree include the burial of Indian princesses to farmers burying their wives under the tree.

Mr. Rounry asked whether the landowner's deed included a covenant. Mr. Wiltzius replied that there was a covenant included.

Mr. Wiltzius reported four areas were surveyed for archeological purposes. Artifacts were documented as buried in the areas and no trees were planted in those areas.

Mr. Wiltzius reported the irrigation system runs under the river from the new treatment plant to the north of the property and then down the center of the road.

The cost of 40,000 trees was approximately \$8,000. Planting by hired crews cost approximately \$7,000. Survey of the land was approximately \$100,000. Two part-time employees work in the field on maintenance. The area is fenced with 8-foot fencing to keep elk and other animals out of the plantation.

Mr. Rounry asked how different management units are distinguished. Mr. Wiltzius replied the units are arbitrarily divided into appropriate sizes for growing and for irrigation. The different management units include different hybrids.

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Ms. Napier asked whether the City is responsible for cleanup of the area. Mr. Wiltzius replied the City is responsible and wants to eventually work with a student on a project involving the plantation.

Mr. Wiltzius reported in Management Unit 1 of the plantation, the trees appear to have a growth resembling rust, which is a fungal disease causing the leaves to fall earlier in the fall. There is little that can be done to prevent the disease. Herbicide applications are used for weed control in the tree lines and manual brush hogs in the rows. As the trees grow larger they form a canopy creating difficulty for grass and weeds to grow.

Mr. Wiltzius explained that there are two types of reclaimed water that can be used for irrigation. Class C reclaimed water is used during the agronomic phase and Class A reclaimed water can be used for irrigation at any time. This is the first year the City has been able to irrigate because the flood destroyed most of the irrigation lines.

DOE mandated installation of groundwater monitoring wells throughout the plantation. Five wells were placed based on groundwater flows. Dairy Gold has its own wastewater treatment plant and doesn't experience river restrictions to the extent the City experiences. During river restrictions, the plantation uses the dairy's excess water for irrigation.

Three manifolds are located on the plantation, each serving three to four units. A flow meter in each valve monitors the amount of water used by each unit. Mr. Wiltzius displayed a slide showing the Supervisory Control and Data Acquisition (SCADA) screen. The entire system can be opened and closed from the treatment plant. Sprinkler heads are located two feet from the ground and are placed on fiberglass rods.

Pruning is at head height to maintain trees appropriate for future logging. Pruning began in 2005, but it's a slow process with two part-time workers. In 2008, the Federal Emergency Management Agency (FEMA) funded a work crew to clean up debris from the 2007 flood. The crew did such a wonderful job they were hired as a pruning crew for an additional six weeks.

Mr. Wiltzius commented on impacts to the plantation by the flood. The plantation can be submerged up to three or four months without sustaining damage. The 2007 flood created floodwaters from the north and south banking over Highway 6. The eight-foot fence along Highway 6 was flattened. Two miles of the gravel road was washed into the trees along with debris. The flood washed out the main for the irrigation line. FEMA covered 75% of the damage to the roads and fence. However, the process was long and repairs were only recently completed. Damage to the irrigation system was not identified at the time of the flood and was not covered. There was also silt displaced to the plantation. Although not too damaging to trees, silt is a factor in how water infiltrates into the ground. He displayed a picture showing how the water level rose so high that the irrigation lines were tangled in the branches of trees. Many of the irrigation lines were ripped and the irrigation sprinklers were damaged creating geysers in the system.

Mr. Wiltzius displayed current photos of the plantation.

Mr. Schillinger reported that the City of Montesano undertook a similar project around its treatment plant. The plan was to apply biosolids as they accumulated, but DOE would not allow the application in a floodplain. During December through February when the ground is soft, the plantation will have problems with trees falling over when there are high winds, which the City of Montesano experienced over three different years. Mr. Wiltzius commented that the City of Chehalis does not experience the same velocity of winds typically experienced by the City of Montesano.

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Mr. Schillinger asked about the costs associated with operating the plantation. Mr. Wiltzius reported the cost is approximately \$60,000 a year for part-time employees, fuel, tractors, and labor. Mr. Schillinger asked about the initial costs. Mr. Wiltzius reported the farm was purchased for \$1.4 million with the first phase of development costing \$1 million. Tree plantings cost approximately \$200,000 and another \$500,000 for the irrigation system. DOE provided a grant and a zero interest loan.

Discussion ensued on the capacity and harvesting of the trees.

Mr. Rountry asked about the potential harvest value of the trees. Mr. Wiltzius advised that the figure has not been established at this stage of the process. Mr. Schillinger offered to assist in estimating the value based on harvesting recently completed by the City of Montesano.

Discussion ensued on other uses of reclaimed water and the costs associated with the option.

Mr. Schillinger responded to Mr. Rountry's earlier question and indicated Zepp Logging harvested the City's trees. Not factoring initial preparation costs, the City netted approximately \$500 an acre.

Mr. Rountry asked whether the groundwater monitoring wells are designed to accommodate a water review or analysis. Mr. Wiltzius affirmed that it's possible. Mr. Rountry said the concern involves a lack of balancing water flows to the river and how much is lost to evaporation. Mr. Wiltzius advised that polar tree experts provided the basic information on irrigation rates.

Ms. Napier advised that at the Partnership's October meeting, Mr. Wiltzius will provide the same presentation.

*Mr. Dalan and Mr. Nelson arrived*

### **Discussion of Water Quality Concerns in the Grayland/Westport Area and Possible Role of Water Quality Committee in Finding Solutions**

Mr. Rountry described the background associated with the Grays Harbor TMDL. Water quality concerns for the Grayland/Westport area date back 10 years. Since then, the TMDL study identified pollution loads at dozen of locations throughout Grays Harbor, specifically at Winter Creek and Grayland ditch. There are expectations within the TMDL study that there will be actions to limit and bring the tributaries up to water quality standards. There are actions in the TMDL implementation plan for local government stormwater pollution prevention and protection. There has been much discussion in seeking financial and research assistance for pollution source identification. Three years ago the Department of Health's (DOH) Shellfish Program recognized the concerns and limitations regarding human health protection from shellfish in the harbor. Work is underway with Mr. Nelson, Director, Grays Harbor County, Environmental Health Division, for different sampling strategies for the Winter Creek area. DOH is conducting monthly sampling within the creek. DOE doesn't have any additional information since 2003.

Mr. Rountry reported that approximately two months ago, the state's health shellfish program expressed concerns on the results received from the south harbor area. At that time, DOH indicated if high levels continued the state would close the area for shellfish. The area may be influenced by bacteria discharged from the Grayland ditch. A question was raised on whether additional monitoring and sampling should be undertaken. There is a significant source of fecal coliform bacteria pollution loading into the south harbor area based on the 1997-1998 work from the Elk River. There is no human influence in the area so there is no expectation of improving conditions by focusing on Elk River.

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Mr. Rountry reported that he and Mr. Loft visited the area to become better acquainted with current activities occurring within the area.

Mr. Loft displayed a slide showing the different locations of samples. The first sample is from the mouth of Winter Creek near the tribe. Unfortunately, no GIS data are associated with Winter Creek. At some point, mapping will need to be undertaken of Winter Creek and the areas running through urbanized areas. Mr. Loft reported on the sample from Fake Lake and samples in Grayland along the ditch. A gated road revealed high levels of bacteria, which may require some type of mitigation. An individual is using mycelium mats to filter particles, bacteria, and chemical contaminants that could also be used in areas experiencing similar contamination.

Mr. Loft reported the ditches surrounding the cranberry bogs should be sampled as well. A series of bioswales could be used to decrease the amount of contaminants running off the fields.

Ms. Franklin asked whether a student is available to assist Mr. Loft in monitoring activities. Mr. Loft advised that the school's chemistry lab for water quality might be a good source of student volunteers.

Ms. Napier asked Mr. Nelson if the division is currently conducting any sampling. Mr. Nelson replied that there has been some sampling in conjunction with the yearly beach monitoring program. Data are available from June to September 3, 2008. The samplings show slightly elevated levels in July and a high spike in mid-August.

Ms. Napier asked about the current status of water quality in shellfish areas and whether there's a possible role for assistance by the committee. Mr. Engvall replied that the problem in the state pertains to similar treatment of all shellfish areas with no methodology to assist shellfish growers in identifying the source of fecal coliform contamination. Testing is needed to determine the source of the contamination.

Mr. Dalan offered that it's likely the impact of testing would have on closures or regulations is unknown, and that funds would be wasted if testing does not identify the source of the contamination.

Ms. Napier commented that Thurston County has a Shellfish District which provides a funding source. Mr. Engvall replied that a major downgrade is necessary before a shellfish district comes into play. Ms. Napier confirmed that the letter states that if there is a major downgrade then a shellfish district could be established. Mr. Engvall suggested that if that occurred, shellfish businesses would likely shut down until the situation improved.

Discussion ensued on the animals at Elk Creek and the source of fecal bacteria.

Mr. Rountry reported that there have been discussions with Grays Harbor County Commissioner Carter for more than two years regarding the situation occurring at Westport. He expressed interest in having interlocal government discussions to help address the issue. The recent letter has raised the level of interest again. Commissioner Carter has asked Mr. Rountry for his assistance in establishing a meeting. Mr. Rountry said he's contacted affected parties for participating in a meeting.

Ms. Napier said she understood the meeting occurred in August when she was unavailable to attend. Mr. Rountry said he believes the meeting has not been scheduled.

Ms. Napier questioned the desired outcome from the meeting. Mr. Rountry said his goal is for participants to compare notes on the current issues and impacts and consider establishing outcomes to achieve some

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resolution, as well as looking at the cost and impacts to the environment, people, the local economy, and to local industry.

Mr. Dalan said the letter pertained to the formation of a shellfish district. At some point, a district will be formed. Local government has the option of establishing a district. Local governments discussed working with the college for assistance on the program. Grays Harbor County Environmental Health Division contacted the Board of Health at the request of Commissioner Carter. The overall intent is focusing on options for further studies. There is an opportunity to improve the sampling process through a more structured program.

Mr. Nelson advised that the division is working with community groups to discuss the issues and tracking information to determine the best options for moving forward.

Ms. Napier asked whether the division needs additional assistance. Mr. Dalan replied that the division's scope of work is outside the realm of the saltwater environment.

Mr. Engvall asked for clarification on the RCW regarding a shellfish district if a major downgrade within the industry occurs. Mr. Dalan replied that RCW allows county commissioners to form the shellfish district before enacting downgrade action. Mr. Napier advised that there is interest in forming the district before such action occurs. The question is whether forming a district is necessary if another group is willing to perform the work to help limit restrictions. Mr. Engvall said the industry is opposed to forming a shellfish district.

Mr. Dalan said he's not aware of any funding availability for a shellfish district, and there is no benefit. County commissioners can appoint another body with funding availability to perform the same duties as a shellfish district. Mr. Engvall said to receive funds, the entity must have taxing authority and that the county must form a shellfish district before the county can establish a taxing authority.

Ms. Napier offered that the county could form a conservation district and level assessments. There is a variety of mechanisms for assessing fees to generate revenue. Options could be researched in terms of the benefits of a shellfish district versus other special purpose districts.

Mr. Dalan said that he understands after the establishment of a district there are requirements that must be fulfilled. However, some of those requirements can be avoided if authority is transferred to another group.

Ms. Napier asked for clarification on the comments by Mr. Dalan regarding improving sampling. Mr. Dalan replied that there are times when flows are high, which generally occurs in winter. If testing was constant at those sites, it's likely the samples would reveal contaminants because of the amount of rain and the influence from septic systems from November to March. If there are potential suspects in terms of the contamination source or hypothetical conclusions, the scope of samplings could be narrowed to those factors.

Ms. Napier reported on Mr. Pickernell's contribution in assisting in the collection of samples for the Partnership's Water Quality Monitoring Program. She asked whether there is the ability to adjust the monitoring sites or add additional ones. Mr. Pickernell advised that the program currently involves 93 sites, which could be increased to 95 sampling sites.

Ms. Napier commented that it's possible to place long-term probes that can be calibrated monthly by the tribe. She asked whether the long-term sites have been selected. Mr. Pickernell replied that he's in possession of the probes but doesn't have the sites identified for placement.

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Discussion ensued on the possible location of the probes as well as accessibility issues.

Ms. Napier asked whether Mr. Nelson has previously worked with a drainage district. Mr. Nelson replied that he has not worked with a district. Ms. Napier suggested a drainage district is limited in scope but that the committee may be able to work with the district. She asked whether the drainage district is active. Mr. Engvall replied the drainage district is primarily focused on removing water and likely would not be interested in assisting with water quality issues. Drainage water is used to process cranberries. There are several cranberry bogs that are diked using ditch water. Those cranberries can only be processed for canning.

Mr. Schillinger commented that it's an issue the Water Quality Committee was established to support as well as assisting in the sampling program. Grays Harbor County, the Department of Health, and cities have a huge responsibility role pertaining to the issue.

Mr. Rountry suggested more sampling is necessary to ascertain current conditions. There is known pollution in Winter Creek that should be segregated from the harbor. The Water Quality Committee should continue to monitor at the mouth and work up stream to identify possible sources. He said it's within the scope, interest, and the work of the Partnership to continue collecting additional samples in those areas. Strategy decisions have been established as well as commitments. He agreed discussions need to occur among local and state governments as well as with stakeholders. The State Department of Health's Shellfish Program is a valuable resource for consulting to determine possible sample points for the Grayland ditch area. Bill Leland with the Department of Health, who has reviewed the data, is seeking information on water quality, the area, and land uses.

Ms. Napier suggested briefing the County Board of Commissioners on the committee's discussion to determine interest in organizing a stakeholder meeting for the parties involved. She noted the presentation was informative on the issues and that the committee will receive a progress update.

Mr. Rountry said including the drainage district in the discussions is a good idea. The letter and efforts to coordinate the meeting were focused on Winter Creek because pollution exists in the area and there is ongoing data. He asked about his and DOE's role in coordinating the meeting. Ms. Reed with the Small Community's Initiative would be a good resource to coordinate the meeting as well.

Discussion ensued on the best way to coordinate the meeting and involvement of key entities.

### **Next Meeting**

The next meeting of the committee will include discussion on the locations for long-term monitoring probes.

### **Adjournment**

With there being no further business, Ms. Spaulding adjourned the meeting at 12:25 p.m.

Prepared by: Danielle Gardea, Recording Secretary  
Puget Sound Meeting Services