

February 16, 2005 Meeting Summary

The third meeting of the Vancouver Lake Watershed Partnership was held on Wednesday, February 16, 2005 4:00-6:00pm at the Port of Vancouver Administration Offices.



Attending

Partnership members in attendance:

Pete Capell, Brian Carlson, Nancy Ellifrit, Don Jacobs, Jeroen Kok (for David Judd), Gary Kokstis, Lee McCallister, Thom McConathy, Clark Martin, James Meyer, Iloba Odum, Patty Boyden (for Larry Paulson), Randy Phillips, Doug Quinn, Jane VanDyke, Allison Shultz (for Bruce Wiseman), Vernon Veysey

Partnership members absent:

Carl Dugger, Dawn Fletcher, Debra Marriott

Partnership Staff:

Loretta Callahan, Maureen Chan-Heflin, Victor Ehrlich, Amanda Garcia-Snell, Jeanne Lawson, Ron Wierenga

In the audience:

Dvija Michael Bertish, Dick Carroll, Justin Clary, Tim Dean, Jacquelin Edwards, Vinton Erickson, Dave Howard, Peg Johnson, Tim Kraft, Bob Moser, Lenora Oftedahl, Madya Panfilio, Earl Rowell, Katlin Smith, Rod Swanson,

Committee Business

01/19/05 Meeting Minutes

Corrections:

- Page 2 needs more description/ definition of what the post-it exercise was meant to achieve.
- The technical presentations need to have more detail. Specifically on pg 3, the system presentation by Jan Rosholt needs to include more information concerning the environmental and financial analyses that were conducted.
- Pg 3 the flushing channel presentation by Todd Coleman needs to include why the flushing channel does not operate in the way that it was originally designed to operate.
- Pg 5 the section on community resources needs to include a few examples that were provided by members of the partnership. (Boy Scouts study on the topography of the bottom of the lake; references from the inter-tribal fisheries group, Lenore Oftedahl's database/bibliography, which will include all the documents that were available through the agencies and linked to the website as well
- Documents that were made available during technical presentations need to be referred to and attached to the minutes.

Jeanne mentioned that in past meetings members have identified questions and data needs that have come up in response to the technical presentations. She reminded the Partnership that there is not a technical staff that is devoted to the project and it would be difficult to answer all of these questions between meetings. Instead, a running list (see attached) of the questions will be maintained as bin items. The list will be kept until the end of the presentations at which point a decision will be made as how to address the outstanding questions.

Standing of Partnership

Jeanne asked Brian Carlson to clarify how the meetings function in terms of Washington State open meetings law. She clarified that regardless of the legal demands of the Partnership, the agency partners are committed to following the requirements of the law.

Brian addressed the question of whether or not the Partnership and the Steering Team (formerly called Executive Committee) meetings are subject to the Washington Open Meetings Act. He clarified that, based on legal review of the City's and the Port's attorneys, the meetings of neither group are subject to the Open Meetings Act, from a strict legal standpoint. However, the partnership and the Steering Team will continue to operate as if they were, in order to ensure transparency, which the partners believe is just good public policy. He reiterated that both group's meetings will be treated as open meetings and reminded the Partnership and the public that all comments will be subject to public disclosure.

Loretta Callahan gave a brief update on the progress of the website. It is currently active and in its early formation. It is hosted by the City of Vancouver and the web address is www.vancouverlakepartnership.org.

Jeanne also distributed the first version of the resource bibliography that Lenore Oftedahl has compiled. Jeanne mentioned that the work will continue to be done towards making the bibliography available on the website.

Thom McConathy asked about the status of the intergovernmental agreement between the agencies. Brian Carlson clarified that there is no intergovernmental agreement between the agencies at this time. He also stated that so far there hasn't been a need for an agreement.

Public Comment

No public comment at this time.

Presentations

Vancouver Lake Water Quality Monitoring– Ron Wierenga – hand-out attached

Ron presented on the Volunteer Monitoring program that is currently being run by Clark County. He gave a brief overview of what the volunteer monitoring effort is at this time. He also discussed general lake problems and lake assessment techniques. He focused on what specifically is addressed when conducting a lake health assessment and some of the problems that Vancouver Lake has had in the past. His presentation was accompanied with a handout that is attached and he also handed out The Lake Pocket Book to all the members. This publication briefly describes how lakes and lake partnerships function and is available from North American Lake Management Society, NALMS, PO Box 5443, Madison, WI 53705-0443 fax: (608) 233-3186 • phone: (608) 233-2836 <http://www.nalms.org>

Ron then described what the Volunteer Monitoring program has accomplished over the last two summers and what the program plans to do in the upcoming year.

The Volunteer Monitoring Program is part of the public works department's water resources program and is run by the water resources staff. The program is accountable to the County Commissioners and the public. The County has been using the program as a way to get information to the public about the quality of water resources, streams, and lakes throughout the county. The program was started with a grant from the Department of Ecology and continues to be funded by Clark County's clean water program.

Most of the volunteers are graduated watershed stewards. The watershed stewardship program is also a county program that serves to teach people about watersheds and water as well as how to protect and restore those resources. Out of this program came community interest in monitoring watersheds and lakes. Many of the current volunteers came through this program. The volunteer group also included concerned and interested citizens, environmental programs, and civic groups. They do some volunteer monitoring with school groups but there are other city and county programs that incorporate students, so this program mainly focuses on adults.

The County provides the volunteers with standardized volunteer procedures that they have written for use in lakes and streams, equipment from volunteer monitoring resource center, and they coordinate sampling dates for the teams that work with the program. All of the information that is collected through the volunteer program goes into the water quality database that is maintained by the County. Eventually the data will be available on Clark County's website. They collect watershed information from various locations throughout the County. There are four stream sites and one lake site on Vancouver Lake. The monitors are generally looking for locations that are representative of overall health, they do not target any specific activity and they do not conduct very detailed studies. The purpose is to get a general feel for the health of the systems and the direction that they are going. In general the sites that are active in their program are selected by the County but the selections are based on community feedback about waterways that have had a lot of use. Occasionally volunteers will mention an interest in a specific water body. The County will support the volunteer with equipment but there is an additional cost associated with lab processing that the County does not cover. Vancouver Lake became part of the volunteer monitoring program through community interest.

The program objectives include:

- Allowing facilitation of grass root participation and education of water resources.
- Collection and Reporting of baseline data, especially with waterways, like Vancouver Lake, that have not been routinely monitored in many years. This provides an opportunity to go out and collect useful information
- Adding to the County's current network of county wide monitoring stations that they have in their water resources program.

The County started the program in 2002 by holding a training session and participating in the "The Great North American Secchi Dip-In". The secchi disc is a disc that is lowered into the water to measure clarity of the water. This is an annual program that the County now participates in. When the program began in 2002 it collected data at four stream sites quarterly. In 2002 Vancouver Lake was monitored by a high school student who was engaged in a lengthy and in-depth school project. This past summer the County launched the Vancouver Lake team. Also, in the spring of 2004 a project was started in Gibbons Creek to help TMDL implementation monitoring.

Ron then provided some information on typical lake problems and assessment. He began this portion of his presentation with a quote from Robert Carlson (founder of 'The Great American Secchi Dip-In').
"Water quality ... is a term used to describe the condition of a water body in relation to human needs or values. Quality is not an absolute; the terms "good" and "poor" water quality only have meaning relative to the use of the water and the attitude of the user. An oligotrophic lake might have good water quality for swimming but be considered poor water quality for bass fishing. "

Ron reiterated that the terms "good" and "bad" in reference to water quality are very relative.

When looking at the problems of a lake related to shallow vs. deep lakes, it depends on how the lake was formed. Vancouver Lake is a large shallow lake and the main focus is on keeping the lake in good condition. Typical lake problems that need to be understood in assessment and dealt with are:

- excess algae and aquatic plants
- exotic species (fish and plants)
- turbid water
- toxins that come into through the watershed and remain in the lake
- pathogens and other viruses that can cause illness and infections
- user conflicts

A usual lake check-up, regardless of current problems, includes basic measurements and assessments. The following is a list of things that the monitor group found this past summer when they conducted the check-up at Vancouver Lake.

- Temperature – In general, lakes are often stratified, creating vertical gradients in the water with different concentrations at the top vs. the bottom. Vancouver Lake is shallow and mixes quite a bit, typically there are no gradients and no stratification resulting in a warm temperature.
- Oxygen - In these types of conditions oxygen can frequently be depleted out of the lake. During the summer months, May to October when the monitoring is conducted, there is enough oxygen in the lake for fish. Although there are times when it is very calm and there can be a breakdown of algae which may lead to low oxygen levels.
- PH levels – This is a concern, as the ph levels are very high in the lake. It was over 9 units in Vancouver Lake and this will be something that the monitors will pay careful attention to as it significantly effects the chemistry and the aquatic life in the lake.
- Water clarity - This is a problem in Vancouver Lake. Turbidity is how much light the water refracts representing clarity of the water. The turbidity of Vancouver Lake is very high especially in September and October you can't see more than about a tenth of a meter with a secchi disc and that is very low. This is a concern as cloudy or turbidity issues could impact recreational uses as well as fisheries uses.
- Phosphorus - Vancouver Lake has a high level of nutrients, specifically phosphorus. The phosphorus level in the summer is about 0.27mg/litre. This is over 10 times EPA criterion for avoiding nuisance alga blooms, which is about 25-30 parts per billion, or 0.025-0.030 mg/liter. There is also a lot of nitrogen as well, in terms of total components. However, it does appear that the lake is nitrogen limited most of the time, as opposed to phosphorous limited which increase and decreases throughout the summer.
- Algae - There are significant amounts of algae in Vancouver Lake including blue greens, which started dominating the alga composition in July and that has lasted through the rest of the year. It is a very unhealthy situation for algae, other organisms and people.
- Bacteria – With regards to E.coli, during the summer there were generally healthy swimming conditions at the Vancouver Lake Park beach. This status will change throughout the season and it depends on where a person is in the lake. Overall, this was not a serious problem in the lake last year.

Ron then showed graphs and charts to indicate whether these are new problems with the lake and how they have changed over time with the limited data that he was able to find. He made comparisons between the data sets that were available from 1982 (prior to the dredging), 1984 (after the dredging), and 6-8 months of 2004 data. He did not intend to use this data to determine a trend or see if the problems have increased or decreased but rather to see if these problems are new or have existed for a while. The charts addressed a couple of different factors they are:

- Secchi depth, the average secchi depth during the summer was comparable to the 1982 average. In 1984, after the dredging, the average depth rose due to suspended material that remained in the lake. In general, there have been documented issues with secchi depth and turbidity since the 1980s.
- pH continues to be a problem. It is a typical problem with a lot of alga blooms. Chlorophyll is used to indicate amounts of algae and the levels were higher in 2004 than they had been in the past. Total Phosphorous can also be an indicator of algae and it had not necessarily changed over time.
- The trophic state refers to nutrients, algae and water clarity in one index. Using chlorophyll to calculate the index puts the trophic state on a range. In 1982 and 1984 the trophic state indices were around the low 70s and high 60s. It is still in that range. It is a very productive system; anything over 50 is in the eutrophic range. Eutrophication is a term used to describe the general increase in algal-productivity and sedimentation; these are commonly referred to as “a dying lake” which is also the process of lakes slowly filling in with sediment.

Ron also mentioned that there is still a lot of interest in the volunteer program, that they have volunteers already signed up for this coming season, they will hold a training in May and go out every couple of weeks between May and October for monitoring to gather data including algae, nutrients, chemicals levels.

This concluded Ron's presentation and Jeanne opened the floor for questions.

A question was raised regarding data collection that focused on sedimentary phosphorous. Thom McConathy asked if they had been looking at sedimentary phosphorous, which was mentioned as a major problem in the Cooper report in 1984. Ron said that no, they have not been looking at sedimentary phosphorous. It is very likely that most of nutrients that they find in the water column are coming from the sediments themselves. Thom also asked if they were monitoring diatoms. Ron said that yes they are still monitoring all types of algae including diatoms and they are utilizing the same person who conducted the algae monitoring in the 1980s. Thom also mentioned that the WA Department of Ecology had a lake monitoring program that has been discontinued but the information collected and produced during that time is available from the Department of Ecology archives.

Vern Veysey inquired about other factors that may affect the health of the lake and whether or not things are moving in the right direction with the dredging process. Ron explained that dredging is a common solution to dealing with a problem of phosphorous in the sediments that will not go away. It does not really matter if there is a hundred times more phosphorus in the sediment if it is not coming out, then it stays contained there. With shallow lakes you are in one of two states, the lake is either shallow, wind mixed, warm, turbid, and full of algae or the lake will have a lot less algae but be full of aquatic plants which will thrive in the sediment and hold the sediment down. When a switch is made from one type of shallow lake to the other type it is difficult to switch it back. The dredging work that was done has made an improvement in the lake and it is difficult to know whether or not more sediment has come in to the lake. In terms of it being on the right track or not, it is going to take a long time for the lake to adjust to all of the changes that have been made in the watershed. A lot of the changes to the watershed are bringing different kinds of things into the lake. It is very difficult at this point to say whether or not it has solved the problem of limited uses of the lake.

Ron also explained that there are other potentially limiting factors. They are: inorganic phosphorous, inorganic nitrogen, and algae; which will grow until they can not grow anymore. For a shallow lake, Vancouver Lake is a very big and powerful lake; it gets a lot of wind and mixing. In addition to wind, fish and unstable sediments there are also nutrients and other things that come out of the watershed and into the lake.

Ron reiterated that the lake system has been fundamentally changed from how it was formed. It was an old Columbia River flood plain that was flushed out every year with high flows. The flushing channel is a step towards trying to replace some of that water. It may not do exactly what the river did for lake, which was clean the lake out, and that may not be a realistic goal.

Jeanne then asked if there were any more questions.

Thom McConathy asked what the limiting factor is at this time. Ron explained that it may be a nitrogen limited system, due to the amount of phosphorous in the lake. He also said that light may be a factor, the fact that the lake is stirred-up frequently allowing algae to cycle through the water is also a factor as algae just need a little bit of time at the surface to become productive. There may also be a micro-nutrient, like silica, that has not been analyzed yet that could be contributing to the algae productivity as well. Blue-greens grow the way they do because they can form blooms that produce toxins which give them a competitive advantage over other algae; once they are present they are difficult to remove.

Nancy Ellifrit asked if there are any studies that identify what is going in to the lake from Burnt Bridge Creek and Salmon Creek. Jeanne announced that these will be addressed later in the meeting and in future meetings.

A question was raised regarding whether or not it is a realistic goal to expect the flushing channel to do for the lake what the river used to do historically. Ron clarified that he does not know if the flushing channel was designed to flush the entire lake out as the river had done in the past. He thinks that it was meant to address the algae and the stagnant water by having a new source of water moving the algae out. He mentioned that he does think that trying to replace the water with cleaner water is a good way to address the algae issue.

A question was raised about the large size of Vancouver Lake in comparison to other shallow lakes and if there is anything in the literature that documents successful management of a large shallow lake like Vancouver Lake. Ron mentioned that yes Vancouver Lake is larger than most shallow lakes and that yes there is literature that suggests that it can be successfully managed. He also mentioned that there are new approaches to shallow lake science that address algae problems. He said that he would share those references with the Partnership.

Thom asked for Ron's background. Ron has a graduate degree from WSU in environmental science where he studied lakes and rivers. His thesis advisor was Dr. Funk who conducted the Vancouver Lake studies in the 1960s.

Burnt Bridge Creek (How it works, City's plans and actions)– Victor Ehrlich hand-out attached

Victor began by describing the Burnt Bridge Creek alignment through the watershed using a large watershed map. The creek's watershed covers 28 sq miles and is managed jointly by the City Vancouver and Clark County. The watershed is not very large compared to Salmon Creek and Vancouver Lake watersheds. The boundaries of the watershed are 162nd Ave on the eastern edge, and the Heights on the southern edge. The creek is about 13 miles long. Historically it was only 5 miles long and the rest of it, from 18th St., was all marsh land. It was the head works where enough water built up and started forming a channel. This area was also very heavily forested, now it is about 20% forested.

The Burton Sink area, east of I-205 and north of Mill Plain permeates so well that there are no storm water outlets. All the water goes into the ground the storm drains are all dry wells. There is one place in the area, at water station 9; there is a 7 million gallon reservoir there. It is very prolific. There is a drain line there that goes into a dry well with a holding area. There is a 16 inch line coming out of a 7 million gallon reservoir. When the City drained the tank water was released from the reservoir into a dry well system which easily percolated the water.

In the late 1800s the farmers in the area put in a ditch that ran from 18th St. to 162nd Ave to drain the marsh and farm the area. The creek runs from 18th St. to Vancouver Lake and the ditch is east of 18th St. Victor used USGS data which gave about 7 cu. ft. per second as average flow during the critical months. In the summer the average daily creek flow is equal to about 1 tenth of a percent of the lake volume. . Over a thirty day period Burnt Bridge Creek would contribute about 3% of volume to the lake. Thom interjected that this figure did not take into consideration the contribution of upwelling.

Victor agreed and continued that the key item is the order of magnitude; there is a lot of groundwater in the area. The five mile sink area adds to the groundwater that flows through that basin but in terms of magnitude, 3% over a month may not make a big impact on Vancouver Lake water quality.

Burnt Bridge Creek is entirely in the Urban Growth Boundary and most of the area is built. A majority of that development took place prior to the adoption of water quality standards and the development is not current with today's environmental standards. The storm water drainage system was developed in the past and was focused on eliminating flooding; it was not focused on water quality and how to trap urban contaminants. The City is now enforcing best management practices for new development.

Victor also discussed the problems with phosphorous. The readings from tests that were conducted from water stations throughout the area and test wells from Vancouver Lake Park that were dug last year indicated an average reading of .22 mg per liter. Grab samples from Burnt Bridge Creek were also collected during the first summer of the blue-green algae problem and the average reading also came out to be .22 mg per liter. Healthy growth requires .05 mg per liter. Other benchmark tests indicated that phosphorous is prevalent in the geology and in the sediment; it is not possible to get rid of phosphorous. The creek flows into the SE corner of the lake; it most likely flows closer to the outlet along the east side of the lake.

The City has focused their attention on Burnt Bridge Creek. It is the only creek that flows through the city and they have focused on it to raise the quality of life in the area.

The city is programmatically addressing the clean-up of the urbanized areas. The list of programs that are in place to do this are on the 4th page of the hand-out. Due to the fact that most of the area was developed with no water quality provisions in place the City has a big, long-term task to retrofit the water quality best management practices to clean-up the run-off from the urbanized areas. The City now has development review in place so that every new development must address flood control and water quality. There is also an erosion control ordinance with enforcement. As the City is learning how to do this in the best way, they are also trying to educate the development community, which is also a long-term process.

The Urban Forestry program is a companion program to the surface water management. The current tree canopy in the City is less than 20%, the Urban Forestry program targets 40% tree canopy. Doubling the tree canopy is a long-term issue.

Septic tank elimination is one of the recommendations that is a companion to the 1980s plan to clean-up Vancouver Lake. A lot of Vancouver development is on a septic tank system. In the 1980s, in order to implement this plan Vancouver identified local improvement districts that worked to that end. It began to get more contentious to get a local improvement district approved, they fell into three categories. One third had problems and wanted to be hooked-up to the sewer, another third had problems but had spent significant money on their septic tank and did not want the sewer hook-up, and the last third did not have any problems so they did not want the sewer hook-up. After some years the city decided that they would subsidize the program and build the sewers into the neighborhoods up front and allow the residents to hook-up as their septic tanks failed. This has been going on for several years, residents are able to hook-up as they need to and the City is slowly retrofitting the area and chipping away at the cost and the effort. They work closely with Health Department; the fee that they collect for septic tank disposal at the waste management facility goes toward mandatory inspection and maintenance for septic tanks. This has really helped, but it will take a long time to get the 6,000 remaining septic tanks eliminated. During that time the City wants to have a good running system.

Solid waste and water resource education continues. There is outreach to the community towards having people value the resources.

Victor then described some of the projects that are currently happening in the watershed area.

The City is now looking at how to restore the floodplain area. They are involved in a project that is looking at the Burnt Bridge District. They have formulated a concept for the Greenway District along Andresen. The City has been acquiring a majority of the property in that area. The ordinance was developed to target restoration and preservation of open space for habitat and water quality. The City is planning to implement this vision and use it as a way to explore best management practices.

Victor showed pictures of present-day Burnt Bridge Creek and the Greenway District; which is the former marsh and the ditch. The ditch is deep; the water does not routinely flow out of it, and has fairly high flow for the creek.

He stated the project goals which are; target water quality, habitat, flooding, to treat the storm drainage, and to add a diversity of plant life. When they started this project they focused on the science of the area. The City spent \$400,000.00 in this one area and invested in it to have the science guide them in their efforts. They conducted different types of outreach to discuss the ideas with the public; a list is in the attached handout. The investment that the city made in the science of the area helped with the environmental review and the permitting process; a list of the agencies that granted permits is in the attached handout.

The new improvements included a 3 stage cleansing process involving mechanical removal, natural sedimentation, and wetland filtration; diagrams are included in the attached handout.

Victor then described the process happening in Andresen Road. There is 48 inch in diameter storm drain that runs south in Andresen Road. It receives the runoff from Vancouver Mall and all the surrounding commercial areas. The storm drain discharges directly into Burnt Bridge Creek. The City has intercepted that storm drain and put in a vortexing manhole. The flow goes into a screened area and swirls around in a vortex, the larger contaminants are captured in the screen that contains absorbent peanuts to capture oils and greases, and the remaining water goes out of the screen and into the next process. The second step is natural sedimentation which occurs in the water quality pond that was built about three years ago. There are plans for at least two more ponds on the east side of the project area. The third step is outfall to the wetlands for further polishing. Victor then showed photos of Andresen Pond which are in the attached handout. He also showed a diagram of the ditch; which is in the attached handout. He mentioned that even at high flow the water does not come out onto the flood plain and does not replenish the wetlands. He also showed a close-up photo of the ditch and described how the City will shave back the banks to create more of a floodplain. He also showed on a map where the water quality ponds are located, these are all in the attached handout. He also mentioned that there will be reforestation of the area with caliper trees and shrubs. He indicated on a map where the new tree and shrub plantings will be, by the hospital in the Meadowbrook Marsh area. He showed a map of the Greenway District master plan, he mentioned that the City will be documenting what works and does not work to make sure that they are doing the best job that they can with the urban wild areas. He made the distinction that this area is not a park nor is it landscaping but that it is something different. He finished with a before and after photo of Burnt Bridge Creek, these photos are in the attached handout.

Burnt Bridge Creek (Clark County's plans and actions)- Rod Swanson hand-out attached

Rod briefly described what Clark County is currently doing in the area, although almost all of the creek and about 2/3 of the watershed are within Vancouver, it is an important area for the County. The County does not have a sewer or greenway system; they have a storm water management program for their NPDES municipal storm water permit, which is sometimes referred to as the Clean Water Program. It is a mix of things that the county does with a storm water fee and other activities in the county to have an overall storm water program. The program originated in the late 1990s when the County was faced with getting a MPVES permit for its municipal storm water system and faced with several other storm water issues that needed to be addressed. It was during the 1990s that these types of development programs came into play nationally.

The program has five main elements. They are listed here and described in detail in the attached handout; regulatory component which deals with new development and redevelopment regulations; operations and maintenance component which maintains all storm water facilities and inspects private facilities; monitoring and data management (trends, condition, and pollution sources); education and public involvement (helps public realize that they are part of the problem and the solution); and capitol improvements which include a recently added new wetland facility. This concluded Rod's presentation.

Jeanne then asked the members for clarifying questions regarding the presentations.

Clarifying Questions

Brian reminded the Partnership that the nutrients are naturally occurring, like phosphorous, which give blue green algae a competitive advantage.

Vern also commented in agreement with Brian and added that he needs to see more evidence that Burnt Bridge Creek is a problem in terms of contributing nutrients to the lake. He concluded from the presentations that it is not a significant problem and would like to know if this is accurate.

Victor answered to say that the creek is important to the City for quality of life and they have several programs in place to clean it up, but it is not necessarily a solution to the problems in the lake.

Ron validated what Brian said, blue green algae; they are going to grow either way if there is a phosphorous problem. He also wanted the Partnership to know that they do not know the answers to a lot of these questions in terms of nutrient budgets. Questions like how much water is coming from Burnt Bridge Creek and how much phosphorous is in that water, how much phosphorous is coming from Lake River, Salmon Creek, and the groundwater and the flushing channel; these questions do have answers and they will help the group figure out what to do.

Thom reminded the group that blue green algae is not a new problem, it was occurring before the flushing channel was put in. He described his own experience with blue green algae in the past. He mentioned that it is becoming more of a concern because it is being treated as an active poisoning agent and that is why the Health Department started a monitoring program for the lake. He reiterated that it has been a problem all along; it forms at the interface of the top of the water, even under zero oxygen conditions, it will form and grow into those areas. He also wanted to comment about the phosphorous problem, as the soils oxidize they give off phosphorous, beginning in the Pleistocene era during glacier retreat. He also believes that the actions that are being done relative to the Greenway and the huge amount of development that is taking place in the basin have oxidized the soils to a major degree and have released those huge accumulations of phosphorous and it has ended up in the lake.

Thom also wanted to know what happened to the Burnt Bridge Creek drainage basin and what happened to the 208 plan. This plan was completed in 1979 and 1980 and called for the elimination of septic tanks, which were considered to be the limiting factor that were threatening lake clean-up for phosphorous and nitrogen. At that time it had a goal that septic tanks would be eliminated by 1990 completely.

Pete reiterated that we need to move forward with out placing blame or accusatorily questioning past actions. He reminded the partnership that they have all agreed to move forward from this point and that accusations of past actions are not helpful.

Thom disagreed stating that it does help because there are obligations that the City and the county made in order to get the 17 million dollars in the first place. As a community they have obligated themselves as well and he does not understand why they have abandoned the one instrument that will help them in achieving this goal.

Jeanne clarified that members need to be clear about how looking to the past will help in the current process and for moving forward. She suggested that Thom make a tie in how the past can help the move forward in the presentation that he might give at the March meeting.

Thom expressed frustration and disappointment that the City and County did not give full reports when they presented, so there would not be a need to appear accusatory. He felt that they should tell the history and asked why they had ignored this piece in the presentations.

Vern then stated that the real question on the table is, "Where is the phosphorous coming from?" Whether or not there was a promise made in the past regarding septic tanks will not solve today's problem. He restated that phosphorous occurs naturally. In order for him to be able to make any decisions about the future of the lake he would like to know; how much phosphorous occurs naturally, what impact that has on the lake, what amount, is coming from other sources like septic systems. He restated that regardless of what the thinking was 20 or 30 years ago, if phosphorous is a problem and it can be quantified then it will help determine what kind of an impact the group can have by doing things. He also stated that based on the presentations that were just given, removal of the septic systems may not change the situation that much although there should still be a program for removal. He restated that he needs a clarification about where the phosphorous is coming from and if it is naturally occurring. His understanding is that changes in Burnt Bridge Creek will not make any difference in the lake situation. He would also like to know what the sources of revenue are. He asked what the relationship is between the Burnt Bridge Creek fee, the drainage fee and what is currently being done for the creek including the retrofit storm drain by the Mall. He would like to know how the funds are being spent and how they may improve the creek.

Jeanne restated the questions that came out the discussion and mentioned that they will likely go into the question bin. They are;

- Where is the phosphorous coming from?
- Would it do any good to address septic tanks?
- What is happening with the revenue source?
- Can you test for naturally occurring phosphorous?
- Is BBC still contributing phosphorous? If so, how much?
- What is the flow from Lake River into Vancouver Lake? Do the waters from the stream actually go into the Lake?
- If a septic tank fails before it gets to the sewer line what happens?
- What percent of homes in BBC are still on septic?
- Will improvements to BBC (sloping of flood plain etc.) change volume of flow of BBC to Vancouver Lake?
- What are the other pollutants?
- What are the various phosphate [phosphorous] contributors to the Lake? Can this be quantified?
- How much historical data needs to be collected in order to establish what problems/trends exist for various factors?
- Effect of temperature of blue green algae blooms?
- How many septic tanks within BBC Basin have been eliminated since 1982?
- What is the ? of the BBC utility and the requirements of the 208 plan?
- Why don't we get current conditions assessed by a limnologist?
- Can we incorporate this process into a TMDL plan for BBC and Salmon Creek?
- How much sediment is coming from BBC to Vancouver Lake?

Other requests were made by committee members for different pieces of information.

- Blue green algae - need to know more about it to understand effects and how to control it.
- More information about new science of shallow lake management
- More information on influence of ground water

It was clarified that the levels of phosphorous in Vancouver Lake are the same as what is coming in from the groundwater. Even if all possible work is completed in the watershed there will still be a phosphorous problem in the lake.

Jeanne then asked for members to write down their questions and they will be added to the question bin. She then opened the floor for public comment.

Public Comment

- Vinton Erickson asked if putting the flushing channel in the location that it is in produce the desired results. Was there a better place for the channel to go? The question is raised because there was another possible location for the flushing channel at the time of planning that would have allowed for 2 more feet of fall and consequently more volume.
- Dvija Michael Bertish offered information regarding the BBC utility. The County collected utility funds from Feb. 1981 to 1995. When the utility was finally ceased in 1995 the County collected 9.1 million dollars. According to Mr. Bertish's calculations 6.4 million dollars of that money was accounted for and he has not been able to determine yet what has happened to the remaining 2.6 million. His understanding is that the expenses were administratively heavy. He offered to forward this information to the members. Jeanne asked him to send it to JLA.

- Dvija Michael Bertish also inquired how de-watering of the Columbia dredge will add to the mix of what will end-up in the lake and how can that be minimized.
- Dvija Michael Bertish wanted to know whether the volunteer monitoring is working under a quality assurance program and are they routinely turning over the data to DOE so that it can establish churn analysis for the supporting of the TMDL study in the future.
- Dvija Michael Bertish asked how to test between naturally occurring Phosphorous and not naturally occurring and how to differentiate between the two as to what is going into the lake and the accuracy of where it is coming from.
- Dvija Michael Bertish questioned what the volume of the vortexing manhole is and how are they maintained, what's the volume of water that is going through them and how are they checked to ensure that they are working properly.
- Dvija Michael Bertish also requested clarification about how the completion of the flushing channel improved the algae problem over time, as the graphs did not seem to depict that there was a decrease.
- Lenora Oftedahl requested copies of any documents that are not on the list, she would like to know about them.
- Tim Dean wanted to know how long until the septic tank removal program is completed? Will it continue until it is done?
- Tim Dean also wanted to know how long the greenway program is going to continue.
- Tim Dean inquired if pathogens occurring in the lake be traced to the septic tank problem.

Next Meeting

The next meeting will be held March 16th, 2005 from 4:00pm to 6:30pm. Location will be confirmed and sent out via email meeting notice. The focus of the next meeting will be to finish the watershed focusing specifically on the Lake shore, Lake River which includes Salmon Creek and Burnt Bridge Creek.

Thom suggested that the Partnership commit more time to the process, have more meetings, and/or more commitment of time in meetings.

The Partnership then discussed adding more meetings or more length to the existing meetings. It was decided that an extra half an hour would be added to the length of the meetings.

Jeanne reminded members and the audience that if they were interested in making a presentation that they need to contact the Committee Coordinator, Amanda Garcia-Snell 503-235-5881.

Committee Business

- All Partnership related information will be distributed by email unless otherwise noted.
- The meetings are tentatively scheduled for the third Wednesday of every month and will be held from 4:00pm – 6:30pm until the end of the presentations at which time they may return to the 4:00-6:00pm schedule.
- The next meeting session, and later meetings if necessary, will be dedicated to the sharing of past pertinent information about the watershed area.
- Any member that would like to present information will need to notify Amanda Garcia-Snell (amanda@jlainvolve.com) and provide a summary of the information.