



## January 18, 2011 Technical Group Meeting Summary

### In Attendance:

Harvey Claussen	Vancouver Lake Sailing Club
Thom McConathy	Citizen Member
Marty McGinn	Clark Public Health
Jeff Schnabel	Clark County Environmental Services
Dorie Sutton	City of Vancouver
Ron Wierenga	Clark County Environmental Services
Lisa Willis	Port of Vancouver
Rob Zisette (by phone)	Herrera Environmental
Phil Trask	PC Trask & Associates
Sandra Coveny	PC Trask & Associates
Eileen Stone	PC Trask & Associates

### Opening

Phil began the meeting with a discussion of the Technical Foundation, initially completed in late 2008. It is scheduled to be updated with new information in early 2011. The first four chapter updates are straightforward, and Phil asked the group to please let him or Sandra know if anything is missing as well as thoughts about the chapter updates so far.

Chapter 5 has almost completely been replaced by last year's Five Year Research Plan (Dec 2009). The job of the Technical Group today is to help inform how that chapter should be updated. We want to be clear on the approach and be sure to capture the changes that have occurred post-2009 as well.

To aid us in our discussion about Chapter 5, Rob Zisette created a conceptual model in the form of a diagram (handed out) portraying the process necessary to address cyanobacteria blooms. Elements include: identifying research priorities, identifying funding needs and sources, and project implementation and monitoring.

Agenda for this meeting:

- Gap analysis of each of the first four chapters.
- Analysis of Chapter 5: Discuss structure and gaps. Consider technical strategy – to prioritize research and move from research to action.

### Technical Foundation Discussion

Phil asked the group to confirm our assumption that this document is still intended as a communication piece for a lay audience, and while it is intended to have its foundation solidly in science, it is not an overly scientific document.

Dorie commented that it is up to Partnership to say who the intended audience is.

Harvey noted that taking a technical document and trying to make it readable to a lay person may gloss over some technical detail. Need to be careful not to make it more confusing instead of informative.

The group reviewed each chapter of the Technical Foundation as described in Attachment A.

### **Next Steps/Closure**

Technical Questions will be sent out early next week.

Another version of the Technical Foundation will come out in about two weeks.

We are planning to bring the Technical Foundation to the Partnership on March 16<sup>th</sup>. It will be shared with the Steering Group prior to that.

Ron noted that while it is important to update the Technical Foundation with what we know, it won't really seem like new news to Partnership, so the presentation at the meeting shouldn't take long.

This document doesn't have an evaluation of the potential techniques – that will be later in the year.

Phil adjourned the meeting.

## **Attachment A: Notes from Technical Group on Review of Technical Foundation**

### **Review of Conceptual Model**

The group noted that this diagram might be a good introduction to the entire Technical Foundation. The following recommendations were given:

- Write in where data can be found at the top of each box.
- Add a box for tributaries.
- Each box should point to a document with further information, or have a document developed with that further information.
- Funds available: discussion of impact of level of funding on entire process, not just at one step: possibly include in discussion and not as a specific box. Note: a Funding Strategy is to be developed by July.
- Developing management plan – add in an EIS box – between phase 1 and phase 2 was suggested.
- Box for evaluating management alternative:
  - Rob explained that nutrient loading is the current mass balance research by USGS.
  - Watershed model: would be informed by the nutrient and sediment loading from tributaries, also getting from USGS.
  - A lake model would further expand knowledge of nutrient, hydrologic cycling and impacts of management within lake.

Thom commented that to develop programmatic BMPs, program specific to tributaries will require characterization and analysis that would include microbial studies. If we don't do that concurrently with a lake plan our implementation will be delayed. Sub-watersheds or tributaries should be analyzed and funding would need to be assigned.

This was acknowledged, but given the state of the economy, concurrency will be very difficult to fund at this time. We are currently looking at what each tributary is delivering to lake. As we learn this we can move forward with planning next steps, such as sub-watersheds and any necessary analysis.

All agreed a diagram like the one presented is useful – possibly create a simpler version that is even more introductory to place in the beginning of the entire document; keep the more detailed one in Chapter 5.

### **Review of Chapters**

Sandra began this discussion asking for confirmation that this document represents the ideal path forward and is the foundation for moving forward, not just a means to document the process as we go along. The group confirmed that and added that if the Technical Foundation is developed well enough, it will feed nicely into the development of an EIS.

### **Chapter One**

In paragraph 3 of chapter one, add fecal coliform, as well as microbial studies so that the source of fecal coliform can be determined.

It was noted that the reference should be to *E. coli* instead of fecal coliform. It was noted that pathogens are already listed, but as that can be broader than our concerns, Thom would like *E. coli* to be specified.

A table of *E. coli* closures should be included with the seven or more years of Health Department sampling. Marty will provide information to Sandra along with similar information for cyanobacteria sampling and closures.

On page 2, last paragraph: look at Dames and Moore study 1977/78 regarding Buckmire Slough, also the final EIS for Vancouver Lake Restoration.

Geologic information is in the final 1980's EIS, where Vancouver Lake is referred to as part of the Willamette Channel in geologic terms.

## **Chapter Two**

Regarding the shallow lake conditions section (paragraph 4): the characterization of the lake being homogeneous should be revisited. An earlier study (WSU) found a gradient as high as 8% within water column (turbidity) between the bottom and the top layer of the lake. This difference is significant enough to consider the implications if the lake was not considered homogenous (mixed). Also consider that there are deeper sections in the east part of the lake. There are also rocky areas that get deeper.

On page 6 please elaborate more on the EPA study – explain what the invertebrates were that were sampled (invasive Asian clams, no native clams sampled).

There was a native clam study done by USFWS for Clark County four years ago. Thom can forward Sandra/Eileen a copy.

A side note: the Partnership needs to take possession/ownership of the Vancouver Lake bibliography developed by Stream Net so that if Stream Net priorities change the Partnership can continue to update the bibliography and not lose this valuable resource.

Discussion of Buckmire Slough: there is a quick reference to it here, should Buckmire Slough be included in the Technical Foundation? It has not been referred to before as part of the contributing watershed.

It was noted that the Final EIS from 1980 treated Buckmire as part of Vancouver Lake. Also, Salmon Creek is included in the watershed because at extreme high tide or under the right high water conditions, the water from Salmon Creek enters into Vancouver. If the same is true for Buckmire Slough, it probably ought to be treated the same way as Salmon Creek. It seems like including Buckmire Slough would make sense.

Limited funding forces us to continue focusing most of our energy on Vancouver Lake proper. We can refer to Buckmire Slough but can't expect to put too much energy into Buckmire Slough as part of the analysis for Vancouver Lake.

Consider including wetlands in South Vancouver Lake area. The developed wetlands are receiving warm discharge water from CPU. Need to confirm if there is connectivity between these wetlands and Vancouver Lake during high water and at what levels.

Corps bathymetry data can be used to update section on "anecdotal" depths.

Discussion of expanding the section on 'Aquatic Vegetation:' Title should just be Vegetation, and discuss the lake shore vegetation: explain emergent vegetation, submerged vegetation, and lake bed function of each along with plant/water interactions at various water levels, and the management implications for each condition. Wetlands should be part of this as well.

Data gap: if we don't know nearshore community of plants, then we could describe the significance of knowing/not knowing. Depending on management solutions, this could be a need to know element or just "nice to know."

If the varied vegetation types point us to solutions about re-vegetation in the future then we should have some basis for it here. Basic descriptions and interactions would be very helpful.

Ron noted that we should reach out to USFWS again, as well as WDFW and WSU regarding surveys. They did some surveys in the past, including invertebrates, that would be helpful for us.

Phil also noted that the US Army Corps is working in Dairy Creek for Sturgeon Lake, spending significant funds to study and understand the lake. There could be some analogous data that could be useful for Vancouver Lake.

### **Chapter Three**

Remove the word nuisance before algal blooms - that seems to downplay the importance. It is a technical term, but if this document is for the layperson, it seems to downplay the significance...as in 'just a nuisance.'

Also need to be careful not to characterize all algal blooms as harmful, and not to characterize all cyanobacteria as harmful.

Clarification requested on the cyanobacteria levels listed and Clark Public Health's criteria. Marty noted that Public Health uses both numbers of cyanobacteria and microcystin counts, following World Health Organization and Washington State guidelines. World Health Organization information in our report can be updated – it was just changing in 2008.

Using cyanobacteria cell counts is being conservative as the cyanobacteria may be present without toxins. WHO (and Clark Public Health) also use a 'scum' criterion.

The Health Department has three ways of closing a lake. Marty will forward the details and the seven years of data monitoring information to Sandra.

Change wording on cyanobacteria closures from "guidelines reached" to "criteria levels exceeded."

Also, remove the term "drinking" before the word water from the top of page 2 – even though it's a technical term, "drinking water" and Vancouver Lake shouldn't be connected.

Change wording from "likely source" for cyanobacteria to something like factors, causes, influences, conditions that influence.

The document should state that birds are a source of fecal coliform, not that they could be a source. We know they are a source, even if not to levels to close the lake. We need to be careful not to mischaracterize closure situations however without a microbial study. Sandra requested help in getting a citation for birds as source.

### **Chapter Four**

Phil asked if there are other technical questions that we are totally missing. The Technical Group developed a long list of questions two years ago. Chapter 4 has some questions; Chapter 5, developed last year, has research needs within categories. Any further questions should be evaluated to see if a question is either part of chapter 4, or one of the specified research tasks, or if it doesn't fit within a current task is it because it is a low priority or does it need a new task identified. Thom noted that he and others had further questions that have not been addressed in the Technical Foundation so far. He would like them added.

Eileen will check on technical questions that she has received, highlight where they would fit in urgency tables, vet with group to give input and determine if/where it fits in Chapter 4 or Chapter 5. Technical Group will let Eileen know if something was missed/if it was placed correctly in urgency tables. We will discuss the questions/placement as a group.

Thom noted that characterization of the tributaries was the most important of his questions.

## **Chapter Five**

Phil gave an overview of Chapter 5, which is being modified to incorporate the research plan. We are specifically wondering about how the group suggests going about re-crafting page 1 of the chapter.

Part of this chapter should include that the Technical Foundation is a precursor for the EIS – a description of the role of the Technical Foundation in the eventual EIS will be added.

There was discussion on adding a concurrency section, including who will be responsible for each part and funding. Funding strategy will be a separate document (due in June or July). This document is one part of how to get to the actions; it will be the foundation from which to build a funding and implementation strategy.

A critical part of this chapter is to prioritize the research actions. Thom noted that there are new research questions are not part of this document – haven't gone through prioritization they need before inclusion, namely mussels, sediments, and changes in nature of sediment consistency. Jeff explained that we need to better prioritize with Rob Zisette all of the priorities identified last year, then see where new items fit.

This document is essentially a precursor to the central box "Evaluate Alternatives" on the diagram – it needs to be clear to everyone as to where this document will get us, and what is outside the scope of this document. Funding for example is an element outside the scope.

We know this won't be the vehicle for everything. We just need to clearly indicate where this vehicle will get us. Maybe provide some different colors to illustrate what this document is and what it is not.

We could separate the diagram into two flow charts: one for before Technical Foundation and then everything else. Alternatively, have colors indicate which areas of chart are in/prior to Technical Foundation and which are after.

## **Funding discussion**

Discussion of the funding box in current location as one determinant of updating research plan when funding level will be important at each stage.

Thom noted last time Vancouver Lake work received significant funding there was a strong proponent, Senator Magnuson in DC.

Funding should be noted, but not as a yes/no route. It is important to consider data gaps and at which points you will be stuck if you do not have funds. There are some studies which might be nice to know but aren't necessary to fund to move forward. It will be important to note if there will be a critical data gap. As this group looks to what is critical and what is not, we are to make recommendations, which will be based on funding. May give a range of recommendations based on varying funding levels.

More on the role of funding will be explained in the narrative, pointing to the upcoming funding strategy document.

## **General Comments on the Technical Foundation**

Harvey commented that this research is to serve as a foundation for any potential management actions, and should point us to certain management alternatives, whether they are minimal or grand, but shouldn't be so specialized to only support a grandiose plan; if it did it could be for naught. Also, no matter what the management decision will be, we will need an EIS.

Is this to be enough research to feed into EIS to get that going, or will more research will be needed after we come to understand what alternatives we have before us?

Phil commented that the research we have now should tell us the magnitude of the nutrient issue. We also have the algal control techniques document, from which we will be narrowing down alternatives for Vancouver Lake. As we narrow down alternatives and have information from USGS we will need some more focused work. But this Technical Foundation will be a broad platform. We are looking to complete research to point us in the best direction. We are not looking to narrow down techniques based on their costs at this time, but need to be moving forward in direction of making recommendations.