Coastal Hazards Removal – Challenges to the Effective Removal While Minimizing Environmental Impacts

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Padre Associates, Inc.
Coastal Hazards Removal – Environmental Challenges

Historical Roots of Today's Coastal Hazards
Coastal Hazards Removal – Environmental Challenges
Site Condition Summary

<table>
<thead>
<tr>
<th>Site No.</th>
<th>Name</th>
<th>Access</th>
<th>Staging</th>
<th>Site-Specific Special Considerations</th>
<th>Preventative Measures</th>
</tr>
</thead>
</table>
| 1       | Tajiguas Creek                      | Private Property via Arroyo Cuemada                                    | Private Property         | • Tajiguas Creek  
• Coordination with UPRR  
• Red-legged frogs and steelhead in Arroyo Hondo                                                                                 | • Pre-construction biological surveys                                                                 |
| 2       | El Capitan State Beach              | Gated paved road before park entrance station, east side               | State Park maint. yard  | • State Beach - Public                                                                                     | • Public Noticing                                                                 |
| 4 & 5   | Ellwood                             | Through VENOCO pier lot access and private property owner             | Above Ellwood Pier parking lot - private property | • Bell Canyon Creek - tidewater goby  
• Monarch Butterflies  
• Proximity to Sandpiper and Bacara  
• Archaeological Resources                                                                  | • Pre-construction biological surveys  
• Arch monitoring during construction required at Site Nos. 4 & 5  
• Public Noticing                                                                 |
| 6 & 7   | Santa Barbara Shores A and B        | Through gate on Santa Barbara Shores Dr.                               | On bluff top, erect temp fencing | • Monarch Butterflies  
• Archaeological Resources at Site No. 7                                                                                   | • Pre-construction biological surveys  
• Arch monitoring during construction required at Santa Barbara Shores (B) Site No. 7 |
| 8, 9, & 10 | Sands Beach at Devereaux Slough, Devereux Point, and Isla Vista | Via Storke Rd to El Colegio Rd and past Devereaux Ranch School | In gravel parking lot at access location | • Devereux Slough - snowy plovers  
• Archaeological Resources at Site No. 10                                                                  | • Pre-construction biological surveys  
• Arch monitoring during construction required at Isla Vista site No. 10 |
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<tbody>
<tr>
<td>14, 15, &amp; 22</td>
<td>Miramar, Santa Barbara-Carpinteria, Fernald Pt, and Ortega Hill East</td>
<td>SB County Parks ramp</td>
<td>Within Miramar Hotel construction site</td>
<td>• Archaeological Resources at Site No. 22</td>
<td>• Arch monitoring during construction required at Ortega Hill Site No. 22</td>
</tr>
<tr>
<td>16</td>
<td>Ortega at Summerland East End-Padaro Lane</td>
<td>Thru road adjacent to SSD above Summerland Beach</td>
<td>Fenced yard at SSD above Summerland Beach</td>
<td></td>
<td>• Potential abalone survey required.</td>
</tr>
<tr>
<td>18</td>
<td>Carpinteria State Beach</td>
<td>from Carpinteria State Beach</td>
<td>Clean Seas lot or VENOCO Casitas Pier parking lot</td>
<td>• Snowy plovers • Steelhead in Carp Creek • Archaeological Resources</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Casitas Pier - East Side</td>
<td>VENOCO Casitas Pier turnaround</td>
<td>Clean Seas lot or VENOCO Casitas Pier parking lot</td>
<td>• Harbor seal haul-out area restrictions</td>
<td>• Construction Timing Preclusions to Avoid Haul-Out Season • Biological Monitoring During Construction</td>
</tr>
<tr>
<td>20</td>
<td>Rincon/Mussels Shoals at Mussel Rock/Pitas Pt.</td>
<td>Mussel Shoals Rd to Ocean Ave to pier/causeway access road</td>
<td>Rincon Pier parking lot</td>
<td></td>
<td>• Potential abalone survey required.</td>
</tr>
<tr>
<td>21</td>
<td>Ventura River, Ventura</td>
<td>Fairground frontage road at turnaround</td>
<td>Fairgrounds or CalTrans yard</td>
<td>• Ventura River Habitat • Construction Area is Primarily Underwater</td>
<td>• Potential surf grass survey required.</td>
</tr>
<tr>
<td>23</td>
<td>Rincon Point</td>
<td>Walk in from west parking lot</td>
<td>Staging not necessary</td>
<td>• Archaeological Resources</td>
<td>• Arch monitoring during construction required</td>
</tr>
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</table>
Coastal Hazards Removal – Environmental Challenges

Case Study - Goleta Beach Exposure (1998)
1998 Goleta Beach Caisson Removal
2006-07 Goleta Beach Caisson Removal
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Goleta Beach Hazards Removal
Coastal Hazards Removal – Environmental Challenges

Goleta Beach Hazards Removal
Ellwood Beach Exposure - 2007
Current Hazards Removal Program

- CSLC has Established Hazards Removal Program.
- Removal Contractor Under Contract.
- CEQA Compliance Completed and Permits Issued.
- Effective Mitigation Monitoring and Compliance Program in Place.
- Private Funded Site Removals Completed.
- Additional Funding Still Required.
Permitting Requirements

- California Coastal Commission
- Army Corps of Engineers
- Regional Water Quality Control Board
- USFWS/NOAA Fisheries/CDF&G
- State Parks Department
- Santa Barbara County
- Ventura County
- City of Carpinteria
- City of Goleta
Key Program Issues

- Exposures of Hazards are Periodic and Short Term in Nature.
- Site Conditions Change Rapidly.
Effective Site Exposure
Key Program Issues

• Exposures of Hazards are Periodic and Short Term in Nature
• Site Conditions Change Rapidly
• Site Access is Limited
Site Access Limitations
Key Program Issues

- Exposures of Hazards are Periodic and Short Term in Nature.
- Site Conditions Change Rapidly.
- Site Access is Limited.
- Hazards Located in Areas of Sensitive Environmental Resources.
- Hazards are Often Located in Areas of Active Public Use.
Coastal Hazards Removal – Environmental Challenges

Heavy Equipment in Sensitive Areas
Coastal Hazards Removal – Environmental Challenges

Key Program Issues

- Exposures of Hazards are Periodic and Short Term in Nature.
- Site Conditions Change Rapidly.
- Site Access is Limited
- Hazards Located in Areas of Sensitive Environmental Resources.
- Hazards are Often Located in Areas of Active Public Use.
- Funding is Currently Limited.
Key Environmental Issues

- Access Routes.
  - Upland Routes and Staging
  - Lateral Beach Transit Routes
- Seasonal Site Restrictions.
- Sensitive Resources.
  - Water Quality
  - Biological
  - Cultural
  - Recreational
- Site Safety Considerations.
  - Slope stability
  - Sea State and Beach Profile
Coastal Hazards Removal – Environmental Challenges

Environmental Considerations
Key Program Issues

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- Site Conditions Change Rapidly.
- Site Access is Limited.
- Hazards Located in Areas of Sensitive Environmental Resources.
- Hazards are Often Located in Areas of Active Public Use.
- Funding is Currently Limited.
Key Program Recommendations

- Review exposure history and implement detailed GPS mapping program.
- Maintain detail removal and access methodology.
- Acquire long term permits and access approvals.
- Active monitoring of sites during significant coastal erosion events.
- Implement immediate all pre-activity surveys and provide timely notification of all responsible agencies.
- Obtain well maintained equipment operated by knowledgeable operators.
- Implement active site monitoring during all work activities to identify changing site conditions.
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