

**Deschutes River, Capitol Lake, and Budd Inlet
TMDL Advisory Group Meeting**
Thursday, July 23, 2009 -- 9:00 a.m. to 11:40 a.m.
Tumwater Fire Department, 311 Israel Rd. SW

Attendees

Agriculture, Dept. of

- Ann Wick

Ecology (ECY), Dept. of

- Betsy Dickes
- Kim McKee
- Lydia Wagner

Fish and Wildlife (WDFW), Dept. of

- Dan Adkins
- Hal Michael

General Administration (GA), Dept. of

- Nathaniel Jones

LOTT Alliance

- Karla Fowler

Natural Resources (DNR), Dept. of

- Zoanne Thomas

Olympia, City of

- Joe Roush

Olympia, Port of

- Joanne Snarski

Squaxin Island Tribe

- John Konovsky

Thurston County Environmental Health

- Sue Davis

Thurston Public Utility District

- Chris Stearns

Tumwater, City of

- Dan Smith
- Tim Wilson

Protecting Washington State's Water Video

We watched a video that describes, through interviews and photos, the process the Department of Ecology uses to improve water quality in Washington State's rivers, lakes and streams. It discusses the benefits of clean water and the role citizens and local governments can have in reaching this clean water goal. The video was made in 2006 to address audiences such as participants at fairs or local events, county commissioners, city council and staff, public meetings, advisory groups, schools, and interested citizens. This video is available online at: <http://www.ecy.wa.gov/biblio/0610027.html>.

Virtual Watershed Tour

Note: The following contains supplemental information from notes taken during the June 4 tour.

On a sweltering hot day peaking at a recorded 92° F, 16 people took a tour of the Deschutes watershed. We made stops or drove by the area near the Upper Falls, Huckleberry Creek, Lake Lawrence, Lake McIntosh, Silver Springs, Tempo Lake, Stewart Conservation Easement, Pioneer Park, and Budd Inlet. John Konovsky, Squaxin Island Tribe, developed the itinerary and narrated the tour.

Upper Falls area: The Deschutes River is young in geologic time. There are areas throughout the system with significant erosion. The upper watershed releases fine sediments which flow downstream, particularly during flood events. Results of this flow include soil movement downstream and a huge sediment problem in Capitol Lake. About half of the fine sediment load in the upper watershed is anthropogenic. Weyerhaeuser has done a lot of work on forest road improvements, but that has not eliminated the fine sediment issue. In December 1990, we experienced the largest flood ever in the upper watershed. A landslide occurred along Huckleberry Creek causing fine sediments to wash into the Deschutes River. The sediments from this episode are still making their way down the watershed.

Huckleberry Creek: Much of the water goes sub-surface at the mouth. The creek was once a main source of coho salmon spawning before the major landslide. They since shifted spawning elsewhere and the population numbers have declined dramatically. Coho is the main salmon population in the Deschutes River. There are some fall chinook from hatchery releases. The WA Department of Fish and Wildlife (WDFW) has a great dataset that addresses the relationship between large floods and egg survival. Large flood events at sensitive times of the year wash salmon eggs out of the gravel.

The landslide filled the channel in many places and sediment and debris continue to accumulate at the mouth. The group met Peter Schmidt, local homeowner and the President of the Homeowners Association, who commented that: "This is a flood zone because the creek overflows", "It has fast flowing water"; and "There are no salmon returning to Mitchell or Huckleberry Creeks anymore." The homes in this area are the first significant community below Weyerhaeuser property.

Mitchell Creek: This is the beginning of the sensitive reach of the watershed. It is sensitive because it is a reach losing streamflow to groundwater and that helps it easily heat up when the air temperatures are warm. Key issues are temperature, dissolved oxygen, lack of riparian cover, and lack of large woody debris. There is a strong relationship here between the air and water temperature. Hotter summer temperatures equate to fewer smolts surviving the following year.

Smith Ranch: This section of the tour includes an area commonly referred to as "The Smith Ranch" and represents the middle reach of the watershed. The ranch is a sheep farm for meat production and is the only sheep farm in the watershed. There are cattle operations both up and downstream.

There are a large number of commercial agricultural activities in the flood plain and riparian area. These are located close to the river. Problems in this area include fertilizer use (during the fall and spring), manure management, and disposal of dead animals. The outlet of Lake Lawrence flows into the Deschutes and is low in dissolved oxygen.

The constant flooding here causes landowners to lose fencing in the winter. These are expensive to replace and maintain.

Lake Lawrence, which is very eutrophic, is upstream of this site. Large algae blooms are a problem here. Sediments are fine and flocculent. There is a lake management district. Water seeps under the roadbed, dyke, and through the gravels.

The stream channel here is representative of much of the Deschutes—it is one long glide, a continual run of constant velocity water approximately 2-3 feet deep. It was cleaned of large woody debris years ago which eliminated the pools and riffles. John Konovsky stated, "A healthy stream should be

shallow in ripples and deep in pools with variable velocities for oxygenation and sediment sorting.” Glides are not very fish-friendly and exacerbate fish problems.

We talked about the Forest Practices Act (FPA), adopted in 1999 and effective for 10 years and ends July 31, 2009. The FPA essentially excluded forest lands from having to develop a water cleanup plan. Has work done under the FPA been effective? We don't know. No data yet has resulted from the 10 years this has been in effect. It is likely that the FPA will be extended for another 10 years with a significant change of adding strict monitoring requirements.

Silver Springs: We stopped here to see an example of groundwater upwelling. It is a large groundwater source entering the Deschutes River. The temperature of Silver Springs is much cooler than the Deschutes River and forms a thermal refuge for fish. Protecting groundwater from new water uses is a necessary strategy to maximize the river miles that will meet state water quality.

Stewart Conservation Easement: The purpose of this stop was to contrast restoration strategies with protection strategies. Capitol Land Trust (CLT) has an easement on 44 acres along the Deschutes River. The owners donated the easement to protect the conservation values of their property. The property consists of river floodplain and upland terrace. There is an active farm that is waning. Shade is needed at the reach. More information for this site is available online at www.capitolandtrust.org/stewart.htm.

Pioneer Park: This area is an example of a successful bioengineering project. We observed the former site of bank erosion, riprap, and a lot of vegetation growth.

The gravel road near artesian road is gone. Major 2009 storm took it away. Seasonal floods move more sediment, smaller size but higher quantity. Larger water flows take with it bigger sediment. The ability to sort sediments into different sizes is impaired in the river. The water can clean the gravel and stores it along the banks which help to create pools in the channel. This in turn creates clean spawning gravel for the fish. While there are sediment benefits here it can cause problems downstream in the watershed.

One problem with the sediments is from glacial material that is coarse sand and gravel. There are many septic systems in the watershed but don't always do a good job of removing nitrogen. Thurston County has data for Chambers Creek that shows the increase in nitrogen base flow streams. In the winter the nitrogen levels decrease. The creek feeds the river and increases the nitrogen levels. Nutrients and phosphorus usually travel with sediment particles.

Budd Inlet: We ended the day standing atop the hot pavement on the Cascade Pole parking lot over the area. Someone made the comment that an estuary would improve the water quality in West Bay. Ken Butti, LOTT Alliance, joined us. The LOTT outfall is in 35 ft. of water off the peninsula. They treat 10-12 million gallons per day (mgd) that flows through the outfall into Budd Inlet. They are the only plant in the Puget Sound with an advanced secondary removal treatment.

Ken Butti and Karla Fowler talked about an Ecology study addressing Pharmaceutical & Personal Care Products (PPCP). The report from the August 2008 one-time sampling event is not available yet. It appears from the preliminary data that PPCPs are getting removed. LOTT volunteered to add Martin Way reclaimed water system to the study.

Some of the treated water goes to a reclaimed water facility for other uses such as irrigation. The purple pipes indicate reclaimed water flowing through. Reclaimed water is already treated effluent. They divert 1 – 1.5 million gallons of water to the reclaimed water facility. This water is safe for public contact and beneficial uses. The Department of General Administration is already a user of reclaimed water. Future uses are planned including extending the reclaimed water pipes to the Tumwater Golf Course. More information about LOTT's reclaimed water system is available online at <http://www.lottonline.org/reclaimed.htm>.

In summary, John Konovsky stated, "The Deschutes River is too wide, too shallow, and too slow. We have to make improvements to the stream channel in addition to the riparian zone to fully meet water quality standards for temperature."

Capitol Lake Update

Nathaniel Jones, General Administration, provided us with background about the Capitol Lake Adaptive Management Plan (CLAMP), the Steering Committee, and the process they are undertaking to make a recommendation about the fate of Capitol Lake. This process is already in its 13th year and started with 14 objectives. An Estuary Feasibility Study was completed and identified four alternatives to establish data and analyze options. While this is still a "work in progress" a draft recommendation was written on July 2. There are still concerns to address before the CLAMP Steering Committee will commit to the recommendation. The next meeting on August 6 will continue the discussion. It is possible a recommendation can move forward to the General Administration Director by the end of August. It will have additional review and discussion before the final recommendation is made and appropriations from the legislature issued. More information is available at the following websites:

- Capitol Lake Adaptive Management Plan: <http://www.ga.wa.gov/CLAMP/Plan.htm>
- Frequently Asked Questions: <http://www.ga.wa.gov/CapitolLake/FAQ.htm>
- Plans for Capitol Lake: <http://www.ga.wa.gov/CapitolLake/Plans.htm>

Open Comment

This was the opportunity for anyone attending the meeting to offer comments, suggestions, or ask questions regarding this water cleanup plan effort. None were offered.

Next meeting

It is on Tuesday, September 29, from 9:00 a.m. – 12 noon, at the Tumwater Fire Department, 311 Israel Rd. SW. The theme for this meeting is Forests & Fish. At the minimum, we will have representatives from Weyerhaeuser join us to talk about issues regarding the impacts of Forests & Fish regulations.