

Focusing on the Triple Bottom Line - Planning Your Program to Meet Multiple Needs



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Background

- CASQA LID Barriers Prop 84 Grant
 - Removal of barriers to LID through:
 - Direct code writing assistance to 25 municipalities to update municipal codes
 - Training of municipal staff regarding LID
 - Outreach to local government officials about LID & codes
 - Dissemination of information and case studies
 - Evaluate the mechanisms to fund LID & stormwater programs as a primary barrier to LID implementation
 - 2 White Papers developed with assistance from SCI & EOA
 - » White Paper #1: Stormwater Funding Barriers & Opportunities
 - » White Paper #2: Use of a Triple Bottom Line Analysis to Support Stormwater Management Objectives

Triple Bottom Line Analysis

 White Paper Purpose: Provide an introduction to the Triple Bottom Line concept, methodology, and usefulness within public works and stormwater management.

TBL is an approach increasingly being used to evaluate the social, economic and environmental aspects of any project or program.

Triple Bottom Line & Stormwater

- Increased awareness on the need for clean water and healthy watersheds, expectation is for public agencies to pursue multi-benefit projects
- Can help to identify high value multiple-benefit stormwater programs and projects
- Considers risks and costs for capital projects & operation and maintenance
- Evaluates the concept of sustainability as it relates to municipal stormwater programs.

Fundamentals of a TBL Analysis

- An objective way to assess project or program options
- An analytical and modeling framework providing transparency and balance between cost, and social and environmental benefits
 - Environmental and social elements reflect
 externalities, in past were considered side effects
- Helps to choose the "highest value" project
- Measuring TBL
- Involvement of Stakeholders

Measuring Triple Bottom Line

- Assigning Values
 - Needed so economic, social, and environmental can all be weighed objectively against one another.
 - Options
 - <u>Monetization</u>: Putting dollar values on each element of TBL, including social welfare or environmental damage.
 - <u>Index</u>: Ranking the relative value of each cost or benefit in relation to the others, without assigning a specific dollar (or other) value to them.
 - Stand-Alone Elements: This method would use neither dollars nor an index. Rather, each sustainability measure would stand alone.

Involvement of Stakeholders

- By involving various stakeholders, the TBL process ensures transparency and "best value" for the outcome
- Stakeholders should be broadly defined to best measure and weigh all three TBL elements
- When considering social and environmental elements for public agency projects, members of the general public should be stakeholders.
- Promotes ongoing involvement by stormwater professionals with the public they serve.

Example TBL Approach - Steps

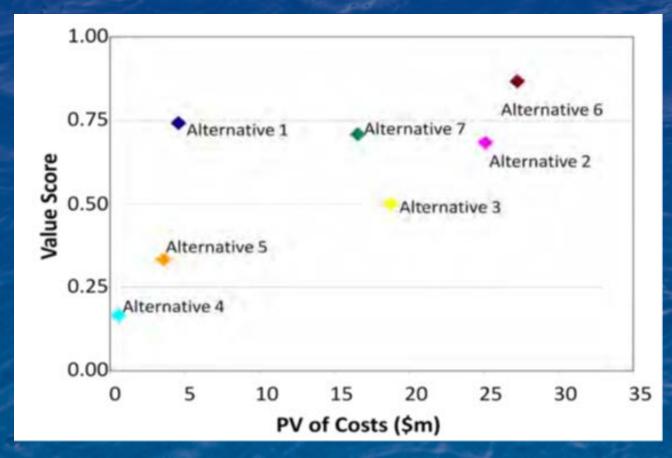
- Identify and estimate costs and benefits for project alternatives
- 2. Identify project stakeholders
- 3. Hold one or more stakeholder forums to
 - a. develop criteria to evaluate social and environmental attributes
 - b. develop relative weighting of criteria
 - c. score each criterion
- 4. Evaluate the criteria for all project alternatives and plot them in relation to their respective financial costs

- 2012 Comprehensive Combined Sewer
 Overflow (CSO) Control Program
- Economic Aspects
 - Cost estimates of present value of capital, O&M, equipment replacement.
- Social and Environmental Aspects
 - "Value modeling"
 - Each alternative is evaluated for the extent it meets project criteria
 - Criteria are weighted according to their relative importance in making the project decisions.

- Criteria
 - Constructability
 - Operations & maintenance
 - Property impacts
 - System performance
 - Community/business
 - Carbon footprints
 - Compatibility with other planned projects
 - Public confidence
 - System flexibility

- Scoring Criteria
 - -1 to 5 scale
 - 1 for criteria that do not meet the project's goals
 - 5 for criteria that meet the project's goals easily
- Weighting Criteria
 - Weighted in regard to their relative importance to each other
 - Critical step/opportunity for the stakeholders to express their values by weighting individual criteria
- Value Modeling
 - Establish performance measures
 - Score each alternative to ID "Value Score"

- Final Analysis
 - Value Score vs. Project Costs



Challenges of TBL Analyses

- Takes Time & Effort
 - Small municipalities may be especially challenged by a comprehensive TBL process
 - TBL is scalable and it can be implemented on a smaller scale
 - Stakeholder input is critical and this may take several meetings to receive the desired input
 - Many agencies already have a public input process
 - For TBL add criteria setting and weighting steps
 - Integrate TBL into the schedule early in the schedule at the earliest planning stages of a project

Challenges of TBL Analyses

- Objectivity in TBL
 - Meant to be as objective as possible
 - Several steps include subjectivity, however this provides flexibility to local priorities
 - With stakeholder input early in the process the later analysis with TBL is more objective
 - Broadens the palate of possibilities, and helps ferret out the alternative that provides the best value.

Challenges of TBL Analyses

Constraints & Opportunities

Budgets

- Allows for better comparison of alternatives that have similar costs
- Evaluation of social and environmental benefits might identify other potential funding sources (i.e. grants) associated with an identified benefit.

- Policies

- TBL analysis can influence policies like CIP and positively affect stormwater projects for the future
- Can broaden the understanding of ways stormwater infrastructure supports other water-related objectives
 - water supply, wastewater, local drainage, flood control

Next Steps

- CASQA Financial White Papers
 - Finalized and posted on the California LID
 Web Portal www.californialid.org by 5/30/17