



# Palos Verdes Shelf Institutional Controls Program Strategic Planning Meeting

Thursday, September 13, 2012  
Long Beach, California



# Location Map



Los Angeles Margin (Pt. Dume to Dana Pt.) conducted by USGS from 1996 to 1999. Bathymetry data within Los Angeles Harbor were derived from USGS San Pedro and Long Beach quadrangles.



# 2009 Interim Record of Decision (IROD)

- IROD has three major cleanup components:
  - Institutional Controls
  - Monitored Natural Recovery
  - Clean Sediment Cap



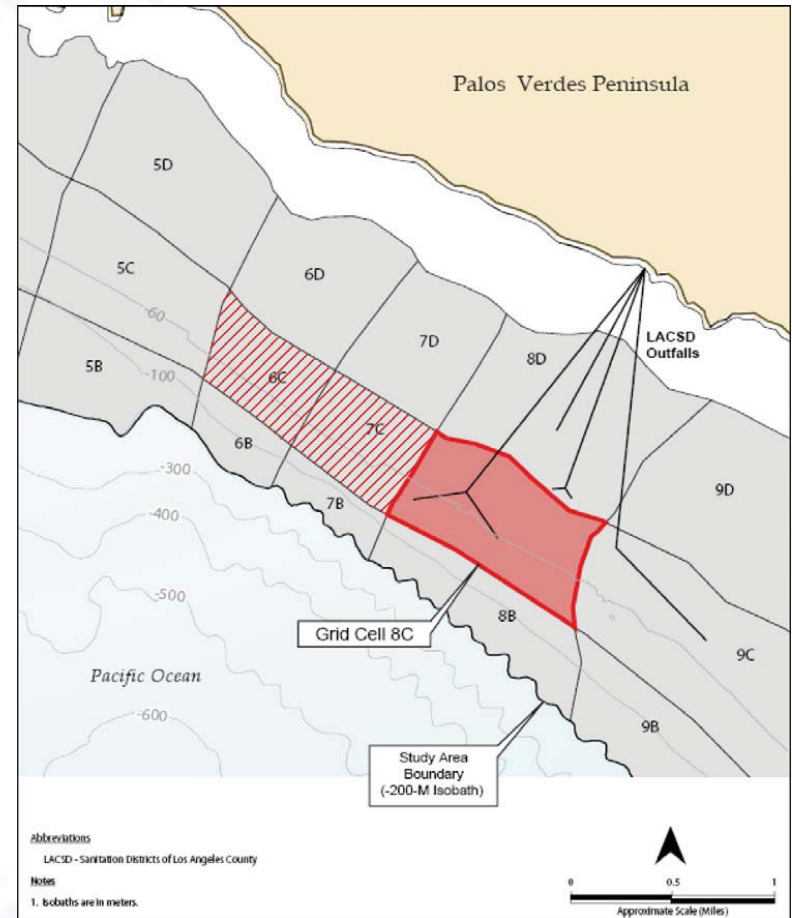
# Monitored Natural Recovery

- **Sediment Quality:** DDTs, PCBs, and DDE breakdown products
- **Sediment Movement:** Deposition and transport
- **Water Quality:** DDTs and PCBs (surface, middle and bottom of water column)
- **Fish Tissue:** DDTs and PCBs
- **Fish Tracking:** White Croaker and Barred Sand Bass
- **DDTs and PCBs Breakdown:** Reductive dechlorination study



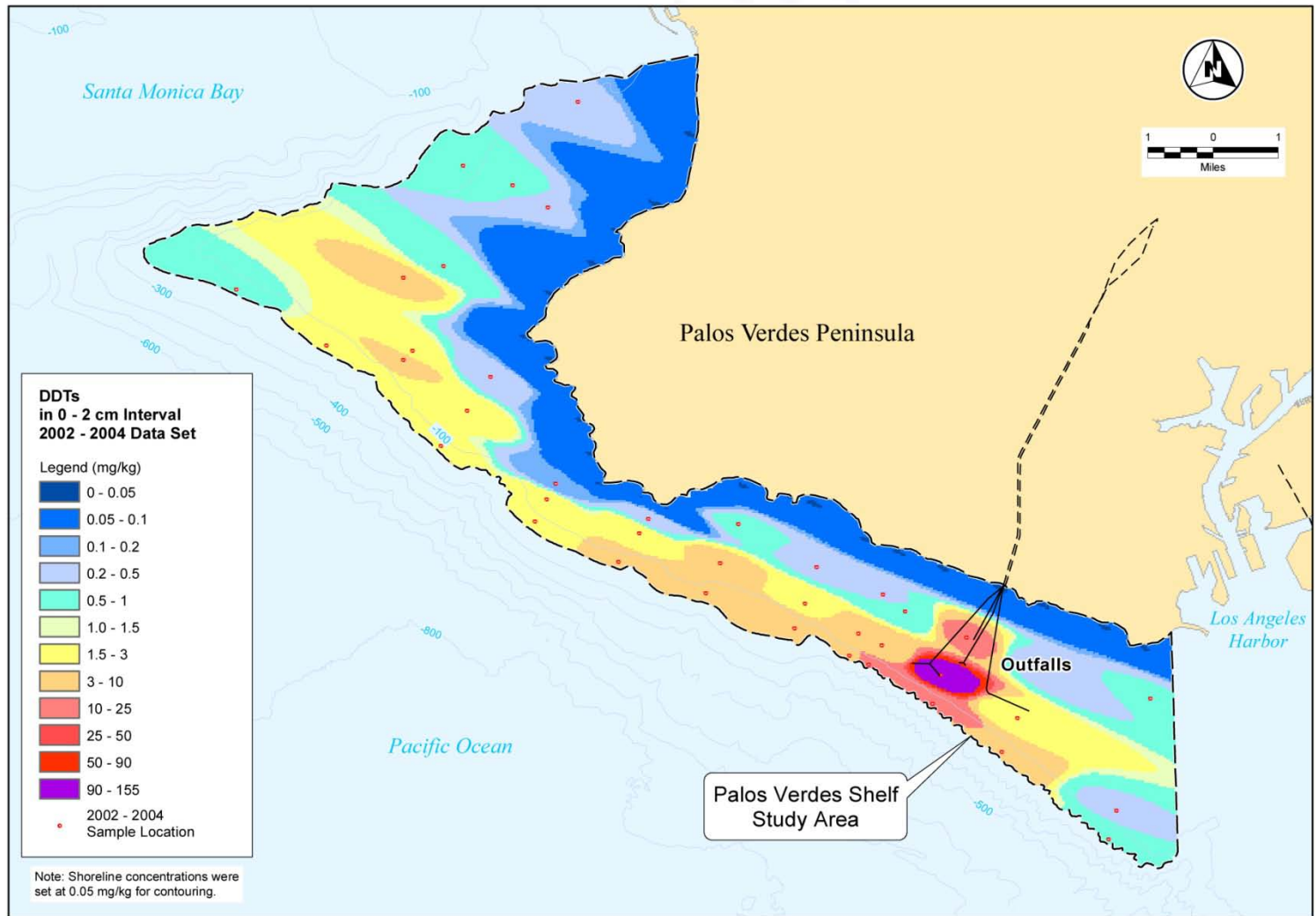
# Clean Sediment Cap

- Place a 300 acre cap of clean sediment to cover the area near the outfalls (area with highest surface DDTs and PCBs concentrations)
  - **Prevent erosion** of contaminated sediment by winter storms
  - **Reduce flux** of dissolved contaminants from the sediment into the water column
  - **Reduce exposure and uptake** of contaminants by benthic organisms



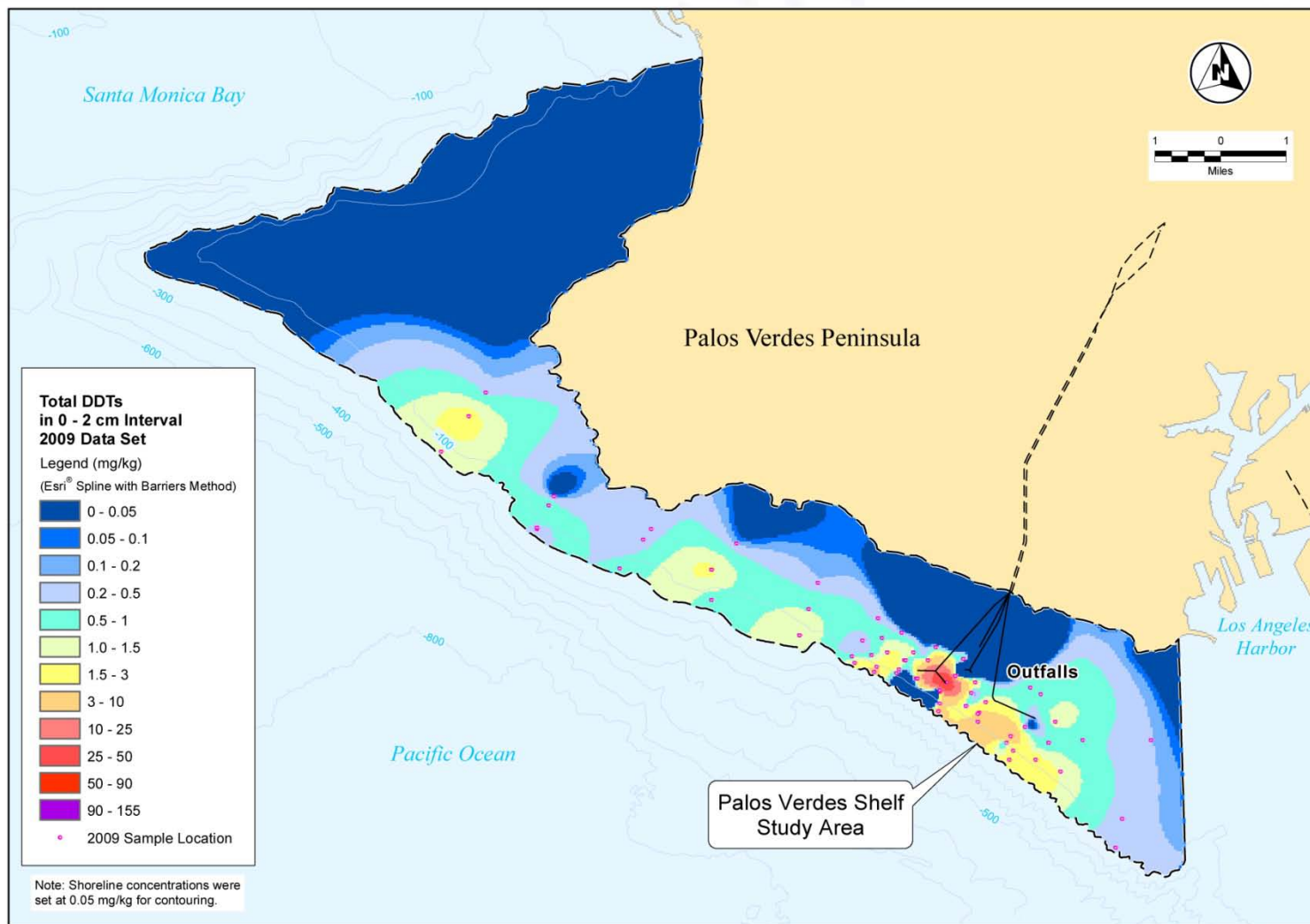


# Interpretive contours – DDTs (2002/2004 data set)



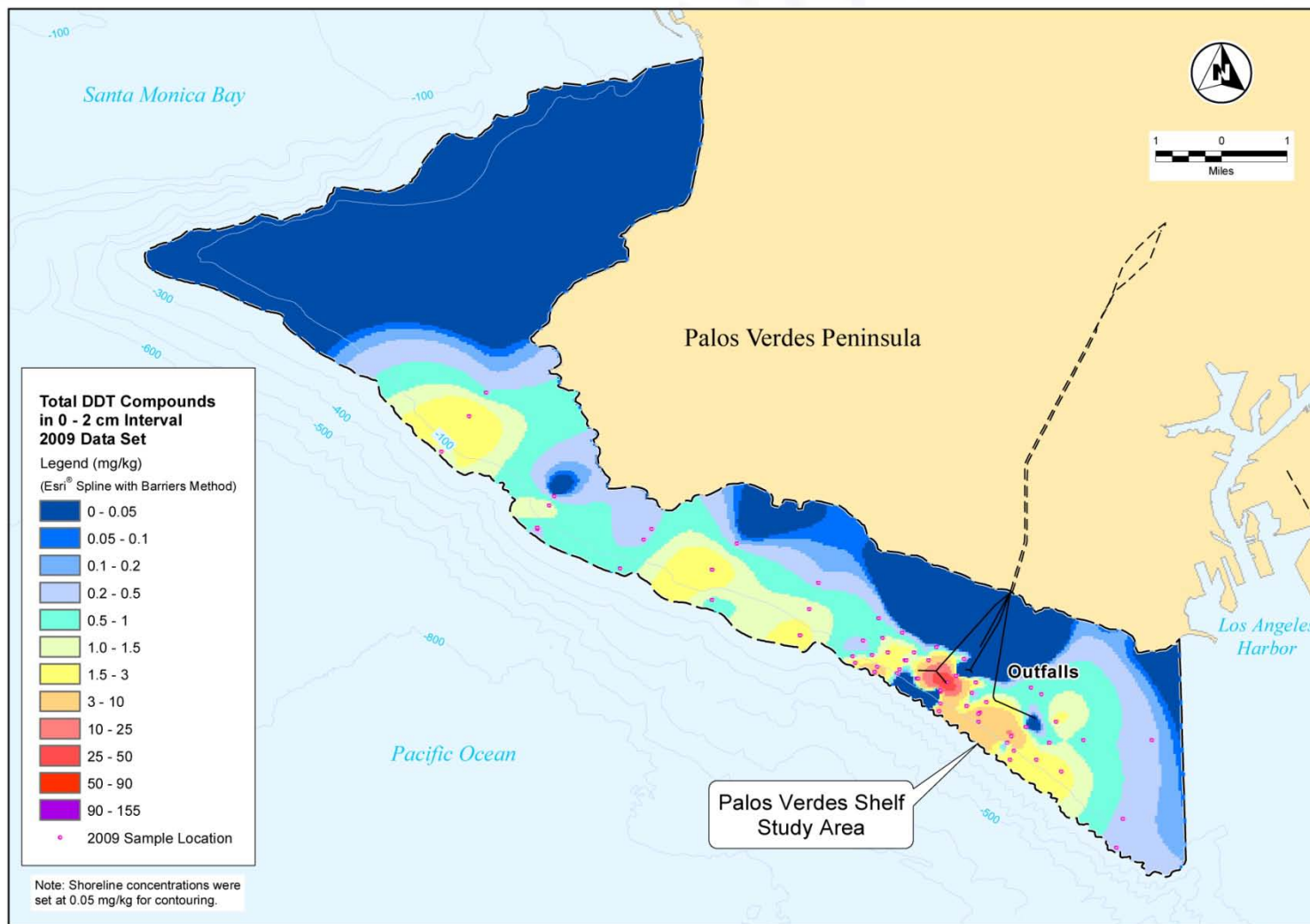


# Interpretive contours – Total DDTs (Fall 2009 data set)





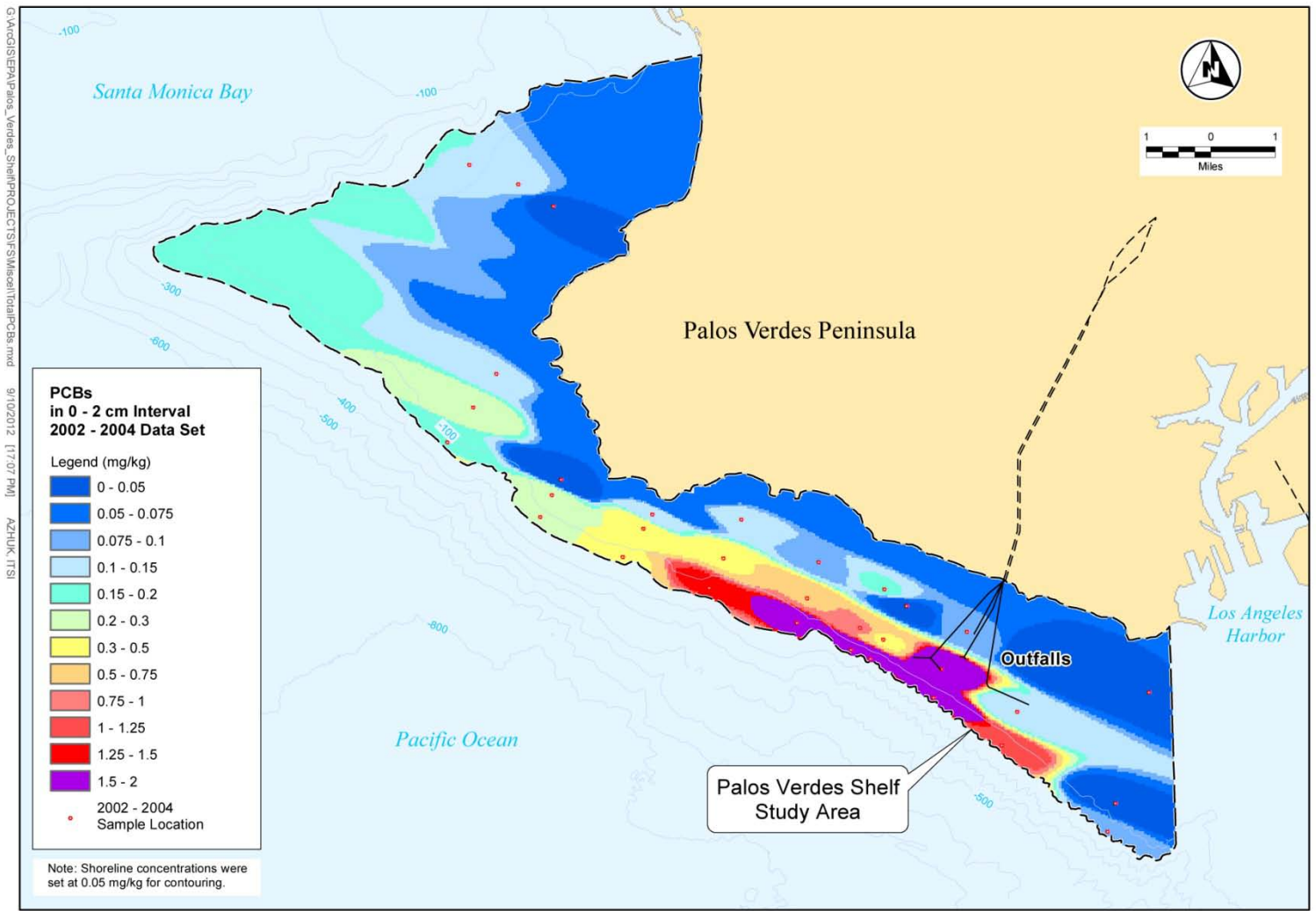
# Interpretive contours – Total DDT Compounds (Fall 2009 data set)







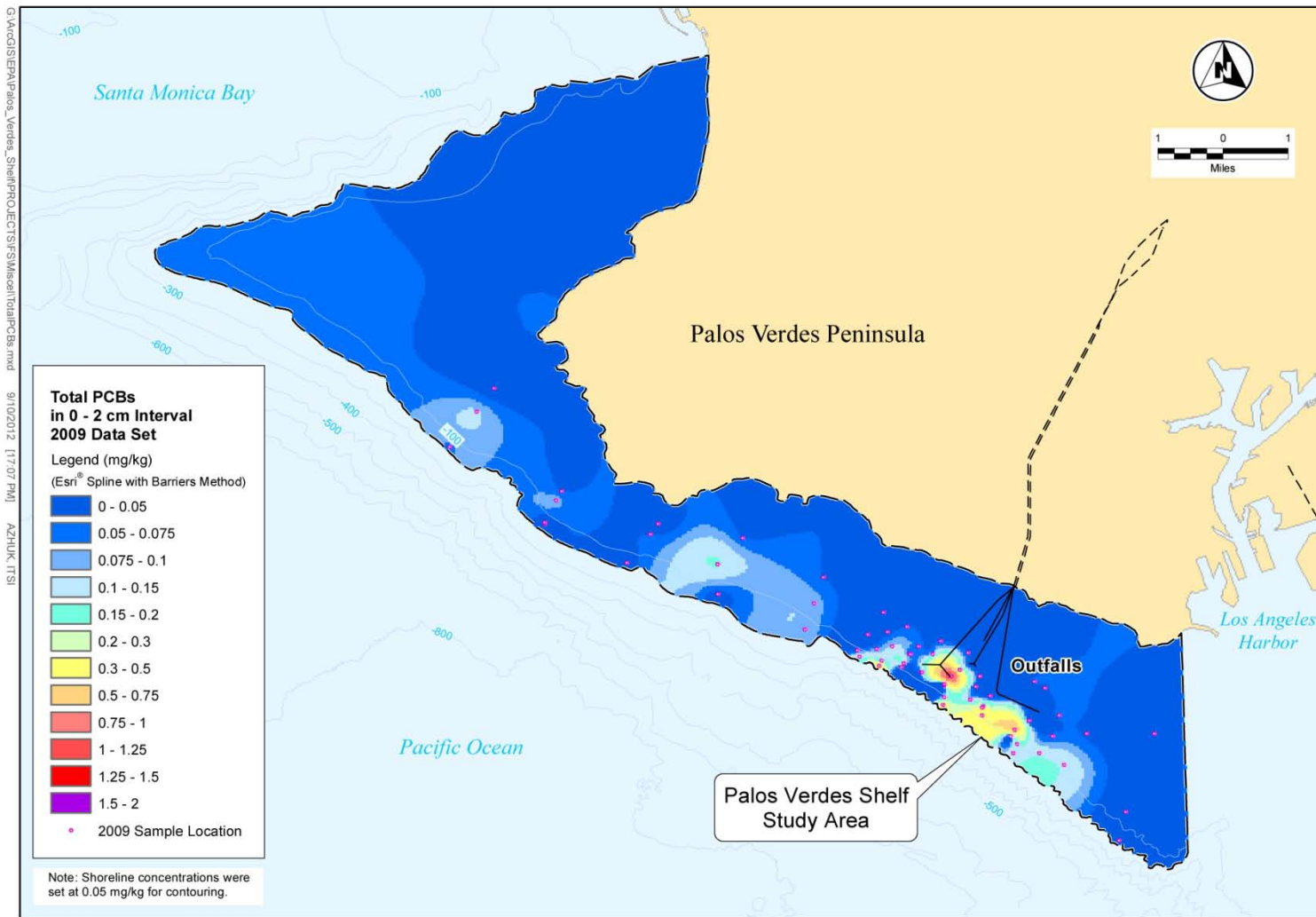
# Interpretive contours – PCBs (2002/2004 data set)



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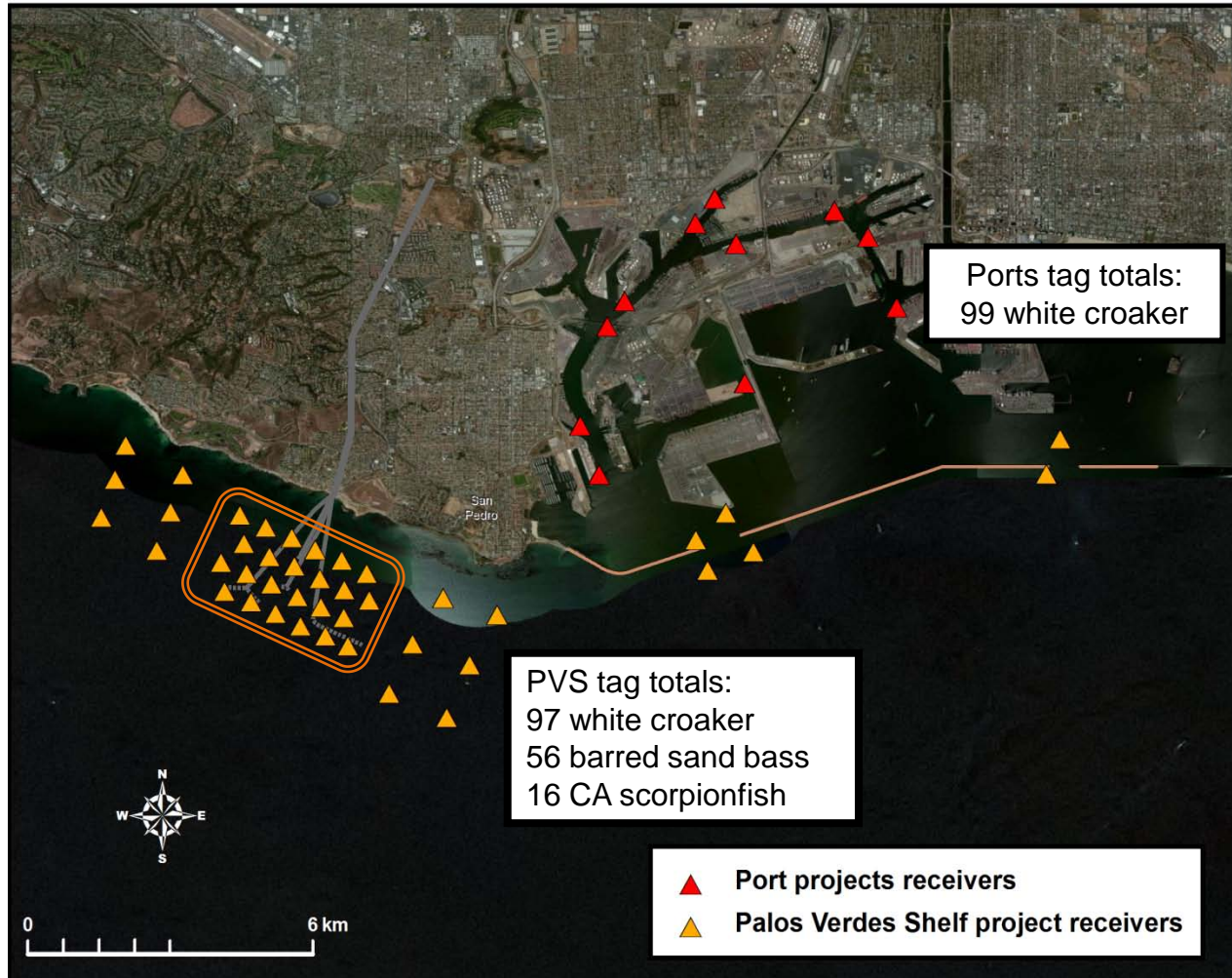


# Interpretive contours – Total PCBs (Fall 2009 data set)





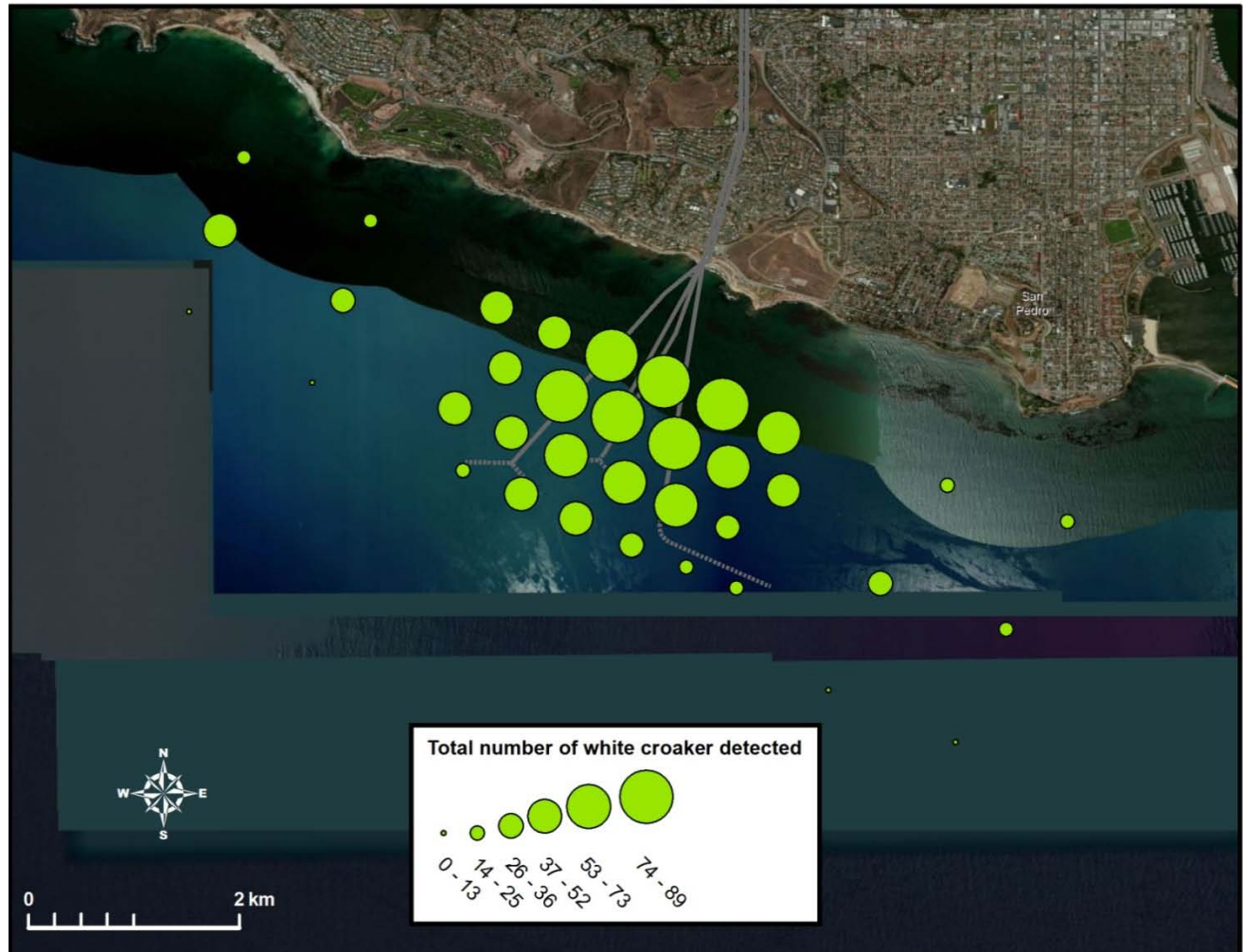
# Arrays for tracking fish







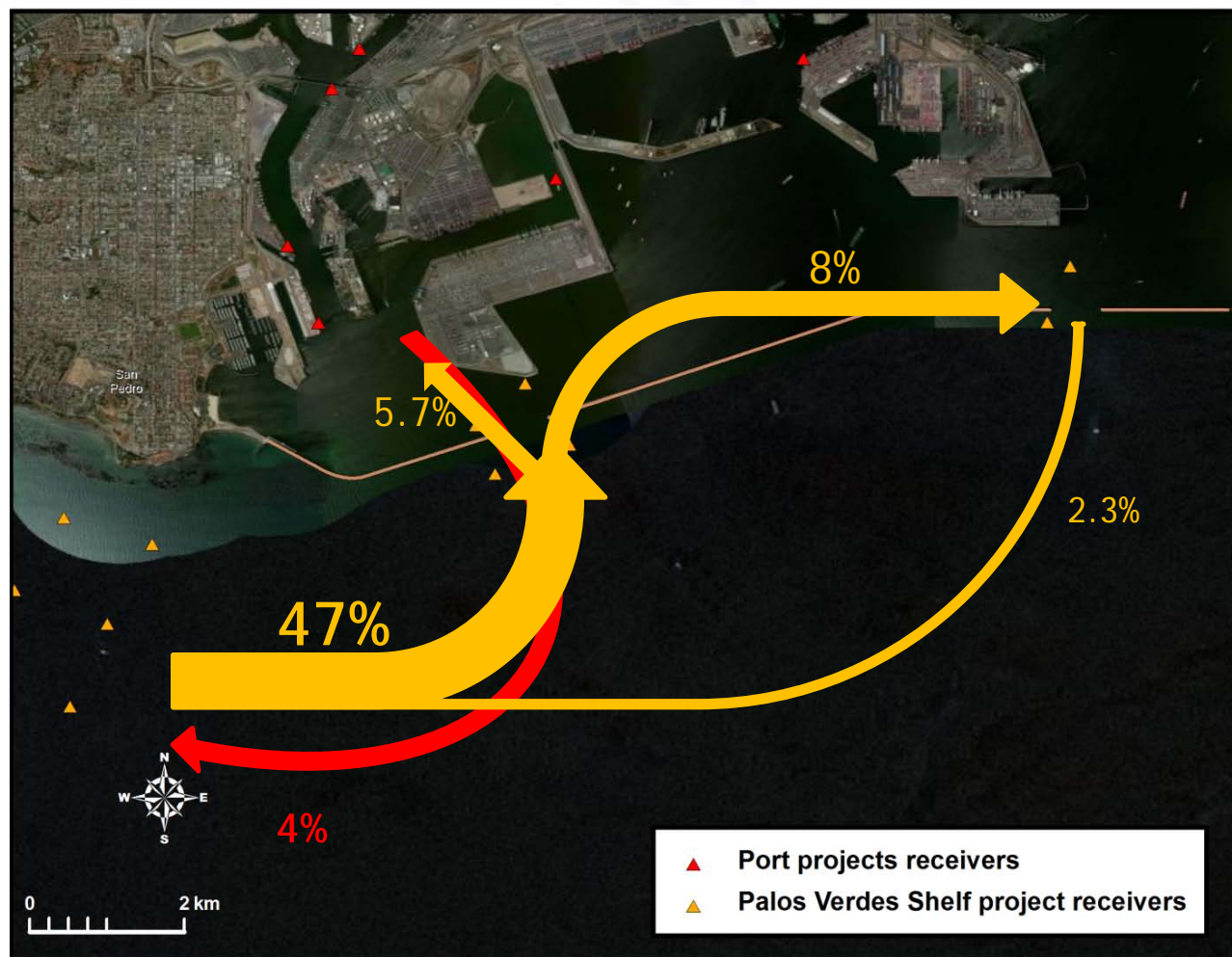
# Broad-scale distribution of white croakers







# White croaker migration – PV Shelf to LA Harbor





**Questions?**



# IROD Remedial Action Objectives Status Update

Constituent	IROD Cleanup Objective	Preliminary 2009 Baseline Sediment Sample Results	Preliminary Phase II Fish Tissue Study Results	Preliminary 2010 Water Column Data Polyethylene Strip Results	Preliminary 2010 Water Column Solid Phase Micro Extraction Fiber Results
White Croaker Tissue DDT ( $\mu\text{g}/\text{kg}$ )	400		256.6 (Max) 40.4 (Min) 138.5 (Average)		
White Croaker Tissue PCBs ( $\mu\text{g}/\text{kg}$ )	70		254.3 (Max) 28 (Min) 129.7 (Average)		
Sediment DDT Concentration ( $\text{mg}/\text{kg}$ )	46	56			
Sediment PCBs Concentration ( $\text{mg}/\text{kg}$ )	7	0.23			
Water Column DDT Concentration ( $\text{ng}/\text{L}$ )	0.22			Surface: NA Mid: 0.68 Bottom: 2.6	Surface: 0.16 Mid: 0.45 Bottom: 1.2
Water Column PCBs Concentration ( $\text{ng}/\text{L}$ )	0.064			Surface: NA Mid: 0.071 Bottom: 0.29	Surface: < 0.2 Mid: < 0.2 Bottom: < 0.2



# Change in Mass Estimates

Constituent	IROD Estimate	2009 Baseline Estimate
DDT (Metric Ton)	110	20
PCBs (Metric Ton)	10	1





## Next Step

- Consult with Palos Verdes Shelf Technical Information Exchange Group



# Questions



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