



February 18, 2009 Meeting Summary

The twenty seventh meeting of the Vancouver Lake Watershed Partnership was held on Wednesday, February 18th, 2008 from 4:00-6:00pm at the Port of Vancouver Administrative Offices.

Attendance:

Member Present	Member Seat
Patty Boyden	Port of Vancouver
Brian Carlson	City of Vancouver Department of Public Works
Pete Capell	Clark County Department of Public Works
Anne Friesz	WA Department of Fish and Wildlife
Tom Gonzales	Clark County Public Health
Chris Hathaway	Lower Columbia River Estuary Partnership (alternate for Deb Marriott)
Iloba Odum	WA Department of Ecology
Steve Prather	Clark Public Utilities (alternate for Doug Quinn)
Todd Welker	WA Department of Natural Resources
Jacquelin Edwards	Citizen
Nancy Ellifritt	Citizen
Thom McConathy	Citizen
David Page	Citizen
Vernon Veysey	Citizen

Public in attendance:

Dvija M. Bertish	Citizen (Riverkeeper)
Dick Chandlee	Citizen
George Drake	Citizen (George Drake & Associates)
Vinton Ericsson	Citizen
Lehman Holder	Citizen (Sierra Club)
Traci Nolan	Citizen (Geo Design)
Roy Potts	Citizen (Vancouver Sailing Club)
Terry Potts	Citizen (Vancouver Sailing Club)

Other Agency Members Present:

Gary Bock	Vancouver Watershed Council
Loretta Callahan	City of Vancouver Public Works
Tonnie Cummings	WA Department of Ecology
Victor Erlich	City of Vancouver Public Works
Matt Graves	Port of Vancouver
Andrew Ness	Port of Vancouver
Dorie Sutton	City of Vancouver
Ron Wierenga	Clark County Public Works

Project Management Team:

Phil Trask	PC Trask & Associates, Inc.
Sabrina Litton	PC Trask & Associates, Inc.
Mardy Tremblay	Lower Columbia River Estuary Partnership

Introductions

The project manager welcomed the group to the 27th meeting of the Vancouver Lake Watershed Partnership and thanked everyone for coming. Introductions were made around the room.

General Partnership Announcements

The project manager asked if there were any general Partnership announcements. There were none.

Agenda/Discussion Topics

The project manager introduced the agenda and asked if there were any additions or modifications. There were none.

Flushing Channel Analysis

Patty Boyden introduced Matt Graves, an environmental specialist with the Port of Vancouver and George Drake with George Drake & Associates. They would be presenting initial data from the flushing channel flow monitoring effort that began in November 2006.

Matt began by providing a brief background to the flushing channel flow monitoring project. The purpose of the effort was to obtain water level and flow data for the flushing channel and quantify flows entering Vancouver Lake. Monitoring began in November of 2006 and is still ongoing today. Results depicted in their presentation are based on 45,000 data points collected between November 2006 and September 2008. The flushing channel data collected is compatible with Clark Public Utilities lake level monitoring by using the same datum and 15 minute data collection intervals.

Matt showed several slides that provided visual context for the flushing channel. He depicted its location relative to Vancouver Lake and a plan diagram illustrating the Columbia River, the trapezoidal flushing channel, SR 501, the twin culverts, and flap gate structure. To measure velocity, a strip with multiple flow meters was placed by a diver around the inside of one of the culverts. This device measured velocity, which was multiplied by the cross-sectional area of the culvert, times two culverts, to get volume of flow moving through the flushing channel into the lake. Water level was measured with a water level transducer not far from the culvert entrance. Flow and water level meter downloads are performed monthly.

George continued the presentation by explaining that there is one main concept to understand about this system. He explained that the only way water moves into the lake via the flushing channel is when a hydraulic differential exists between the flushing channel and the lake. In other words, if the water level in the flushing channel is greater than in the lake, water will move into the lake. Due to the one way nature of the flap gate water can only flow into the lake and not the other way around. The gates are able to open with only the slightest hydraulic differential.

George reviewed graphs illustrating flushing channel (blue) and Vancouver Lake (red) water levels from November 2006 to October 2007 and October 2007 to September 2008. He pointed out the sawtooth pattern illustrating the tidal influence of the system and the peaks in the data related to dam releases at Bonneville. It was asked that if the blue line is above the red line most of the time, does this mean water is flowing into the lake most of the time? George estimated that roughly 70% of the time, there is flow going into the Lake.

He then summarized several flushing channel water level observations. It was observed that flushing channel water levels ranged from 16.2 to 3.8 feet. Diurnal fluctuations from the tide range from 2 to 4 feet. Lake levels are typically lower than the flushing channel by an average of 1 to 2 feet. Seasonal variations were approximately 3 feet with winter/spring 2006/07 higher than summer/early fall 2007.

George reiterated that the flushing channel tide gates only allow water into Vancouver Lake. From the data collected to-date, flow through the culverts ranged from a high of 382 cubic feet per second (cfs) to 0 cfs. Average flow rate of all the data (including when the gates are closed and flow is 0) was 69 cfs, and average flow when the tide gates are open was 140 cfs. Based on these flows the overall monthly average volume entering the lake was 8,529 acre feet.

Next steps for the project are to continue monitoring and to share data with partners including the Partnership, Clark County, Clark Public Utilities, and the Corps etc.

The presentation was then opened up for questions:

- *Instead of using averages to calculate the volume of water entering the lake, would it also be possible to calculate actual volume for each 15 minute data point and then add it up?*
Yes.
- *What would happen if we enlarged the culverts?*
This project did not look into that scenario.
- *Would the lake empty if the culverts were removed completely?*
That is impossible to know. There are many inputs and outputs to the Vancouver Lake system making it difficult to speculate.
- *Could you raise the culverts to create a waterfall or better hydraulic driver?*
No.
- *Why are there tide gates on the culverts in the first place?*
When the culverts were installed over 25 years ago, the gates were added to address fish and wildlife concerns.
- *There is a difference in the length of time the flow meter malfunction noted on slide 15 (Oct 2006-June 2007) and slide 16 (June 2007-Sept. 2008), why is that?*
This is because of the difference in the time period measured.
- *What is the major finding from this study? What does this measurable information mean to the Vancouver Lake Watershed Partnership?*
The dataset documents and provides valuable information on flushing channel water levels and flows into the lake. This information will be useful in future modeling efforts.

The Partnership thanked Matt and George for their presentation.

Burnt Bridge Creek TMDL Update

Tonnie Cummings with the Washington Department of Ecology gave a brief presentation on the status of the Burnt Bridge Creek Total Maximum Daily Load (TMDL) Water Cleanup Plan process. She reiterated that Ecology is still underway with the project and data shown in the presentation is strictly preliminary.

Tonnie began by reviewing the process and timeline. She explained that the TMDL is long term and right now this four year project is only in year one. Currently the timeline is scoped as follows. From May 2008 through December 2010, Ecology will be monitoring and modeling to determine how much pollution reduction is needed. Starting in 2011, Ecology and stakeholders will develop a cleanup strategy that must be approved by EPA. In 2012 Ecology and stakeholders will develop a detailed list of cleanup actions (who, what, when, and where). From 2013 onward, follow-up is conducted to determine if the strategy is working and to make adjustments as needed.

The study involves tracking nineteen monitoring sites along Burnt Bridge Creek from May 2008 through August 2009. Monitoring parameters include:

- Surface water – temperature, PH, dissolved oxygen, conductivity, fecal coliform, nutrients, flow
- Groundwater – temperature, PH, dissolved oxygen, conductivity, fecal coliform, nutrients, inputs/outputs
- Air – wind speed and direction, temperature, relative humidity
- Other – effective solar radiation, riparian vegetation height and density, channel width and depth, dry and wet season storm events, periphyton

Tonnie showed a graph illustrating the number of water quality standard exceedances for various water quality parameters. Data were gathered from May 2008 through January 2009. According to the graph,

temperature had the highest number of exceedances mainly because temperature data is collected continuously. The other parameters (bacteria, dissolved oxygen and pH) are collected once every two weeks. One interesting thing about the data so far is that the highest number of temperature exceedances at the most sampling sites occurred on August 15, 2008.

The presentation was opened up for questions. Being none, the Partnership thanked Tonnie for the update.

Project Manager Update

Annual Report/Technical Foundation

Phil told the Partnership that in lieu of the December Partnership meeting, an Annual Report and Technical Foundation had been mailed to all Partnership and Technical Group members and posted on the Vancouver Lake Watershed Partnership website. A link to the website and posting announcement was emailed by Loretta to the public who have signed up to get information about Vancouver Lake. Phil said work on the executive summary for the Technical Foundation has begun. He added the possibility of doing an update mid-year or when a major study is completed. Phil asked that if anyone wanted a copy of either of these documents, contact Sabrina.

Draft Flowchart/Timeline

Phil handed out a new draft of the Partnership timeline/flowchart. He said that Sabrina has researched other lake restoration projects of similar scale to Vancouver Lake, such as Capitol Lake and Klamath Lake, to see what sort of timescales they are working on. From doing so they observed that the pace of Vancouver Lake is comparable.

Phil reviewed the timeline which shows a ten to nineteen year span from start-up to completion of implementation. Operations and maintenance have also been added. Vern said that he was interested in learning more about the possible alternatives given what we know now. Phil said that they are scoped to develop some alternatives this year and will begin characterizing them soon.

U.S. Geological Survey

Phil reported that the Project Management Team had met with water quality program staff from the U.S. Geological Survey (USGS) Tacoma office to explore opportunities for partnering on research at Vancouver Lake. The USGS is a well respected agency that focuses on research. From that meeting it was learned that there are cooperative water funds that could allow USGS to match a project at 50%. However, these funds are not available until the next fiscal year begins in October 2009. Discussions are continuing to see if partnering is a possibility at Vancouver Lake.

Tech Group Update

Washington State University - Vancouver Update

Ron told the Partnership the final report from WSU on year one is complete. The final report is available and will be on the Vancouver Lake Watershed Partnership website soon. The report confirmed large amounts of blue-green algae in the lake. It also points out that there is no significant statistical difference geographically between sampling stations throughout the lake. This is a helpful result because it means that sampling from the sailing club dock provides a reasonable snapshot of what the lake looks like as a whole.

Recommendations from the report included:

- Continue monitoring plankton abundance from the Sailing Club dock.
- Determine rate process of cyanobacteria (growth and death rate)

Ron said the second year contract with WSU is underway. WSU will continue high frequency sampling from the Sailing Club dock which will provide critical comparison to the year one sampling effort.

Grant Updates

Fresh Water Algae Program – Ron announced that the Vancouver Lake Watershed Partnership was awarded a \$48,137 grant from the Washington Department of Ecology's Freshwater Algae Program. He said that they are currently working on details of the grant agreement. The Partnership will match 25% (approximately \$15,000), and this money will be used for continuing the plankton sampling and incubation experiments.

Centennial Clean Water Program – Ron said that the Partnership's Centennial Clean Water Program grant proposal had made the draft offer list of funded projects. The Partnership had requested \$171,810 but is currently slated to receive \$127,151. If funded, even at a partial amount, the project would help fill a large data gap for the Partnership. A final decision won't be made until the Washington legislature adjourns in April or May. It was asked when the funds would be available if we are awarded the funding. It was noted that it would likely not be until after July 1st.

Phil added that Ecology's Clean Water Program is part of the Governor's budget as bond money. Now is the time to make it known that the Partnership and its member agencies support the Governor's budget and to hold the line for the Centennial Clean Water Program. Phil handed out the Legislative Fact Sheet. He said that Ecology ranks the projects and determines a project cut-off line based upon the Governor's budget. This line is contingent upon the final budget passed by the legislature and signed by the Governor. Our request was ranked last on the list of funded projects and we are right on the bubble for funding. Phil said that the PIO Group drafted a template of a letter that could be used to send your support of this request to the legislators. If anyone wants a copy, contact Sabrina or Phil.

PIO Group Update

The PIO group had no additional items to report.

Public Comment

There was no public comment.

Next Steps/Close

The project manager thanked everyone for coming and closed the meeting.

Next Meetings:

Steering Group Meeting on March 31, 2009– 3:30-5:00 p.m.

Full Partnership Meeting on April 15, 2009– 4:00-6:00 p.m.