THE RMP SMALL TRIBUTARIES LOADING STRATEGY: *LINKING WATERSHEDS AND THE BAY*

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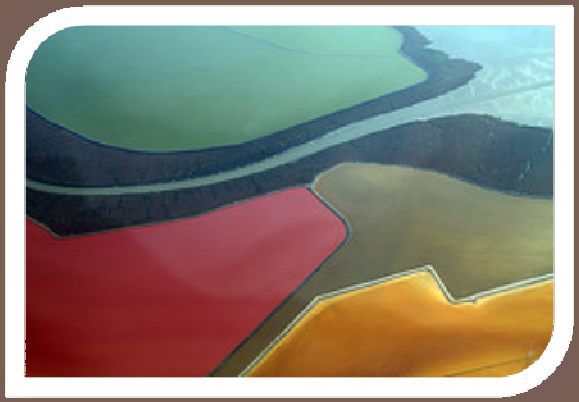
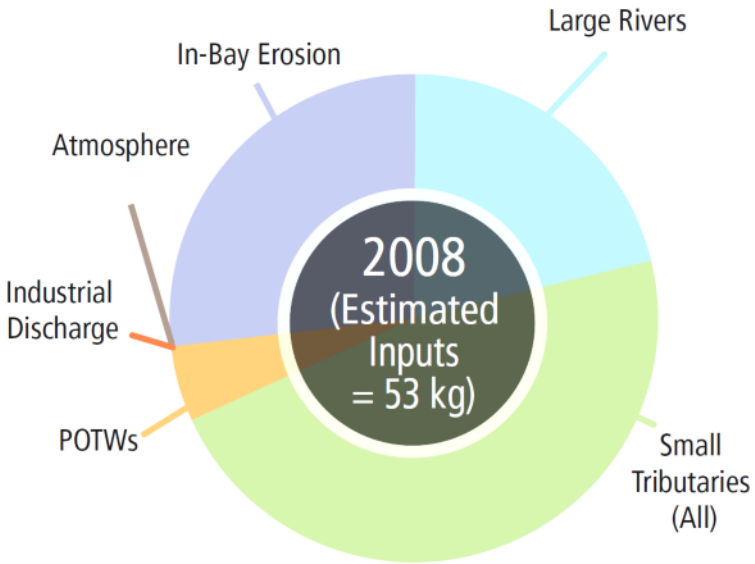


Presentation Outline

- Small Tributaries Loads Monitoring to-date
- Strategy Drivers and Goals
- Management Questions
- Strategy Components
- Implementing Agencies/Organizations

"Small" Tributaries

- **Draining to San Francisco Bay**
- **Natural Rivers & Creeks**
  - Excluding Sacramento River
- **Stormwater Conveyances**
  - Flood Control Channels
  - Pump Stations
- **Urban and Non-urban Port of Watersheds**



PCBs to SF Bay

Alameda Creek (Fremont)

Colma Creek (Daly City)

Lake Merritt (Oakland)

Small Tributaries Monitoring To-date

- **Bay Area Municipal Stormwater Agencies**
  - 10+ Stations (Early 1990's)
  - Metals, TSS, Aquatic Toxicity
- **Regional Monitoring Program**
  - PCBs, Hg, SSC, Turbidity
  - Guadalupe River (Santa Clara County)
    - 2003-2009
  - Zone 4/Line A Channel (Alameda County)
    - 2007-2010

Santa Clara Valley Urban Runoff Pollution Prevention Program

Alameda Countywide Clean Water Program
A Consortium of Local Agencies

CONTRA COSTA CLEAN WATER PROGRAM

SFEI

Need for a Strategy

- **Progress Toward Regulatory Targets**
  - TMDL Allocations - PCBs, Hg and Pesticide Toxicity
- **High Priority Watersheds**
- **New/Refined Loading Estimates for Pollutants of Concern (POCs)**
  - Next iteration of Mercury and PCB TMDLs
  - Other POCs (Se, PBDEs, PAHs)
- **Cost-effectiveness**

Main Goals of Strategy

- **Establish a common science based framework**
  - Regulatory-mandated (MRP)
  - RMP funded (SPLWG)
- **Build on existing and previous efforts**
- **Increase cost-effectiveness of POC monitoring**
- **Assist in long-term planning**

"Additional" Goals

Build Consensus on Science-based Approach

Maintain Compliance

How long do we have to get into compliance?

Management Questions

1. **Contributions to Impairment** - Which are the "high leverage" small tributaries that contribute or potentially contribute most to Bay impairment by pollutants of concern?
2. **Current Loads (Status)** - What are the loads and concentrations of pollutants of concern from small tributaries to the Bay?
3. **Trends in Loads** - How are loads or concentrations of pollutants of concern from small tributaries changing on a decadal scale?
4. **Effectiveness of Management** - What are the projected impacts of management actions on loads or concentrations of pollutants of concern from the high-leverage small tributaries?

Core STLS Elements

1. Small Tributary Monitoring

- POC loads from a representative set of small tributaries
- Downstream of planned management actions

2. "Source" Area Runoff Monitoring

- Event Mean Concentrations (EMCs) for specific POCs
- Data input for watershed "spreadsheet" model

3. Watershed and Bay Modeling

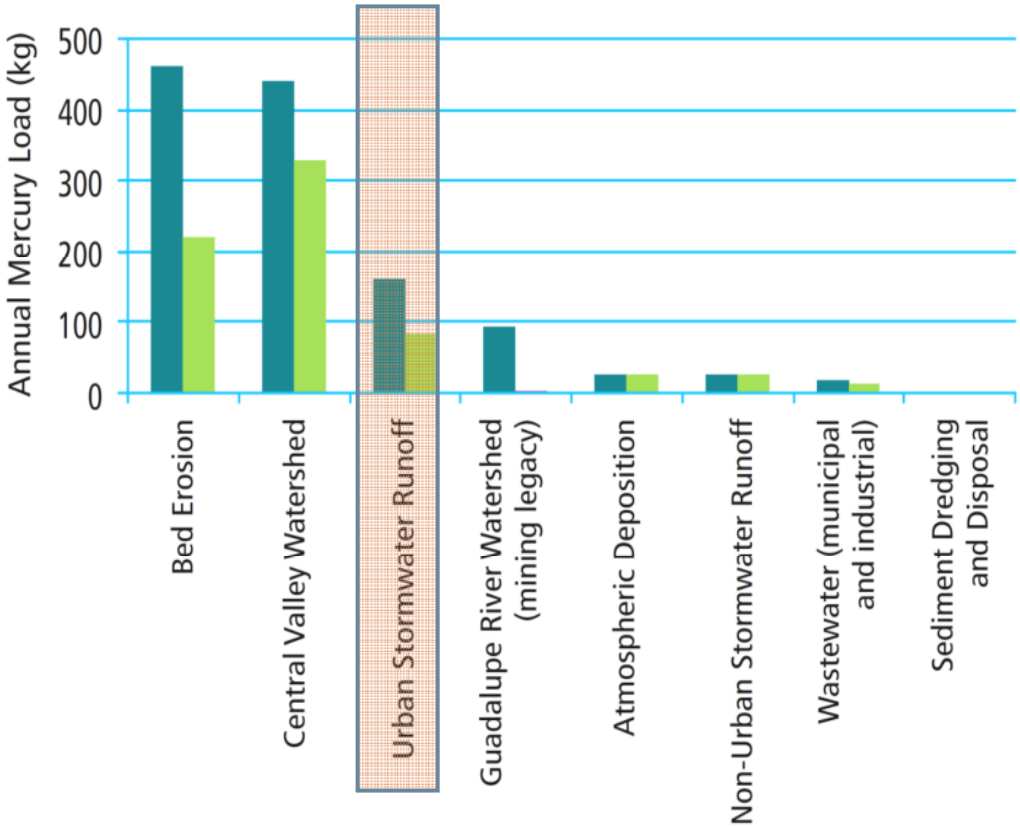
- Watershed
  - Simple spreadsheet model(s)
  - Watershed-specific dynamic models ?
- SF Bay
  - Bay margins modeling

Element #1 "Representative" Set of Small Tributaries

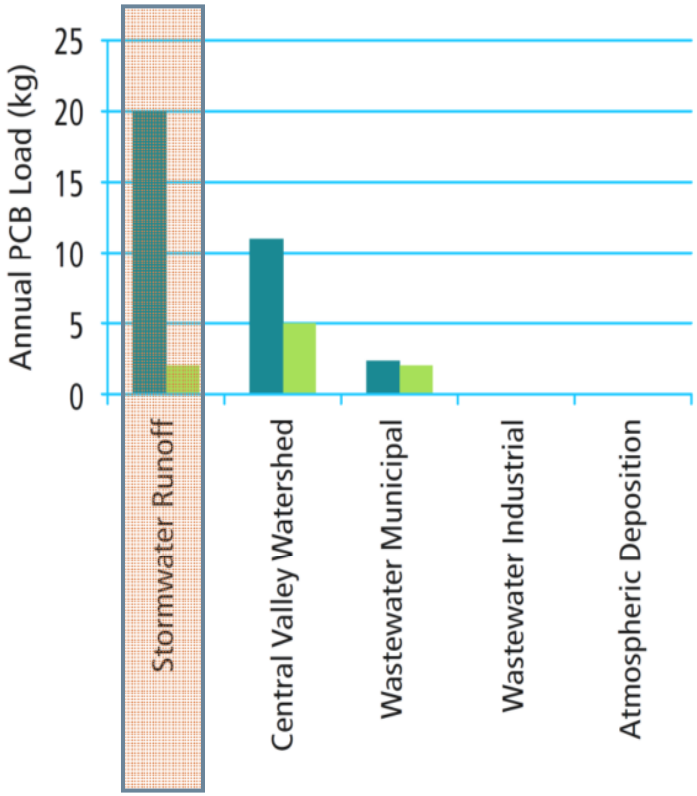
Element #1: BMP Effectiveness Assessment

Assessing Progress Towards TMDL Allocations

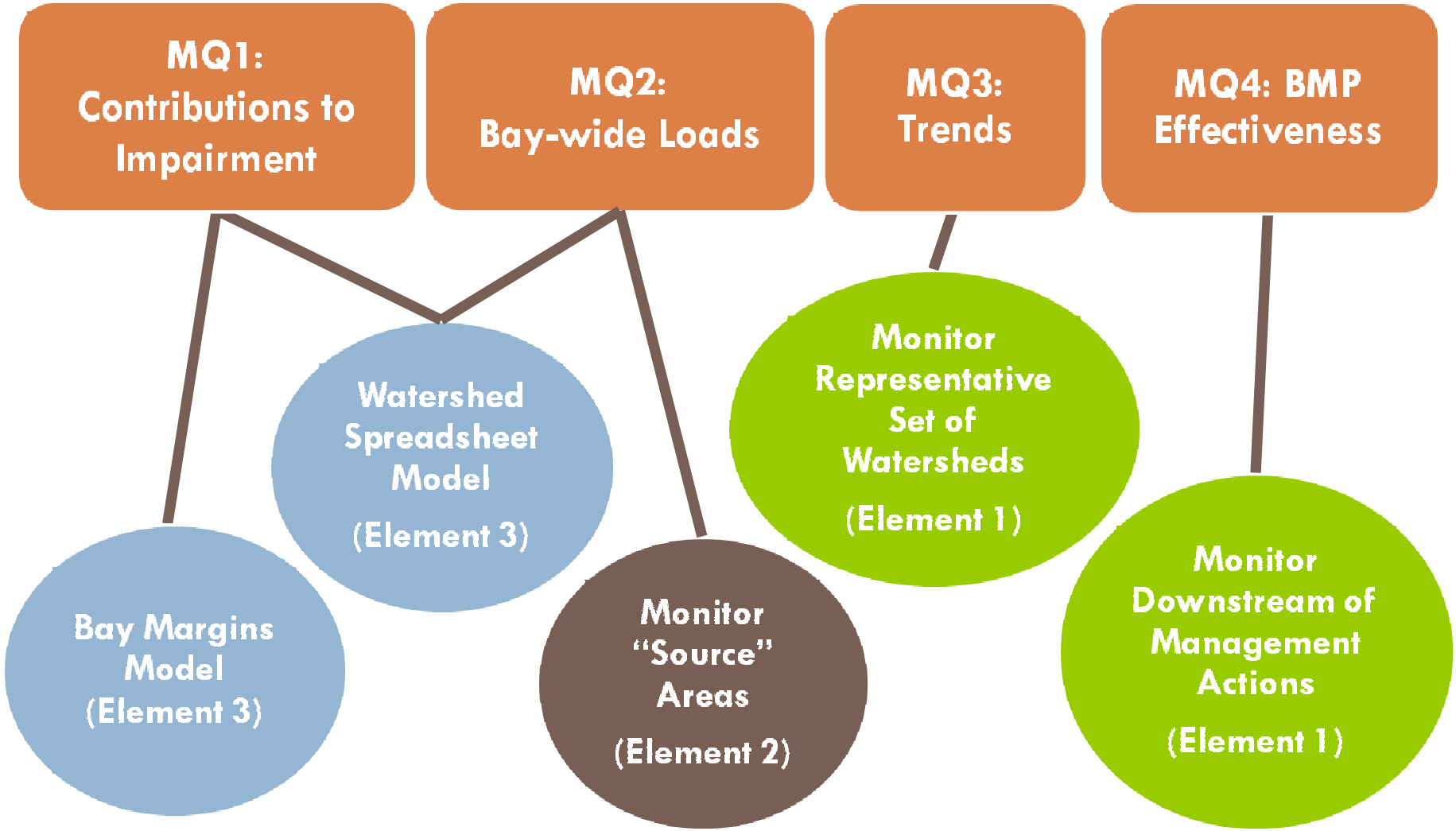
48% reduction



90% reduction



Management Questions & Components

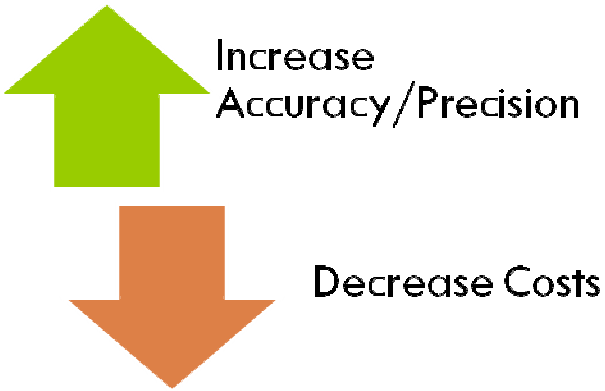


Strategy Implementation

Element	RMP	Stormwater Programs
1. Small Tributaries Monitoring		
A. Monitor Representative Small Tributaries	♦	♦
B. Monitor Downstream of Management Actions		♦
2. Source Area Runoff Monitoring	♦	
3. Watershed and Bay Modeling		
A. Watershed Spreadsheet Modeling	♦	
B. Bay Margins Modeling	♦	

Immediate Next Steps

- **Winter 2010**
  - Resolve Remaining Questions
  - Number and Location of Sites
  - Sampling Methods
  - Initial spreadsheet model
- **Spring 2011**
  - Multi-Year Sampling Plan
  - Reach consensus on alternative (to MRP) approach
- **Fall 2011**
  - Sampling plan implementation



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