Approach to Los Angeles/Long Beach Harbor Toxics TMDL

Kathryn Curtis, Port of Los Angeles

January 23, 2014 CMANC Meeting

THE PORT OF LOS ANGELES

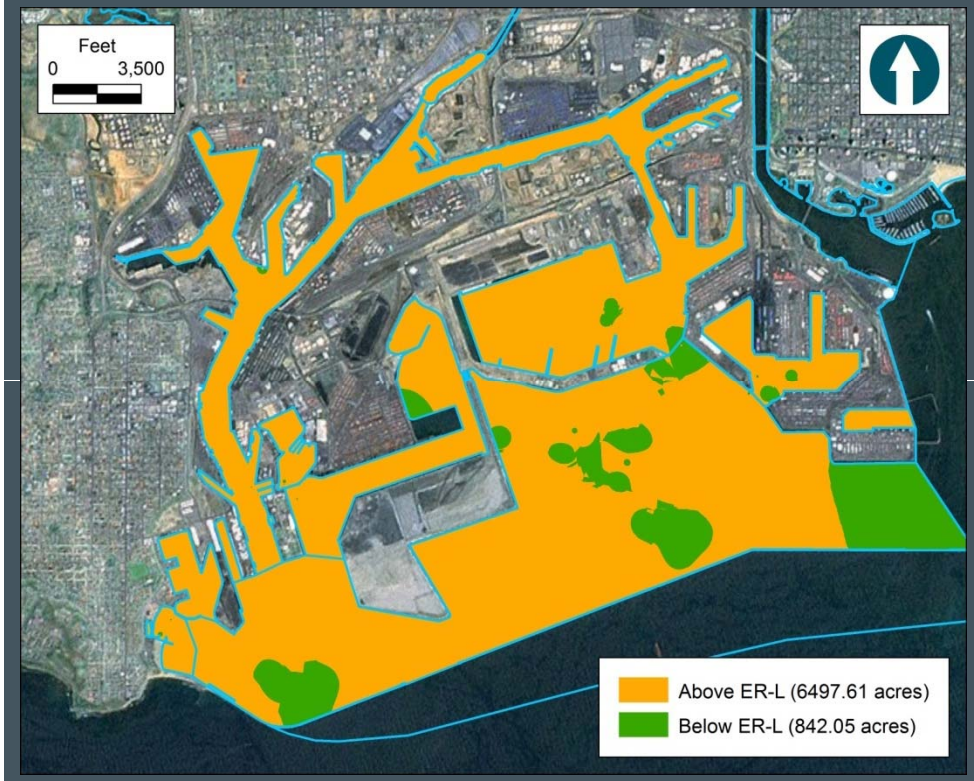
Harbor Toxics TMDL

- Impairment listings in Harbor are sediment-related
- Two main compliance endpoints:
  - Direct Effects (animals living in sediment)
    - TMDL identifies fixed chemical targets (ERLs) but allows for alternative compliance via Statewide Sediment Quality Objectives (three lines of evidence: chemistry, toxicity, benthic community health)
  - Indirect Effects (fish tissue/protection of human health)
    - TMDL identifies ultra-low sediment targets for DDTs and PCBs or alternative compliance through Statewide SQOs
    - SQOs for indirect effects still under development
    - Harbor has been designated by SWRCB as a test case to use in SQO development process

THE PORT OF LOS ANGELES

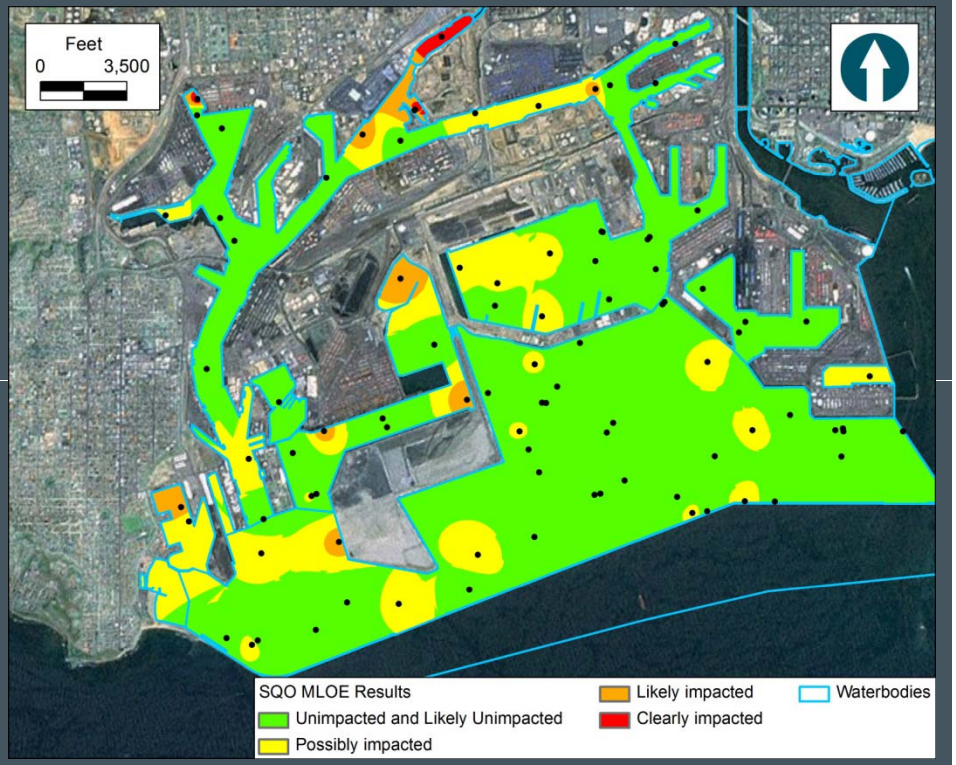
Direct Effects: Fixed Chemical Targets (ERL) vs. Integrated SQO Assessment

ERL sediment targets – majority of harbor is above targets



SQO assessment results in focused areas for sediment management

Based on preliminary data:



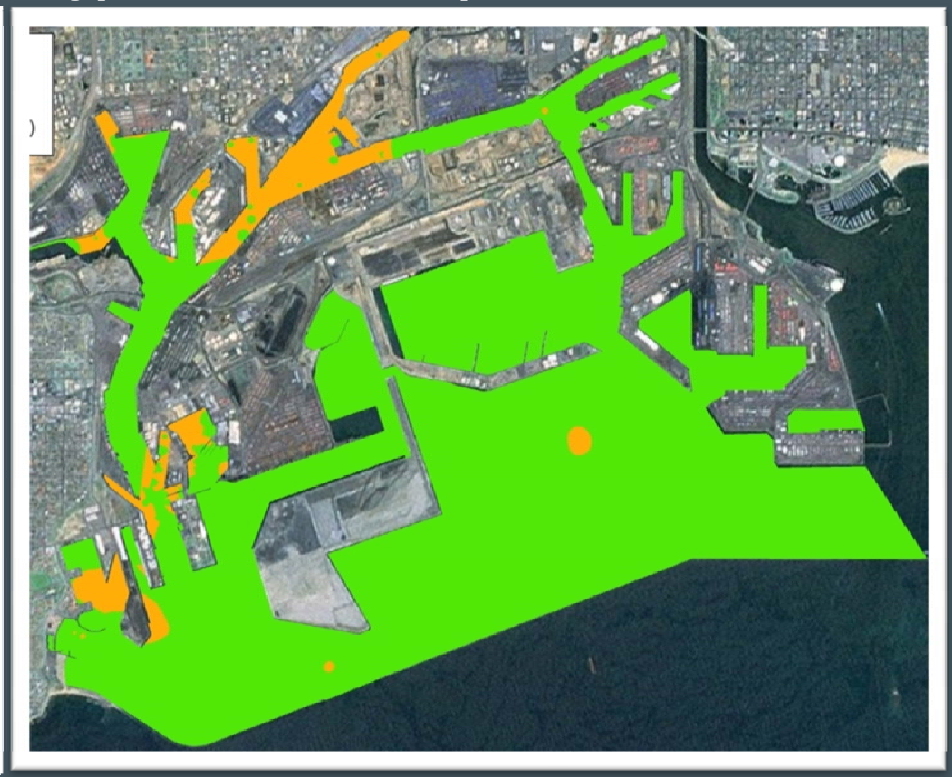
THE PORT OF LOS ANGELES

Indirect Effects (Protection of Human Health): Fixed Sediment Target vs. SQO Approach

TMDL sediment targets based on Fish Contaminant Goals - entire harbor is above targets

Goal for indirect effects special studies is to narrow down potential areas for management

Hypothetical example:



THE PORT OF LOS ANGELES

Port Involvement and Approach to TMDL Compliance

- Coordination with City of LA (Port is Harbor Dept.)
- POLA and POLB share common water body so working together on TMDL
- Ports collaborating directly with RWQCB and SWRCB on TMDL implementation and special studies to fill in key data gaps (Harbor Technical Working Group)
- Key focus of HTWG is bioaccumulatives and finalization of SQOs for indirect effects
- Results of special studies will inform meaningful revisions to TMDL during the designated 2018 reopener

THE PORT OF LOS ANGELES

TMDL Special Studies

- Goal is to greatly reduce long term liabilities
  - TMDL sediment targets as written could require dredging entire harbor at great cost (≈$9 billion) and with no net environmental benefit
- Information from special studies and implementation of SQO indirect effects assessment will focus remediation efforts on science-based and fiscally sound management actions to ensure the most effective reduction of contaminants

THE PORT OF LOS ANGELES

TMDL Challenges

- Lack of sound science – special studies are expensive and time-consuming, but critical
- Ongoing influence from outside sources – upstream watershed, Palos Verdes Shelf Superfund Site
- Identifying management actions that will result in the maximum benefit to sediment conditions while taking into account existing biological community, financial resources, etc.
- Identifying sediment disposal options
- Getting all responsible parties to the table

THE PORT OF LOS ANGELES

Important Steps

- Early involvement in the process – Ports were active stakeholders during development of the TMDL
- Direct collaboration with the agencies – in development of special studies scopes, data sharing, discussing compliance strategy, etc.
- Identify synergy between sediment management actions and Port capital development projects

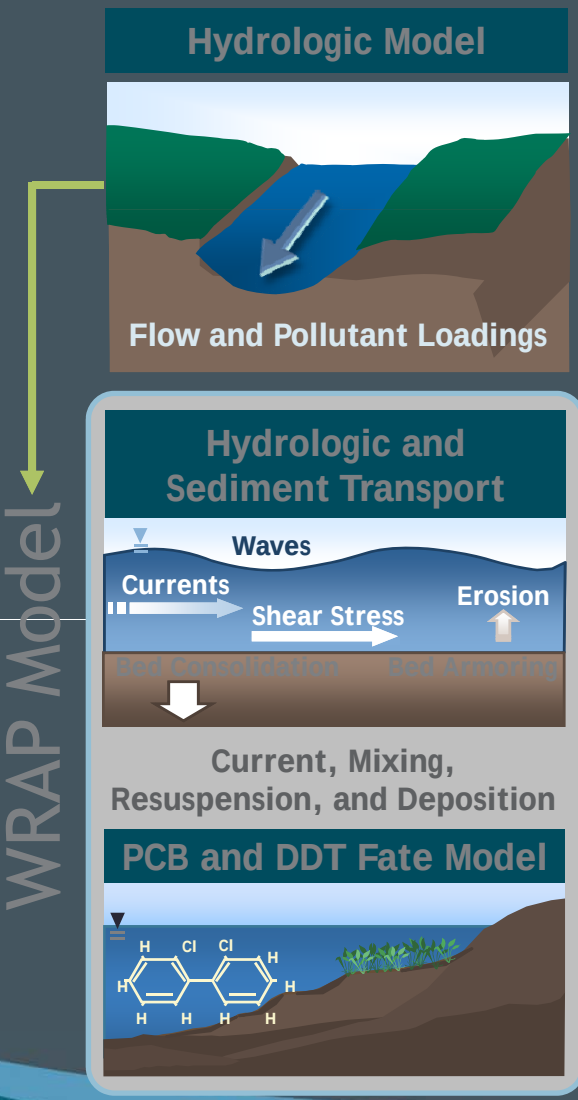
THE PORT OF LOS ANGELES

QUESTIONS?

THE PORT OF LOS ANGELES


LA
THE PORT
OF LOS ANGELES

Special Studies: Model Development

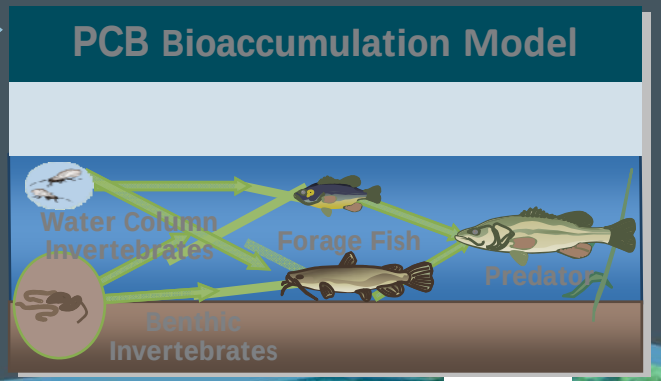


Model provides linkage of contaminant sources to contaminants in fish tissues. Integrates:

- Contaminant sources: sediments, water column, ongoing discharges, and tributaries
- Pathways of contaminant transport
- Fish habitat, diet, and movement

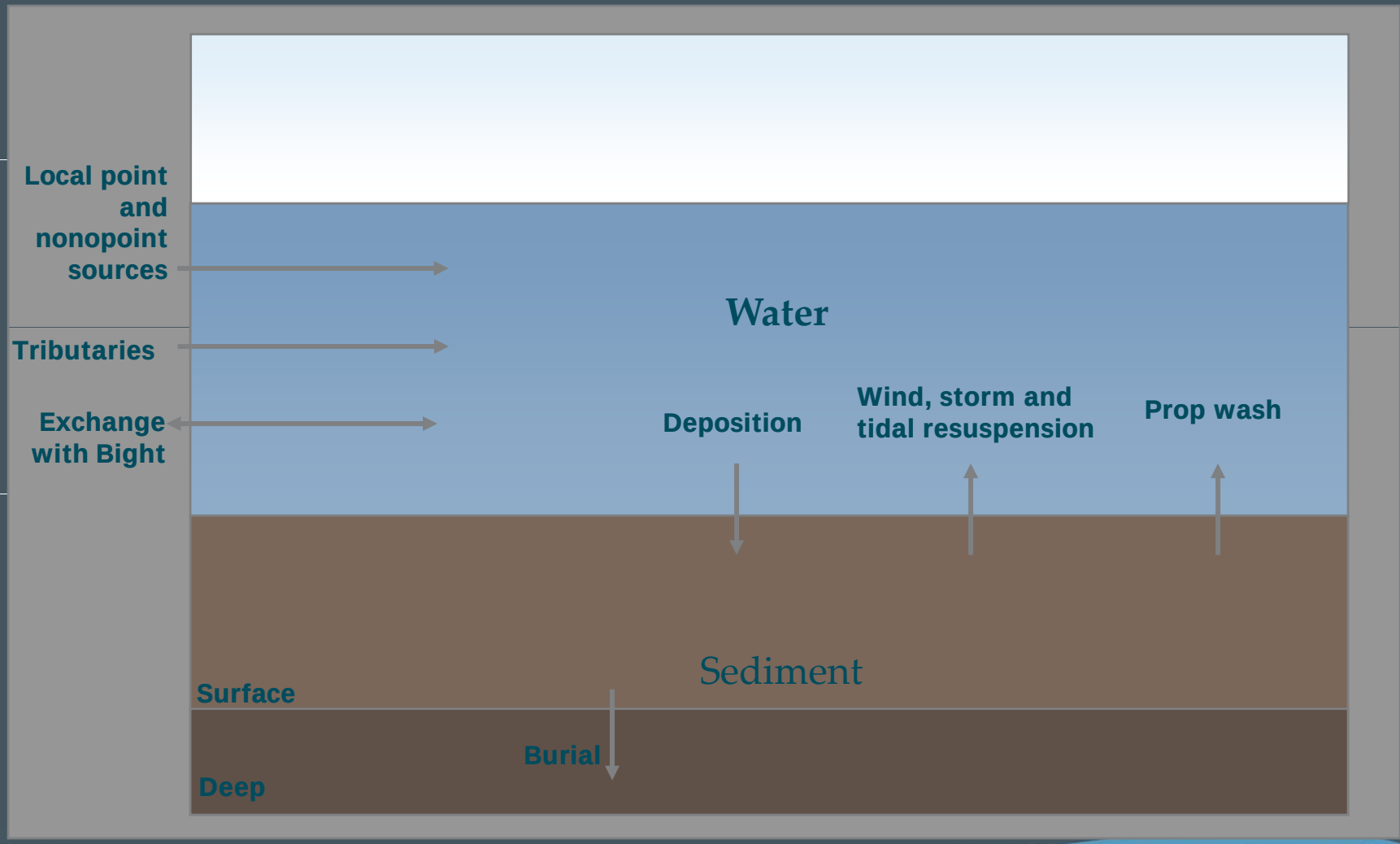
Model projects effectiveness of alternative management plans

Water column and sediment bed concentration

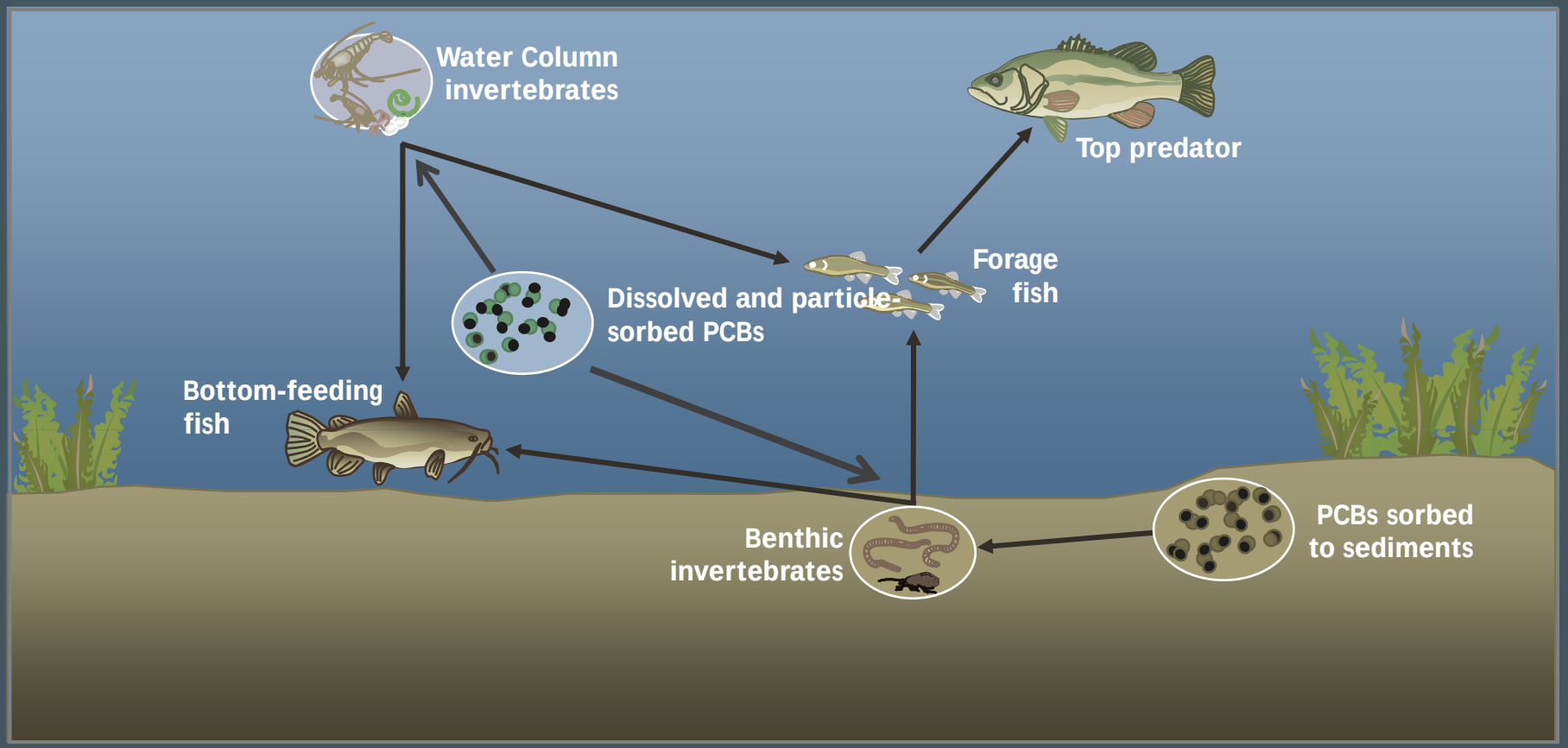


THE PORT OF LOS ANGELES

Sediment and Contaminant Transport: Conceptual Site Model



Indirect Effects: Transfer of Contaminants to Fish Tissue



THE PORT OF LOS ANGELES

Overall Model Schematic