

EXCELLENCE IN SUBSEA SERVICES

**DIVECON**



# SANTA BARBARA CHANNEL COASTAL HAZARD REMOVAL PROJECT

California State Lands Commission



# PRESENTATION OVERVIEW

- Project Description
- Project Locations
- Overview at two Specific Sites
- Abandonment Methodology Utilized
- Lessons Learned
- Moving Forward



# Project Description

- CSLC identified derelict structures & recognized numerous hazards that were located along the SB/Ventura/Los Angeles Coast.
- The identified hazards posed a serious threat to public safety.
- CSLC awarded a contract to Divecon to perform remediation work & removal at approximately 23 locations of various onshore & offshore hazards & derelict wellheads.



# ***Project Locations***

- ***23 Identified Locations***
  - ***22 Onshore / Near shore***
  - ***1 Offshore Location***
- ***Project area ranges from Northern SB County to Northern LA County***



# ***Hazards Include***

- ***Sheet Pile, H-pile, Round pile***
- ***Concrete with exposed rebar***
- ***Wellheads with remaining well casings***
- ***Hazards are sometimes always exposed and others only exposed during low sand events***



# Hazard Removal Projects Detailed in Presentation

- Las Tunas Beach- Los Angeles County
- Goleta Beach- Santa Barbara County



# Las Tunas Beach (located north of Malibu) Hazard Description

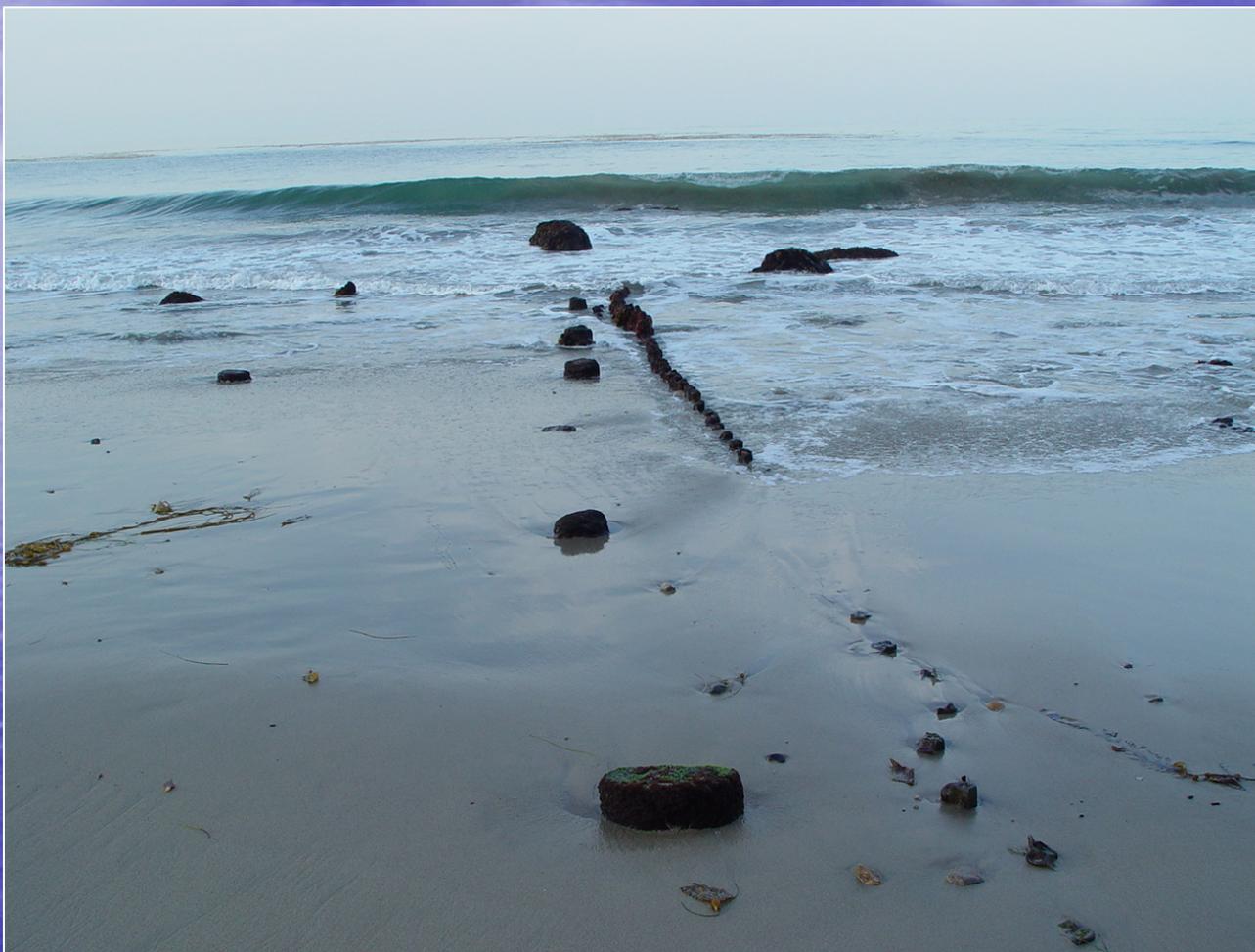
- 5 derelict groins with exposed sheet piling constructed in 1934
- Sheet Pile, concrete cap & exposed rebar
- Exposed H-Pile
- 1 groin that required remediation work



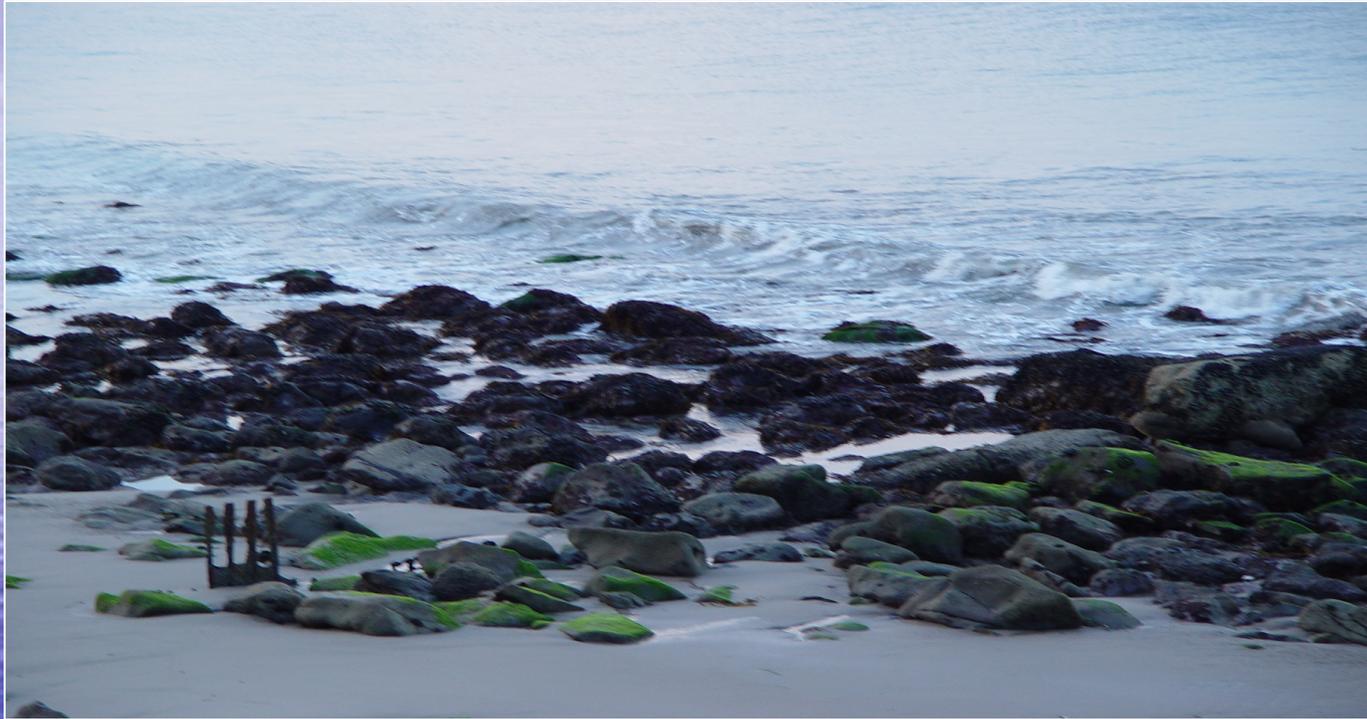
# Las Tunas Beach



# *Las Tunas Beach*



# *Las Tunas Beach*



# *Las Tunas Beach*



# *Las Tunas Beach*



# Removal Methodology

- Onshore & Offshore Spread
- Onshore Spread
  - CAT 330 Excavators
  - U/W & Topside Burning Equipment
- Offshore Spread
  - Divers working in surf line supported from beach
  - U/W Burning Equipment



# *Las Tunas Beach – Removal Operations*



# *Las Tunas Beach – Removal Operations*



# *Las Tunas Beach – Groin No. 2 Remediation*



## ***Las Tunas Beach – Post Project Results***

- Over 900 feet of groin removed
- Recovered sheet pile average height of 5 feet
- Divers removed approximately 265 feet of sheet pile from the surf area

# *Las Tunas Beach – Post Project*



# Goleta Beach Hazard Description

- This site is located on Goleta Beach, SB County; east of the Goleta Slough
- The site consists of 4 former drilling sites known as James-136, Sands-137, Crandall-138, and Parker-139
- Each site contained a center well caisson and four surrounding caissons
- Additional hazards included approximately 250 10 “ H-pile



# Goleta Beach Hazard Removal



# Goleta Beach Hazard Removal



# Removal Methodology

- Onshore Spread
  - 2 each CAT 330 Excavators complete with hydraulic breaker & thumb attachment
  - 6 wheel drive end loader dump truck
  - 100-Ton Crane
  - U/W & Topside Burning Equipment



# Removal Methodology



# Goleta Beach Hazards Removal

- The goal was to remove all hazards in their entirety or ensure that they never reappear during low sand events.
- Removal criteria- 2 feet below cobble accomplished

# Removal Methodology



# Removal Methodology



# Removal Methodology



# Goleta Beach Recovered Hazards

- 16 foundation caissons removed below cobble line
- 250-10" H-Pile approx. 5 to 8 feet in length
- 295-tons of concrete removed and transferred to approved waste disposal & recycle facility
- 186-tons of steel removed and transferred to approved waste disposal & recycle facility



# Unique Project Challenges Overcome

- Complete all work accident free and without incident
- Permit Criteria
  - Required Staging Areas
  - Biological Monitoring
- Access to Sites
  - Sand Ramp
  - Steel Ramp
- Tide Conditions
- Public Scrutiny during Project



# Lessons Learned

- Permit the Project that you require, do not let the permit dictate your means & methods
- The use of large Excavators vs. rubber tired equipment



# Moving Forward

- There are numerous project sites that still require hazard removal
- This should be made a priority as the hazards are a threat to public safety.



# Acknowledgements

- Divecon crews- completed all projects without incidents
- Adobe Construction- Provision of Equipment & Operators
- Padre- Environmental Compliance
- URS- Project Management
- PMTI- Well head abandonment expertise



Questions or Comments ??



The logo for DIVECON features the word "DIVECON" in a bold, sans-serif font. The letters "DIVE" are black, and "CON" is blue. Below the text are stylized, layered blue waves that create a sense of depth and movement. The entire logo is set against a white rectangular background.

**DIVECON**

**“EXCELLENCE”**

**More than a goal,  
It's our standard**