

Sediment Quality Objectives Stakeholder Advisory Committee

Meeting Summary

April 16, 2013

Note: The list of attendees and the meeting agenda follow the meeting minutes. Additional materials from the meeting (PowerPoint presentations) have been sent to each Committee member and interested party along with this meeting summary.

Another note: The summary captures the major issues presented and discussed during the meeting, though they are not intended as an exhaustive record of all comments made. Where it contributes to the readability of the summary, discussion of the same issue that occurred at more than one place during the meeting is summarized together. Items on which the Committee expressed general agreement are indicated **in bold**, although it is important to emphasize that the Committee did not vote on these items. General agreement was assessed by the facilitator although no votes were taken. Specific commitments by State Board staff, SCCWRP, the facilitator, or Committee members are also indicated **in bold**.

Meeting objectives

The objectives of the meeting were to provide an update on the SQO development schedule, review the case study focused on the Ports of Los Angeles and Long Beach, and examine potential issues involved in policy implementation.

SQO schedule update

(See slides 2 - 5 in the presentation “Adv comm mtng 04-16-13 Beegan presentation.pdf” distributed with these notes)

Chris Beegan summarized the proposed time line extending into 2015 and said this is the timeline he will propose to State Water Board executive management. The extended schedule will allow time to address technical and implementation issues and to work through these with the stakeholder committee.

Discussion and comments included the following:

- The schedule has been extended to February of 2015
- Additional time and funding will allow for a more in-depth test drive / case study involving the Ports of Los Angeles and Long Beach
- There is some scheduling flexibility until about September or October of 2014, at which point the stakeholders’ role will shift to a more formal one after release of the draft Amendment and Supplemental Environmental Document
- While the Ports’ TMDL provides an opportunity for evaluating the new SQO tools, the TMDL schedule extends beyond the SQO policy development schedule

SQO technical update

Steve Bay summarized recent progress on the technical aspects of the Phase I and II SQO:

- For Phase I SQO
 - The Phase I technical support manual, which was last revised four years ago, is being revised.
Stakeholders may provide comments and suggestions for the revision until the end of April

- Web access for the data analysis and assessment tools is being improved. The one benthic index that is difficult to calculate will now be available free in an online version
- The special section of the IEAM journal containing a number of SQP papers came out late in 2012
- The technical team provided a short course at the recent SETAC meeting in Long Beach
- For Phase II SQO, the two main priorities are to
 - Verify and refine the technical report on the assessment framework
 - Apply the draft assessment framework to as many water bodies as possible statewide.
- Stakeholders with datasets they think are relevant to the statewide assessment should submit those to Steve Bay within the next month**
- Both tasks are targeted for completion by the end of 2013

Discussion and comments on these topics included the following:

- The statewide assessment will focus on enclosed bays and estuaries and will not include offshore data; however, offshore data will be useful for improving the underlying model, for example, by expanding information on the distribution of PCB congeners in fish tissue
- The statewide assessment will include all types and sizes of waterbodies, from small coastal lagoons to the large ports; however, they will all be in California
- Bight 13 will include a significant effort on bioaccumulation, especially developing a regional snapshot of contaminant levels in bird eggs. The bird egg study will extend from 2013 into 2014 and involve 12 locations and four species (Least tern, Caspian tern, Western gull, cormorant) that represent different feeding strategies, and other species (both benthic and pelagic) intermediate in the foodweb involved in trophic transfer of contaminants. Data from this study will lay useful groundwork for a wildlife SQO. The Bight Program will sample more than 400 stations for sediment chemistry and the bioaccumulation study will help fill a knowledge gap about potential transfer of contaminants from sediments to birds. Study sites could include Newport Bay, Ports of Los Angeles and Long Beach, San Diego Bay, and the EPA Superfund site on the Palos Verdes shelf
- The Bight 13 bioaccumulation study will target metals, chlorinated hydrocarbons, flame retardants, selenium, and mercury. Indicators will include shell thinning to enable comparison with historical studies
- There have been no new results regarding the performance of Tier 1 and Tier 2 in the Phase II SQO since the last stakeholder meeting. Previous test applications in several locations showed that a negative result on Tier 1 (i.e., no evidence of a problem) was confirmed by further analysis with Tier 2 tools; thus, Tier 1 behaves as intended
- The upcoming statewide assessment will document the proportion of sites that pass the Tier 1 screen (i.e., no evidence of a problem)

Summary of issues from previous meeting

(see slides 8 – 10 in the presentation “Adv comm mtng 04-16-13 Beegan presentation.pdf” distributed with these notes)

Chris Beegan briefly summarized issues identified at the last stakeholder meeting (October 9, 2012). There was no significant discussion.

Ports case study

(see the presentation “Adv comm mtng 04-16-13 Ports presentation.pdf” distributed with these notes)

Andrew Jirik’s presentation highlighted the following key points:

- The TMDL was implemented in 2012 with a 20-year timeline
- The TMDL includes approximately 80 pollutant / waterbody combinations
- The TMDL includes both direct and indirect effects
- For direct effects, there are several paths to compliance, including meeting ERL thresholds
- The TMDL calls for application of the SQO indirect effects policy when it becomes available
- The TMDL includes a reopener in 2018, which is an opportunity for applying the results of the studies described in the presentation
- The Ports will try to integrate their efforts with relevant the MS4 program(s); the TMDL monitoring will substitute for MS4 monitoring for any MS4 whose receiving waters are in San Pedro Bay or the Los Angeles River estuary (but not Dominguez Channel)

Additional comments included the following:

- Chris Beegan clarified that the SQO applies only to bays and estuaries; the SQO therefore constitutes one set of targets for the TMDL, which may include a broader area that includes inputs / sources (some of which are in fresh water) that are not directly relevant to the SQO
- Two upstream monitoring groups are being integrated into the TMDL

Discussion and comments on the topics identified in the presentation slides included the following:

- Slides 6 and 7: The initial Bight 13 sample draw for the harbor area was 20 stations and the Ports wanted 30; other interested parties wanted 21 stations in East San Pedro Bay. The TMDL called for 22 stations, so the planned sampling effort exceeds the TMDL requirements
- The TMDL for direct effects applies targets to the entire area while the SQO shows specific hot spots, suggesting that application of the SQO results might result in different load allocations. In addition, source identification and load allocations should include in place sediments as well as direct inputs
- The TMDL allows compliance determinations for individual sites using the direct effects MLOE (where sites might exceed the TMDL targets and still comply based on the MLOE) but sets hard loads targets for the area as a whole; the reopener is an opportunity to address possible adjustments to loading targets
- Slide 2: Chris Beegan clarified that the reopener is a key opportunity to include information on source identification, specific targets for individual stations, and more appropriate benchmarks
- An important goal of the case study is to validate what exactly it means to comply with the SQO, particularly in the context of other regulatory frameworks such as NPDES permits and TMDLs
- The case study may find that certain contaminants that are in the TMDL are not an issue; this highlights the need to at some point revise the state's listing policy to better accommodate newer assessment methods and information

Strawman outline and organization

(See slides 11 - 23 in the presentation "Adv comm mtng 04-16-13 Beegan presentation.pdf" distributed with these notes)

Chris Beegan reviewed the outline and content he envisions for the draft implementation document.

Discussion and comments on the topics identified in the presentation slides included the following:

- Slide 14 re Tier 3
 - Tiers 1 and 2 have lower data requirements than does Tier 3

- Tier 1 is accomplished with available data and using the default assumptions and inputs in the assessment tool
- Tier 2 is accomplished with additional site-specific data that replace some of the default assessment tool
- Tier 3 is accomplished with site-specific data and a model whose assumptions are structure are tuned to the study area. Tier 3 is materially different from Tier 2
- The purpose of the Tiers, including Tier 3, is strictly to determine whether there is a problem or not, based on the presence / absence of a tissue contamination problem and the relative contribution of sediments to those tissue levels
- Subsequent studies to identify sources, characterize pathways, etc. may include some of the elements of Tier 3 but it is important to distinguish different purposes in terms of the policy implementation. Steve Bay highlighted the difference between assessment of conditions and assessment of management actions
- Evaluation of management alternatives, as, for example, the Ports intend, is beyond the scope of the SQO, even though such evaluations may use data and models that are also used in Tier 3
- Slide 15 re monitoring
 - The SQO policy may include general guidance on sampling requirements but detailed monitoring designs require site-specific information
 - Nevertheless, stakeholders would benefit from some boundary conditions such as minimum site size to apply the SQO (e.g., ½ acre); such specific guidance could only be included in the policy if there was some sort of credible support for it
- Slide 20 re Tier 3 triggers
 - These have not yet been defined and Chris is looking for input
 - However, Chris envisions specific, agreed on conditions that would have to be met before going to a Tier 3 assessment
 - In other tiered assessment programs, there is usually the option for collecting more data, without the requirement of meeting specific triggers
 - The regulated community would make the decision about whether to proceed to a Tier 3 assessment, assuming the triggers had been met
- Slides 20 and 21
 - A remaining large issue for implementation is defining what should / could be done if a site / area fails the SQO
 - Chris is looking for flexible options that do not always default to cleanup
 - Management actions for legacy vs. current use pollutants are very different
 - The behavior of legacy pollutants is better understood than that of many current use contaminants
 - The assessment tools and process (slide 20) could be used for a range of contaminants, as long as model inputs and assessment thresholds are available
 - The framework in Slide 20 includes offramps for each Tier

Scenario exercise

(see “Adv comm mtng 04-16-13 Scenario Instruction.pdf” and “Adv comm mtng 04-15-13 Scenario Exercise.pdf” distributed with these notes. The first file contains presentation slides that summarize the exercise and instructions; the second file contains more detailed background information.)

Chris Beegan and Steve Bay described a scenario exercise intended to stimulate thinking about what actions should / could be taken subsequent to a finding that a site or area has failed the SQO. They emphasized that the starting assumption is that an assessment (Tier I, II, or III) has reliably concluded that there is a problem, i.e., the site / area has failed the SQO. Thus, the exercise is not intended to design a Tier 3 assessment, but to focus on next steps after the assessment is complete.

Meeting participants were split into three groups, each of which selected a reporter (Shelly Anghera, Andrea Crumacker, David Glaser). The groups' summaries are included as appendices at the end of these notes.

Discussion related to presentation of the small group summaries included the following:

- The value of gathering additional information such as background levels of contaminants
- The potential for additional offramps if, for example, the source is identified but no management actions are needed or possible
- Issues of spatial scale will have an effect on decisions about how to respond to a finding that the SQO has not been met. For example, actions on the scale of Consolidated Slip vs. the Port vs. the entire Palos Verdes Shelf would be very different
- The scope of the policy and its guidance will be statewide, which means that there will be a limited ability to target the policy at specific types of situations
- Decisions or policies that affect who pays for assessments and management actions could strongly influence the range of management actions considered and implemented; a broader / more inclusive / more flexible model could allow for wider range of potential management actions
- TMDLs may not be well suited where contaminants are already in the waterbody and the sediment reservoir is a major source
- The old Toxic Hot Spots Program in the 1990s identified problems and estimated order-of-magnitude of cleanup costs, but never assigned responsibility for conducting cleanups. It was similar to a TMDL

Next meeting and next steps

A date for the next Advisory Committee has not been set, although **the group agreed to meet more frequently (e.g., every month or two) to assist with addressing outstanding issues.**

Topics for the next meeting could include:

- Tier 3 definition and triggers
- Management options for different scenarios
- Other regulatory / management frameworks such as CERCLA or the Dept. Toxic Substances Control site cleanup program

Attendees

Name	Organization	Representing	Position
<i>Staff</i>			
Steve Bay	SCCWRP		
Chris Beegan	State Water Resources Control Board		
Brock Bernstein	Facilitator		
<i>Committee</i>			
Chuck Anthony	Latham & Watkins	Legacy Pollutants	Primary
Karen Cowan	Larry Walker Associates	POTWs	Primary
Kathryn Curtis	Port of Los Angeles	Ports	Primary
Lisa Haney	Orange County Sanitation Districts	POTWs	Alternate
Ruth Kolb	City of San Diego	Municipal SW	Primary
Susan Paulsen	Flow Science	Industrial Direct	Primary
<i>Other Participants</i>			
Shelly Anghera	Anchor QEA		
Matt Arms	Port of Long Beach		
Mariela Paz Carpio-Obeso	State Water Resources Control Board		
Jennifer Casler-Goncalves (P)	Latham & Watkins		
Andrea Crumpacker	Weston Solutions		
Elaine Darby	Anchor QEA		
Tessa Fojut (P)	Water Board		
Will Gala (P)	Chevron		
Phillip Gibbons (P)	Port of San Diego		
David Glaser	Anchor QEA		
Rich Gossett	Physis Environmental Labs		
Ben Greenfield	UC Berkeley		
Joe Gully	Los Angeles County Sanitation Districts		
Raymond Hiemstra	Coastkeeper		
Sheila Holt (P)	Weston Solutions		
Wendy Hovel (P)	Anchor QEA		
Andrew Jirik	Port of Los Angeles		
Scott Johnson	Aquatic Bioassay & Consulting		
Anna Jones-Lee (P)	G. Fred Lee & Associates		
Fred Lee (P)	G. Fred Lee & Associates		
Chris Lieder	Geosyntec Consultants		
Zhimin Lu (P)	Central Valley Regional Water Board		
Shokoufe Marashi (P)	City of Los Angeles		
Danny McClure (P)	Central Valley Regional Water Board		
Matt McDonald (P)	Brown and Winters		
David Moore	Environ		
Thanhloan Nguyen	Los Angeles Regional Water Board		
Mark O'Brien (P)	ERS Corporation		
Marilyn O'Neill	Nautilus Environmental		
Jeff Orell (P)	Brown and Winters		
Jian Peng	County of Orange		
John Rudolph (P)	AMEC		
Chris Stransky	AMEC		
Chi-Li Tang	LA County Sanitation Districts		
Clayton Yoshida	Los Angeles Dept. Water & Power		
Doris Vidal-Dorsch	SCCWRP		

Agenda

Sediment Quality Objectives Advisory Committee Meeting
April 16, 2013, from 9:30 to 3:30
Southern California Coastal Water Research Project
3535 Harbor Blvd., Suite 110, Costa Mesa, CA 92626.

9:30 – 9:45	Introductions	Brock Bernstein
9:45 – 10:00	Status report and revised schedule	Chris Beegan
10:00 – 10:30	Summary of previous meeting	Steve Bay, Chris Beegan
10:30 – 11:30	Port activities and schedule	Kathryn Curtis / Matt Arms
11:30 – 12:00	Strawman outline and organization	Chris Beegan
12:00 – 1:00	Lunch	
1:00 – 2:30	Post assessment implementation process	All participants
2:30 – 3:00	Future meetings and next steps	Brock Bernstein

Remote meeting participation instructions:

Reserve your Webinar seat now at:
<https://www3.gotomeeting.com/register/930683038>

SQO Advisory Committee

Title: *SQO Advisory Committee*
Date: Tuesday, April 16, 2013
Time: 9:30 AM - 3:30 PM PDT

After registering you will receive a confirmation email containing information about joining the Webinar.

System Requirements

PC-based attendees

Required: Windows® 7, Vista, XP or 2003 Server

Mac®-based attendees

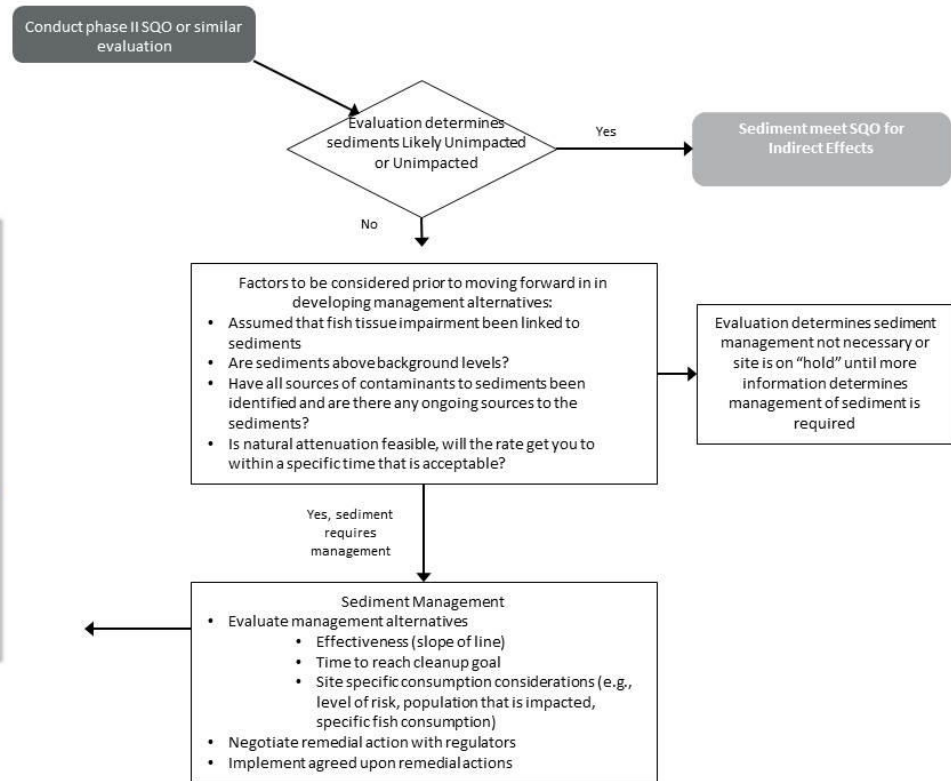
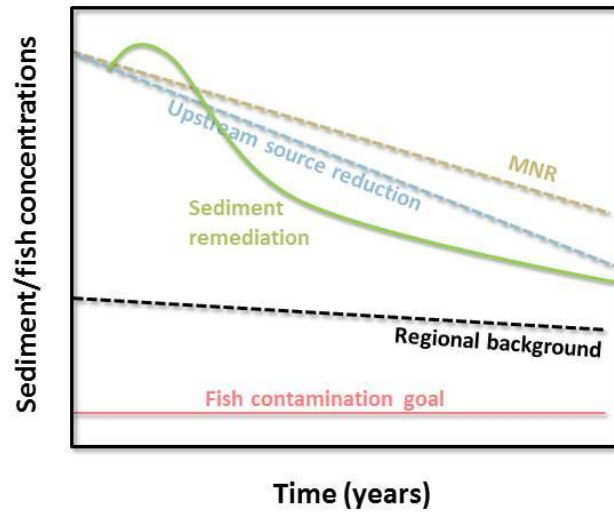
Required: Mac OS® X 10.6 or newer

Mobile attendees

Required: iPhone®, iPad®, Android™ phone or Android tablet

Appendix 1: Group 1 report

Illustrated result of potential actions



Appendix 2: Group 2 report

Reporter Andrea Crumpacker

Problem: Site has been identified as impaired for indirect effects using the SWO process. Fifty percent of contamination in fish tissue is from sediments at the site, which is in a small inlet of a larger bay on the coast of Oregon.

The group began discussion of the problem, and with some debate about whether or not we believed the conclusions of the study before us. With little data, and no regional perspective it was a challenge to get the group centered on the idea that this was a fictional situation...and that to move forward and recommend management actions we must make some assumptions. We started with all of the questions we would ask, were we given the information in another venue. We started with two general questions: 1) What do we need to know? and 2) What should we do?

To answer Question 1, we came up with all of the questions we would want to know the answers to before recommending a course of action:

Questions (what we need to know to make management recommendations):

1. Are there ongoing sources? (what is the site conceptual model?)
2. Do we have all of the available data?
3. Are the fish resident?
4. Are we confident with the Tier III result? (the sediment contribution percentage of 50%)
5. Are there hot spots within the area?
6. How was the area defined? (are the sediment and fish samples representative of the area?)
7. Need regional/background data to put the study results in perspective/context

We then prioritized the questions, and developed follow-on steps/questions to the three most important questions (to answer the second general question of “what should we do?”):

1. Source controls (implement BMPs)
2. Prioritize hot spots
 - a. Based on likely contribution to the fish tissue
 - b. Based on how long it will take from the action to “clean fish”?
 - c. What is cleanup level? It must be above the background levels
3. What is the timeline of implementation?

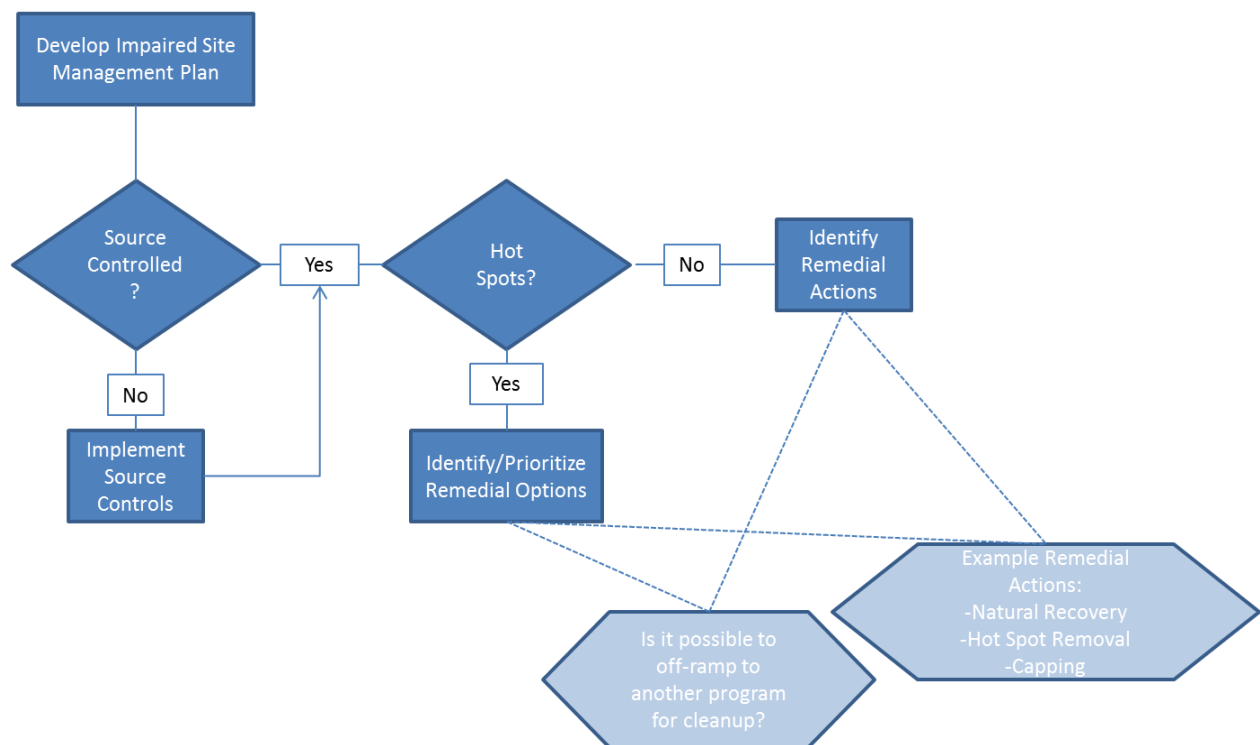
The final step was to develop a flow chart of the steps to take once an area is determined to be impaired for indirect effects, based on the SQO. Assuming that:

1. The Site Conceptual Model is well developed and understood
 - a. Including horizontal/vertical extent of contamination
 - b. Including historical data inputs/legacy contamination
2. Tier III evaluation is complete
3. A full understanding of regional data and other sources is at hand

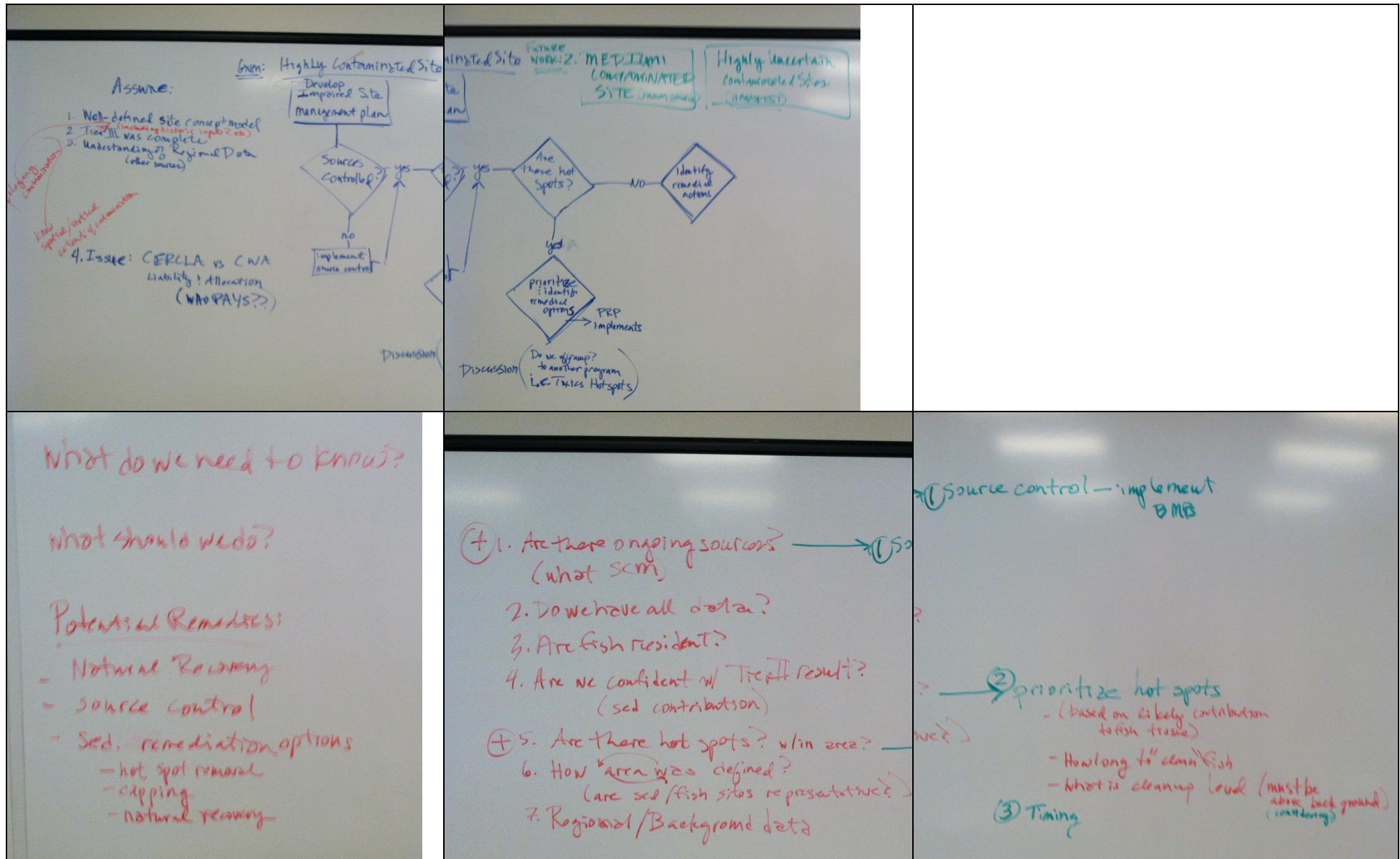
We found that: A highly contaminated site is easier to deal with than a site with ubiquitous or moderate levels of contamination. Therefore, we laid out a path to deal with a highly contaminated site. Should a site be moderately impaired, or should we be highly uncertain of the levels of contamination, or have confounding variable (like a huge local source off the site) – additional steps would be necessary to develop the management plans.

A few other things to think about: Who pays for cleanups? If the contamination is legacy, who can help fund the remedial actions? Is the model for cleanup the PRP model? Are there any other programs that a contaminated site could be rolled into? Is there a conflict between CERCLA and CWA? Who will pay???

Highly Contaminated Site



White Board Notes:



Appendix 3: Group 3 report

Reporter David Glaser

Establish the Questions that Need to Answered

Evaluate whether there really is a problem

1. Are data statistically valid – minimum data set

Develop Conceptual Site Model

1. Any existing or ongoing PCB sources
 - a. Upland (source ID study, magnitude and load)
 - b. Background concentrations: what degree of cleanup is possible?
 - c. Existing sediment source: verify the Tier 2 50% estimate
2. Fish residency
3. Larger bay as a source (sediment transport)
4. Natural recovery rate

Reevaluate the target

1. Site-specific fish consumption rates

Evaluate management options

1. Cost-benefit analysis
2. Institutional controls

These questions can be answered at a various levels of precision

- Start with low-level (paper) Phase 1 study
- Use the results of this study to design a focused field program