



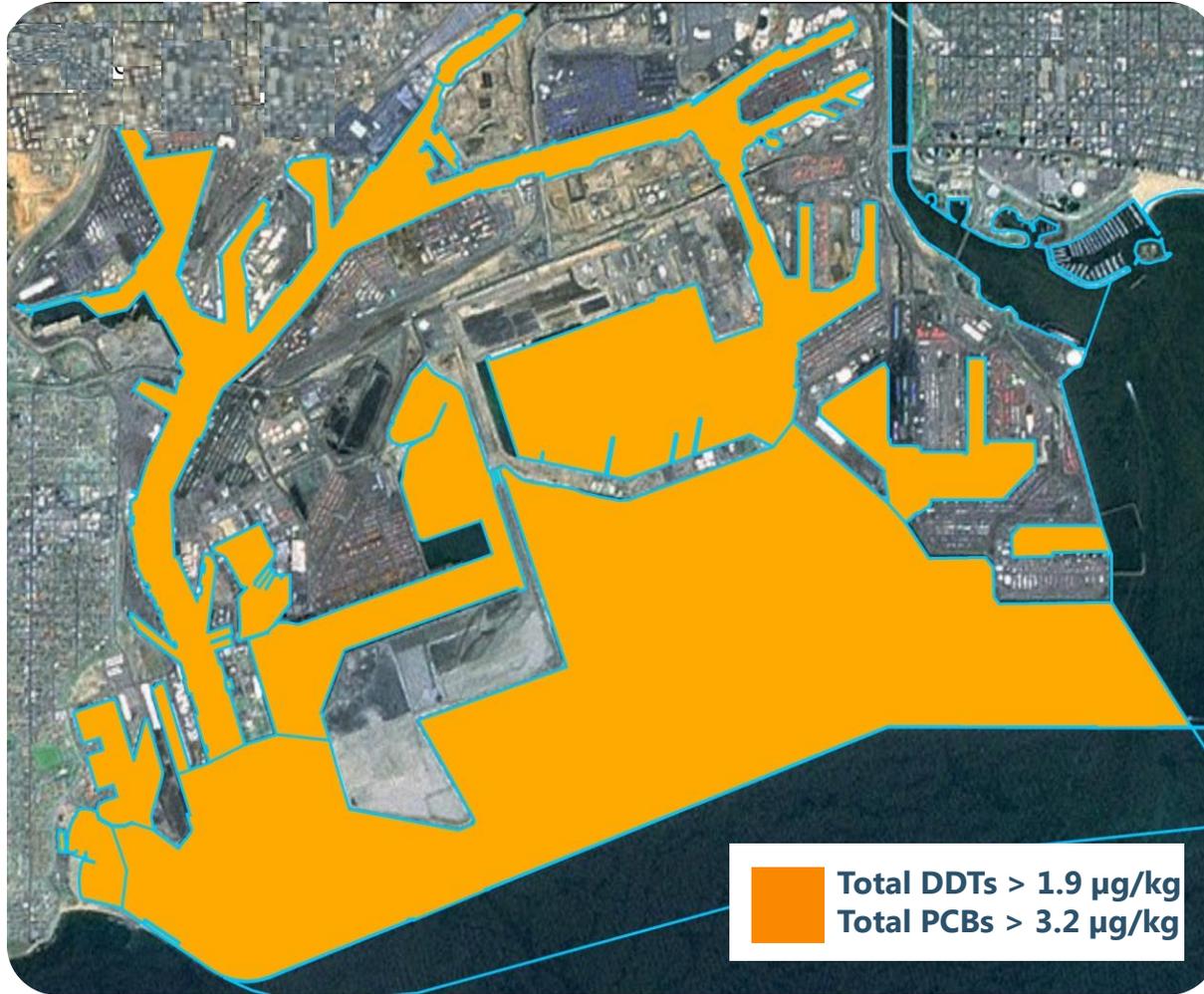
Harbor Toxics TMDL: Program Overview

AAPA Environmental Committee
April 28, 2017

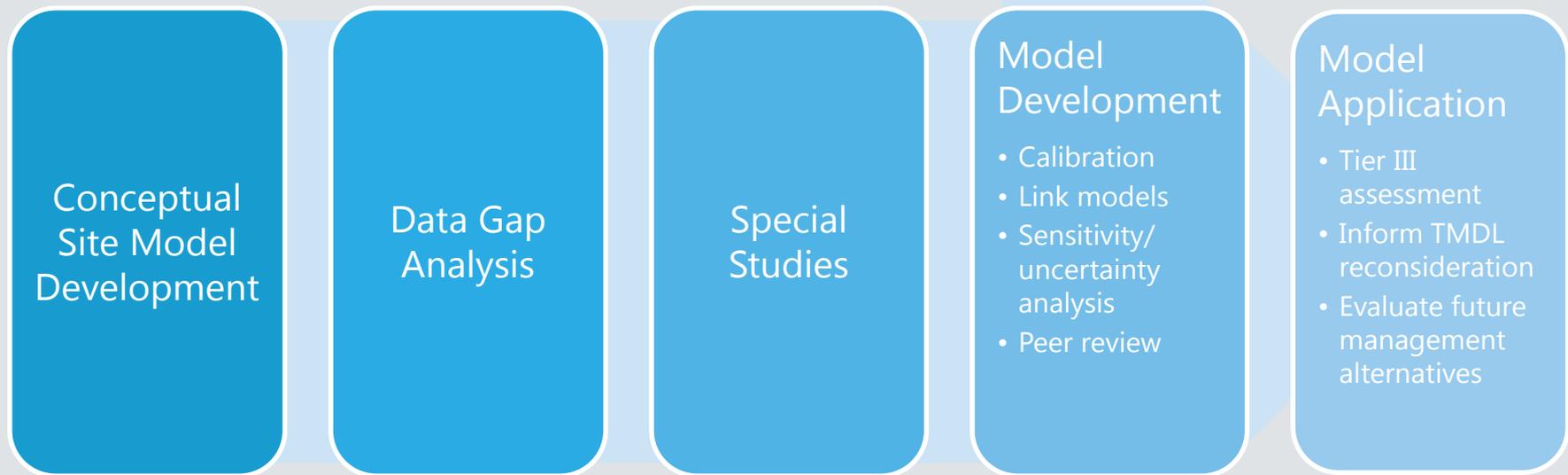




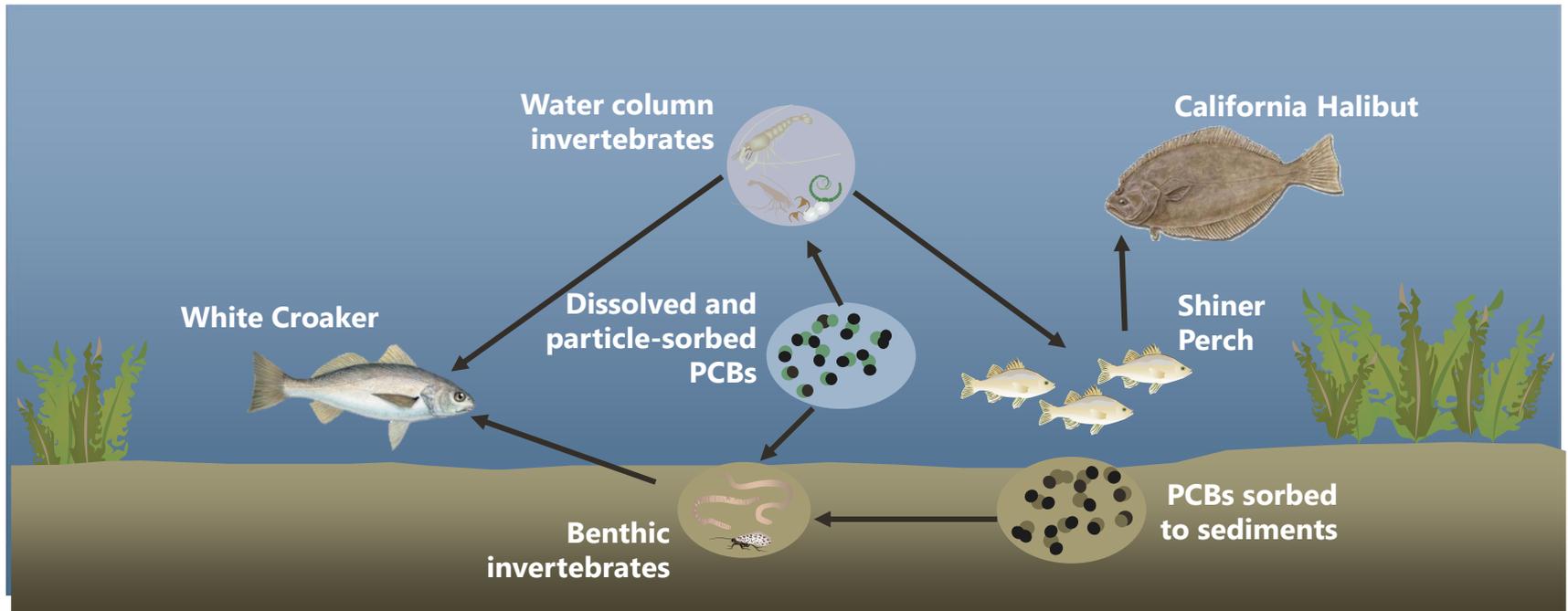
100% Exceedance of TMDL Indirect Effects Sediment Targets for PCBs and DDTs in LA/LB Harbor



Development of Harbor Model



Involved HTWG review and input

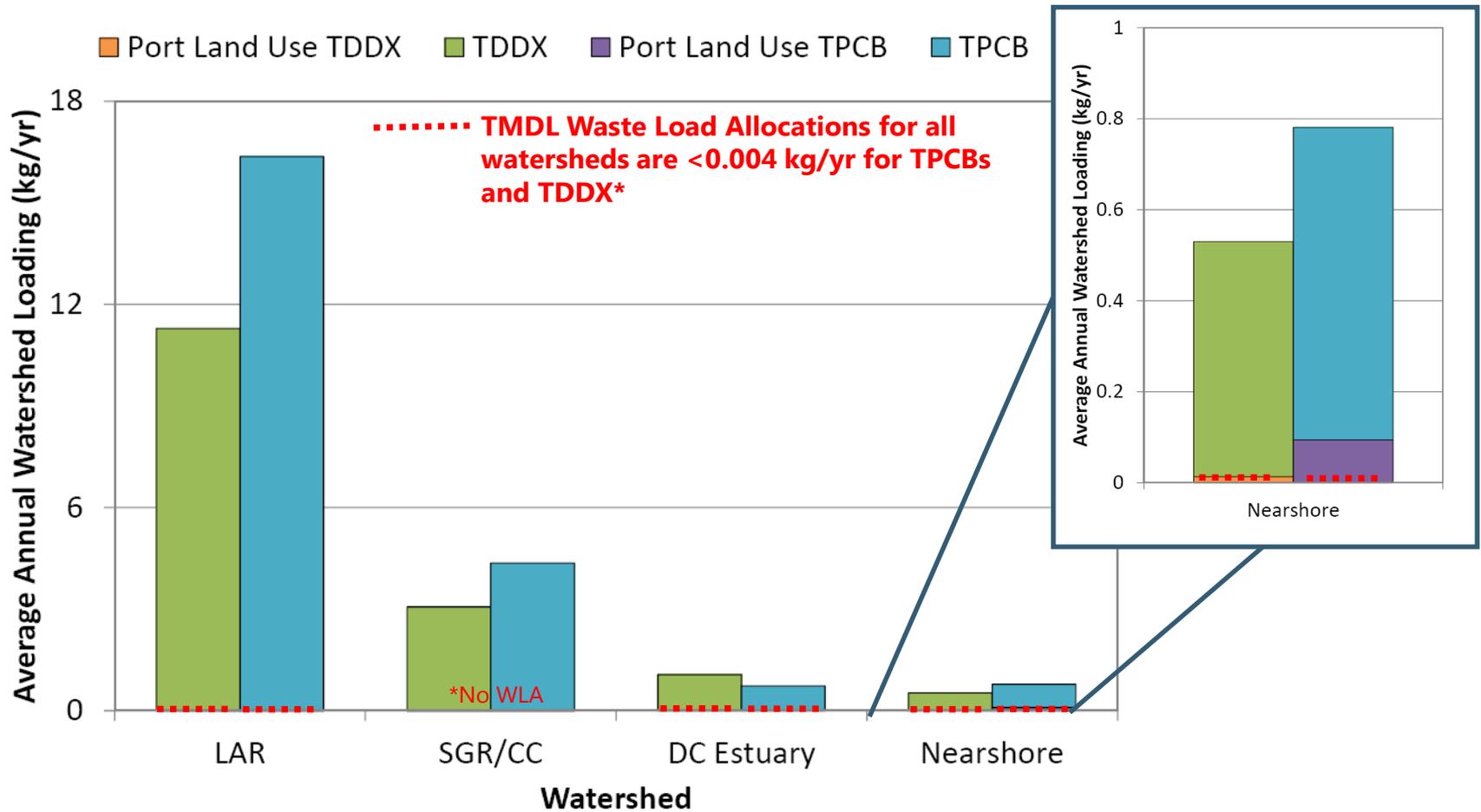


Special Studies for Model

- Model development
 - Watershed loading
 - Water column concentrations
 - Sediment concentrations
 - Food-web bioaccumulation
 - Propwash evaluation
 - Fish movement



Upstream Watershed is a Significant Contributor



Fish Migrate into Harbor from PV Shelf

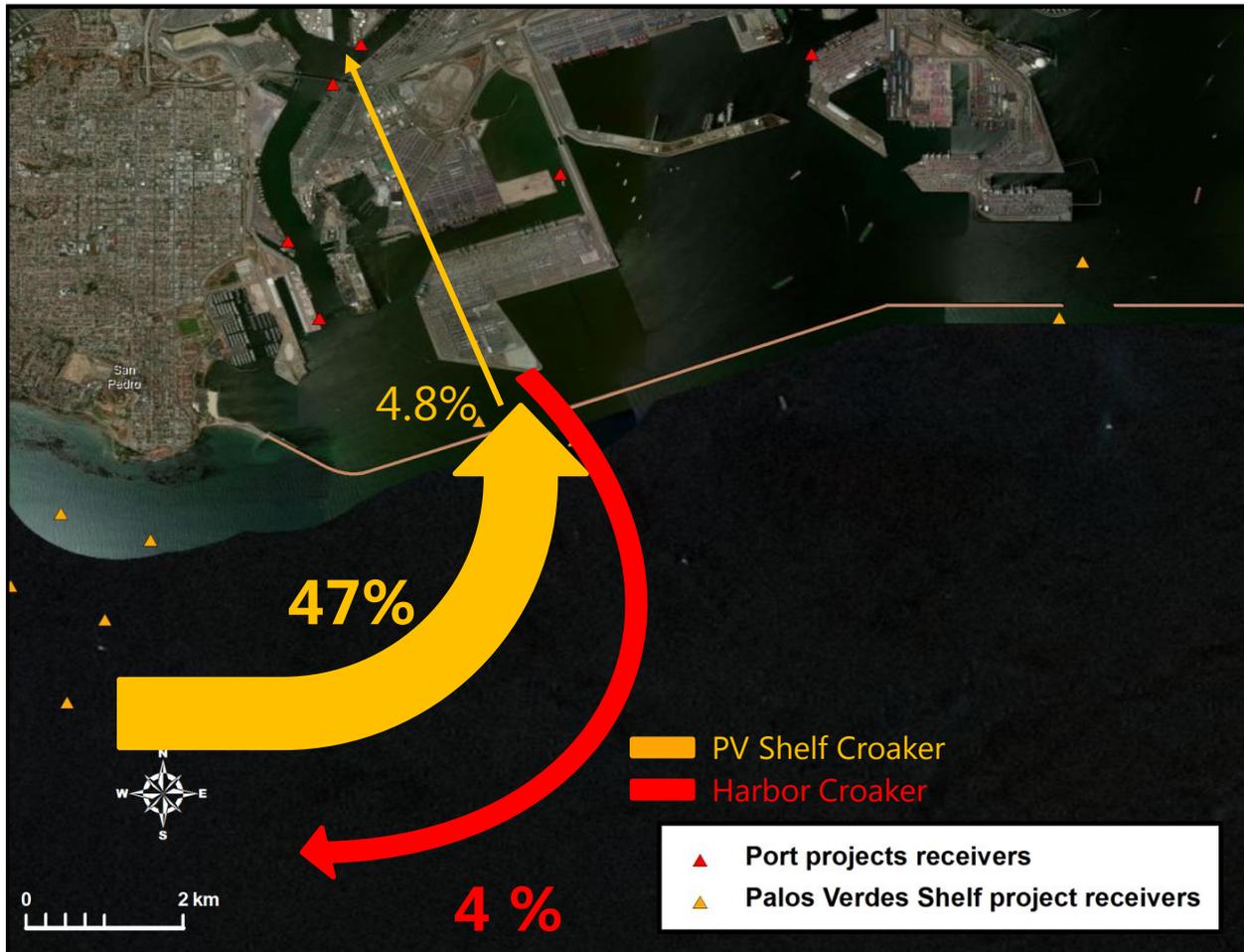
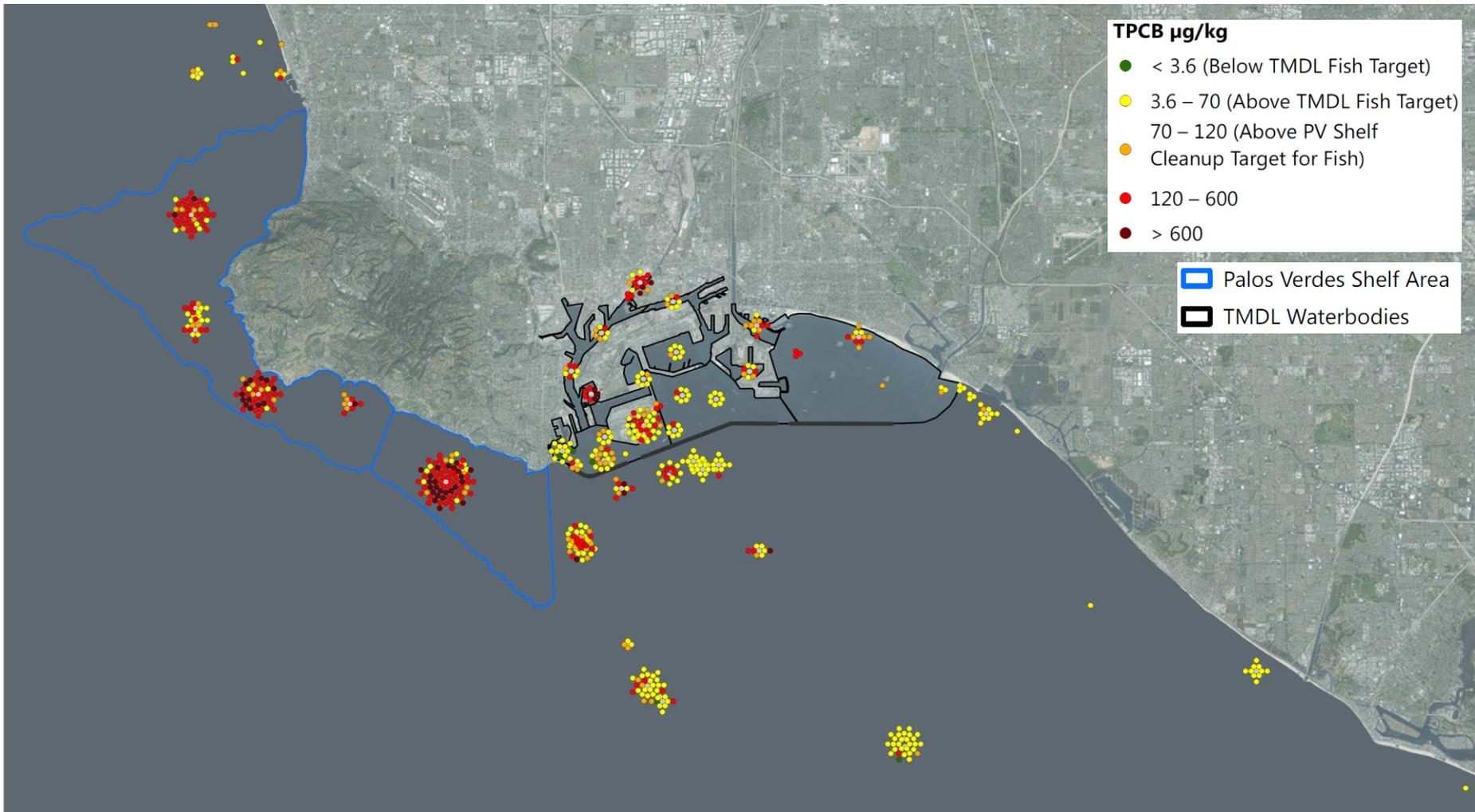


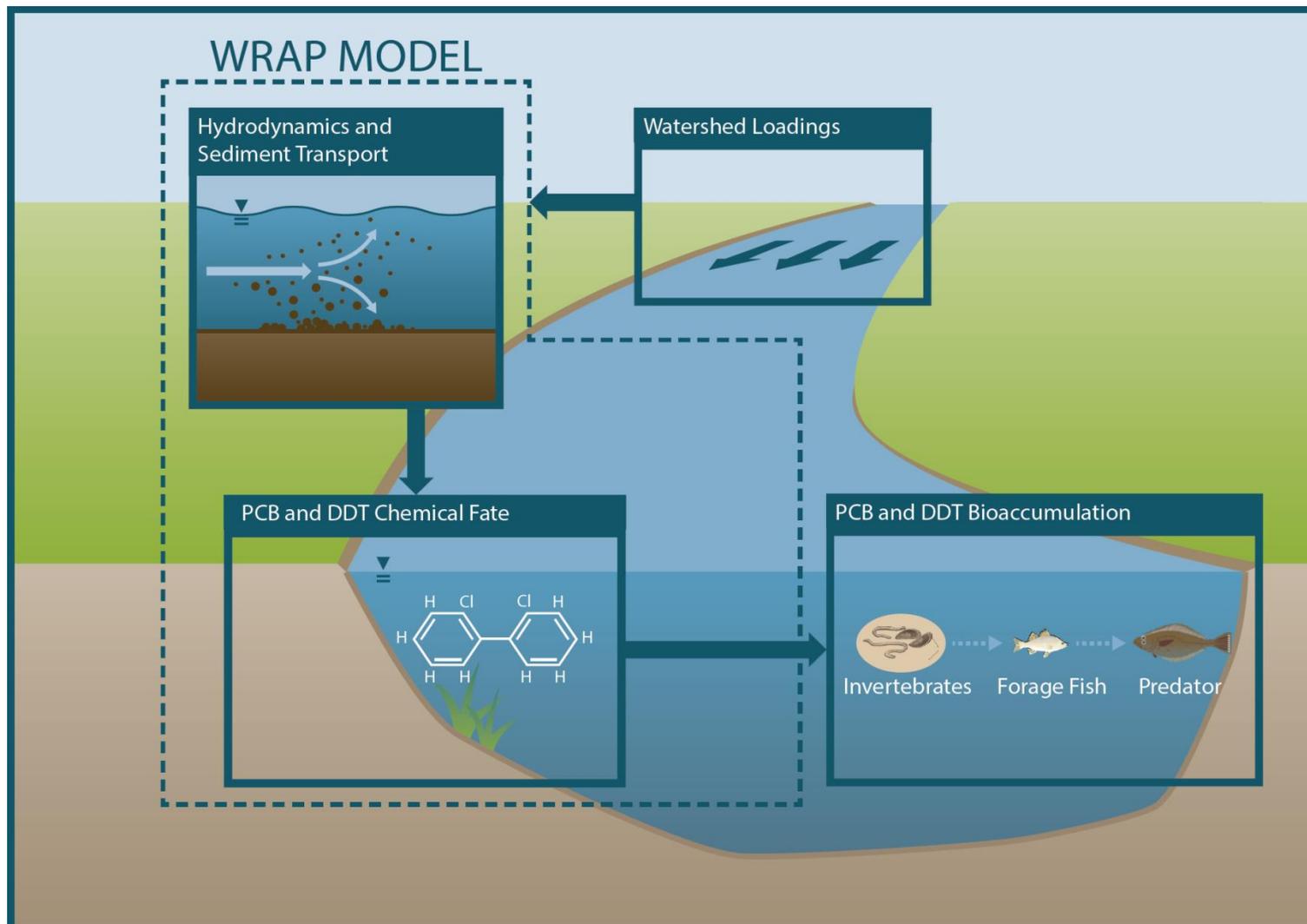
Image Source: Wolfe, B.W. and C.G. Lowe, 2015. Movement patterns, habitat use and site fidelity of the white croaker (*Genyonemus lineatus*) in the Palos Verdes Superfund Site, Los Angeles, California. *Marine Environmental Research* 109:69-80.

Fish Tissue Contamination is Regional Problem

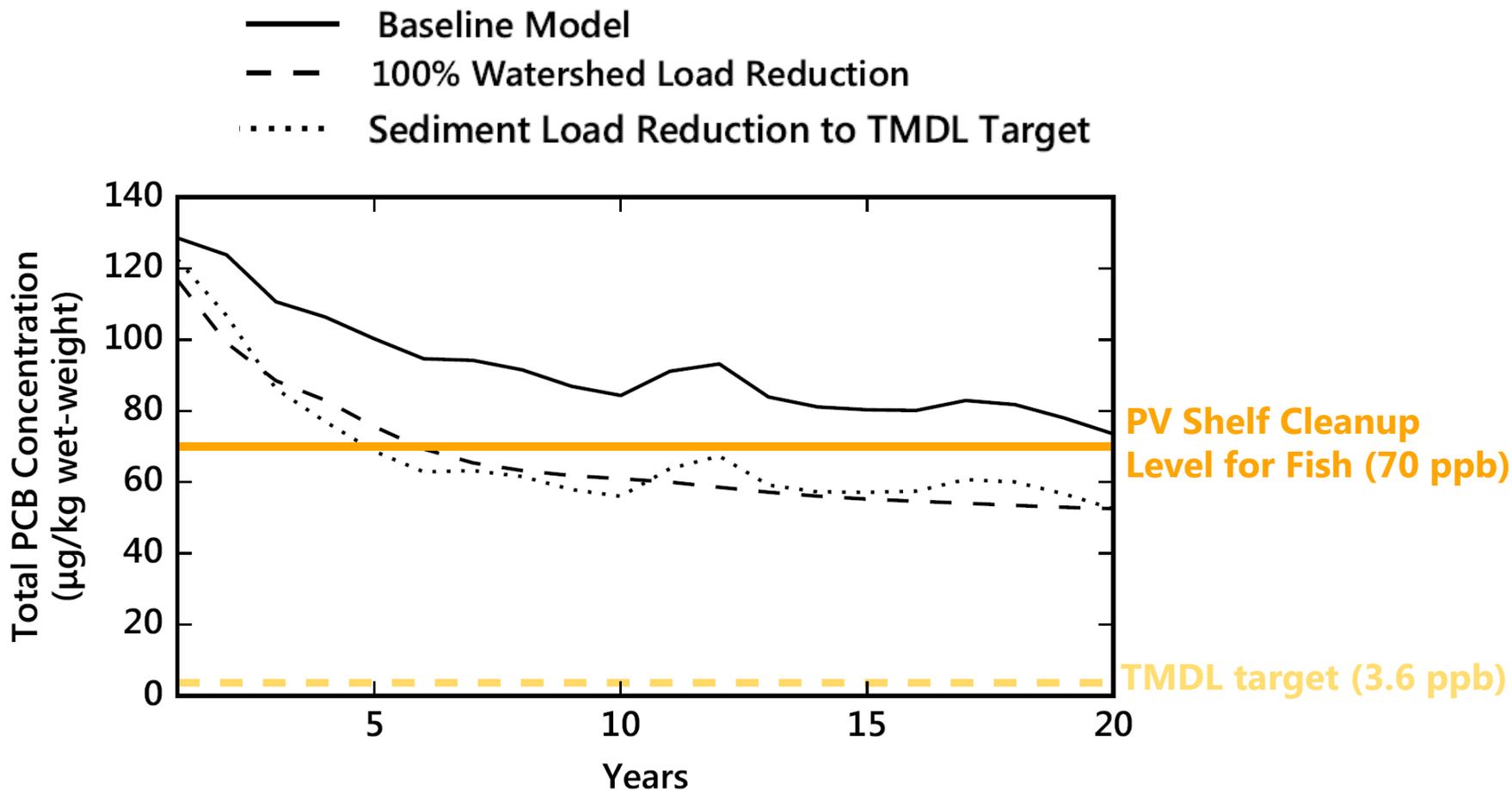
White Croaker PCB concentrations elevated for 20 miles in each direction



Overview of Modeling Approach



California Halibut TPCBs 20-yr Model Predictions: Eastern San Pedro Bay



Key Model Findings to Date

- TMDL fish tissue targets cannot be achieved within current 20 year timeline
- Watershed loading contributes to fish tissue impairment
- Harbor-wide sediment load reduction will not bring fish into compliance
- Other model scenarios are ongoing