
**San Francisquito Watershed Council
Steering Committee Minutes**

November 8, 2006

Introductions. Agenda approved. October 11th minutes approved. The next meeting is December 13th.

Announcements

- Pam Sturner (SFWC): The next Watershed Council volunteer workday will be December 2nd; the activity is planting native plants behind Woodside School. Also, the Watershed Council has extra copies of the Napa sediment TMDL plan and the flier on the Basin planning process from Sandi Potter of the Regional Board from the October meeting that everyone is welcome to take. Also, happy birthday to Art Kraemer and Katie Pilat.

Presentation and discussion: Where to next for the Long-term Monitoring and Assessment Project: Key findings from the past five years and a discussion of future priorities (Brad Eggleston, City of Palo Alto)

Brad started by saying this presentation is a continuation of the presentation on water quality findings from September. The City of Palo Alto hired Armand Ruby, the consultant who helped develop the original LTMAP plan, to compile the first five years of results and develop recommendations for future monitoring.

The original LTMAP plan was completed in 2002. It included more than what we will be talking about today. Today, monitoring is focused on chemical results. The original plan also included biological, physical, and other kinds of objectives. The first year of data was water year 2003 with data from the two Piers Lane stations and the Newell station. Water years 2004 and 2005 included these three stations plus the Bear Creek station on Jasper Ridge Biological Preserve. This year, that station captured data for flow only. Balance Hydrologics has been doing data collection, review, and analysis for the three upper watershed stations (Piers Lane and Bear Creek) and Palo Alto has been doing the same for the lower watershed station (Newell).

In doing data review and analysis, Armand Ruby considered the following:

- Spatial differences among data;
- Trends over time;
- Comparison of data to water quality objectives; and
- Recommendations for changes and improvements

Key findings

Spatial differences among data: For most of the parameters studied, the p value was less than 0.05, meaning that we can not conclude with 95% confidence (a standard statistical threshold) that there is a difference between the true mean values at the sampling stations that were compared. The only parameter with a statistically significant difference with regard to location in the watershed was hardness, which comes mostly from naturally occurring magnesium and

calcium. This parameter was higher in the upper watershed and lower in the urban lower watershed. Also, dissolved copper was higher at Newell than at other stations. However, because the lower creek dries out in the summer, measurements are only taken at the Newell station in the winter, when copper concentrations are higher due to lower hardness. When only the winter means were examined, the values were closer.

Question: Sometimes there is debris in creeks including computers and electronics. Might the copper be from old circuit boards?

Response: That's possible, but copper from brake pads is more friable, and brake pads are probably the biggest contributor.

The analysis also looked for temporal trends in the data and found none. The data were very variable. However, five years (approximately 70-80 total samples) is not very much data given the scale of the variability. A power analysis could be done to determine how much data would be necessary to determine temporal trends at a given statistical significance or confidence level. It's basically a sensitivity analysis to data variability. Or even more valuable information from a power analysis might be to determine how often we would need to sample in the next five years to make a statistically significant comparison with the last five years.

The results showed some exceedence of water quality objectives, namely total recoverable mercury, dissolved copper, aluminum, and dissolved lead.

Question: What would the source of aluminum in the creek be?

Response: Soils and rocks, anything with clay.

Question: Has there been any visible drop in mercury since the cities started their fluorescent tube and thermometer collection program?

Response: No; no temporal trends were found.

Brad then showed a series of charts with results for specific parameters.

Total recoverable mercury: there was a lot of variability. Mercury correlates with total suspended solids and affects the growth and reproduction of biota. The chronic water quality objective is shown by the pink line at 25 nanograms/liter (ng/L), which is a human-health based objective based on bioaccumulation of mercury in shellfish. The highest result is close to 500 ng/L. To be comparable to this objective, the sample is supposed to be a four-day average. All samples from the LTMAP program are ultraclean grab samples, which may not be comparable to the chronic objective. The acute limit, which would be measured from a 1-hour sample, is 2400 ng/L, which would be way off the chart. There is no guidance in the documents on how to sample for the acute value, and we would need to ask the Regional if we wanted samples to be comparable to this objective. According to Armand Ruby, San Francisquito watershed mercury data are typical of those from Bay Area creeks. Another thing to note is that the mercury levels are higher at the Bear Creek station than at Newell, meaning that the mercury is not from urban runoff.

Brad explained how methyl mercury and dissolved mercury are related to total mercury. Our data show that approximately 1% of total mercury exists as methyl mercury, which is the organic

form that bioaccumulates up the food chain. However, non-methyl mercury can be methylated in the Bay, so total mercury in creeks is important.

The dissolved copper data showed no clear trends over time. Comparing dissolved copper to a water quality objective is more complicated than doing the same for mercury because you need to consider hardness to determine the objective: you need to plot hardness against dissolved copper to determine the objective. In this chart, data above the diagonal line exceed the objective; data below the line are ok. Our dissolved copper data are composite samples of one to two days, which are more comparable to the chronic objective than grab samples are. Two samples also exceeded the acute objective. Five of six samples that exceed the chronic objective are at Newell. In addition to the possibility that there is more dissolved copper in the urban runoff of the lower watershed, there is also lower hardness here, which means the objective is lower and exceedence is therefore more likely.

Question: Should the creek be listed for copper?

Response: According to new State Board policy, for the total number of samples we've taken and exceedences we've seen, we are just below needing to be listed.

Question: Are there qualifications in the policy for flow conditions -- for example, whether the samples are collected from storm flow vs. base flow?

Response: No. The policy was developed on standing water bodies. Looking at creeks is newer.

There was no water quality objective for aluminum for California, but there is a US EPA-recommended objective of less than 1 mg/L, which is very low. Aluminum in our system is from the geology. Many high-quality streams have higher aluminum values than the EPA objective. Aluminum is also pH-dependent, and this objective may be more appropriate for Eastern low pH streams. The values from the San Francisquito watershed creeks are typical of Bay Area creeks.

Lead is also pH-dependent. The New Year's Eve 2005 storm is the only lead value that exceeded the water quality objective.

There was lots of variability in the total suspended solids (TSS) values. Some were grab samples, from which high values are more likely than from composite samples. There is no TSS objective, but the US EPA uses a benchmark of 100 mg/L (a value derived from industrial sites) as a trigger to do more monitoring. The meaning of this "benchmark" vs. a true water quality objective should be clarified in the report.

All nickel and zinc data (both hardness-dependent) were well below water quality objectives.

The bottom line is that in the 1990s we used to detect diazinon in the creek, but in the last five years we have never seen it. Its detection limit is 50 mg/L, which is half of the TMDL target for creeks. In general, there is high variability in all the data and no clear trends over time. The mercury data show exceedence of chronic objectives, although these values are typical of Bay Area creeks. The dissolved copper exceedences are close to the State Board impairment listing criteria.

Monitoring Objectives and Challenges

The objectives were: (1) to develop baseline data to identify trends (so even non-detect data is useful to compare against future data), (2) to support the TMDL processes for San Francisquito Creek listings, (3) to support the TMDL processes for Bay listings (PCBs and mercury), and (4) to investigate potential future impairments for the creek.

Challenges include: (1) resources (money for people and lab costs), (2) making sure the data is used by decision-makers (for example, what do we need to do to make our data useful to the regional water quality “SWAMP” program?).

Armand’s recommendations include:

- (1) lowering the reporting limits for ammonia, organophosphates (hard to hold lab to current reporting limits), and organochlorine pesticides (never detected);
- (2) dropping silver testing (but this test is automatically done as a part of a suite of tests that Palo Alto does simultaneously);
- (3) adding methyl mercury testing to upper watershed locations and investigate if Searsville Lake is a source (Brad suggests comparing data to similar creeks systems first);
- (4) adding sediment sampling for pyrethroids, total organic carbon, mercury, methyl mercury, and sulfate (all of which would be useful for the pesticide TMDL); and
- (5) adding water and sediment toxicity testing (which would also be useful for the pesticide TMDL).

Further investigations that could be done with the current data include:

- (1) examining the copper grab samples for comparison with the chronic objective. Multiple grab samples could be examined to see if they are over the acute limits; and
- (2) coordinating sampling among different stations.

Question: How often is copper sampled at Newell?

Response: Five to six times per year.

San Francisquito Creek TMDLs

For the sediment TMDL, habitat-based monitoring is the key. The original LTMAP document does include these objectives, but these kinds of monitoring are not achieved by the monitoring stations. This kind of monitoring is being done by SCVURPPP on other creeks. They do chemical monitoring but also bioassessments for BMIs and fish.

Comment: I’d be curious to know why this is not being done for San Francisquito Creek.

Response: The municipalities and the Water District provide the funds. Palo Alto is partnering with the Water District to do geomorphic assessments on Matadero and Adobe Creeks. It would be worth having a conversation with SCVURPPP to see about getting this monitoring on San Francisquito Creek, although only 20% of the watershed is in Santa Clara County.

Comment: It seems that we have no useful data and this program costs a lot of money.

Comment: I disagree. It establishes a baseline about several pollutants.

Comment: If the baseline is established, then we should stop monitoring.

Comment: I'd like to get a presentation from SCVURPPP on their biologically based monitoring either here or at a LTMAP meeting.

Comment: We need to do biological monitoring, such as for coliform. There are algae blooms in the creek every summer and I have the sense there are leaking septic and sewer systems.

Comment: As a point of clarification, the "biologically based" monitoring that SCVURPPP does is habitat assessments, and not coliform testing.

Comment: We also need to come back to how to make our data comparable with the SWAMP program.

Comment from Geoff Brosseau (one of original LTMAP architects): There were two key drivers to the original LTMAP program: (1) to compile the various uncoordinated studies going on in the watershed, and (2) to collect information that would be used by decision-makers. The recommendations to make the program more responsive to the TMDLs are in that vein. Our diazinon data has been useful to that TMDL, although our sediment data has not.

Comment: We might want to stop doing monitoring that is not directly tied to a management decision.

Question: Was the original selection of parameters to study defensively driven (i.e., tied to specific concerns)?

Response from Geoff Brosseau: No. The LTMAP plan established a monitoring framework. It was not expected that it would all be done. But we had the sense that we were monitoring things that the regulatory agencies were interested in.

Comment: We don't monitor coliform because you can't do automated samples (because you must do testing immediately), and there is the sense that this is not a critical issue since it is not a domestic water source.

Comment: Test kits exist for monitoring coliform, and there are kids that play in the creek.

Comment: The monitoring that we do is the tip of the iceberg. We could do many kinds of sampling.

Comment: We have been monitoring ammonia and nitrate, which could have a correlation with failing septic systems.

Comment: The goal is to prioritize the process to connect to the question you want to be able to answer, whether it's kids' safety, the diazinon TMDL, etc.

The Steering Committee decided it would like to hear a presentation on the SCVURPPP habitat-based monitoring of other creeks as it relates to working with the Regional Board and the sediment TMDL and how that monitoring could be used as a model for the San Francisquito watershed. It should include an introduction with a description of their monitoring and also how it fits in with their stormwater permit requirements. The SCVURPPP stormwater permit requires them to assess whether the creeks may be impaired by sediment and if so to do a limiting factors analysis. The monitoring program for water year 2006 is set, but they would like to hear the presentation soon enough so that new information can be used to help design water year 2007 monitoring. Geoff and Trish will help Pam shape the request for the presentation. Brad has a copy of the SCVURPPP work plan (also available at SCVURPPP.org under "Monitoring

Workplan”), which we can use to identify what Sandi Potter and the Regional Board would be interested in for the sediment TMDL.

Comment: We should ask the Regional Board what we’re doing that is not useful to them. They only care about what might be useful to the TMDL process, which should be the number one priority for our monitoring.

The group also decided that it made the most sense to hold discussions about redesigning the LTMAP program at a LTMAP working group meeting, who would then bring recommendations back to the Steering Committee. But interested members of the public should be notified and the meeting should be open to the public. This meeting should happen before the SCVURPPP presentation so that it can happen as soon as possible to start preparing for potential changes for water year 2007 monitoring, hopefully in December.

After the LTMAP working group meeting, the Steering Committee would like them to present their recommendations for changes at a Steering Committee meeting. The presentation should also include the “why” -- in other words, an elevator speech about the benefits of the program. The LTMAP group will review the original LTMAP objectives (from the original LTMAP plan, which is posted at <http://sanfranciscuito.org/projects/monitoring>) for this presentation.

Comment: Reprioritizing the LTMAP program will also depend on the agreement of the funders, who include Stanford University and the City of Palo Alto. The Watershed Council needs to explore whether different monitoring objectives still fit into current funding criteria. Stanford Management Company, SLAC, and Jasper Ridge Biological Preserve are all at the end of their current funding commitments for the program and need compelling reasons to continue.

New business: Request for input on winter Steering Committee presentations

Pam told the group that we are nearly at the end of our list of requested presentations for the year (in December we’ll hear about the vulnerable tree survey conducted as an Eagle Scout project by Jason Banich with help from the JPA). She asked the group to brainstorm about new topics for presentations starting in January.

New topic ideas:

- Ask the West Bay Sanitary District to do a presentation on their work in this watershed and on future operations. (The Corte Madera Creek pump station overflows at least once a year.) Following on that theme, it would be interesting to see a map of sewer vs. septic in the watershed. We would also like to hear about their new overflow reporting requirements.
- Based on the Army Corps public input meeting in April, we could ask for a review of the Army Corps project schedule and a presentation if there is any new information on the project.
- SFEI is doing studies on the history of fisheries in the Bay Area. They have some interesting hypotheses on pre-European vs. European impacts on fisheries. They have a presentation already prepared on Coyote Creek. Also, Robin Grossinger is doing a talk about the historical ecology of Stevens Creek next Thursday morning.
- The presentation by SCVURPPP on habitat-based monitoring they do in other nearby creeks.
- The next big thing is trash, and we could ask SCVURPPP for a presentation on that, too.

- A presentation from Cal Water on their acquisitions and fish passage work with the agencies.
- The results of the Searsville bathymetry study.
- The Stanford Facilities fish ladder and the projects associated with it, which include sediment removal from Felt Lake but not changes to the old Lagunita diversion dam. Negotiations between Stanford and the Department of Fish and Game are not complete yet. This presentation should come when the plan is finalized.
- Water issues at Stanford, including the stormwater detention basins that were built to satisfy C3 and GUP requirements and the CDS unit (a mechanical unit that acts as a centrifuge to remove trash from stormwater). A field trip could be interesting for this topic.
- The Watershed Council will be giving presentations on its stormwater projects in winter or early spring.

Can we have two presentations in one meeting? Yes, if one is not a brainstorming-type presentation.

Pam asked the group to prioritize the topics for the next few Steering Committee meetings, and the group identified the following:

December – the tree survey;

January – SCVURPPP habitat-based monitoring;

February – Searsville bathymetry and SFWC stormwater projects; and

March – West Bay Sanitary District.

Request for approval of Steering Committee membership agreement

Pam presented the agreement and recapped the process leading to it. Philippe Cohen moved to approve; Trish Mulvey seconded. There was no discussion. The membership agreement is approved.

Staff reports

Katie Pilat, Restoration Projects Manager: Katie spent part of the last month working on an interpretive sign that will be installed at the non-residential stormwater demonstration project at the municipal Parking Plaza #5 in Menlo Park. This project consists of the use of pervious concrete and biofilters that absorb the remaining runoff from the parking lot. There will be two guided tours of both this site and the residential site in Palo Alto, mostly in January 2007.

Ryan Navratil, Field Coordinator: Ryan has completed the *Arundo* program requirements for this year, which include mapping and eradication. The Watershed Council is conducting this work with a grant that comes through the Sonoma Ecology Center, the nonprofit that is coordinating Northern California *Arundo* eradication efforts. A consultant working with Sonoma Ecology Center has been working to expand our *Arundo* removal permit to include the tributaries. Our current permit only covers *Arundo* removal on San Francisquito Creek.

Ryan led a workday at El Palo Alto Park on November 4th, at which volunteers planted 57 plants. The next workday will be at Woodside School on December 2nd, also planting native creekside plants.

Ryan has also been working on developing site-specific goals for all the revegetation sites and would be happy to get input from the Steering Committee and the community in drafting these goals. He will send out an email listing the sites he wants input for, and ask for input either through email or by meeting at the sites. The Watershed Council will post photos of the sites, and there is already a map showing the site locations on the website. It is important to connect with the property owners in seeking input on these goals.

The first Streamkeeper meeting of the season will be November 15th, before the first flush.

Ryan also consulted with a teacher at Ormondale Elementary School who is interested in involving her students in more outdoor learning at the creek.

Pam Sturner, Project Director and Coordinator: Pam has been working on the development of an educational forum on Searsville Lake and Dam. She's working with a committee with a diverse set of perspectives, including Philippe Cohen of Jasper Ridge Biological Preserve, Trish Mulvey, Marty Laporte of Stanford Facilities, homeowners, creekside residents, and the US Geological Survey. The group is making progress on defining objectives for the forum.

Continuing Business (Trish Mulvey)

On Tuesday, the Water District voted to rescind the old 83-2 ordinance and replace it with the Water Resources Protection Ordinance, which will take effect on March 1, 2007.

On Thursday, the Water Resources Protection Collaborative decided that it is only interested in land use near streams and not other water resource protection needs, meaning that there will be no follow-up now that the current work is complete. The group may continue in some fashion.

An informal collection of people including Trish Mulvey, the San Francisco Estuary Institute, and the Regional Water Quality Control Board has been working on a Stream Ecosystem Goals Project Prospectus. The Regional Board convened a meeting of Bay Area watershed groups to talk about their needs and interests. There will be presentation on this prospectus on December 7th at the WMI Core Group meeting.

There will also be a stream protection, restoration, and erosive forces workshop on January 31st.

In attendance:

Katie Pilat – SFWC

Libby Lucas – Los Altos resident

Julie Skelton – Stanford Management Company

Jonathan Owens – Balance Hydrologics

Bill Whitmer – SFWC

Marge DeStaebler – PV Conservation Committee

Philippe S. Cohen – Jasper Ridge Biological Preserve, Stanford University

Jerry Hearn – Acterra

Trish Mulvey – SFWC / WMI

Paul Amato – Regional Water Quality Control Board
Geoff Brosseau – SFWC
Brad Eggleston – City of Palo Alto
Michael Pilat – observer
Marty Laporte – Stanford Utilities
Art Kraemer – CPNA
Bill Springer - SCVWD
Walter Nelson – Families for Fair Government, Institute
Pam Sturner – SFWC
Ryan Navratil – SFWC

Minutes respectfully submitted by Katie Pilat.