

San Diego Bay Contaminated Sediments Assessment and Remediation Workshop

Toxic Hotspots and San Diego Bay
TMDLs - Current and Future TMDLs

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Overview

1. Background information Toxic Hotspot and TMDL Program for San Diego Bay
2. Strategy and approach
3. Schedule
4. Partnerships
5. Questions

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Bay Protection and Toxic Clean up Program Objectives

- Determine presence or absence of adverse biological effects
- Determine relative degree of adverse biological effects
- Determine relative spatial extent
- Determine relationships between toxicants and effects

Bay Protection and Toxic Clean up Program - Sampling

- San Diego Bay Region sampling effort
 - San Diego Bay
 - Mission Bay
 - San Diego River Estuary
 - Tijuana River Estuary

Bay Protection and Toxic Clean up Program - Data

- Sediment chemistry - trace metals (n = 217)
- Sediment chemistry - organics (n = 229)
- Bioassay/toxicity testing of pore water and sediment (n = 350)
- Benthic community analyses (n=75)

Toxic Hotspots - Evidence

- Toxic Hotspot determination
 - Elevated sediment chemistry (PAHs, PCBs, pesticides, metals)
 - Benthic community degradation
 - Toxicity in sediment and/or porewater

Toxic Hotspots

- Seventh Street Channel/Paleta Creek
- Mouth of Chollas Creek
- Near Coronado Bay Bridge
- B St/Broadway Piers
(Downtown Piers)
- Switzer Creek

San Diego Bay TMDLs - Background

- 1998 303(d) listing
 - Identified impaired waterbodies
 - Prioritized for TMDLs
 - Based on existing data
- Rainbow Creek - Nutrients
- Chollas Creek - Metals and Diazinon

San Diego Bay TMDLs

- San Diego Bay locations
 - Based on existing data, including BPTCP
 - 9 locations for sediment impairments

San Diego Bay Contaminated Sediment TMDLs

Seventh St Channel/Paleta
Creek

Mouth of Chollas Creek

Near Coronado Bay Bridge

B St/Broadway Piers

(Downtown Piers)

Switzer Creek

- Near Submarine Base
- Naval Station SD
- Near 24th St Marine
Terminal
- Near Grape St

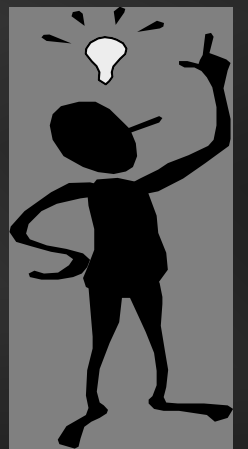


1. Submarine Base
2. Grape Street
3. B St/Broadway Piers
4. Switzer Creek
5. Near Coronado Bridge
6. Chollas Creek Channel
7. Naval Station
8. 7 Th St/Paletta Creek Channel
9. 24 th Marine Terminal
10. Shelter Island Yacht Basin

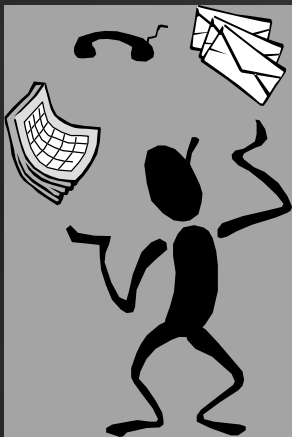
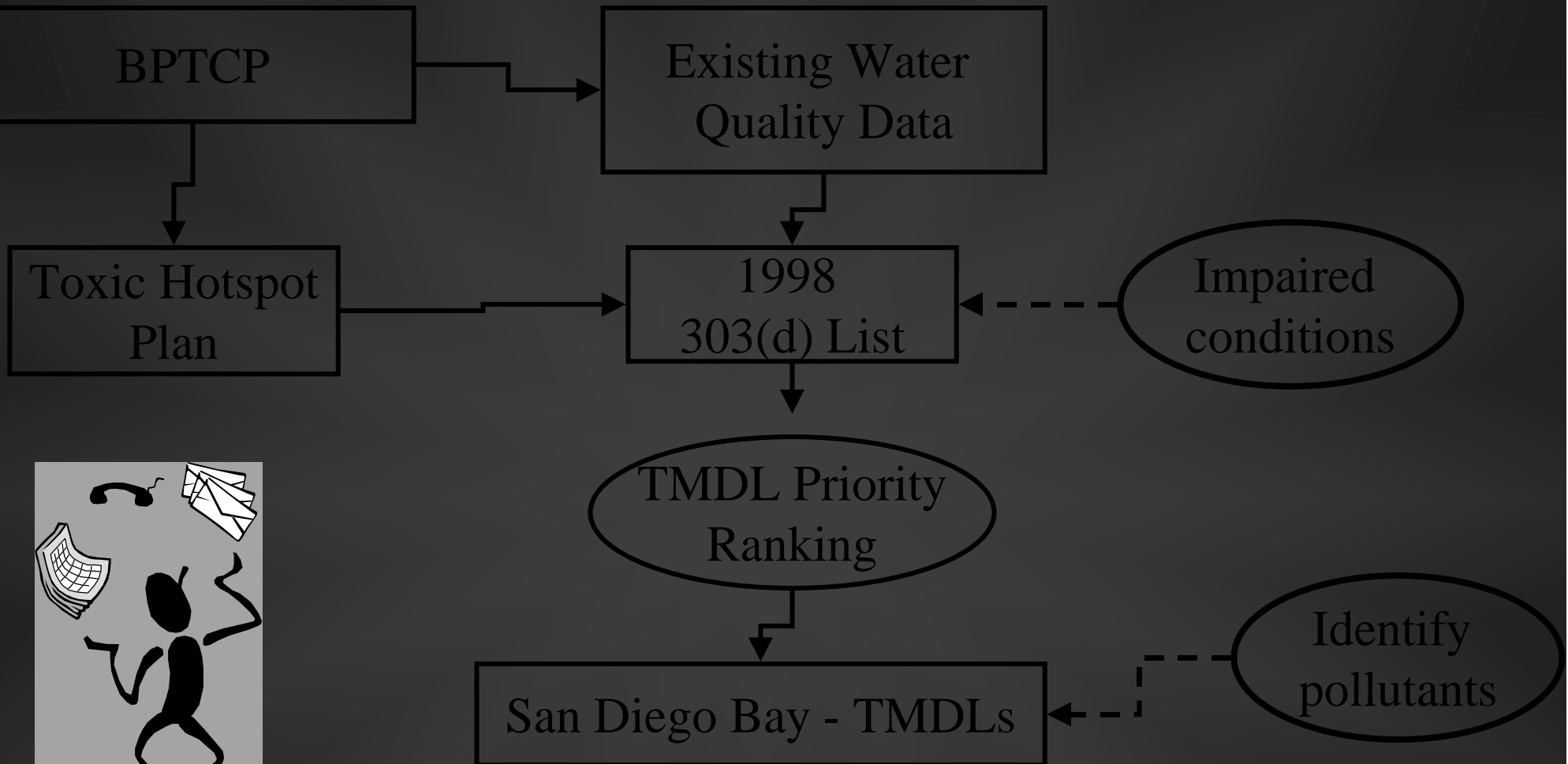
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Approach for Assessing THS and TMDLs

- Combined the THS and TMDL programs
 - Common areas
 - Common goals and intent
 - Need to control pollutant sources before clean up



Toxic Hotspots vs TMDL Program

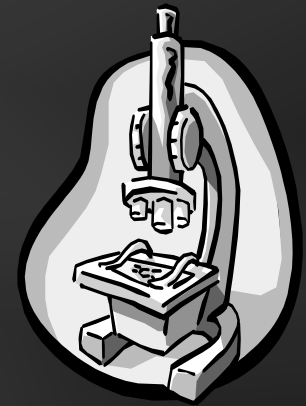


Approach for Assessing THS and TMDLs - Continued

- Confirm impairment still exists at identified locations
 - Map extent and magnitude of impairment
- Weight of evidence approach
 - Sediment Chemistry
 - Toxicity Testing
 - Benthic Community
 - Bioaccumulation

Approach for Assessing THS and TMDLs - Continued

- Identify specific contaminants of concern
 - Toxicity Identification Evaluation (TIE)
- Identify and control sources of impairment
- Clean up implementation



Phase 1

Measure Spatial Extent and Magnitude of Impact

Measure sediment quality indicators

Identify and Map impaired areas

Phase 2 - (TMDL Actions)

Determine cause of Impairment (TIE)

Determine sources

Document key indicators

Cleanup Actions

Identify indicator chemicals

Calculate cleanup levels

Phase 3

TMDL

Implementation

Source control

Source reduction

Phase 4

Cleanup Implementation



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San Diego Bay TMDLs - In Progress

- Mouth of Chollas Creek
- Seventh St Channel/Paletta Creek
 - Benthic Community Degradation, Toxicity
 - Regional Board, Port of San Diego, US Navy, SCCWRP joint workplan
 - Funding (FY 2000-2001)

San Diego Bay TMDLs - This Fiscal Year (FY 2001-2002)

- Near Grape Street
- B St/Broadway Piers
- Switzer Creek
 - Benthic Community Degradation, Toxicity
 - Contract with Marine Pollution Studies Laboratory (MPSL) - UC Davis
 - Approach similar to Seventh St & Near Chollas study
 - Funding (FY 2001-2002)

San Diego Bay TMDLs - Future

- Near Coronado Bridge
- Near 24 St Marine Terminal
- Naval Station San Diego
- Submarine Base
 - Benthic Community Degradation, Toxicity
 - FY 2002-2003

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Partners and Collaboration Efforts - Toxic Hotspot Workgroup (THSWG)

- Regional Board
- US Navy/SPAWAR
- San Diego Unified Port District
- City of San Diego
- Southern California Coastal Water Research Project (SCCWRP)
- Marine Pollution Studies Laboratory - UC Davis
- Natural Resource Agencies
- San Diego Bay Council

Questions

