Environmental Cost-Benefit Analysis

SAN DIEGO BACTERIA TMDLs

August 31st, 2016 Public Meeting

Environmental Incentives

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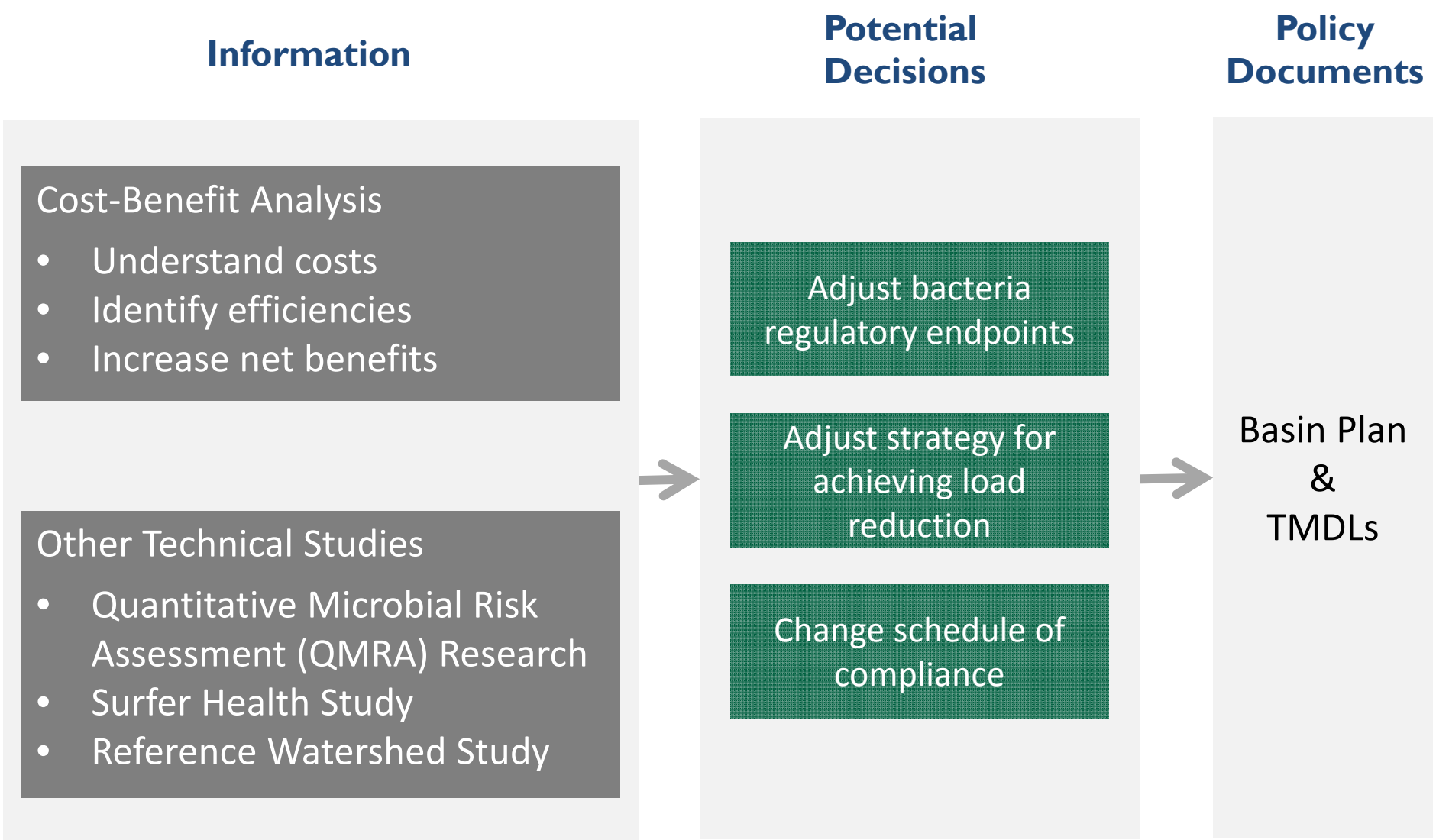
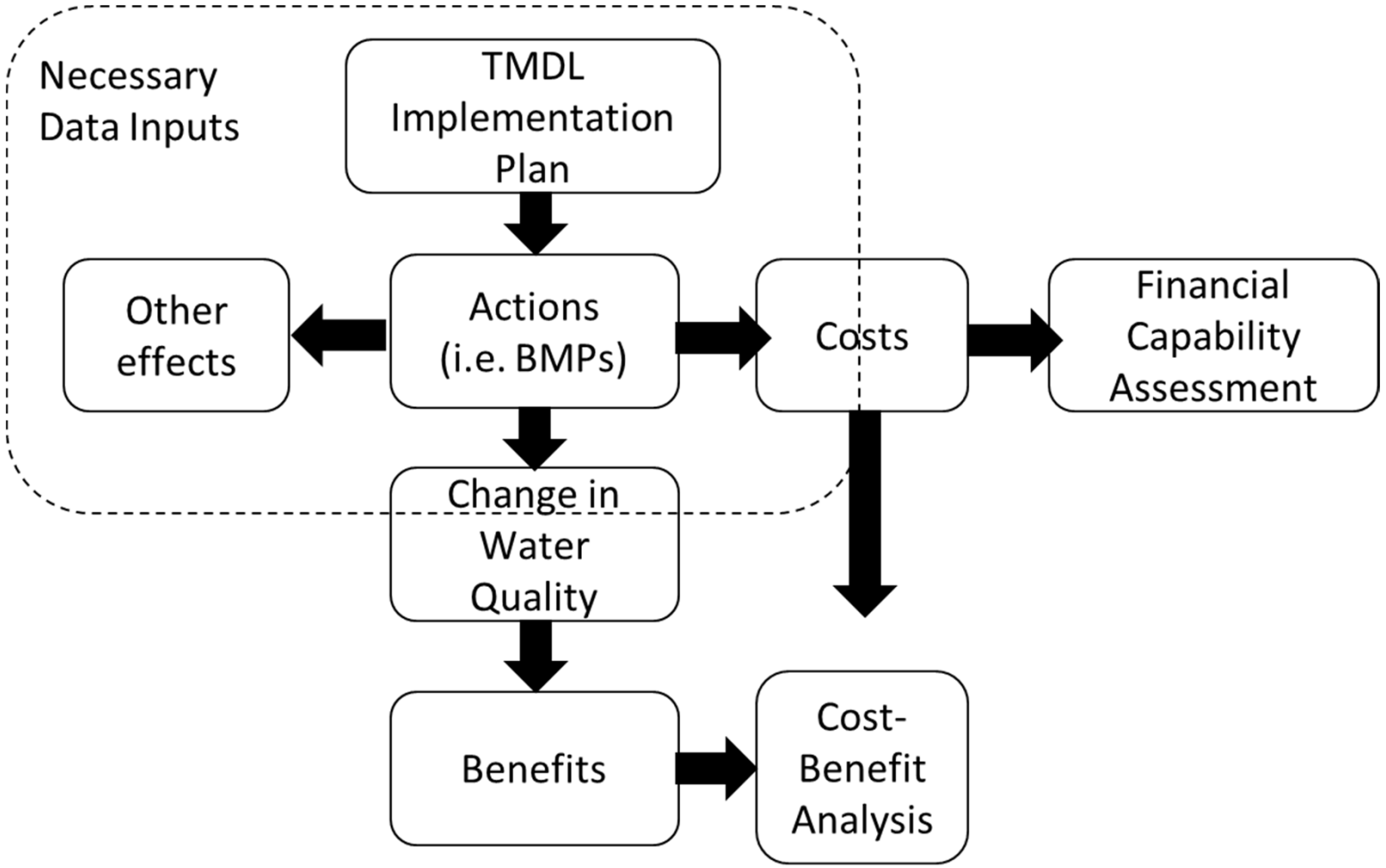
Triennial Review Information Flow

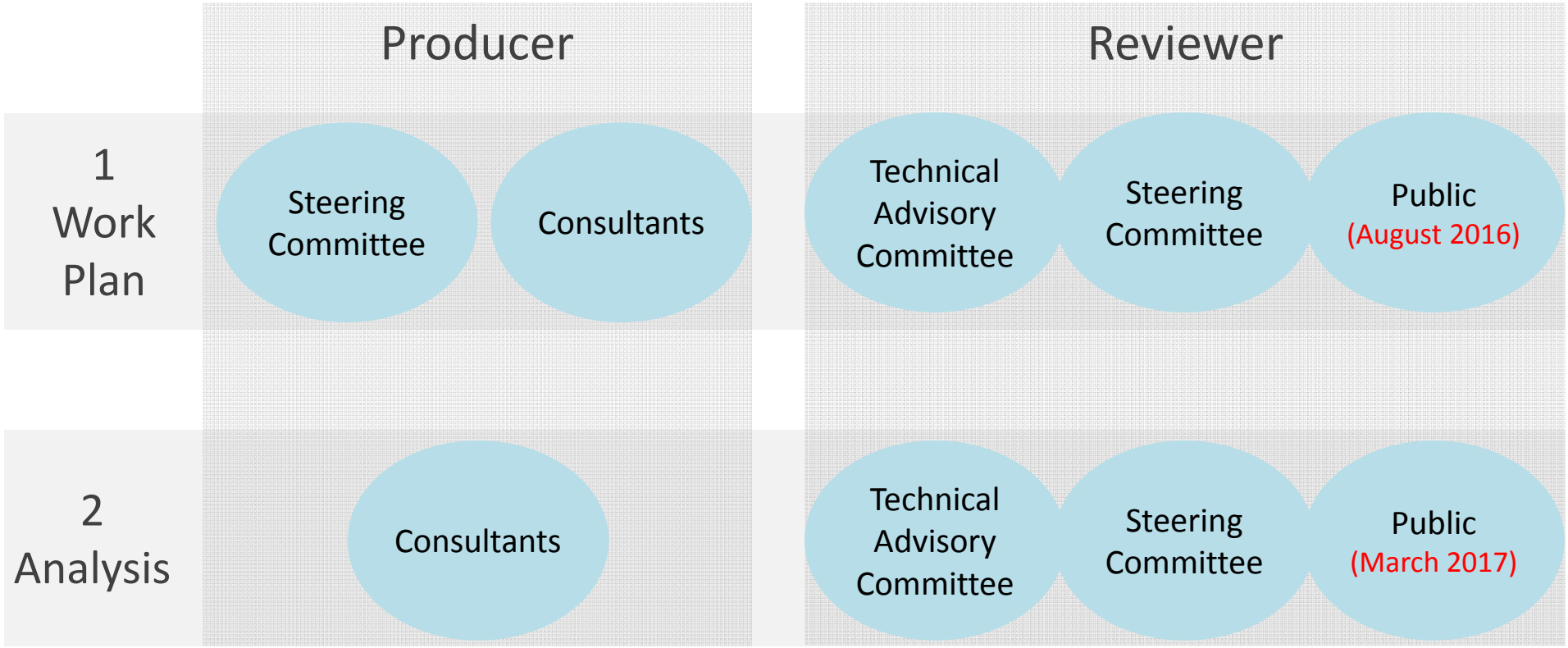


What is a Cost-Benefit Analysis (CBA)?



ACTIVITY:
PARTICIPANT INTEREST

CBA Development Process



Committee Membership

Steering Committee

- Water Quality Control Board, San Diego Region
- San Diego County, Watershed Protection Program
- U.S. Environmental Protection Agency
- County of Orange, Stormwater
- City of San Diego
- SD Taxpayers Association
- San Diego River Park Foundation

Technical Advisory Committee

Kenneth Schiff (TAC Chair)

- Southern California Coastal Water Research Project

Charles Colgan

- Middlebury Institute

Eric Strecker

- Geosyntec Consulting

Rhodes Trussell

- Trussel Technologies

Tim Wade

- US EPA Office of Research and Development

Consultant Background

Environmental Incentives

- Performance-driven conservation
- TMDL implementation plans

Key Team Members

Chad Praul, P.E.
- Role: Project Manager
- WQ crediting program design

Maso Motlow, MESM
- Role: Analyst
- Water policy development

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- 40 years of economics for policy
- Cost-benefit studies
- Economic impact analyses

Key Team Members

Mark Buckley, PhD
- Role: Econ. project lead
- Principal: Natural Resources Group

Ed MacMullan, MS
- Role: public health, co-benefits

Ralph Mastromonaco, PhD
- Role: recreation, modeling

Mike Wilkerson, PhD
- Role: Property value, modeling

Major Assumptions & Limitations

1.
Reliance on
existing data
for BMPs

2.
Focus on
wet weather
water quality
improvements

3.
Analyses are
focused on
incremental effects
of BMPs

Benefit Analyses

Recreation

- User-days

Public Health

- Exposure-based
- Builds from rec data

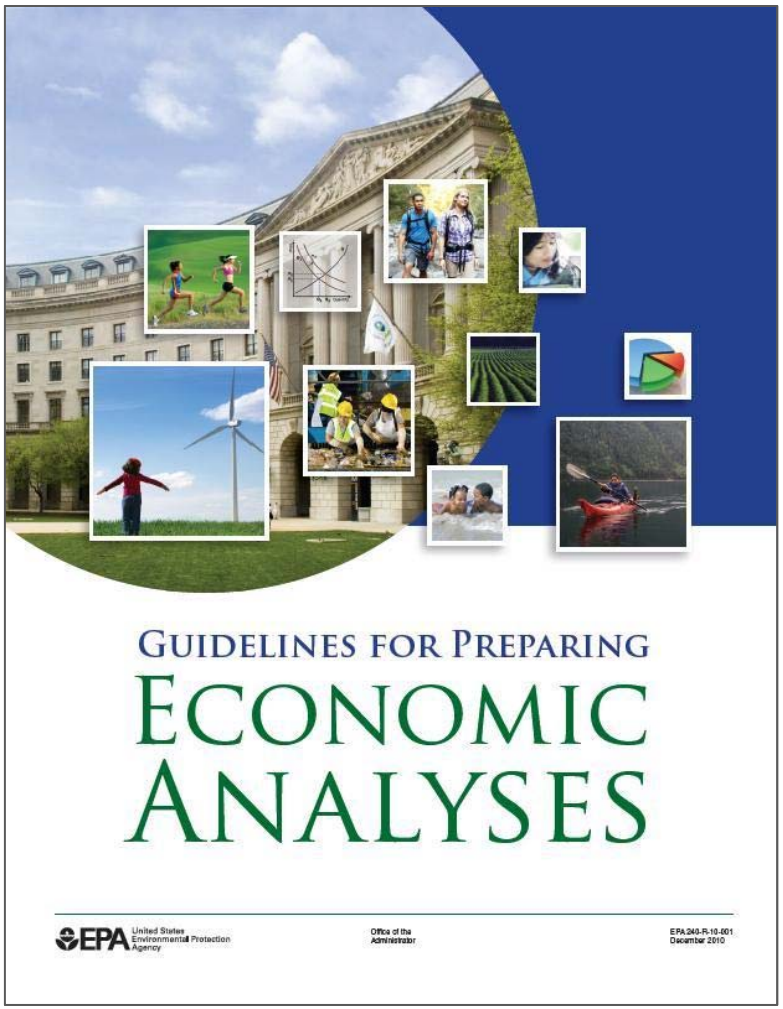
Property Value

- Changes with closures, water quality differences

Other/Co-Benefits

- Green stormwater infrastructure, other social/environmental

Primary Federal Technical Guidance



Appropriate Baseline Setting

Benefits are measured as a net present value over time, in comparison to the counterfactual without water quality improvement

Monetizing Benefits – Health & Economic

Benefits are derived from goods and services facing demand. Form of use determines means of monetization.

Appropriate Underlying Assumptions

Results are sensitive to assumptions regarding water quality improvements and demand for improved resources. Rigorous basis in data and theory is crucial.

Revisions to the Work Plan

Based on comments from the TAC, the following revisions to the Work Plan were made:

- Inclusion of a **BMP effects table** to describe the positive and negative effects of BMPs in addition to reducing bacteria concentrations
- Description of the likely **effects of growth & climate change** on factors which may impact analysis results
- Inclusion of a **data plan** to identify specific data requirements

Next Steps

Work Plan

- Public Comments Due: 09/16/16
- Response to public comments: 09/30/16

Analysis

- Document available for public review: 03/07/17
- Public meeting: 03/20/17
- Public comments due: 04/07/16
- Response to public comments: 05/07/17

QUESTION AND ANSWER