June 20, 2012 VLWP 40th Meeting Summary

The fortieth meeting of the Vancouver Lake Watershed Partnership was held on Wednesday, June 20, 2012 from 4:00 – 6:00 pm at the Port of Vancouver Administrative Offices.

Attendance:

Member Present	Member Seat
Jacqueline Edwards	Citizen
Lehman Holder	Citizen
Don Jacobs	Citizen
Gary Kokstis	Citizen
Thom McConathy	Citizen
David Page	Citizen
Jane Van Dyke	Citizen
Patty Boyden	Port of Vancouver
Brian Carlson	City of Vancouver Public Works
Kevin Gray	Clark County Environmental Services
Aaron Henderson	Clark Public Health
Iloba Odum	Washington Dept. of Ecology

Other Agency Members Present:	Association:
Annette Griffy	City of Vancouver
Rob Guttridge	Clark County Environmental Services
Andrew Ness	Port of Vancouver
Brooke Porter	City of Vancouver
Brett Raunig	Washington Dept. of Ecology
Jeff Schnabel	Clark County Environmental Services
Dorie Sutton	City of Vancouver
Lisa Willis	Port of Vancouver

Public in Attendance:	
Candice Armijo	Portland State University
Nancy Chandlee	Vancouver Lake Crew
Curt Peterson	Portland State University

Project Management Team:	
Phil Trask	PC Trask & Associates, Inc.
Eileen Stone	PC Trask & Associates, Inc.

Not in Attendance:

Member	Member Seat
Jean Akers	Vancouver-Clark Parks & Recreation
Carol Cloen	Washington Dept. of Natural Resources
Nancy Ellifrit	Citizen
Anne Friesz	Washington Dept. of Fish and Wildlife

Eric LaBrant	Fruit Valley Neighborhood
Debrah Marriot	Lower Columbia Estuary Partnership
George Medina	US Army Corps of Engineers
Doug Quinn	Clark Public Utilities
Vernon Veysey	Citizen
Bruce Wiseman	Port of Ridgefield

Opening of Meeting/Agenda Review
Phil welcomed everyone to the meeting and asked if there were any additions to the agenda. No revisions to the agenda were requested.

Public Comment
Kevin Gray introduced Lehman Holder as the newest member of the Partnership. Lehman was selected by the Steering Group to fill the seat that Jim Meyer vacated. Lehman has been an active member of the community in many ways, including the local chapter of the Sierra Club, and has attended many Partnership meetings over the years.

Eileen introduced Aaron Henderson as the Clark Public Health representative, replacing Tom Gonzales. Aaron noted that he plans to attend meetings regularly in the future. Marty McGinn has been representing Clark Public Health on the Partnership Technical Group and for general meetings on occasion. As Marty has recently retired, Aaron will participate in Technical Group meetings and will have other staff conduct sampling at Vancouver Lake while they look to fill Marty's position. A thank you card was circulated around the room to thank Marty for his Technical Group work.

Eileen gave public comment on behalf of the Federal Highway Administration regarding the access bridge to Ridgefield National Wildlife Refuge's River S unit. The bridge planning is in the early stages and they welcome public comment. More information on the project and a place to comment is on the website: http://www.wfl.fhwa.dot.gov/projects/wa/ridgefield-wildlife-refuge/

Thom commented that the Partnership has a stake in this project in that any future bridge should allow for passage of dredging equipment in case dredging is a future lake management action.
There was a motion for the project management staff to submit such a comment on behalf of the Partnership. The motion was seconded.

Jane asked if the Partnership should broaden the comment to request accommodation of the water trail underneath and a pedestrian trail. The Partnership comment will include consideration of beneficial uses. Partnership members are encouraged to comment individually as well if they have specific concerns or requests.

Thom announced that there is video on You Tube entitled "Vancouver Lake Monster" that he encourages individuals to view.

Project Manager Update
Phil noted that on a recent visit to Reiger Road he saw that traffic-calming devices were installed in the road to slow speeding cars and prevent drag races. The roadway was also cleared of litter.
Phil heard from Dr. Stephen Bollens recently that WSU student Tammy Lee will be pursuing her PhD at WSU and will continue her Vancouver Lake food web research, including development of a food web model. This research will benefit the Partnership's knowledge of the lake.

In other work of interest to the Partnership, the Bonneville Power Administration and Corps of Engineers have been expressing interest in floodplain lakes along the Columbia River for salmon restoration projects. Areas they are looking at include Sturgeon, Shillapoo, and Vancouver Lakes. It is not clear what the level of interest is, but work has begun on a more thorough literature review of the use of floodplain lakes by juvenile salmonids. This review includes information from salmon surveys conducted in the 1980s in Vancouver Lake as well as at Sturgeon and Smith and Bybee Lakes. The sampling protocols differed between lakes, with a sampling of various habitat types at Smith and Bybee. For Sturgeon Lake, sampling was next to Dairy Creek (which is similar to Vancouver Lake's flushing channel). For Vancouver Lake, sampling was throughout the lake.

Also of note is that the Washington Department of Fish and Wildlife conducts fish surveys on Lake River annually and within Vancouver Lake on a 3-year basis. We are likely to receive the recent fish data in the next week. With these surveys, WDFW staff noted that they have found all life history stages of White Sturgeon in Vancouver Lake. Other local fish biologists have mentioned that Pacific Lamprey may also use Vancouver Lake.

Thom asked when we could expect the literature review report. Phil noted that the draft is under review by agencies now and then there will be a scientific review. It will likely be completed this summer.

Geologic Origin of Vancouver Lake
Candice Armijo of Portland State University presented her recent work to find the geologic origin of Vancouver Lake. Common thought

Research questions included time range for formation of Vancouver Lake, how the shape formed, and how water accumulated in the lake. Common

Eight sediment cores were collected: seven around the lake and one in the lake. From the core in the lake (Core- CRVL-07), a 20 cm ash deposit was found below the lake sediments at 450-470 cm depth. This ash layer is believed to be correlated with Mt. St. Helens "Set-P" from the Pine Creek period of eruptions due to other ash layers found at similar depth and thickness around the Columbia River. Mt. St. Helens Set-P is dated at 2500-3000 years old. Above the ash layer, at 409-450 cm depth, another flood plain developed. This flood plain then transitioned into the beginning of Vancouver Lake. At 409 cm depth there was a sharp contact and change in sediment color. This was due to the Holocene sea level rise. As the sea rose, ground water rose as well and submerged the basin, forming Vancouver Lake.

From study results it appears that the outer part of Vancouver Lake was formed by two rivers on opposite sides building up scroll bars/ridges of sediment deposited by the river. When ground water came up into the basin, the scroll bars retained the water, forming Vancouver Lake in a bulls eye configuration. Tidally influenced bulls eye lakes are stable when the rate of submergence from sea level rise exceeds the rate of sedimentation. Similar nearby lakes are Bachelor Island, Sauvie Island and Deer Island.

The radiocarbon dates on the Vancouver Lake cores will be completed this summer. The nearby study with the similar ash layer was at Delta Park. This study was published in the Journal of Coastal Research in 2012. *(Article Citation: Curt Peterson, Rick Minor, Edward B. Gates, Sandy Vanderburgh, and Kendra Carlisle (2012) Correlation of Tephra Marker Beds in Latest Pleistocene and Holocene Fill of the Submerged Lower Columbia River Valley, Washington and Oregon, U.S.A. Journal of Coastal Research In-Press.)*

Questions and Answers:

- Of the eight sediment cores that were collected: did all have the ash layer?
  No – not all cores had the ash layer. Most had a lot of mud. One had a small amount of ash. The core on the north side of lake (CRVL-07) had a large amount (20 cm) of ash.

- How old is Vancouver Lake?
  The ash layer below the lake is 2,500-3,000 years, so the lake is roughly 1,500-2,000 years. The radiocarbon dating will give more information on year.

- How would you characterize the organic layer core above the ash layer: a lot or limited amount?
  There was a significant amount of organics from 409-274cm.

- Were the scroll bars formed from movement of the Columbia River?
  As the Columbia River migrated from east to west, the river made the scroll bars by depositing sediment and then left the deposit as the channel moved. The scroll bars formed the outer perimeter of the lake and then the Holocene sea level rise filled the lake. The scroll bars serve as natural levees on the side of a river; it keeps building as sediment is deposited.

- You mentioned a reference to Vancouver Lake as ephemeral: what does ephemeral mean for Vancouver Lake: months/years?
  It is not clear why Vancouver Lake was referred to as ephemeral. It often means longer than seasonal but less than a year, which is not evident at Vancouver Lake.

- Can you tell if the ash layer was deposited from the water or the sky?
  It was deposited from the river.

- Will there be follow up studies aside from the radiocarbon dating?
  There is hope of conducting GPR (ground penetrating radar) on one of the floodplains – this process sends radar below the surface of the soil to tell us about the sediment underneath and whether or not it is cemented or stratified.

- What is the natural progression of Vancouver Lake?
  Nothing is changing the shape of Vancouver Lake any longer: it is just retaining water. It is interesting to note that similar lakes are only found in a wide floodplain setting. When looking at Google Earth as soon as the Columbia River floodplain narrows the occurrence of floodplain lakes stops. The research team has only seen similar floodplain lake features along the Amazon River.

- Were there similar lakes nearby that are no longer lakes (e.g., the airport land)?
  Dr. Peterson answered that Force Lake in Delta Park and Smith and Bybee Lakes formed in the same manner as Vancouver Lake. The oldest lakes in Delta Park are 7500 years.

- Did Campbell and Post Office lakes form in the same manner?
  We do not have samples of these lakes so we do not know for sure.

- Did Vancouver Lake form after the major Missoula floods or are these even earlier than the Missoula floods?
  The Missoula floodplain is further down below (older) than the ash layer. It is often mistakenly stated that these lakes were formed by the Missoula floods, but they appear to be formed from the Holocene or younger.

With no further questions, Phil thanked Mrs. Armijo for her presentation.

Technical Group Update
Phil gave a run through of the timeframe for current research and the initial evaluation of the alternatives. He reminded everyone that we are waiting for results from USGS, but are working to move forward in our understanding of potential lake management techniques while we wait for the results. We will receive data from USGS over the next year, but will not have the data analysis until the end of 2013.

The Technical Group has met three times since March, focusing on the algal control techniques identified in the Technical Foundation. The recreation-focused techniques from the matrix the Partnership looked at in December were not part of these evaluations because we were only focusing on the scientific likelihood associated with algal control.

Phil showed a slide to the group of an interim chart from these technical group meetings. The chart shows by color the group's analysis of the techniques. The Technical Group evaluated if we were to use a technique, would we consider it a primary or secondary tool for addressing algae? That is, which are ones we build around and which ones do we add on to others? There were also some techniques that individuals felt were not applicable to Vancouver Lake.

After sorting the major and minor techniques, the group looked at the likelihood of success. That is, high, medium, or low likelihood of technical success, or not applicable to Vancouver Lake. This was an interim step in looking at the techniques. Realizing that we need more data, how would we judge techniques based on what we currently know? This process helped us see the ways members were thinking about the techniques. We next need to develop a narrative of what is being considered. For example, some techniques cover a broad category. For example, "modify lake footprint" could be a large change or a very small, incremental change.

The likelihood of success column could be considered disheartening in that there are few "high" rankings, but we have said from the start that there would not be a "silver bullet" solution for Vancouver Lake.

Several actions rely on knowledge of the nutrient source for the lake. Once USGS information is in regarding nutrient drivers, it will direct us to certain actions. We are starting to consider a decision tree so that we will have a head start once we have the results. This will allow us to understand our options better while we wait for research results.

Phil asked if there were any comments from other Technical Group members on this before opening to the Partnership for questions.

Thom mentioned that it is important that be careful about moving forward on cyanobacteria. There was a time to consider cyanobacteria on its own but we are beyond that. We may determine that salmon is a

more important management goal. As we move forward with the narrative of techniques, we need to discuss other resources.

Thom noted that he did not vote on the likelihood of success without the narrative. The full range of benefits could not be explored in this brief chart. For example, modifying the lake footprint could increase flushing and decrease residence time.

It was agreed that the summary chart could not have all information in it, but it was a discussion starter. Dorie and Brett commented that they felt it was useful for the Technical Group to work through the techniques in this way. We have not discussed the techniques at this level before and what each of them means. It will help us develop the narrative. Jeff agreed and commented that as we go forward the Partnership and Steering Group will weigh in on the social and financial aspects. Phil thanked Thom for continually encouraging the group to move forward.

Patty thanked the Technical Group for taking the extra time to meet. This iterative process advances us by taking these first steps.

Gary remarked that he sees this as a melding of each individual member's professional and life experiences. The current political environment will want more on common understanding of techniques. It was likely difficult to keep it focused on only technical aspects as we all have beneficial uses in mind. The narrative will start to show these other aspects and how they interrelate.

Andrew noted that while you do not have a full narrative you get some technical understanding from the chart. You can also see that while social aspects may have had some role; the group did not let it drive their technical likelihood, as the top techniques could be socially charged. It was noted that the Technical Group had some concern that this chart could be misread to think that a top technically likely technique might be construed as a recommendation for the lake, which it is not.

It was asked if the USGS data would be available before the completion of the report in 2013. Phil answered yes; we will continue to get data from USGS as we move forward, so we will have a good direction. The full analysis of the data however will be at the end.

Lehman was asked if he would be interested in taking part in the Technical Group meetings. Meeting notices will be forwarded to Lehman and to others in the future.

David commented that this was probably a good exercise for current understanding. While there is only partial information, he would expect those colors to change as we get more info.

Phil noted we would add to this work for a fisheries perspective. Other beneficial use techniques, such as fisheries, a boat launch and others were not looked at here, but could be considered along with any one of these techniques. Brian added that if you were to overlay fisheries this can dramatically change.

Lehman brought up about the kayak launch concept, noting that construction of several kayak launches is underway along Lake River. On June 2nd, water trail plan partners held a Big Paddle Event on Lake River for an up-close view of the planned water trail.

Outreach Update:
Andrew updated the group on the Outreach Ad-Hoc Group's recent meetings.

The function of the Outreach Ad-Hoc Group is to plan events to get people involved at the lake. Last year we conducted the cleanup at the Lake in partnership with SOLV and the Vancouver Watersheds Council.

This year the group wanted to do something different from the cleanup. Preliminary discussion included a possible birding event or helping another group with a cleanup. The Vancouver Watersheds Alliance has voiced interest in conducting a SOLV cleanup and Andrew has let them know that if they were to lead a cleanup we would look to assist them at the lake.

This past spring, Kevin mentioned having a picnic/barbeque at the lake for the September Partnership meeting. The Outreach Group would like to expand this idea to other individuals interested in the Partnership. As we work out details, we will get more information to the Partnership.

For other upcoming outreach actions, Andrew will give a presentation to the Northwest Neighborhood Association in July.

General Partnership Announcements
There were no general announcements.

Close of Meeting
Phil thanked everyone for attending and ended the meeting.

Next meetings:
Technical Group: Monday, July 16th from 2-4pm in the Port of Vancouver Commission Room.
Steering Group: Tuesday, August 28th from 3:30-5pm in the Port of Vancouver Commission Room.
Partnership: Wednesday, September 19th from 4-6pm at Vancouver Lake Park.