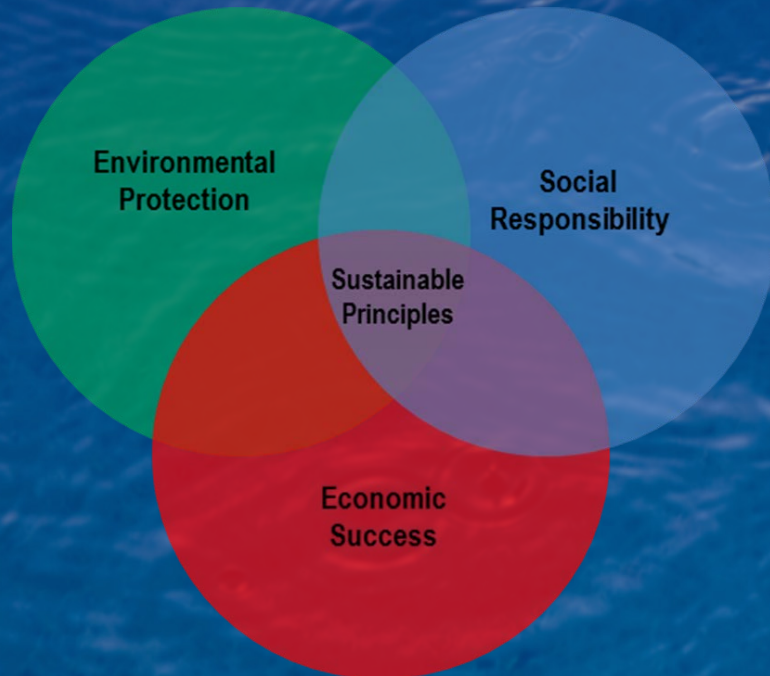


# Focusing on the Triple Bottom Line – Planning Your Program to Meet Multiple Needs



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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
  - Monetization: Putting dollar values on each element of TBL, including social welfare or environmental damage.
  - Index: 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

1. 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



# TBL Example: King County, WA

- 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.

# TBL Example: King County, WA

## ■ Criteria

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



# TBL Example: King County, WA

- 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

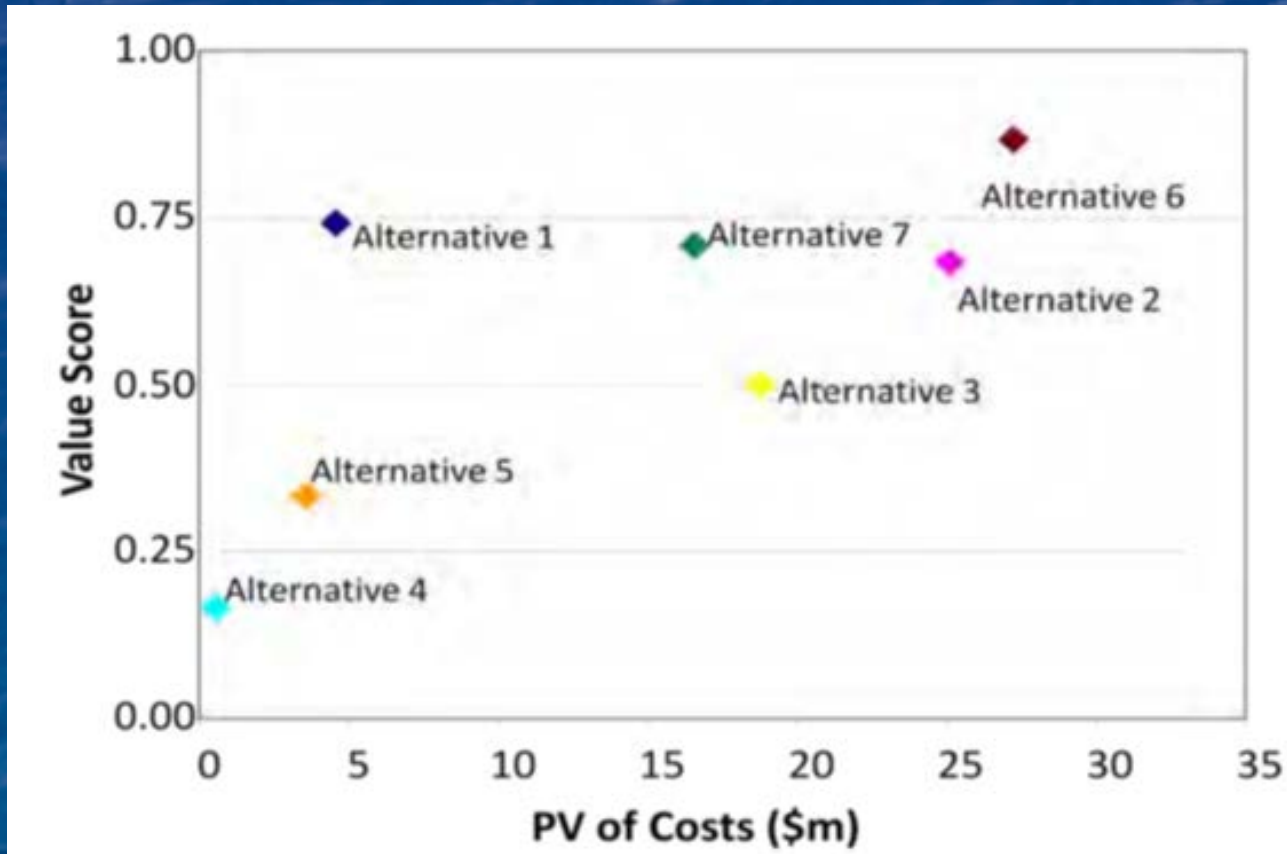
- Value Modeling

- Establish performance measures

- Score each alternative to ID “Value Score”

# TBL Example: King County, WA

- 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](http://www.californialid.org) by 5/30/17