EXCELLENCE IN SUBSEA SERVICES

DIVECON
SANTA BARBARA CHANNEL
COASTAL HAZARD REMOVAL PROJECT
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
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

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Las Tunas Beach – Removal Operations
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 ??
“EXCELLENCE”
More than a goal,
It’s our standard