

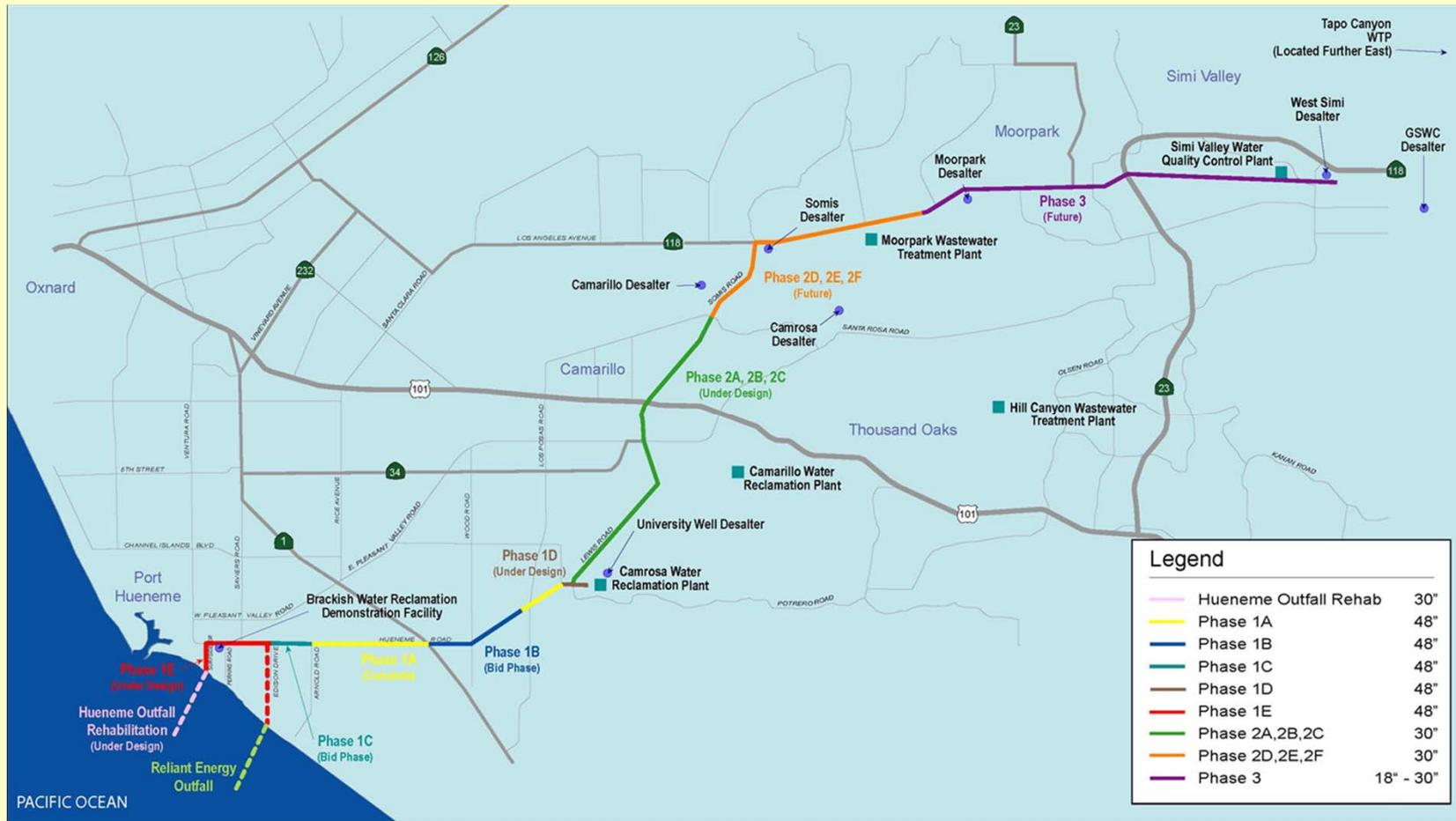


Permitting for Offshore Projects,
Complexities and Challenges

Topics of Discussion

- Overview of each of the projects and there technical challenges:
 - Calleguas Hueneme Outfall Project
 - Beta Unit Pipeline Replacement Project
 - PG&E 3D Seismic Study
 - the permitting process including a review of the agency roles and responsibilities based the changing regulatory requirements; and
 - Application process and recommendations.
-

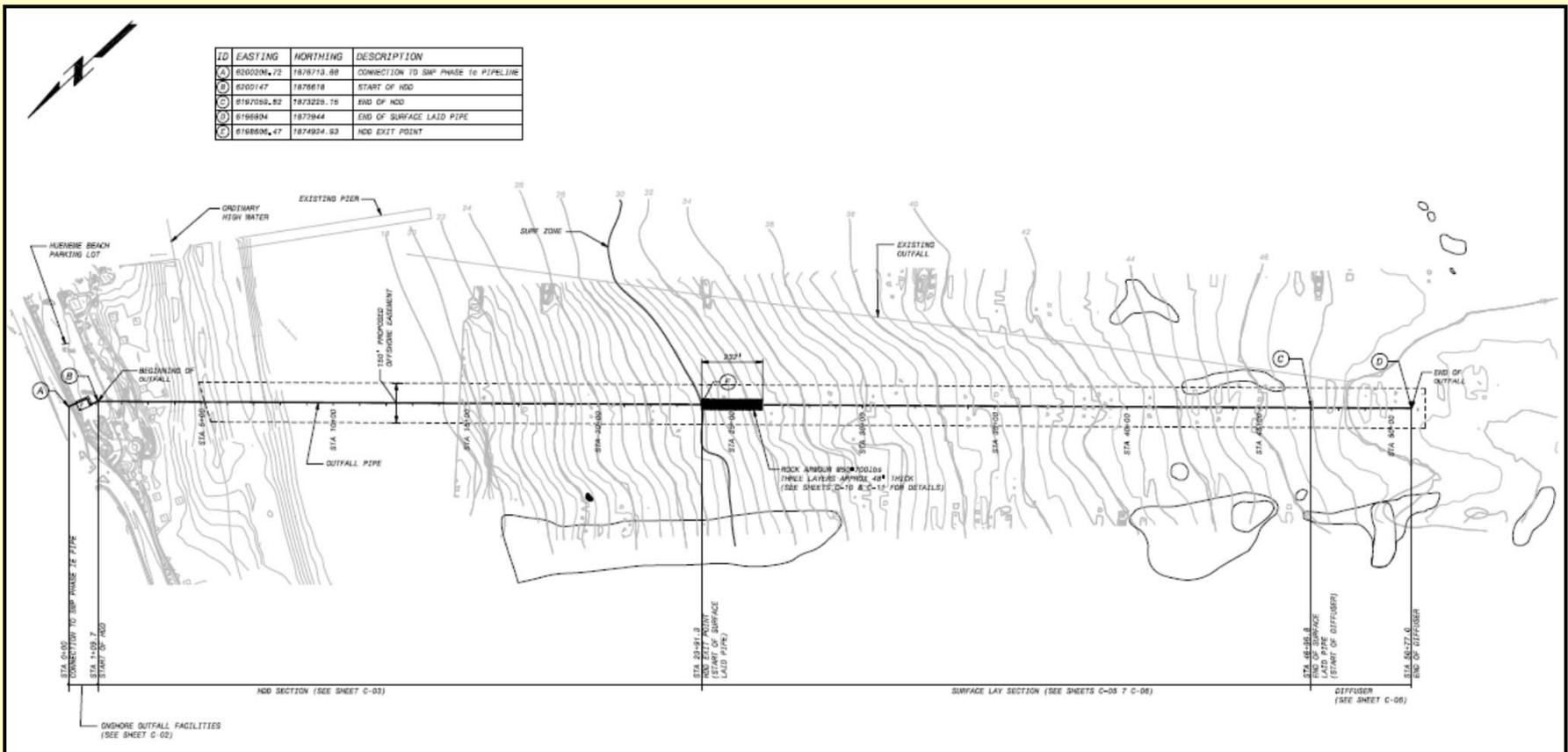
Calleguas MWD Salinity Management Pipeline



SMP Overview

- Pipeline system to transport saline water downstream for reuse or to an ocean outfall.
 - Alignment roughly parallels Calleguas Creek and tributaries from Simi Valley to discharge point.
 - Length: ~35 miles
 - Diameter: 18-inch (upstream) to 48-inch (downstream)
 - Maximum design flow: 30 cfs (13,500 gpm)
-

Outfall Plan



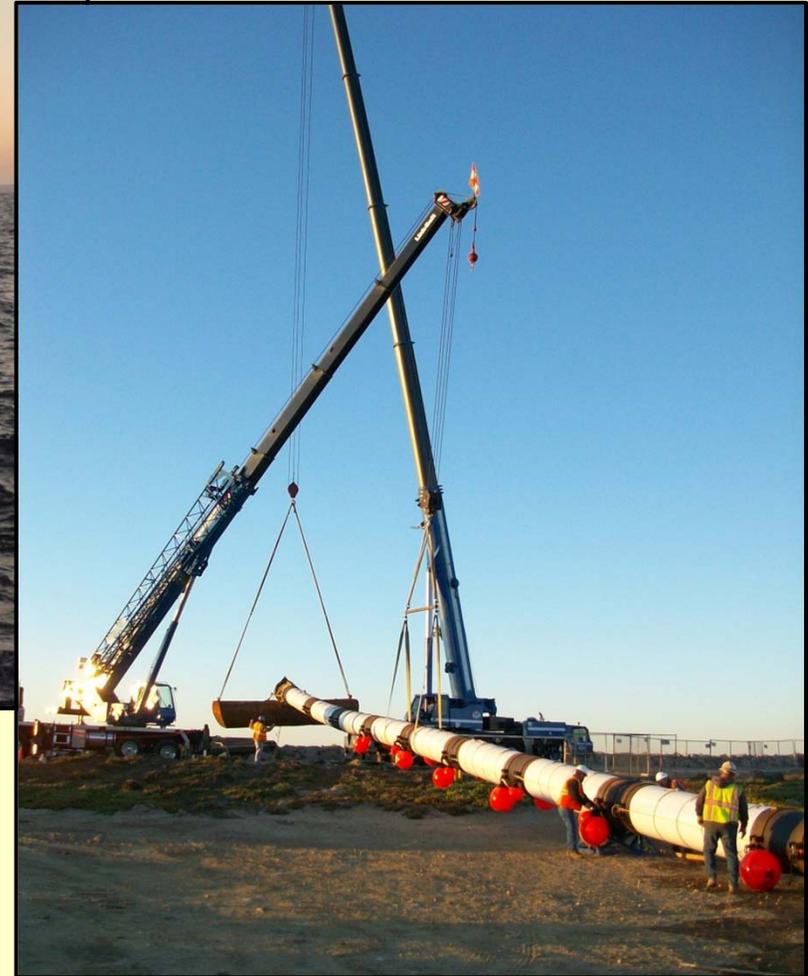
Hueneme Outfall - Key Issues

- Land Use
 - Growth Inducement
 - Geology
 - Pipeline Construction Constraints
 - Air Quality
 - Construction Impacts
 - Water Quality
 - TMDL Compliance
 - NPDES Permit Limitations to Ocean Outfall
 - Biological Resources
 - Impacts from outfall installation and operational discharges
 - Agriculture
 - Beneficial Water Supply Impacts
 - Risk of Upset
 - Discharge of drilling mud
 - Construction Impacts
 - Noise
 - Aesthetics
 - Transportation
 - Cultural Resources
-

Hueneme Outfall - Agency Approvals

- Calleguas MWD
 - California Environmental Quality Act (CEQA) Lead Agency
 - California State Lands Commission
 - Tidelands Lease
 - California Coastal Commission
 - Coastal Development Permit (CDP)
 - Regional Water Quality Control Board
 - NPDES Permit
 - 401 Certification
 - Army Corps of Engineers
 - 404 Certification
 - NOAA Fisheries / U.S. Fish and Wildlife Service (FWS)
 - Endangered Species Act (ESA) Consultation
 - City of Port Hueneme – Encroachment Permit
 - City of Oxnard – Encroachment Permit
 - U.S. Coast Guard – Notice to Mariners
-

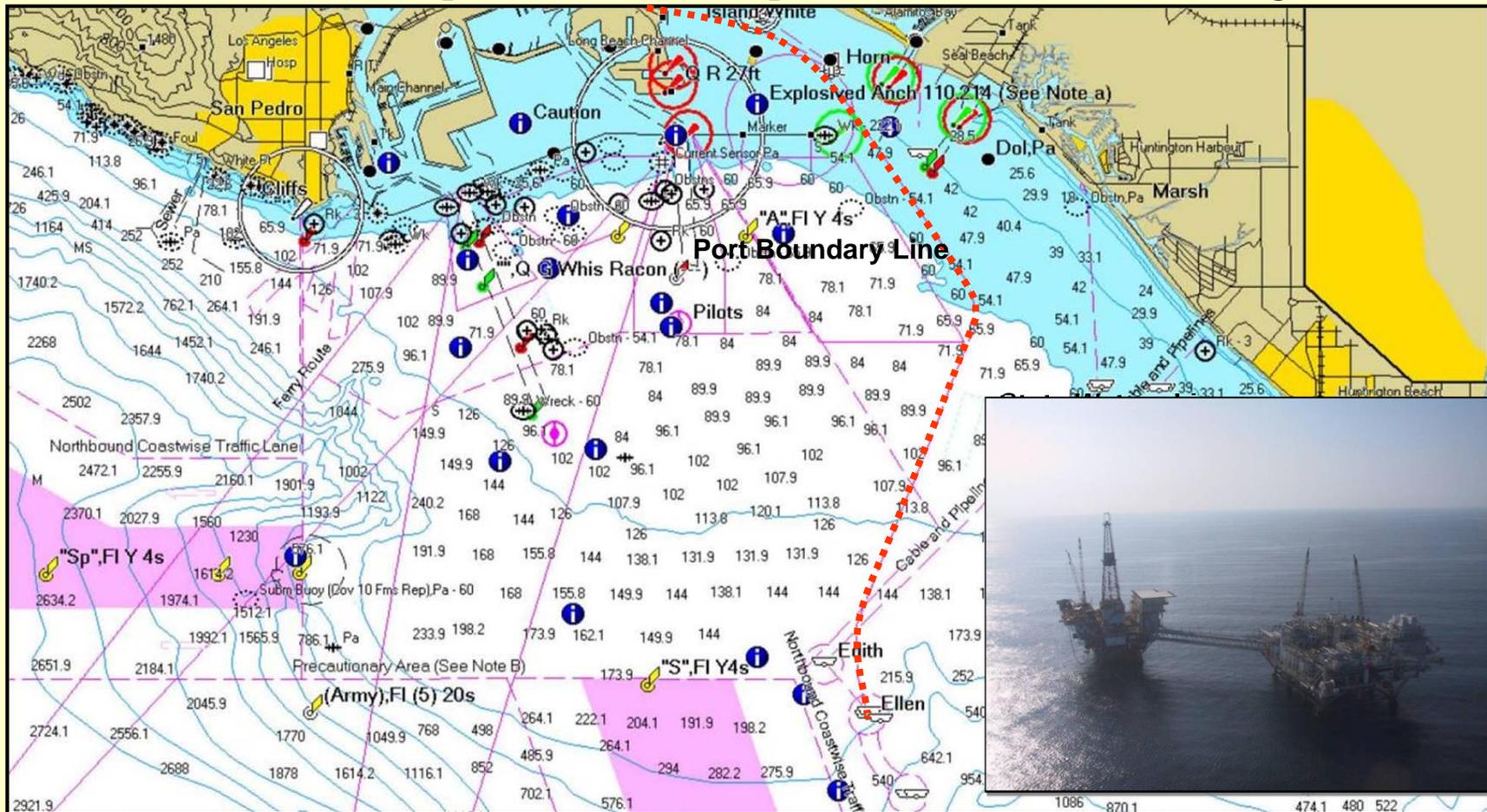
Prevention First 2012
Permitting for Offshore Projects, Complexities and Challenges



Prevention First 2012
Permitting for Offshore Projects, Complexities and Challenges



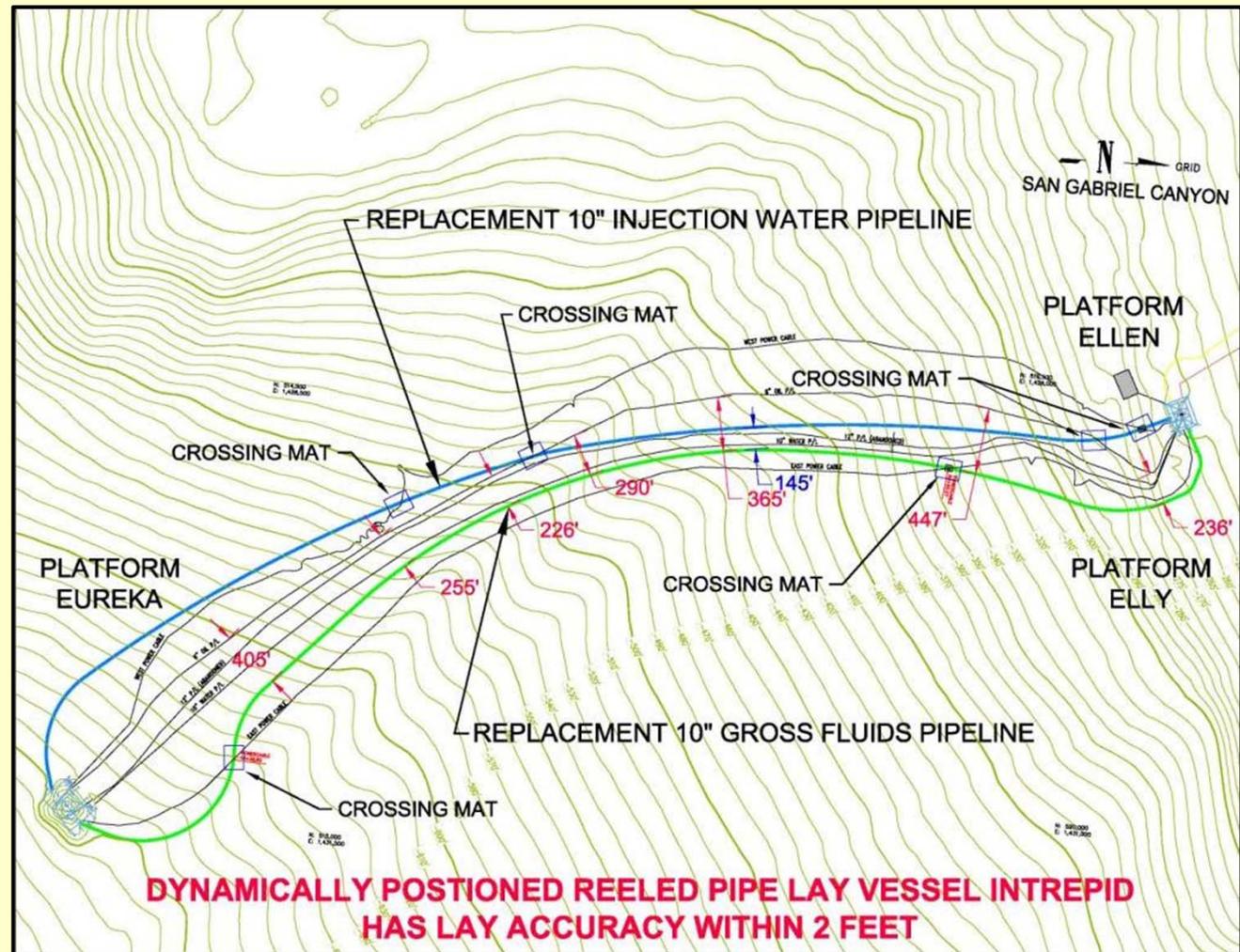
Beta Unit Pipeline Replacement Project



Beta Unit Background

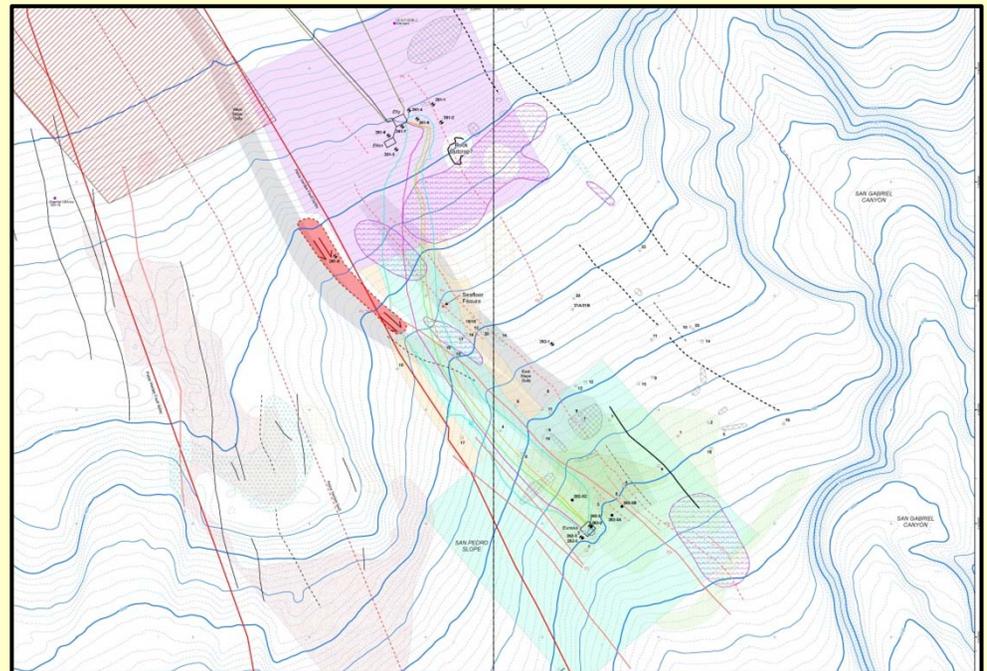
- Platforms located 9 miles offshore of Huntington Beach in 250 to 700 feet of water.
 - Elly and Ellen installed in 1980 with first production in 1981.
 - Platform Eureka installed in 1985.
 - Originally installed by Shell, now owned and operated by Beta Offshore
 - Pipeline leak (12" produced fluids pipeline) in 1999.
 - Platform Eureka shut-in until April 2008 when pipeline reconfirmation was approved by MMS.
 - Beta Offshore become operator in May 2010 and is proposing to replace existing pipeline confirmation with new pipelines
-

DP Vessel Installation



Beta Pipeline - Key Issues

- Geology
 - Marine Landslides and Gas Pockets
 - Pipeline Construction Constraints
- Biological Resources
 - Hardbottom Habitat
 - Marine mammal Impacts
- Risk of Upset
 - Increased Pipeline Safety
- Construction Impacts
 - Air Quality
 - Transportation
 - Cultural Resources



Beta Unit Pipeline - Agency Approvals

- MMS – BOEMRE – BOEM/BSEE
 - National Environmental Policy Act (Lead Agency)
 - South Coast Air Quality Management District
 - Permit to Operate
 - Regional Water Quality Control Board
 - 401 Certification
 - Army Corps of Engineers
 - 404 Certification
 - NOAA Fisheries / U.S. Fish and Wildlife Service (FWS)
 - Endangered Species Act (ESA) Consultation
 - U.S. Coast Guard – Notice to Mariners
-

Prevention First 2012 Permitting for Offshore Projects, Complexities and Challenges



Prevention First 2012
Permitting for Offshore Projects, Complexities and Challenges



Prevention First 2012
Permitting for Offshore Projects, Complexities and Challenges



PG&E 3D Seismic Project Objectives

- Obtain improved deep (>1 km [>0.6 mi]) imaging of the Hosgri and Shoreline fault zones to better define fault geometry
 - in the vicinity of the DCPD
 - at the intersection of the Hosgri and Shoreline fault zones near Point Buchon
 - at the intersection of the San Simeon and Hosgri fault zones near Point Estero
 - Expand regional seismic database
-

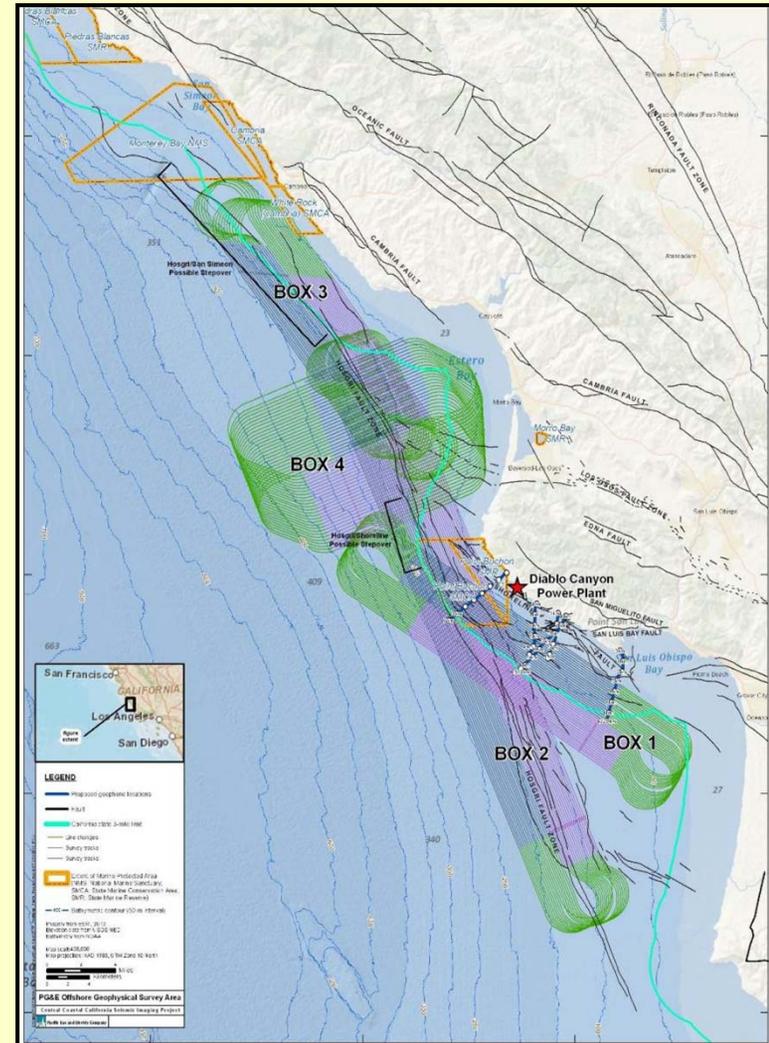
Proposed Action

Prevention First 2012

Permitting for Offshore Projects, Complexities and Challenges



- Box 1 – Offshore Diablo Canyon
- Box 2 – Estero Bay to offshore Santa Maria River Mouth fault intersections
- Box 3 – Offshore Cambria to Estero Bay
- Box 4 – Estero Bay

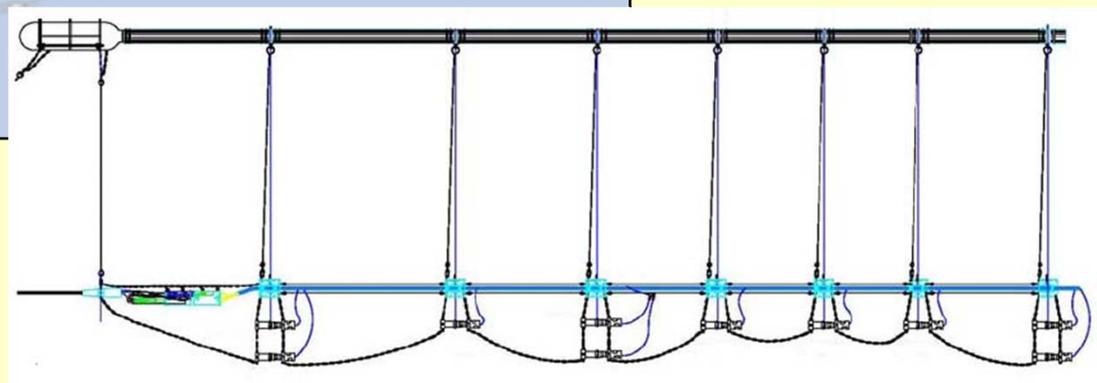
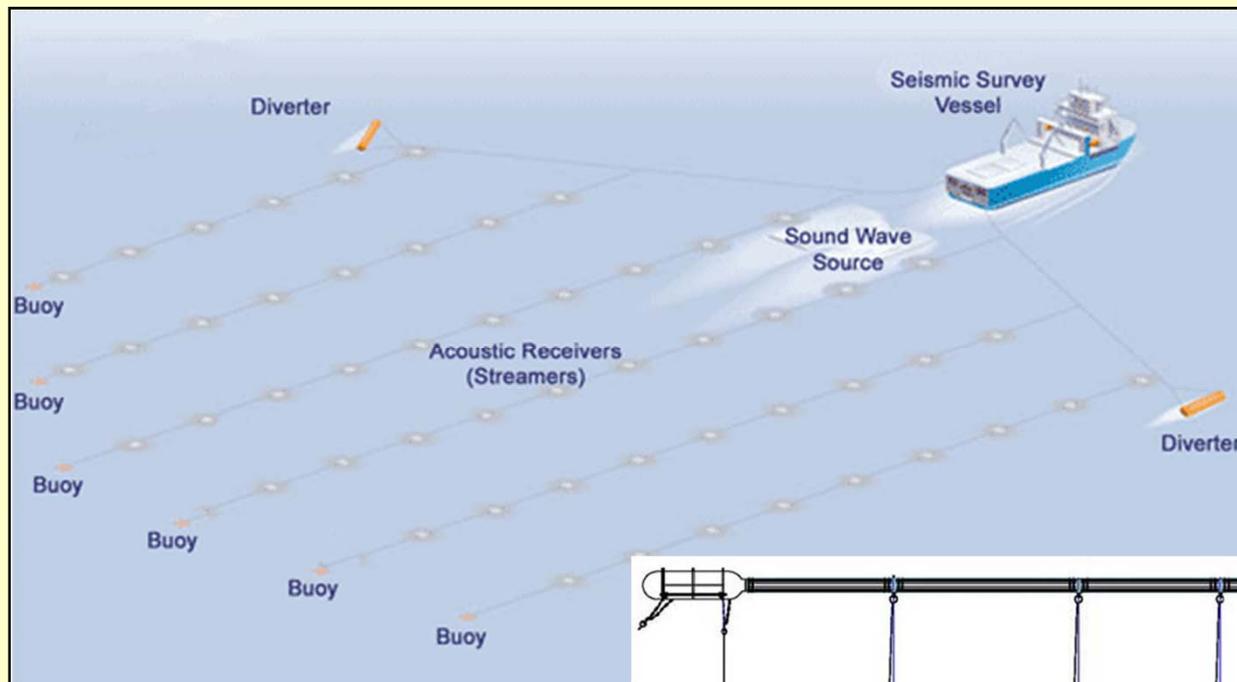


Offshore Seismic Imaging Survey

- Cambria to Point San Luis in water up to 1,400 ft.
- Specialized survey vessel approximately 235 ft in length
- Two strings of tuned air guns with a volume of 3,300 in³
- Vessel-towed hydrophone streamer array of 3.7 miles in length
- Additional scout and support vessels



Towed Air Gun Array and Hydrophone Streamers



3D Seismic Project - Key Issues

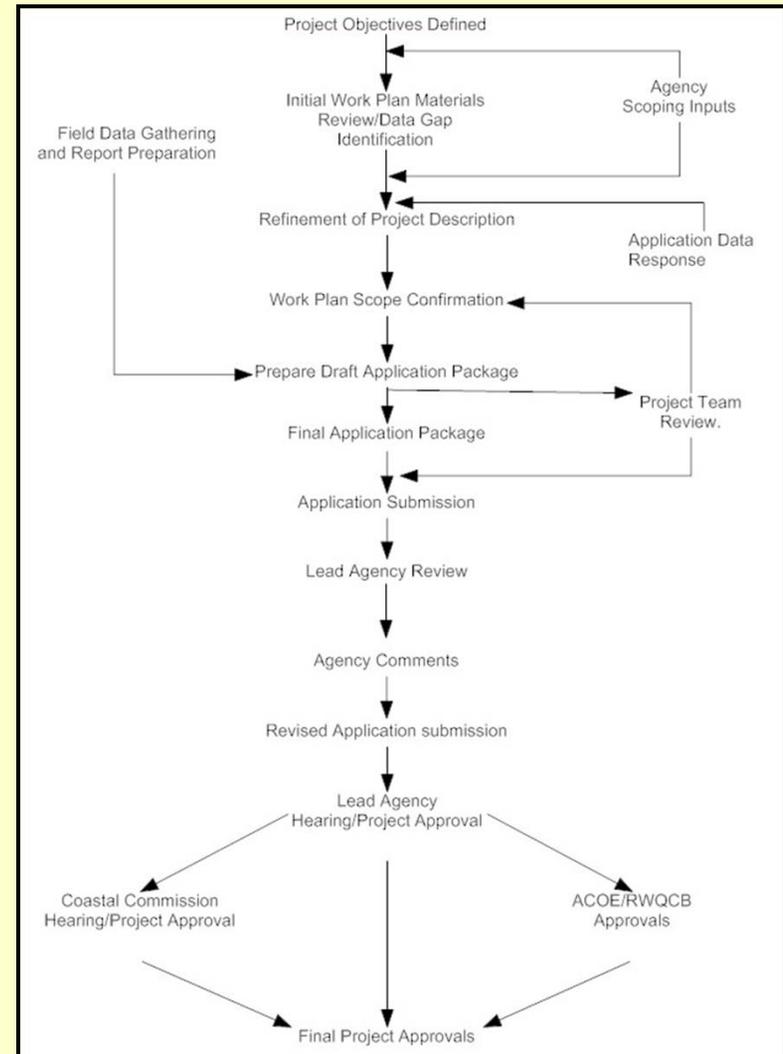
- Geology
 - Target Identification and Alternative Technologies
 - Air Quality
 - Vessel Emissions
 - Biological Resources
 - Impacts to fish resources
 - Impacts to marine mammals
 - Vessel movements
 - Noise impacts
 - Commercial and Recreational Fishing
 - Preclusion
 - Long term impacts on fish populations
 - Recreational Uses
 - Preclusion and noise impacts
-

Anticipated Agency Approvals

- California State Lands Commission
 - Geophysical Permit (Seismic Survey)
 - California Environmental Quality Act (CEQA) Lead Agency
 - National Science Foundation
 - National Environmental Policy Act (NEPA) Lead
 - NOAA Fisheries
 - Incidental Harassment Authorization (IHA)
 - Endangered Species Act (ESA) Consultation
 - NOAA – Sanctuary Concurrence (Biological Resource Impacts)
 - Army Corps of Engineers
 - 404 Certification for marine geophones
 - U.S. Fish and Wildlife Service (FWS) (Sea Otter)
 - Incidental Harassment Authorization (IHA)
 - Endangered Species Act (ESA) Consultation
 - California Coastal Commission
 - Coastal Development Permit (CDP)
 - Federal Consistency
 - California Department of Fish & Game – CESA Permits/MPA Authorization
 - California Dept. of Parks and Recreation – Encroachment Permit
 - County of San Luis Obispo – Encroachment Permit
 - U.S. Coast Guard – Notice to Mariners
-

Project Approach

- Clearly Define Project Approach and Phasing
- Kick-off Meeting – Define Critical Success Factors
 - Develop Workplan
- Determine Available Site Resource Information/Data Review
- Complete Engineering Review and Site Specific Surveys
- Evaluate Potential Project Resource Issues and Alternatives
- Identify Interested Parties and Resource Agencies
- Conduct Evaluation of Resource Issues
- Submit Comprehensive Application Package
- Prepare Final Documentation and Mitigation Compliance Plan



Key Application Inputs

- Clearly Defined Project Description
 - Detailed Engineering Review
 - Well Defined Work Procedures Equipment List
 - Construction Schedule
 - Environmental Characterization including site specific surveys
 - Geophysical Survey
 - Biological Survey
 - Cultural Resource Survey
 - Air Emissions Estimates and Mitigation Measures
 - Critical Operations and Curtailment Plan
 - Oil Spill Contingency Plan
 - Mitigation Compliance Plan
 - Marine Wildlife Contingency Plan
-