



December 21, 2011 VLWP 38th Meeting Summary

The thirty eighth meeting of the Vancouver Lake Watershed Partnership was held on Wednesday, December 21, 2011 from 4:00 – 6:00 pm at the Port of Vancouver Administrative Offices.

Attendance:

Member Present

Nancy Ellifrit
Gary Kokstis
Thom McConathy
David Page
Jane Van Dyke
Vernon Veysey
Patty Boyden
Brian Carlson
Kevin Gray
Eric LaBrant
Iloba Odum

Member Seat

Citizen
Citizen
Citizen
Citizen
Citizen
Citizen
Port of Vancouver
City of Vancouver Public Works
Clark County Environmental Services
Fruit Valley Neighborhood
Washington Dept. of Ecology

Other Agency Members Present:

Andrew Ness
Brett Raunig
Jeff Schnabel
Dorie Sutton
Ron Wierenga

Association:

Port of Vancouver
Washington Department of Ecology
Clark County Environmental Services
City of Vancouver
Clark County Environmental Services

Public in Attendance:

Kim Marcotte
Anita Roberts
Alan Stewart

ICF
Vancouver Lake Crew
Vancouver Lake Crew

Project Management Team:

Phil Trask
Eileen Stone

PC Trask & Associates, Inc.
PC Trask & Associates, Inc.

Not in Attendance:

Member

Anne Friesz
Chris Hathaway
Aaron Henderson
Don Jacobs
Nancy Lopez
George Medina
Jim Meyer
Doug Quinn
Bruce Wiseman

Member Seat

Washington Department of Fish and Wildlife
Lower Columbia Estuary Partnership (alt. for Debrah Marriot)
Clark Public Health
Citizen
WA Dept. of Natural Resources
US Army Corps of Engineers
Citizen
Clark Public Utilities
Port of Ridgefield

Opening of Meeting/Agenda Review

Phil opened the meeting and welcomed everyone, inviting all to the cake provided for the meeting. He asked if there were any additions to the agenda. No revisions to the agenda were requested.

Public Comment

Allan Stewart of Vancouver Lake Crew read an email from Curt Peterson of Portland State University. Dr. Peterson conducted sounding and sediment coring of the lake as part of a class project with his students. He provided preliminary information now and would be glad to present findings at an upcoming partnership meeting if there is interest.

Information excerpted from email: "...we found the beginning of Lake Vancouver at 4.1 m depth just above the Mount St Helens Set-P tephra layer at 4.5 m depth at the northwest margin of the lake.

These results will show that Vancouver Lake is not ephemeral and that it grew above a vegetated wetland ... and that it has existed for the last 2,000 years. There is no evidence for filling-up of the lake prior to historic time, as non-rooted mud extends from the historic dredge fill (upper several decimeters) to the peat at 4.1 m depth.

The students are now performing laboratory analyses, figure drafting, and report writing. The students will be prepared to show the findings to your fellow concerned citizens at your convenience after the winter break.

We expect to date the ash layer at 4.5 m depth later this summer (pending funding from our Canadian colleagues). If you would like a C14 date on the very onset of Vancouver Lake's origin at 4.1 m depth, then we will want to discuss some funding options. A radiocarbon date is \$600."

There was no other public comment.

The KGW news clip coverage of the Vancouver Lake Cleanup Day of September 17th was shown to the group.

Project Management Update

Phil noted that there has been outreach work in addition to the successful cleanup day since the last Partnership meeting, but the main focus for the project management team has been the matrix we will be reviewing and working on in this meeting's work session. As this review will take time we will start right away.

Work Session

Introduction

Phil explained that this work session is a result of the table that was introduced briefly to the partnership at the September meeting. The table was to start conversations about which actions make sense from various aspects of lake health, lake uses, and potential funding sources for such actions.

In this meeting we will be looking at a matrix that shows potential techniques and their potential effects on lake uses. Nearly all of the techniques in the table and matrix are from documents we developed earlier: the Technical Foundation, Algal Control Techniques report, and the Funding Strategy. The Steering Group and Technical Group members helped refine the matrix in a meeting earlier in December, and we now want Partnership provide input.

In introducing the matrix, everyone must know it is not a finished product: it is part of the planning process. We hope to use this to plan ahead and identify the Partnership's desired end goals so we are ready when the research phase is complete. Planning ahead in this manner will help us focus on what informational areas have critical gaps.

Also, this is the beginning of a 2012 work plan focus. Given what we know now, how will we focus in on the feasibility of some actions and how might they apply? No techniques are to fall off the table, but we are looking to focus on more likely techniques.

Phil asked if there were any comments on this so far.

Patty commented that it is exciting to start getting into the prioritization of which management alternatives or combination of alternatives we should start focusing on. She is looking forward to hearing from everybody in terms of what they would like to see for the lake.

Gary noted that this is good to start on now. There are a lot of options and it is good to look at how various actions would impact stakeholders. The options that are here need to be fleshed out more for this tool to be truly effective. We can only go so far at this time as we need to wait for scientific results to make a decision. However, at a minimum this is a practice evaluation for once results are available, at which time we will be more prepared.

Thom remarked that he hopes we will have sustainability of various techniques as a consideration, as some techniques will be short lived and require repeated efforts to maintain.

Iloba commented that the matrix can be helpful as a means to agree on a focus and move forward, but we need to be careful that we don't go too far ahead when research results are needed to inform our decisions.

There were several comments that partners are glad to move forward with a tool like the matrix.

The matrix was handed out to the group. With no further comments, Phil introduced Katy Brooks of the Port of Vancouver to give an overview of the process.

Overview

Katie noted that she is here today to facilitate the process, which is to start looking at a focus/direction while recognizing that things might change in the future. It is similar to planting a flag in the distance to aim towards a goal. New knowledge may change our route or we may decide on a different direction but it is a start. All decisions also have filters that will be part of a go/no go decision. We will look at some of those filters later, after the group feels comfortable with the potential effects as identified.

The matrix is a means to look at two things at same time: potential techniques and the uses of Vancouver Lake based on the unrestrained vision for what we would like to see at Vancouver Lake. We started to give a value to the potential effects of the techniques. These values are binary (-1, 0, 1) and are oversimplified on purpose in order to get us to a starting place; we would like to get consensus at this level.

There are new columns in the matrix based on input from Steering Group and Technical Group members. These columns (sustainability, expected outcome, and likelihood of success) will be looked at by the Technical Group in the near future. These are big picture filters which over the next year or two will start informing our work plan.

It was asked if some techniques could be rephrased. For example, dilution/flushing could be changed to flushing channel management and carp removal could be carp management; Alum treatment could be termed phosphorus management, as it is one of several in-lake phosphorous management methods.

Katy noted that more work needs to be done on the descriptors and organization, including the mix of general and specific techniques. Right now we would like to focus on looking at the matrix numbers. After we go through the matrix with Jeff, Phil will discuss the next steps of refining the matrix, which will include organizational needs such as those raised today.

Matrix Review

Jeff began describing the format of the matrix as it was shown overhead. The current uses identified for Vancouver Lake are across the top of the page as columns. The rows along the side (the left column) are various management techniques. Each technique is given a value for its potential effect on a specific lake use: a value of -1, 0, or 1, for negative effect, no effect, or positive effect.

It was noted there such a wide range in costs for some techniques. Jeff explained that the techniques are really an umbrella of several techniques, which could be done on a very small or a large scale. As we move forward we will likely be looking at packages of techniques and looking to meet some ultimate objective. We will be able to be more specific with costs over time, including up front implementation costs versus long term maintenance costs. The time frame being considered for "long term" is 30 years.

It was mentioned that as we move forward we should focus on doing the best thing for the lake. We should not be overly concerned that we cannot do something due to its costs if it is the best solution.

Jeff began discussing each row of the matrix.

Row 1: Existing programs (status quo). Effects are zero across the board as this is what is currently done: don't expect an effect on lake uses.

It was suggested that this option reflect that we are in a current level of implementation. These programs are good for the lake, and we should look at what people are spending now on these important programs. Jeff noted that current program costs can be described later as we dial in on this current action option. The matrix isn't at the right level for this detail.

Row 2: Increased watershed efforts: This is somewhat of a top down approach, as work in the watershed is not specific to the lake but over time will help the lake improve/heal itself. We would hope to see positive impacts, cleaner water over the long term, and an overall improvement lake-wide.

There was discussion of the definition of watershed for this technique. Salmon Creek and Burnt Bridge Creek would be part of the Vancouver Lake watershed, as well as Lake River at some level. While we couldn't manage Columbia River, management of the flushing channel could be considered watershed management of the lake if nutrient load from Columbia is identified as a concern.

Phil noted that the watershed definition is a good reminder that the matrix is very general and a greater level of specificity would be reached as we examine the categories more thoroughly in the future.

On effects: Jeff changed crew and kayak to a score of one as requested because they have similar in-water use as sailing and swimming.

Row 3: Artificial circulation: The idea is that moving water around in the lake would disturb algal reproduction, reducing the amount of algae. This would require many water circulators around the lake. It was asked if this would include as a possible method a fountain as they are used in water treatment plants or the below surface pipes that are used elsewhere. This description is mainly based on the propriety method named the Solar Bee that has been used at other lakes. The group voiced concern about seeing many devices scattered around the lake and their effects on sailing, crew, and aesthetics.

Vern remarked that he is not sure if this method is as negative as he is hearing, because if a method controls the algae that you are trying to control then that is a good thing. Gary commented that if the technology you apply to help the lake is negative to the lake uses then that is not necessarily a good technique to choose.

On effects: Jeff changed crew to a -1 as requested because although the race course is in a set area so that circulators could be avoided, the crew rows around the entire lake and many circulators would interfere with that use.

Row 4: Algaecide/algaestats: this includes chemicals and barley straw to kill/control algae. The effect on crew and kayak was discussed and the group agreed that in general anything for sailing/swimming would be the same for canoe/kayak. They could be grouped in general as boating, but are not always consistent (e.g., later canoe launch).

Jeff brought the costs column to the attention to the group, noting that the costs for some techniques are per year as they need continued application or maintenance.

Alan commented that he is new to Partnership meetings but wanted to know why the Partnership seems to want to get rid of algae and carp. Jeff explained that the Partnership formed in large part because of closures of the swimming beach due to large blue green algae blooms. With that, many of the techniques here are algal focused with the intent to prevent or minimize large algae blooms. Carp are analogous because in many lakes managing carp will get at the algae problem due to carp stirring up lake sediments and the nutrients in the sediments then feeding the algae bloom. It was observed that algae are natural and good. However, we are trying to prevent too much algae that produce toxins and cause lake closures for extended periods.

It was noted that it would be good to look at doing a spot treatment in different parts of the lake to be effective in specific areas and not interfere with some uses. It was agreed that there is that possibility. For instance, potentially something like circulators could be maintained in certain areas so as not to overtake the entire lake. Would need to look at how that could work. As we delineate our priorities for lake uses we will also delineate what we are willing to put up with, possibly in different areas of the lake.

Row 5: Alum treatment: alum is used to precipitate phosphorus from the lake in order to reduce algae blooms. It is typically more effective when not much nutrients or sediments coming into lake. This treatment has a cost per year, but not certain at this time how often treatment would be necessary. For effects there would be an improvement in water contact recreation and aesthetic appeal of lake. Negatives would be potential toxicity to wildlife. It was requested that the alum category be changed to include other phosphorus management treatments such as free iron.

The group discussed how an alum treatment would be applied and that some activities would likely need to be suspended for a period immediately after treatment. Short term effects on uses should be looked at later when weighing treatments. The matrix is mainly looking at long term effects (not effects at time of implementation). There was also concern about how a surface treatment such as alum would work with tidal input/output at Vancouver Lake. As such, it was recognized that this method may not be as applicable to Vancouver Lake as it is to other lakes.

Row 6: Dilution/flushing: there are many ways and levels by which to approach this: it could be a small or large amount of additional water. Flushing is aimed at trying to disrupt the algal growth cycle. There are no real negatives to lake uses from this technique. It was noted this could have a negative effect if incoming water was nutrient rich when a bloom was underway. It was agreed that adaptive management of flow (and nutrients) is implicit in all approaches.

Thom requested that perching the lake be added under this category. This would entail the addition of a tide gate at Lake River to control water level so that there is a greater amount of water within the lake.

Row 7 with Row 10: Water Level Drawdown and Recruit Rooted Plants: these are usually done in conjunction with one another. Water level drawdown is a technique used to compact sediments to encourage rooted plant growth. This would result in clearer water and less algae, essentially "flipping" the lake from algal dominated to plant dominated. This would have a negative impact on sailing and crew because with successful plant growth there would be plants at the water's surface which would interfere with sailing and crew. Swimming is rated as a positive with the assumption that there would be a barrier at the lake bottom in the swim area so that plants would not interfere with swimming. The barrier would require regular maintenance.

The technical feasibility of this approach was discussed. There is ground water coming up into the lake through springs that would seem to make de-watering the lake for a period of time technically infeasible. Has there been research on what plants, if any, were in the lake years ago? We potentially could get this information from PSU sediment cores to inform consideration of this technique.

Anita asked how long the lake has been tracked. This summer there weren't lake closures due to blue green algae blooms and there were bryozoans all over the lake. Is there a chance the lake will fix itself?

It was noted that this year had high water flows throughout the system, which may be the reason for no large blooms this summer.

Row 8: Biomanipulation for algal control: there are many subcomponents to this technique. It could include carp (**Row 9**) in this as well. The aim is to change the food web to reduce the algal population. The Washington State University research looked at the plankton level of this equation of who eats whom and when. The concept of biomanipulation is to affect the food web to promote predators of blue green algae (top down), or with carp, reduce their resuspension of sediments and the nutrients in the sediment in order to reduce algal blooms (bottom up).

The group discussed the potential for a commercial carp fishery as there has been one before, as well as possible management of a fish trap as public/private partnership. However, barriers to carp entering the lake could limit access to salmonids.

Jacquelin commented that there were many young carp along the bank by the Felida Moorage ramp recently. Carp could be a trapped when babies, possibly more easily than targeting adults.

Row 11: Swimming enclosure with treatments. The area within an enclosed area could be treated if swimming is the only activity of concern. This would require annual maintenance.

Row 12: Sediment removal for Sailing Club, **and Row 14:** Sediment removal for fish habitat. It was asked if effects of sediment removal should benefit all categories. Jeff noted that there are separate impacts for the different targeted sediment removal types because if looking at sediment removal for boating it would be a small depth change over broader area. For sediment removal for fish habitat it would be deeper for smaller area. Sediment management types could be put together and then have several subcategories.

Phil mentioned that the information from the Corps is that water quality would decrease if sediment was removed to make a larger (deeper) lake because of slower flows.

Thom asked about mining sediments in order to remove phosphorus. Jeff said this technique could be put to the Technical Group in January.

Row 13: Canoe/kayak launch facilities: It was noted that launch facilities would have no impact on algae – only for lake recreation management.

Thom commented that a dam at Lake River could be a bridge for more recreational trails.

Brian commented that he doesn't see boat launches and trails as lake management techniques; maybe this doesn't belong in the matrix.

Row 15: Wetland restoration/enhancement: there are no down sides but if to be used as "fix" for blooms will likely need a lot of wetlands. Not a high likelihood on expected outcome, but good for fish and wildlife habitat.

Dredging and wetlands go together for some degree, and it was noted that if a fish use study was conducted and significant salmonid use was found, other funding for wetland work could be become available.

Row 16: Fish habitat enhancement: This category includes structures, primarily for warm water fish but could be some for salmonids as well. There was some discussion of potential negative effect of structures on sailing. If conducted, structures would be placed in certain areas so as not to affect sailing and crew.

Row 17: Biomanipulation/stocking for warm water fishery: this would have a negative effect for salmonids.

With review of the matrix completed, Jeff opened the discussion to comments.

Thom would like to add the technique of bottom sculpting as a means to stop wind resuspension of sediment by prevention of building wave action. There was some discussion of if bottom sculpting would work with the shallow nature of the lake.

The Technical Group will consider adding additional techniques in its next meeting. This will be an iterative process to look at solutions that will fit with long term goals for the lake. When the research results are available we can look at which of the techniques would best address issues.

Next Steps

Phil reminded the group that this matrix is still early in form. We will bring it to the Technical Group next. They will focus first on the columns of sustainability and expected outcome of each technique. Then we can look at how likely we are to achieve that outcome (likelihood of success). Later, partners will be working to narrow our focus when greater information is in hand.

For meeting planning, the Technical Group and Steering Group will each meet in January. We would like to move the Partnership meeting to February 15th. The group was asked if there were any objections to a February meeting and there were none. After the February Partnership meeting the next meeting would be either May or June depending on the Technical Group work.

Gary raised a concern about the planned route: to narrow down techniques that would meet desired outcomes in April/May: can we do this without research results? Will we have the technical knowledge?

Phil explained that it would be further sorting things out. Techniques would not be removed from table, but to focus in smaller subset that appear more feasible for Vancouver Lake. We would be examining techniques with consideration of both the likelihood of success and the confidence in the level of success.

Eric commented that we aren't moving forward with a management plan without the research results, but are working on ideas that the research will either support or reject. If rejected, then we go back to the drawing board. This process is preparing us for the end game.

Phil asked the group for comments on the matrix exercise in general.

The group discussed the binary weighting of effects was a simple start; more weight will be given to effects in the next round. Also, the total column does not mean very much in a binary system and should be removed.

Several members noted that it is exciting to be moving forward after all of our work.

There were no further comments.

General Partnership Announcements

Thom announced that on January 10 at the Washington State School for the Blind there will be a Phase 1-Phase 2 NPDES permit hearing. Thom thinks it has a potential impact on the lake and he would like a stakeholder base for the lake to arrive at regional goals, which could include monitoring.

Close of Meeting

With no further announcements, Phil thanked everyone for their participation and brought the meeting to a close.

Next meetings:

Steering Group: January 25, 2012 from 10-11:30am at Marine Park Engineering.

Partnership: February 15, 2012 from 4-6pm at the Port of Vancouver.