Beaches and Creeks TMDL Cost-Benefit Analysis
Steering Committee Meeting
March 23, 2016

Committee Members Present

Jimmy Smith, San Diego Regional Water Quality Control Board
Jeff Van Every, City of San Diego Public Utilities Division
Ruth Kolb, City of San Diego, Storm Water and Transportation
Todd Snyder, County of San Diego, Watershed Protection Program
Chris Crompton, County of Orange, Stormwater
Rob Hutsel, San Diego River Park Foundation

Supporting Roles

Bree Robertoy, Katz & Associates
Cynthia Gorham, San Diego Regional Water Quality Control Board
Jian Peng, County of Orange, Stormwater
Jo Ann Weber, County of San Diego
Clint Boschen, Tetra Tech
Steve Weisberg, Southern California Coastal Water Research Project

February 24 Meeting Summary Review [All]

- T. Snyder: Revise the note on page 3 regarding elevated bacteria levels at Ocean Beach's Dog Beach to be less definitive. There are no data to support the presence of dogs as the cause of bacteria levels.
- T. Snyder: Revise the comment on page 4 to say, "The County of San Diego has epidemiology data for the entire San Diego coast."
- J. Smith: Add page numbers to future meeting summaries.

Procurement Process Update [J.A. Weber]

- The contractor process is not finalized yet. So far there has not been an appeal.

Technical Advisory Committee Feedback Review and Discussion [J.A. Weber/S. Weisberg]

Process

- J.A. Weber: The Southern California Coastal Water Research Project (SCCRWP) will assist the steering committee with selecting and assembling the Technical Advisory Committee (TAC).
- S. Weisberg: SCCWRP will compile a list of TAC candidates, including nominees provided by the steering committee and SCCWRP, from which the steering committee will select TAC members.
- S. Weisberg: The TAC can be either local or national.
    - R. Hutsel: Our timeframe does not allow for the selection of a national committee.
- S. Weisberg: The steering committee will decide how TAC members will be paid and if travel expenses will be reimbursed. SCCWRP recommends choosing a flat rate – somewhere in the range of $1,000 - $15,000 – to pay each TAC member.

    - C. Crompton: An Environmental Protection Agency (EPA) employee would be the only TAC member that wouldn't receive payment.
- S. Weisberg: The steering committee will decide the TAC's level of involvement and at what point they should enter the cost-benefit analysis (CBA) development process.
    - J. Smith: The TAC should review the consultant's work along the way, as opposed to just providing a peer review of the CBA at the end.
    - C. Crompton: The work plan is first deliverable from the contractor. That would be the first thing the TAC should advise the steering committee about to avoid starting off on the wrong path.
- S. Weisberg: SCCWRP can coordinate logistics and take minutes for the panel. SCCWRP can also volunteer time to chair the TAC.
- **Action items:**
    - Steering committee members are to provide TAC nominee names and resumes, if desired, to M. Mata by April 4.
    - SCCWRP is to reach out to high priority candidates to gauge interest and obtain resumes; then provide a list of potential TAC members by April 6 to Steering Committee.
    - Steering committee members are to send votes, rankings, and nominees they wish to eliminate from consideration to M. Mata by April 11. Justification is not required to eliminate a candidate.
    - SCCWRP will confirm TAC members' availability and coordinate an in-person presentation most likely the week of June 6.
    - J.A. Weber and S. Weisberg are to work out details of TAC member compensation and SCCWRP's level of involvement.

Schedule

- J. Smith: Consultant selection has been slower than anticipated, so the schedule needs to be revisited.
- S. Weisberg: A two-month lead time is needed to assemble the TAC and arrange a time they can meet with the steering committee in person. In order to expedite the process, potential TAC members should be identified prior to the next meeting (before April 19).
- The first TAC presentation to the steering committee will occur in June after the work plan is drafted by the consultant.
- The draft work plan needs to be completed two weeks prior to the TAC's presentation.
- J. Smith: Another public workshop should be held prior to the finalization of the work plan.
    - C. Crompton: Will the workshop be informational, or will input be solicited?
        - J. Smith: The steering committee will need to solicit comments.
    - C. Crompton: The public workshop will extend the timeframe, but the process needs to be transparent to be credible.
    - J. Smith: It will be important to have NGOs at the next public workshop.
        - C. Crompton: The NGOs have declined to participate in an extended process, but the workshop seems like an ideal place to engage them.
- **Action item**: J.A. Weber is to send out revised schedule.

TAC Members

- S. Weisberg: Organization representation is not a concern for the TAC; members should be technical experts (e.g., someone who is discussing the topic at a national meeting).
- S. Weisberg: Members should not have a vested interest in the outcome of the CBA.
- S. Weisberg: Five is the ideal number of TAC members, particularly given the tight deadline. Two each from the cost side (one stormwater specialist and one wastewater specialist) and benefits side (one resource economist and one public health specialist) plus a SCCWRP member as chair are recommended.
- R. Kolb: The TAC should include someone with arid climate knowledge. Dr. Horner from Washington State would be a good option.
    - Dr. Horner may be part of the consultant team.
- T. Snyder: Given how much data we'll be pulling from the surfer study, Ken Schiff is a good option as Chair.
- S. Weisberg: Rhodes Trussel has knowledge in both wastewater and stormwater.
- R. Kolb: Jack Colford, lead epidemiologist for the surfer health study, could be an option for the public health specialist role. Tim Wade, epidemiologist for the EPA, is also an option. Both have also been involved in this project.
    - J.A. Weber: Are they too close to this project?
    - T. Snyder: They're not too close to the CBA.
- R. Hutsel: What about Rick Gersberg, head of Environmental Health Division at SDSU?
    - S. Weisberg: He's more of a microbiologist, but he could qualify.
- J. Peng: A city engineer from a large wastewater treatment plant outside of San Diego could provide wastewater expertise and a reality check on capital investments.
    - J. Smith: They obviously have a vested interest. Maybe someone from northern California would work.
    - R. Hutsel: The role of the TAC is to check the process, not provide data.
- J. Smith: Should the TAC include more economists since the steering committee's weakness is economics?
    - S. Weisberg: Not necessarily. The TAC would include a top economist.
- T. Snyder: Would it be helpful to have the EPA involved in the TAC? They need to be involved in some way.
    - S. Weisberg: That would be changing the role of the TAC.
    - R. Kolb: The TAC could include an economist from the EPA.
- C. Crompton: Eric Strecker, water resources engineer from Oregon, could be an option.
    - S. Weisberg: He could potentially benefit from the project since he works in area, but it's a stretch. He's at the top of my list.
- C. Crompton: There should be a vacant sixth spot reserved on the TAC in case the steering committee identifies a gap in the committee's expertise.
- R. Hutsel: Natural resources, including bays and rivers, need to be considered. This is more than an infrastructure project. Engineers may not understand a natural system.
    - S. Weisberg: Engineers think holistically. Candidates for the TAC would understand natural systems.

- J. Smith: At the start of the project, the steering committee was concerned with bacteria total maximum daily loads (TMDL), but now safety and protection of natural systems is part of the scope.
    - S. Weisberg: The TAC would be in tune with that.
- C. Crompton: Would the public health experts cover microbiology?
    - S. Weisberg: Yes, K. Schiff would as well if he is selected as Chair.
- S. Weisberg: Wouldn't necessarily have NGOs on the TAC, but they could review and comment on the TAC's reports.
- R. Hutsel: TAC members need local knowledge to be successful.
    - S. Weisberg: SCCWRP would provide local knowledge. NGOs could also be invited to the first TAC meeting to present local knowledge.
    - T. Snyder: It may not be important for the TAC to have local knowledge if they are only checking methodology.
- If there was more time, a stakeholder committee could have been set up with one member serving *ex officio* on the TAC.
        - J. Smith: Lacking a stakeholder group, the steering committee needs to ensure stakeholders have a say. It's been hard, as NGOs have declined to participate.

TAC Role and Responsibilities

- S. Weisberg: The TAC is an advisory body which will be asked to determine if the study is being done correctly. It will look at the study's methodology and whether the best data are being used.
    - C. Crompton: They will also need to assess how the contractor is covering data gaps.
- T. Snyder: The method of routing feedback through the steering committee needs to be clear.
- S. Weisberg: The questions asked of the TAC need to be specific (e.g., are the methods described in the work plan the *most* appropriate?)
- Suggested questions for the TAC:
    - C. Crompton: Is the work plan appropriately structured? Has the contractor accomplished the work plan?
    - T. Snyder: Ask where the methods used fit into the range of acceptable to most appropriate.
    - J. Smith: Are the methods "technically defensible?"
        - R. Kolb: The previous CBA was technically sound, but didn't take certain factors into account.
    - S. Weisberg: Are the methods being used technically sound? Are there more appropriate methods?
    - S. Weisberg: Are the best data available being used?
    - J. Smith: What would be the best investments to improve the model output?
    - S. Weisberg: Are there critical data needs?
    - C. Crompton: The contractor had already put certain weights on certain factors based on previous studies. That needs to be validated by the TAC at some point in the process.
- The final report provided by TAC will be short and straightforward, written for a management audience with a one-to-two page answer to each of the questions.

- **Action item**: S. Weisberg and K. Schiff are to draft questions for the TAC for submittal to the steering committee.

Proposed Alternative Scenarios Discussion [J.A. Weber]

Baseline

- T. Snyder: If the baseline was full implementation of the existing Water Quality Improvement Plans, it becomes attainment of REC-1, so what would the comparison be? The baseline should be current conditions, so benefits of existing conditions aren't discounted.
    - J. Peng: This is also what the CBA was intended to do.
- J. Smith: The CBA is an opportunity to quantify the costs and benefits of meeting objectives. Quantifying the baseline today would be difficult.
- R. Kolb: The CBA needs to give current standards.
- T. Snyder: Strike "baseline" from current component of TMDL endpoints in graph.

Recommended Alternative Scenarios

- T. Snyder: Alternative Scenarios should include status quo conditions, implementation of current plans, revisions to the TMDL, and achieving the TMDL with different implementation approaches. That information would be most helpful to frame results for decision makers.
- J. Smith: Take out number 4 as it's the same as number 3.
- R. Kolb: Add "regionally" to number 3.
- J. Smith: The EPA number of allowable illnesses uses all hydrological conditions. The 12 additional illnesses identified in the surfer study were only for wet weather. Nine additional illnesses would be more comparable, since it averages dry (7) and wet (12) weather.
- T. Snyder: An allowable exceedance day is already part of the TMDL. It's not discretionary, and the numbers could only be tweaked.
- J.A. Weber: The recommended scenarios need to be ranked.
- J. Smith: High flow suspension is not on the regional board list. Strike the asterisk where it says high flow suspension is common.
- T. Snyder: For number 10, if an implementation strategy was chosen for creeks, would copermitees be allowed to assimilate pollutants in receiving waters?
    - J. Smith: No it's not allowed.
- J. Smith: Bigger storms data are hard to control.
- J. Smith: What if loading is eventually reduced for everything above 85 percentile storms?
- A high standard would be needed to change the TMDL. Changing standards may not be as difficult.
- **Action item**: J.A. Weber is to revise and resubmit the alternative scenarios to the committee for discussion at the next meeting.

<u>Estimation of Best Management Costs for Watershed Implementation Plans</u> [C. Boschen]

- Non-structural programs are more cost effective, with more load reduction compared to costs. They're not as complicated, there are no capital costs and there is minimal contractor work.
- Focus resources on identifying strategies in low-cost categories. If the target is higher, more expensive BMPs need to be maximized, which starts to drive costs.
- The overlying premise is that all methods rely on well-established, literature-based cost estimates.
- The City of San Diego and San Diego County use different approaches, but both pull from local sources of information.
- J. Smith: Are these estimates based on overall implementation, or are they specific to particular BMPs? Because that's one of the considerations for the CBA that needs to be separated and defined.
    - C. Boschen: Both.
- All of the City's estimates go into the short-term and long-term watershed management plan.
- Estimates are detailed by strategy, including time within the plan, staffing, contracting and overhead costs.
- The Structural BMP Prioritization and Analysis Tool (SBPAT) is a national database of construction costs that San Diego County uses.
- The County uses a broader approach and allows for adjustments.
- The City defines costs for asset management plans.
- The County estimates are based on the projected value of the dollar. The City used present-day costs.
    - J. Smith: Wouldn't decreased costs of technology be a factor?
        - C. Boschen: Yes, but salaries and other costs increase.
- T. Snyder: The County does not include additional administrative costs and the estimates are modest.
- The City took into consideration the number of BMPs as it relates to costs to handle planning.
- Cost uncertainty is pretty low for non-structural BMPs. Costs of larger structural BMPs are more uncertain.
    - T. Snyder: Models look at ideal situations; actual costs tend to be higher.
    - J. Smith: Is it always the case that costs are higher than the model predicts?
        - C. Boschen: Costs could be lower in some cases. In general, the models underestimate costs.
- J. Smith: Can recent BMP studies be factored into these models? The landscape could be retrofitted.
- C. Boschen: These costs need to be revisited once the source information is defined better.
- T. Snyder: The total price tag for watersheds in San Diego county through 2031 (the life of the TMDL) was an estimated $3 to $5 billion. The County's share was $300 to $570 million.