

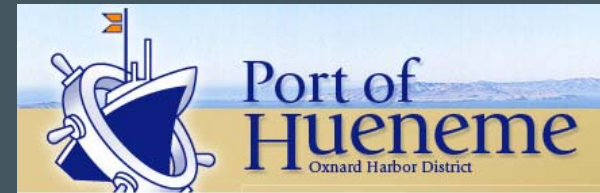


An Example of a Unique Partnership for Contaminated Sediment Management - The Port Hueneme Experience

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Presentation Overview

- Site and Project History
- Partnership Strategy
- Cost Sharing Allocations
- Construction Overview
- Project Benefits

Project Team

- USACE, Los Angeles District
 - Construction Operations
 - Project Management
 - Regulatory
 - Planning
 - Engineering
 - Legal

Project Team Cont.

- U.S. Navy
 - Naval Base Ventura County
 - Southwest Division
 - Legal
 - Planning
- Oxnard Harbor District
- Anchor QEA LLC
 - Everest International Consultants, Inc
 - iLanco Environmental



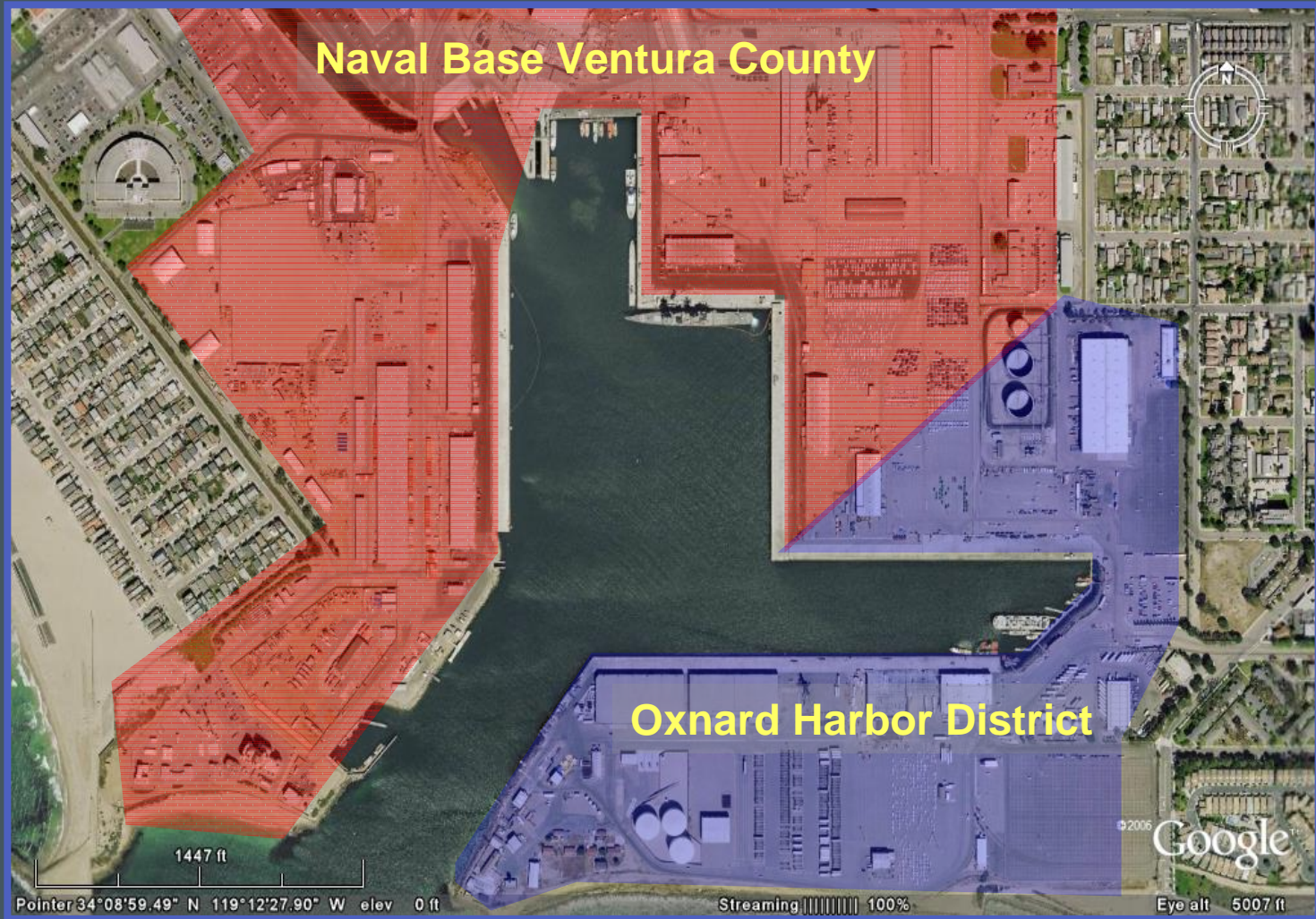
Port Hueneme History

- Oxnard Harbor District (OHD) formed in 1937 with 322 acres
- Harbor constructed and operations began in 1940
- Constructed harbor = not on state lands
- U.S. Navy acquired harbor by paying off bonds in May, 1942
- Navy agrees to lease 16 acres to OHD in 1947 – commercial operations begin again

Current Uses

- Oxnard Harbor District (Port of Hueneme)
 - Produce import/export
 - RO/RO automobile imports
- U.S. Navy (Naval Base Ventura County)
 - Construction Battalion Center
 - Naval Surface Warfare Center
 - Pacific Missile Test Range

Port Hueneme – Joint Use









Challenges for Port Hueneme

- Federal Channel had accumulated ~200,000 meters of O&M material
- USACE has authority to deepen Federal Channel by ~1.5 meters
- None of the berths had been dredged in decades resulting in modified operations
- Contaminated sediments existed throughout Harbor

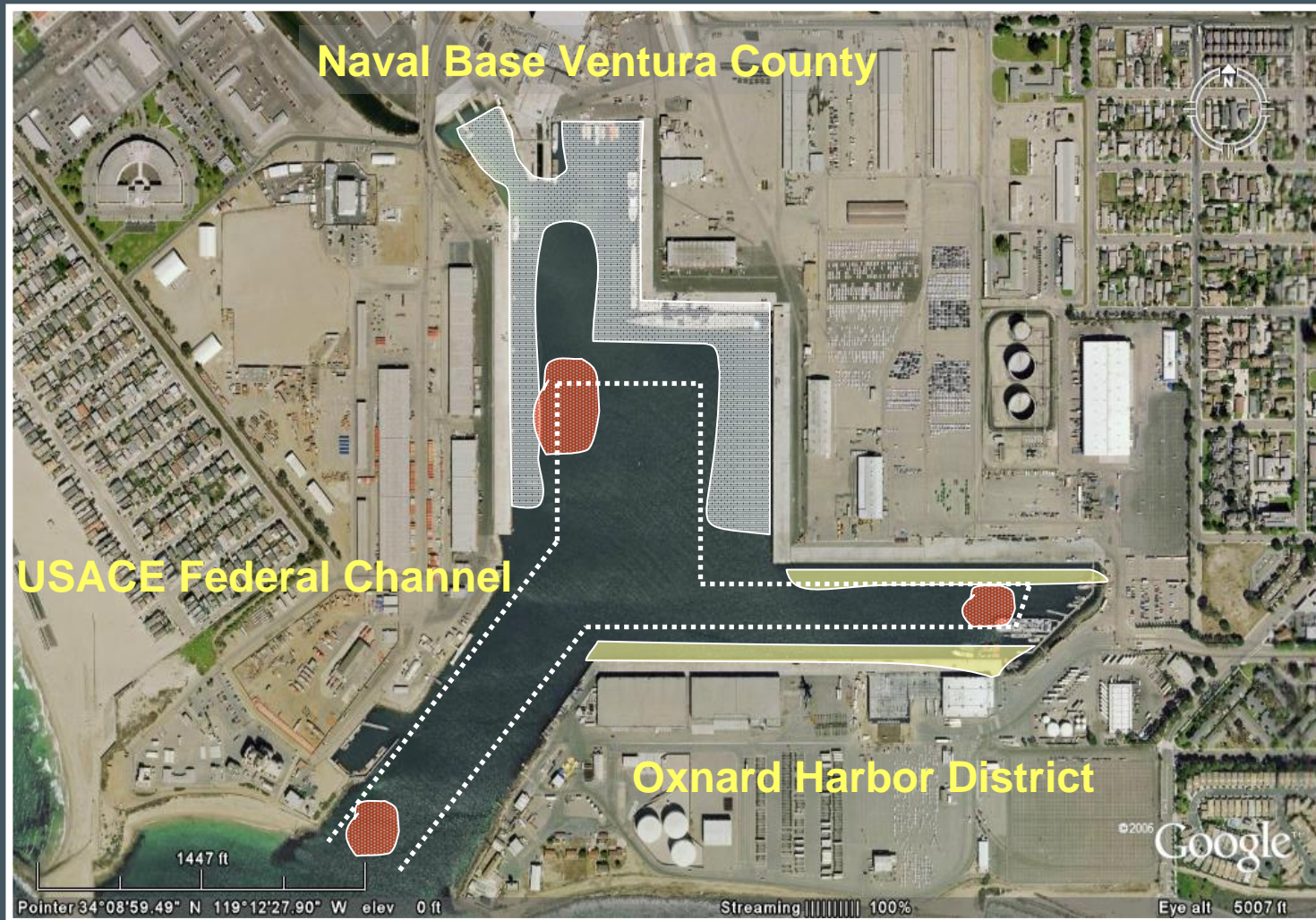
Port Hueneme Sediment Issues



Port Hueneme Sediment Issues



Port Hueneme Sediment Issues



Sediment Contamination

- Total ~250,000 cubic meters
- Approximately 60% from berths/40% from Federal Channel
- Chemicals of Concern included PAHs, PCBs, DDT, TBT
- Mostly fine sands, silts and clays - low organic carbon



Regional Management Alternatives

- Landfill Disposal
- On-site near shore Confined Disposal Facility (CDF)
- Port fill site at POLA or POLB
- Contained Aquatic Disposal (CAD)

Rationale for CAD Selection

- Provided on-site solution
- Not tied to other development or funding
- Environmentally protective
- Opportunity for beach nourishment
- Allowed for Harbor deepening to advance
- Restored 100% use of Naval/OHD wharves
- Provided **total** solution for all 3 projects
- Shared resources = cost effective

Funding Strategy

- Challenges
 - Raising funds (total project ~ \$14 million)
 - Coordinating schedules
 - Contractor negotiations and scheduling
- Opportunities
 - All participants had some funds allocated for reduced individual projects
 - Staff committed from the top down
 - Significant project momentum

Cost Sharing Approach

- Break project into segments (e.g., CAD excavation, Navy wharves, cap armor placement, etc)
- Estimate costs associated with each segment
- Assign segments to participants based on either ownership or limitations in authority

Cost Sharing Approach Cont.

- Fine tune cost segments to accommodate secondary cost sharing strategies and funding schedules
 - Financial balancing to make project more equitable among all partners
 - Recognize previous agreements
 - Account for contaminated sediment ownership allocation

Project Feature	Responsibility		
	USACE	U.S.Navy	OHD
Project Development			
- CEQA/NEPA Permitting		X	X
- Engineering Design		X	X
Contracting			
- Contract Management	X		
Construction			
- Equipment Mobilization	X		
- CAD Cell Excavation		X	X
- Dredging Navy Wharves		X	
- Dredging OHD Wharves			X
- Dredging "Hotspots" within O&M Channel	X		
- Capping	X		
- Placing Rock Armor		X	X
- Water Quality Monitoring	X	X	X
- Sediment Confirmational Sampling	X	X	X
- Construction Management	X	X	X
Post-Construction Activities			
- Long-Term Monitoring		X	X

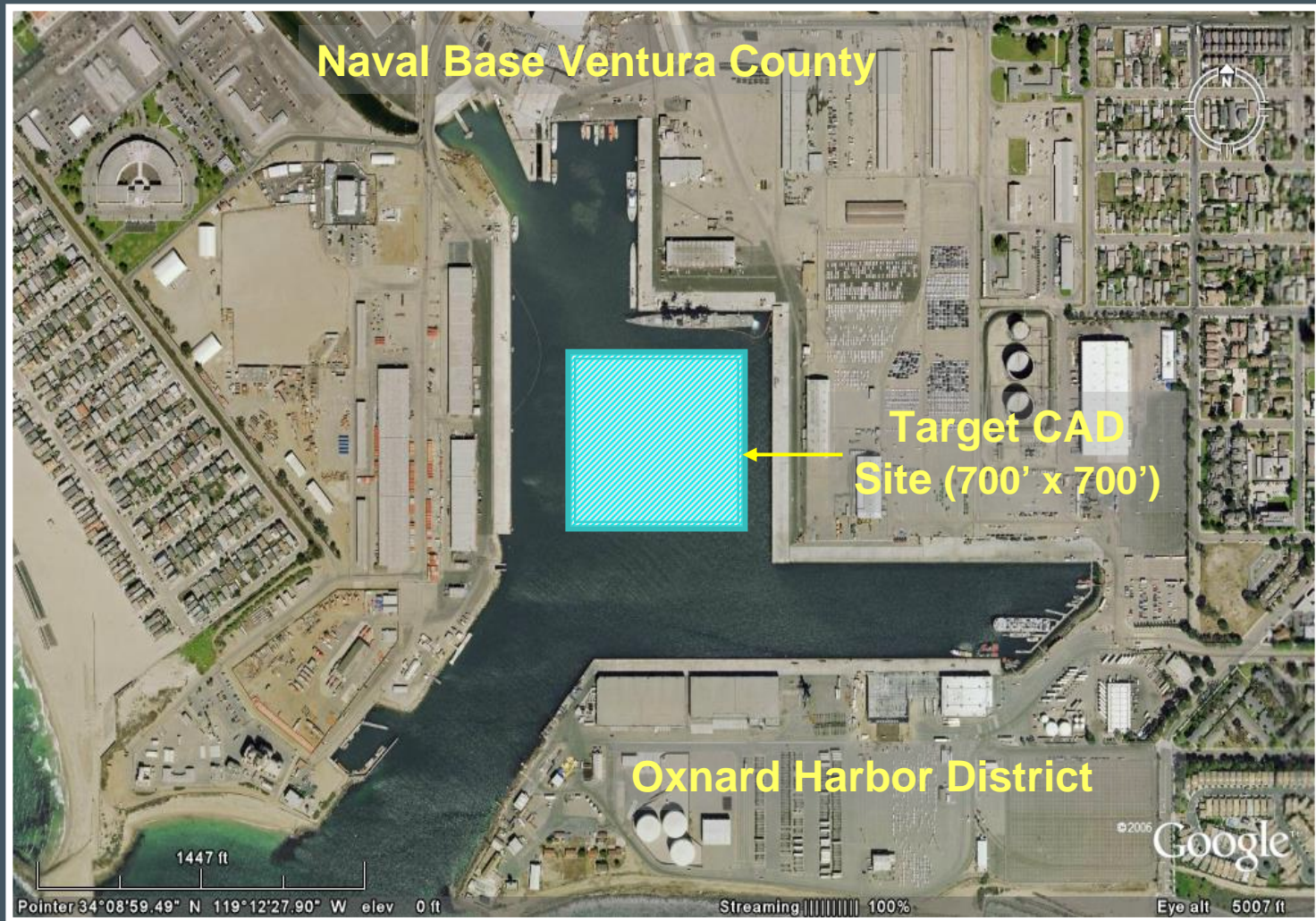
Contracting Approach

- USACE had existing contract with Manson Construction for O&M dredging in Port Hueneme and Channel Islands Harbor
- Modification issued for additional work
- OHD/USACE Cost Sharing Agreement
- USACE/Navy Cost Sharing Agreement already in place for dredging

Contracting Approach Cont.

- OHD/Navy Agreement for CAD construction and long-term monitoring/liability
- All funds transferred to USACE for contracting and management

Port Hueneme Construction Overview



Construction Sequencing



Construction Sequencing



CAD Excavation (Dec 15 to Jan 23)



Construction Sequencing



Contaminated Sediment Dredging (Feb 4 to May 4)



Contaminated Sediment Dredging (Feb 4 to May 4)



Average Barge Load =
900 cubic meters



Construction Sequencing



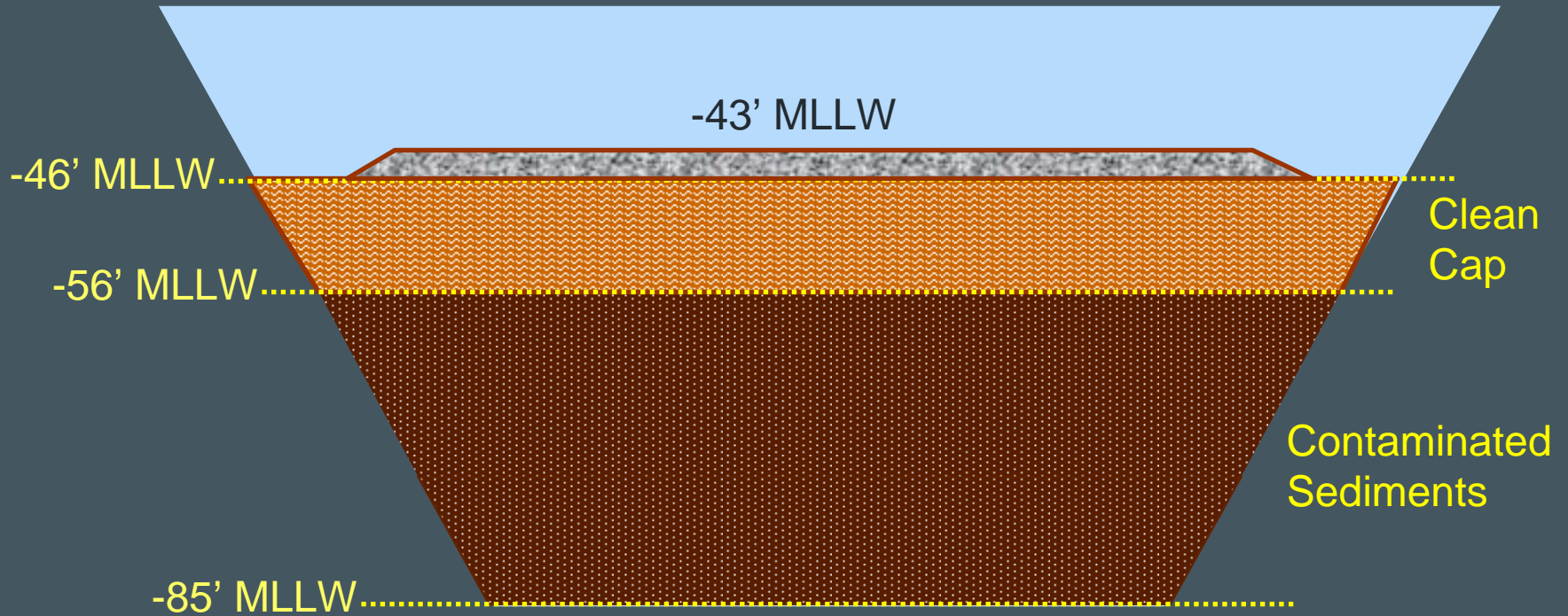
CAD Site Capping (May 5 to June 13)



CAD Site Armor Rock (June 13 – July 15)



Port Hueneme CAD Cross Section



GBA
ENGINEERS ★ SURVEYORS

Port Hueneme CAD site - 2009

Project Schedule

- Conceptual design for project completed in April 2007
- Design and permitting completed in August 2008
- Construction initiated in December 2008
- Completed in July 2009

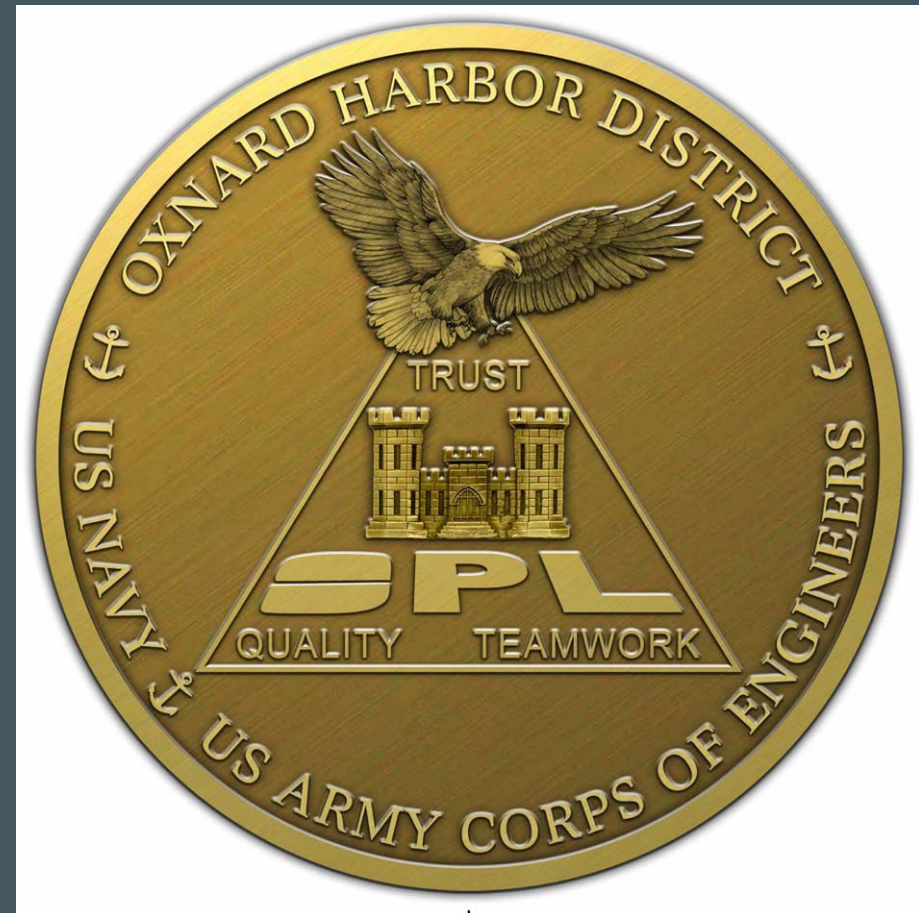
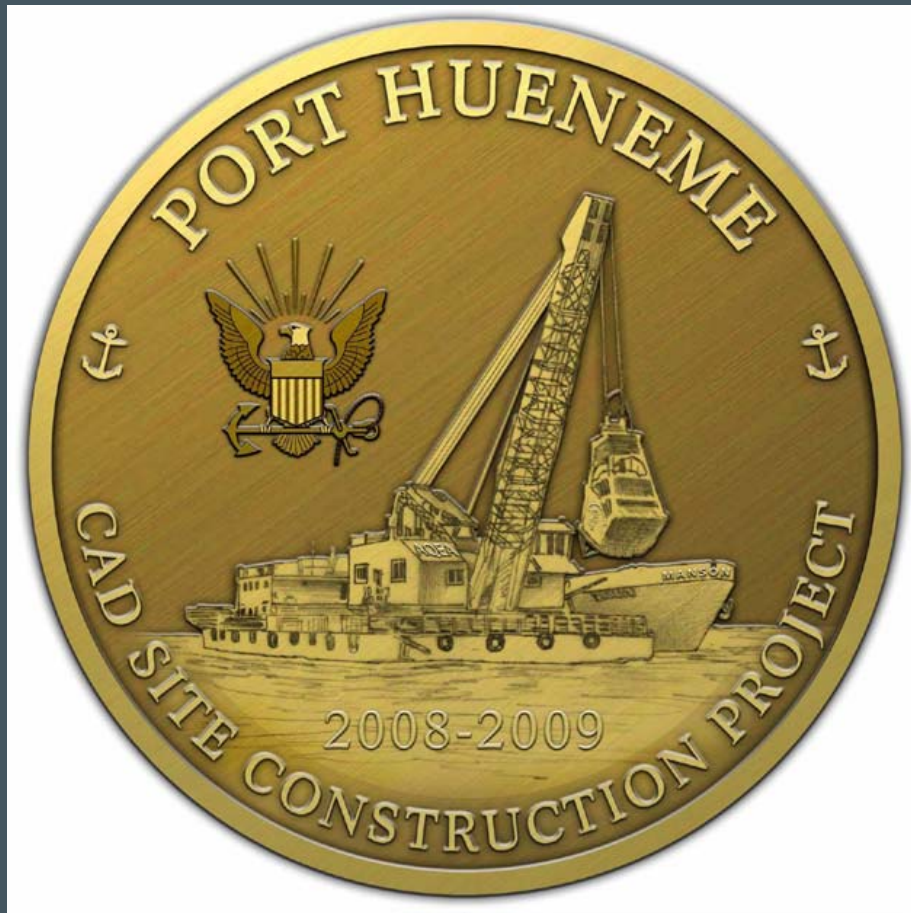
Construction Volumes

- CAD cell construction
 - 540,000 cubic meters
- Contaminated sediment placement
 - 190,000 cubic meters
- CAD cell capping
 - 110,000 cubic meters
- Rock armor
 - 34,000 tons

Project Benefits

- Recreational = Restored Hueneme Beach
- Operations = Restored full navigation use to Harbor
- Future Growth = Provides clear path for Harbor deepening
- Financial = More than \$30 million in benefits achieved for less than \$14 million in costs

Biggest Accomplishment – A Model for a Teaming Approach



Questions?

