

Beaches and Creeks TMDL Cost-Benefit Analysis
Steering Committee Meeting
January 31, 2017

Steering Committee Members Present

Jeremy Haas, San Diego Regional Water Quality Control Board
Jimmy Smith, San Diego Regional Water Quality Control Board
Ted Shaw, Atlantis Group, representing San Diego County Taxpayers Association
Todd Snyder, County of San Diego, Watershed Protection Program
Ruth Kolb, City of San Diego, Storm Water and Transportation
Rob Hutsel, San Diego River Park Foundation
Chris Crompton, County of Orange, Stormwater Quality Planning

Supporting Roles

Lewis Michaelson, Katz & Associates
Bree Robertoy, Katz & Associates
Chad Praul, Environmental Incentives
Mark Buckley, Eco Northwest (participating via phone)
Maso Matlow, Environmental Incentives (participating via phone)
Michelle Santillan, San Diego Regional Water Quality Control Board
Helen Yu, San Diego Regional Water Quality Control Board
Cynthia Gorham, San Diego Regional Water Quality Control Board
Clint Boschen, Tetra Tech (Participating via phone)
David Pohl, ESA (participating via phone)
Tony Hancock, Brown & Caldwell (participating via phone)
Jian Peng, County of Orange, Stormwater Quality Planning (participating via phone)
Ken Schiff, Southern California Coastal Water Research Project
Jo Ann Weber, County of San Diego

Project Status Update

Teleconference Meetings

- During earlier teleconference meetings, the steering committee decided to move forward with quantitative and qualitative co-benefits analyses and a task order to study recreational activities at beaches after rain activities. Results of the study have been submitted to the steering committee.
- The consultant submits a short, one-page report from each teleconference call. Committee members should review each report and submit edits and comments to the consultant team.

Status of Cost-Benefit Results

- The consultant is developing a method for annualizing costs. J.A. Weber, H. Yu, T. Snyder and J. Peng will work with the consultant team to review the assumptions associated with annualizing the costs. The costs will be presented at the next meeting.

- The CBA will not include full costs of current conditions. It will include an analysis of categories of current values (e.g., value of trips to the beach and illnesses). For this type of economic analysis, it is more correct to talk about small changes as opposed to state-of-the-world or big changes. Numeric data will include water quality conditions and current levels of illness. Total benefit can't be analyzed with current data.
 - T. Snyder: The missing piece is how much was spent to get to current conditions, but that information could be gathered by the copermittees as opposed to tasking the consultant.
 - R. Kolb: In the future, are we going to spend at same rate, or will there be a change in spending? There are lots of other funding demands. I find executive management is always concerned about cost.
 - J. Smith: Confidence in funding is low. The efficacy of each dollar spent could be low. I am concerned about benefits being based on a small data set (two seasons). Is it representative?
 - T. Shaw: Someone will ask what we are getting for the money. We need to have an answer in the report, even if it includes caveats.

Health and Recreation

- The consultant calculated forgone trips to the beach on wet days with a statistical model based on weather data and beach count days.
- The value of foregone beach trips is about \$46 million annually. The value of avoided illnesses is about \$1.9 million annually.
- J. Smith: My concern is there is an assumption dry weather days represent clean water days. There are more illnesses during dry weather days than the background illness measure. Right now, we're only improving to dry weather conditions. There might be less foregone beach days if dry weather water quality was better. The consultant could address this uncertainty in one or two lines in the report.
 - J. Peng: Going into water increases health risk but has not been shown to correlate to indicator bacteria.
 - Ruth: We're meeting federal standards now.
 - R. Hutsel: Are predicted rain days considered (i.e., days when rain is predicted but there is no rain)? The media may suggest to stay out of the water because of anticipated rain. The consultant may need to include this in the report as an uncertainty.

Calculation Flow Chart

- The consultant provided a flow chart of CBA analyses and the consultant team's associated confidence level rating for each. Confidence levels could change as the CBA progresses, but the consultant does not anticipate a significant change. Committee members were directed to review the chart and bring questions and comments to the next committee meeting.

Planning for the CBA Document

Approach

- The purpose of the report is to inform policy decisions related to implementing Bacteria TMDLs across the San Diego region.
- The primary user will be the steering committee.
- The secondary user is the TAC, who will review and comment on the report.
- The public has access to the document, but only engaged stakeholders are expected to read and comment on it.
- The costs peer review and screening FCA are included as chapters in the report but are not part of the CBA/results.
- There will be a quality assurance/limitations section.
- The report will not include a recommendations section.

Process

- Data inputs from steering committee members and subconsultants submitted after Feb. 15 will not be included in the first draft of the CBA report. Steering committee members will have the opportunity to ask questions about the subconsultant reports on Feb. 14. If peer reviewed costs are submitted late, they will be included as an appendix in the report.
- The steering committee and TAC will review the draft CBA concurrently. If separate reviews are preferred, the schedule would need to be extended by one month.
- The steering committee will be given three weeks to review and one comment period before public review.

Steering Committee Comments

- T. Snyder: Based on data I've seen, it looks like the 2010 TMDL scenario would be the most expensive. The City of San Diego and County of San Diego use the 2010 TMDL for budgeting and want the report to address whether the costs will change.
- T. Snyder: It should be clarified that the scope of the cost peer review only includes the WQIP.
- C. Crompton: Include an acronyms section and acknowledgements.
- T. Shaw: There should be an executive summary that could be understood at the general public level.
- J. Haas: Which scenarios are affected by the peer review of costs?
 - The peer review is separate from the analysis; the analysis uses industry benchmarks. Nothing could come of the peer review that would affect costs in the CBA. Peer reviews could only impact the confidence rating.
- R. Hutsel: Do you anticipate meaningful collective comment or independent comments from the steering committee? A meeting may need to be added.
- J. Haas: A single comment round before the document goes to the public is fine, but that puts pressure on the June 28 - July 3 review schedule. It is a short turnaround.
- C. Crompton: The committee may need more than an oral review of the final draft.
- J. Haas: I would suggest adding qualitative discussions to the first objective. Also, add the public process to the report.
- Add to the list of objectives: Be clear about analyses not included, and levels of uncertainty.
- T. Snyder: Change the primary user to organizations represented by committee members.

Co-Benefits

BMPs

- The report will include full descriptions of the kinds of benefits associated with each BMP, but locations and designs of BMPs don't align with infiltration zones. It is difficult to come up with total benefit estimates, but the report will include qualitative descriptions.

Green Infrastructure

- The consultant did a literature review and property value analysis of green infrastructure amenity. They analyzed property value data from drainages where there would be green streets to yield an estimated total property value increase.

Reduction in Other Pollutants

- The steering committee requested the consultant quantify benefits of reducing other pollutants. Additional scope and budget were provided, and the consultant is working on it.
- TetraTech analyzed relationships between other pollutants (sediments, metals and nutrients) and fecal indicator bacteria. The benefits analyzed are only in a wet weather context.
- The consultant is having difficulty finding total quantity load data, information regarding benefits to people from load reductions and values of cost per pound. If anyone has additional sources of information for these, send them to the consultant.

Steering Committee Comments

- T. Shaw: How does the cost associated with removing invasive plant species factor in? Also, from a planting area standpoint, all San Diego streets would be available to be green streets. Finally, the cost for wetlands restoration seems really low.
- R. Hutsel: The analysis should look at the cost of wetland mitigation credits, not acreage. The numbers are too low by factor of 10.
- H. Yu: Expand pollutants to include trash and cyanotoxins. Is it necessary to divide treatment of different pollutants (e.g., treatment of trash versus metals)?
- R. Kolb: The City of San Diego might have data regarding trash from the MS4. We don't have data for cyanotoxins. If we keep expanding the scope, we need to expand the budget. It takes time to do those analyses. We already can't move fast enough to meet the schedule and have already provided extra funds.
- T. Snyder: Does SCCWRP have data suggesting that cyanobacteria are making people sick?
 - No. It exists in San Diego, but for purposes of the CBA, the consultants should program it in an 'avoided illness' context.
- J. Haas: Sewage has a lot of metals and nutrients, and we have sewage data.
 - SCCWRP can provide rationale and literature as backup.

Stream Restoration Memo (D. Pohl)

Overview

Because of time constraints, members were informed that there would only be enough time to present the overview and ask questions, and that answers would have to be provided later.

Two scenarios were analyzed: (1) watershed analysis and in-stream restoration, and (2) in-stream and offline tributary restoration approaches. Scenario 1 considered enhancements to streams through GIS analysis, and stream drainage and dimensions. The subconsultant used existing models and standard practices to look at expansion to stabilize streams (e.g., increase the stream's perimeter to allow for more habitat). Then they analyzed mechanisms provided that would reduce fecal indicator bacteria (e.g., filtered and dropped out). Finally, they considered feasible segments (i.e., publicly owned) that the model could be applied to. A continuous hydrology model was run for total infiltration rate (assuming it removes 100 percent of bacteria).

Scenario 2 used the same numbers as the first scenario in addition to offline wetlands treatment. The consultant developed a model using the same modeling approach for Scenario 1. They analyzed two mechanisms, infiltration and retention, and developed cost estimates based on how many offline systems would be needed. Cost estimates included planning, permitting, feasibility, O&M, protected parcels and mitigation requirements.

Steering Committee Questions

- J. Haas: What kind of storm sizes were used?
- J. Haas: Did the opportunity areas for stream restoration include hard-scaped channels or just natural, soft-sided channels?
- J. Smith: What about reduction in other pollutants aside from fecal indicator bacteria?
- H. Yu: What parameters are most sensitive in the modeling and estimates?
- J. Haas: Did you use any local restoration studies with bacteria data to verify assumptions?
- C. Crompton: Where did the Orange County data come from? We have done this work before; did the consultant have access to those data?

Human Sources Memo (T. Hancock)

Overview

Because of time constraints, members were informed that there would only be enough time to present the overview and ask questions, and that answers would have to be provided later.

The study focused on human source bacteria contamination resulting from leaking sewers, failing septic systems and transient camp populations. The subconsultant collected GIS data and ran it through priority analyses to identify priority systems (e.g., systems closer to receiving water). They then took the available information and came up with a rate of leakage and potential bacteria concentration in leakage resulting in load concentration. Then, they identified remediation activities, associated costs and resulting load reduction. The human genetic marker was used to home in on the human source aspect. Assumptions and data gaps are included in the memo.

Steering Committee Questions

- J. Smith: Were sewer laterals included?
- H. Yu: How did you measure transport to convert concentration into a load? Did you assume everything that was leaking entered receiving water?
- J. Haas: Did you look at opportunities for better spill response and how that might reduce load from some spills?

- T. Shaw: Can you identify the difference between spills and ongoing leaks (e.g., the difference between breaks versus leaks) and how that influences the analysis?
- H. Yu: I'm not clear how the human marker was used to arrive at different percentages of sources.
- H. Yu: Why were septic systems in only some watersheds considered?
- H. Yu: Some repair methods were discussed, but the study does not discuss how to remediate sources from homeless camps. Clarification is needed in the sensitivity analysis (i.e., leakage rate and figure on fourth page).
- R. Hutsel: Septics in the backcountry are upstream of non-spill reservoirs; how are those addressed?
- R. Hutsel: I would love to see more data/justification on the homeless data.

Next Steps and Action Items

- The consultant will send the most recent versions of the supporting documents to the committee.
- The consultant will schedule an additional meeting in April to review the draft CBA.
- K. Schiff will send a Doodle poll to committee members to schedule the TAC meeting. The next meeting agenda should include a 15-minute item to discuss the TAC.
- J. A. Weber will send existing load information data to the consultant.
- The next steering committee meeting is Feb. 28, 2017.