Deschutes Advisory Group (DAG) Meeting
Thursday, March 17, 2016
9:10 a.m. to 12:15 p.m.

Attendees

Citizens
- Bob Barnes
- John DeMeyer
- Jim Lengenfelder

Capitol Lake Improvement and Protection Association (CLIPA)
- Jack Havens
- Bob Holman
- Bob Wubbena

Deschutes Estuary Restoration Team (DERT)
- Bill Funk
- Zena Hartung
- Sue Patnude
- Dave Peeler

Ecology (Ecy), WA State Dept. of
- Andrew Kolosseus
- Lydia Wagner

Enterprise Services (DES), WA State Dept. of
- Carrie Martin

Fish and Wildlife (DFW), WA State Dept. of
- Jim Jenkins
- Eric Kinne
- Darric Lowery

LOTT Clean Water Alliance (LOTT)
- Lisa Dennis-Perez
- Karla Fowler
- Wendy Steffensen

Natural Resources (DNR), WA State Dept. of
- Rick Schwartz

Olympia, City of
- Susan McCleary

South Puget Sound Salmon Enhancement Group (SPSSEG)
- Jerilyn Walley

Squaxin Island Tribe (SIT)
- Erica Marbet
- Scott Steltzner

Thurston County
- Jane Mountjoy-Venning
- Charissa Waters

Tumwater, City of
- Dan Smith

Capitol Lake Improvement and Protection Association (CLIPA): Jack Havens, Bob Wubbena, Bob Holman

They have concerns about references to Capitol Lake, both from the Washington Departments of Ecology (Ecology) and Enterprise Services (DES) having bacteriological problems. The Thurston County Public Health and Social Services Department has 14 years of bacteriological monitoring data showing the lake meets swimming standards. All discharges contributing to the bacteria problems were taken out of the lake and problems fixed. Ecology has this data and was asked to reconsider and delist the bacteria listing. Ecology staff met with CLIPA representatives in 2015 and explained how the water quality samples were not taken at the same time of the year as the original study monitoring efforts. The county monitoring program was to take water samples only in the summer months. Ecology's samplings for the study were taken in the winter months in the 1990s. Why didn't Ecology tell the county the problem is in the winter instead of the summer?

Another issue of concern is phosphorus. CLIPA has worked with Dr. David Milne, retired Evergreen Professor, to study issues related to Capitol Lake. He wrote a report stating the lake is actually a natural treatment process for phosphorus, provides beneficial effects to the lake, and protects Budd Inlet. The report is written so lay people can understand the issues.

In 2012 the U.S. Army Corps of Engineers (USCOE) prepared definition of what the removal of the dam would look like. They found that removing the dam is not consistent with the costs/benefits and they removed themselves from the Puget Sound Nearshore Ecosystem Restoration Project (PSNERP) proposal. The USCOE data is good but there could be some gaps that need updating. The Washington Department of Fish and Wildlife (WDFW) was part of that discussion, along with the Squaxin Island Tribe (SIT). They have a report or other documents.

CLIPA appreciates Ecology providing this open forum to hear differing perspectives. Now that Ecology is concentrating on the lower watershed, which is critical to this community, how are they going to review all the new information regarding Capitol Lake? The technical study published last year is using data that is 12-14 years old or more. Ecology should understand the lake conditions of today and not the past in order to make informed decisions. For example, the lake has lost about 60% of capacity due to the increase in sediments and Thurston County monitoring data indicates there is not a bacteria problem in the lake.

They looked at the same studies done or assembled by the Capitol Lake Adaptive Management Plan (CLAMP) process. Approximately $3 million dollars was spent on studies, but now the data and information is old. They've examined the Budd Inlet and South Puget Sound models and have questions about how they are being done. CLIPA representatives would like to meet with Ecology's technical staff and review the data in a collaborative way to fully understand each other's perspectives. CLIPA is not stating there are not problems and that Ecology shouldn't work to improve the conditions. They believe Capitol Lake can be returned to full recreational opportunities. They are stating Ecology is using outdated material or is misinterpreting the data. They would like to see Ecology establish a meaningful sampling program and get current data and address the issue of using river or lake water quality standards. Look at all the problems, including sediments, dissolved oxygen, phosphorus, and bacteria comprehensively and address them all collectively.

Capitol Lake has the highest levels of dissolved oxygen (DO) in the watershed. The lake is shallow and the DO is relatively uniform and is higher than in other parts of the watershed. If the tide lock was removed it would reduce the DO by about 50%. It is fully oxygenated at both the top and bottom. It is also cooler and flows through the lower streambed at the base of the lake. Water in the lake does not have a long residence time. Ecology is comparing Capitol Lake to lakes in other parts of the state. This lake is actually an extension of the Deschutes River and state regulations should consider this as a riverine environment instead of a lake environment. If Ecology uses the riverine water quality standards, then data shows there are no issues of decreased DO in Capitol Lake and no longer have to worry about the potential 0.2 mg/L impact.

Nitrogen passing through can cause problems. Growth of plant life removes all the nitrogen in the summer months. Plant life grows and continue to take nitrogen out of the water. Most of the plant die off that could cause problems occurs in late fall and winter. One suggestion to address this problem is to go into the lake at the end of the growing season and harvest the dying plant material. This is currently done in Long Lake, is relatively inexpensive, and could improve the system beyond its current limits.

Ecology has not extensively examined issues related to sediment management. State and local governments have failed to manage sediments appropriately. Sediment loading is another serious condition for both the lake and Budd Inlet, with ~30,000 cubic yards accumulating every year. How do we address this? It was acknowledged that improved logging practices have reduced new contributions of sediment into the lower watershed. However, it could be another 30-35 years before existing sediments make their way through.

CLIPA suggests Ecology look a long-term 3-phase approach:

- Phase 1: Dredging. Some dredging needs to happen to reduce and remove sediments in the lake. It could also help with removing the New Zealand Mud Snails.
- Phase 2: Identify any specific gaps in the information Ecology is using to develop the water cleanup plan.
- Phase 3: Consider long term implementation plans.

Discussion comments

General

- Is it more important for Ecology to meet water quality standards or to ensure the watershed is healthy?
- Everyone wants to have a healthy watershed. This is not in dispute.
- People want to use the waterfront for a variety of activities such as swimming and boating.
- What is the life span of the dam? What kind of maintenance is needed?

Temperature

- If Ecology applies river standards to the lake, the temperature standards would be higher to protect salmonids.
- What do we need to do to reduce temperature in the watershed? This is a very important issue related to salmon and aquatic life.
- The temperature problems start in the upper watershed.
- One reason temperature is important is because of its ability to hold oxygen.
- We should look to the entities such as the South Puget Sound Salmon Enhancement Group (SPSSEG) or Thurston Conservation District to do instream and riparian work to help improve temperature.
- Dredging the lake would be a smart project to reduce temperature.

Sea Level Rise

- The City of Olympia needs to look at sea level rise projections and develop a plan to protect the downtown area, including urban structures and economic impacts.

- Capitol Lake is currently helping to manage flood water levels. The existing tide gate and earthen dam provide protection now. Maintaining the dam is a relatively minor cost in comparison to the USCOE cost projections to remove it. (Approximately $180 million dollars in infrastructure costs alone.)
- Collectively we need to plan ahead for the next 30-50 years, looking at potential impacts from high tide events, including the additional sediments coming in from the upper watershed. Look to what is in place now and what can happen in the future.

Dredging

- Strategically dredging the lake could help improve issues related to temperature.
- Near-term suggestion is to retain the tide gate. Use the lake as a sediment trap. Maintain and manage it.

Additional information available at:

- Puget Sound Nearshore Restoration Project: www.pugetsoundnearshore.org

CLIPA contact information

- Home page: http://www.savecapitollake.org/
- Email: Friends@SaveCapitolLake.org
- Capitol Lake – The Healthiest Lake in Thurston County: http://www.savecapitollake.org/documents/healthiest-lake.html (D. Milne, 2015)

The following handouts were provided and are available online.

- Significant Findings since the CLAMP Recommendation of 2009: www.ecy.wa.gov/programs/wq/tmdl/deschutes/advisorycomm/31716DAGmtgCLIPAfindings.pdf
- Visual – Deschutes River Urban Watershed District: www.ecy.wa.gov/programs/wq/tmdl/deschutes/advisorycomm/31716DAGmtgCLIPAwatershedd ist.pdf
- Capital Lake and Puget Sound – An Analysis of the Use and Misuse of the Budd Inlet Model (Feb2016): www.ecy.wa.gov/programs/wq/tmdl/deschutes/advisorycomm/31716DAGmtgCLIPAMilneExecS umm.pdf

Deschutes Estuary Restoration Team (DERT) Update: Sue Patnude and Dave Peeler

These notes provide details to the presentation slides; topics include:

- DERT's Work
- Deschutes Watershed Ecosystem
- Deschutes River Watershed
- Deschutes Watershed Guide
- Watershed Health and Youth – the "WHY" Project
- Sediment Management Ideas – 5th Avenue Dam
- Estuary Use by Juvenile Salmon
- Benefits of Estuary Restoration

The DERT is focused on the whole Deschutes Watershed ecosystem. While they have a lot of emphasis on the estuary, they also look at the environmental culture of the watershed, and focus on education and outreach. For example: what has happened, what were the effects, and what is the watershed's future. They are looking at creating sediment management alternatives and a vision for estuary restoration. An estuary is a beneficial use of this watershed and removing the dam would reconnect the functioning ecosystem.

They are involved with other groups working on Puget Sound related issues such as the Alliance for a Healthy South Sound (AHSS), the WA State Department of Enterprise Services (DES), and the Deschutes Advisory Group (DAG). They are involved with community relations work such as special events, tours, working with schools, and partnerships with other environmental organizations. One example is the Watershed Health and Youth (WHY) Project, which will give kids who live in the watershed a sense of place. This project will educate them using science to help develop critical thinking. DERT will look at different geologic areas through tours with students.

This is not a big watershed but it has amazing geological diversity. For example, it has rivers, streams, forests, lakes, wetlands, wide open prairies, and marine bays. The river would flow into the Puget Sound if the dam wasn't there. The watershed also has diverse wildlife and plants. They are currently developing a 16 page Deschutes Watershed Guide and will post it on their website when it's completed (June 2016).

Key points they made on sediment management:

- We need to reduce the amount of sediment contributions and remove some of what is already accumulated.
- Sources include past forest practices, culvert washouts, and storm events.
- Rivers try to change their courses periodically and sediment travels down through the watershed.
- We need to consider issues related to proper disposal of dredged sediment, including the transport of the invasive New Zealand Mud Snails.

Fixing riparian habitat throughout the watershed has already been identified in Ecology's water cleanup plan. We also need to consider the effects on juvenile salmon. Before Capitol Lake was created migrating salmon couldn't go up the falls but they did exist in Percival Creek. Estuary nursery areas once existed and the loss of these areas has impacted migrating salmon. There are salmon from other watersheds who use these areas too and survivability is really low. This applies to both wild and hatchery fish.

They are concerned about Ecology's delay in additional Budd Inlet monitoring and discussion surrounding sediments. The marine water review should have been completed by now to involve any potential contributors located outside of this watershed. Ecology already found significant impact from nutrients coming in from north of Budd Inlet.

They are also concerned about policy contradictions. The science clearly shows the dam needs to be removed or identify a feasible hybrid solution. Ecology's process is occurring at the same time as the Department of Enterprise Services (DES) process addressing the legislative proviso. DERT believes there is a greater positive impact with an estuary.

General points

- Population and land uses have changed and resulted in negative impacts to the watershed.
- Urban populations will increase, along with resulting environmental impacts.
- This is the only estuary in the state that is dammed at its mouth.
- Juvenile salmon – The information they show is from coded-wire tagged fish. They have data for South Puget Sound but no historical information.

Discussion comments

- Ecology's new modeling will provide more information to help understand the scientific impacts. Is it worth the time to discuss this now when the results are pending?
- There is disagreement on the concept that Capitol Lake takes nitrates out of the water and removing the dam would put nitrates into the water.
- Wastewater treatment plants such as LOTT and Chambers Creek are already addressing process changes to reduce nitrogen impacts. Upgrades to existing technology is expensive and how much more can they reasonably do?
- Identifying a sediment management plan is a core element needed in this TMDL.
- There are over 100 stormwater outfalls draining into the lake that are not monitored. What impact are they having?
- Ecology needs to look at Eld Inlet where a dissolved oxygen problem also exists.
- Disagreement on nitrogen sources and benefits/detriments to Capitol Lake.

DERT contact information:

- http://www.deschutesestuary.org/
- Sue Patnude: suepatnude@gmail.com
- Dave Peeler: davepeeler@hotmail.com

Their presentation slides are available online at www.ecy.wa.gov/programs/wq/tmdl/deschutes/advisorycomm/31716DAGmtgDERTpresentation.pdf.

Budd Inlet and Capitol Lake TMDL Overview: Lydia Wagner, Ecology

These notes provide details to the presentation slides.

Rebranding: Ecology is "rebranding" the name of this project to try and avoid confusion between this project and the one the Department of Enterprise Services (DES) is undertaking. Instead of calling this the Deschutes Phase 2 TMDL, it is now referred to as the Budd Inlet and Capitol Lake TMDL

Project Scope: The full project scope is still under development. The Budd Inlet and Capitol Lake TMDL will address issues related to Budd Inlet exceeding water quality standards for dissolved oxygen, and Capitol Lake for total phosphorus. It will identify and develop wasteload allocations (WLA) for all appropriate individual and general permittees and load allocations (LA) for nonpoint sources. Ecology is

using existing data from the following documents and additional Budd Inlet modeling to occur in2016-2018.

- Deschutes River, Capitol Lake, and Budd Inlet Temperature, Fecal Coliform Bacteria, Dissolved Oxygen, pH, and Fine Sediment Total Maximum Daily Load Technical Report: Water Quality Study Findings (June 2012) – available online at https://fortress.wa.gov/ecy/publications/summarypages/1203008.html.
- Deschutes River, Capitol Lake, and Budd Inlet Total Maximum Daily Load Study: Supplemental Modeling Scenarios (September 2015) – available online at https://fortress.wa.gov/ecy/publications/SummaryPages/1503002.html.

Project Timeline: A draft project timeline was developed and posted during the meeting. Process components include: Deschutes Advisory Group (DAG) meetings, Modeling, Internal Collaboration, Permittee Involvement, Report Writing, Government-to-Government Collaboration, and Public Outreach. A few components were highlighted as follows.

Budd Inlet Modeling

- Model Run 1: Four different scenarios to run March – July 2016 and Ecology modeling experts will present the results of this work at the July 21 DAG meeting.
- Model Run 2: This is contingent on the results from Run 1. It will turn on and off individual wastewater treatment plants (WWTPs) to determine who is impacting Budd Inlet. Ecology will use the results to identify additional stakeholders to include in developing this TMDL.
- Model Run 3: This is contingent on the results from Run 2. It will look at potential solutions to meet WQS and determine WLA. Examples could include: no discharge, tertiary treatment, or distribution satellite treatment. This will be an iterative process to continue refining the data to reach attainment.

I**nternal Collaboration**

- Examples of policy decisions could include addressing financial impacts to WWTPs and the DES; identifying new stakeholders who will get assigned WLAs such as WWTPs discharging to other inlets; is water quality trading an option and what would it look like; addressing the Environmental Protection Agency's (EPA) need for reasonable assurance the TMDL will achieve its goal; considering the possibility of undergoing a Use Attainability Analysis for Capitol Lake.
- Briefings include informing other Ecology water resource management programs, Southwest and Northwest Regions, EPA, the Squaxin Island Tribe (SIT), and political outreach.

Permittee Involvement: This will be an ongoing process of working with affected permittees while identifying and deciding on WLA and implementation actions.

Public Outreach: The timeframes listed on the slide are estimates. Ecology intends to have a minimum 45 day public comment and could extend it to 60 days if appropriate. This process includes developing a detailed communication strategy, providing the draft water cleanup plan for public review and comment, and having public meetings to provide an overview of the plan.

Other Components: Ecology will again use the most current Water Quality Improvement Report and Implementation Plan (WQIR/IP) used for the freshwater report. Staff will begin filling in general sections in 2016 and the more substantive sections in 2017. Government-to-Government meetings with EPA and the SIT could happen twice with the first time during the Internal Collaboration phase and then again prior to the draft report going out for public review and comment.

Budd Inlet and Capitol Lake Water Quality Program contact information:

Lydia Wagner, Water Cleanup Plan Coordinator
360-407-6329 or Lydia.Wagner@ecy.wa.gov
Project website: www.ecy.wa.gov/programs/wq/tmdl/deschutes

The following meeting materials are available online.

- Presentation slides: www.ecy.wa.gov/programs/wq/tmdl/deschutes/advisorycomm/31716DAGmtgEcyBIandCapLkOverview.pdf.
- Budd Inlet and Capitol Lake Water Cleanup Plan (TMDL) Draft Timeline: www.ecy.wa.gov/programs/wq/tmdl/deschutes/advisorycomm/31716DAGmtgEcyBIandCapLkTimeline.pdf.

Roundtable

Carrie Martin, DES: She provided a brief overview on the legislative Proviso to address Capitol Lake long-term Management Planning (http://des.wa.gov/SiteCollectionDocuments/About/CapitolLake/2016MeetingDocs/Jan2016-Proviso.pdf) and subsequent DES process. The proviso does not direct them to make any decisions. They are gathering information such as work already completed by CLAMP and other entities. They will build on that work and identify gaps and how to fill in those gaps. Their process has three phases which include:

- Phase 1: Completing the Proviso
- Phase 2: Fund and Conduct an Environmental Impact Statement (EIS)
- Phase 3: Fund, Permit and Implement the Solution

Phase 1 is the critical foundation to complete the proviso; look at best available science, hybrid alternatives, and previous defined lake and estuary options; identify gaps; and assemble an Executive Work Group. This group was established and began meeting in January and consists of representatives from Thurston County, Cities of Olympia and Tumwater, Port of Olympia, and the Squaxin Island Tribe. In this phase they may also look at sediment management, sea level rise, and the steps needed to get to the EIS phase. Phase 2 is the Environmental Impact Statement (EIS) process, providing the DES receives the necessary funding. Phase 3 is implementation and will address permitting, design and construction.

On March 9, DES had an open house with 65 people attending and approximately half of them providing comments. They have an online survey available at https://www.surveymonkey.com/r/CapLakeMar9, to look at high level plan and weigh in on what the public is interested in (for example, flood mitigation, alternatives) to help the DES put their efforts and how the public wants to be engaged and what subjects they are most interested in.

The DES Meeting Documents website at http://des.wa.gov/about/pi/CapitolLake/Pages/MeetingDocs.aspx includes the Executive Work Group meeting information and all related materials. Their next meeting is March 25, 9:30-11:30 a.m., at 1500 Jefferson St., Olympia. This meeting will include briefings on the EIS process and DES implementation plan, and discussion on the March 9 Public Open House. They will begin recording the meetings and will later post the video on their website.

Additional information on the DES website include:

- Frequently Asked Questions: http://des.wa.gov/about/pi/CapitolLake/Pages/CapitolLakeFAQ.aspx.
- Capitol Lake Reports: http://des.wa.gov/about/pi/CapitolLake/Pages/CapitolLakeReports.aspx

Bob Barnes: He used to work for the WA State Department of Transportation (WSDOT) and was involved in some riparian restoration projects in this watershed. He's retired now but is still involved in non-profit work, including serving on the Board of the South Puget Sound Salmon Enhancement Group (SPSSEG). He offered to guide a tour of the Capitol Lake Interpretive Center Trail or the Indian Creek stormwater treatment facility. This was a collaborative effort between WSDOT and the City of Olympia. Ecology will coordinate this if enough people are interested. Some points Bob made regarding restoration work include:

- Whatever we do, the solutions must be multi-generational. They need to be long term solutions with longevity and sustainability.
- We need to control invasive species such as the Himalayan blackberries, Reed Canary Grass, and butterfly bushes. These are undesirable plants which are impediments to get the riparian restoration done.
- Most sites are seriously degraded and difficult to get plants established so it is important to fix the soils. Compost helps and so does using fabric for mulches.

Next meeting

Date: Thursday, May 19, 2016
Time: 9:00 a.m. – 12:00 p.m.
Place: Tumwater Fire Department
311 Israel Rd. SW, Tumwater, WA

Agenda topics: Thurston County Voluntary Stewardship Program (VSP)
Mussel Pilot Project, Pacific Shellfish Institute
Municipal Phase 2 Stormwater Permit, Ecology
Construction Stormwater General Permit, Ecology