

Sediment Removal by Working with the Tides and a Modified Portadam

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Imagine the result

Site Description

- Small, narrow site in California Coastal Zone
- Distinct upland and waterfront areas
- Adjacent to historic downtown area
- Historical use: lumberyard and metals reclamation
- Site COCs: metals, PCBs, PAHs

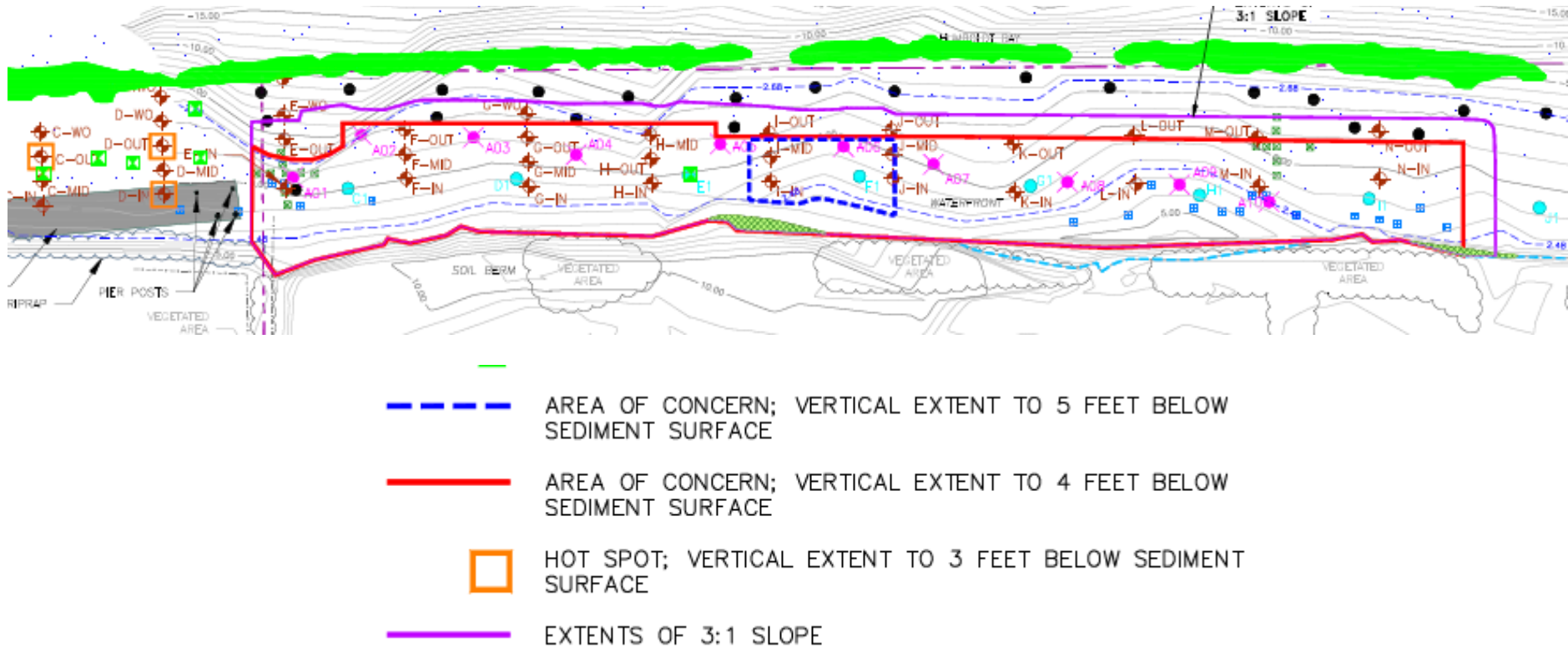


Project Description

- Cleanup and Abatement Order
- Remedy protective of human and ecological receptors, and groundwater
- Excavation of upland and waterfront areas
- Tidal exclusion during waterfront remediation



Waterfront Remediation - AOC



Sediment AOC and hot spots totaling approximately 4,350 cy

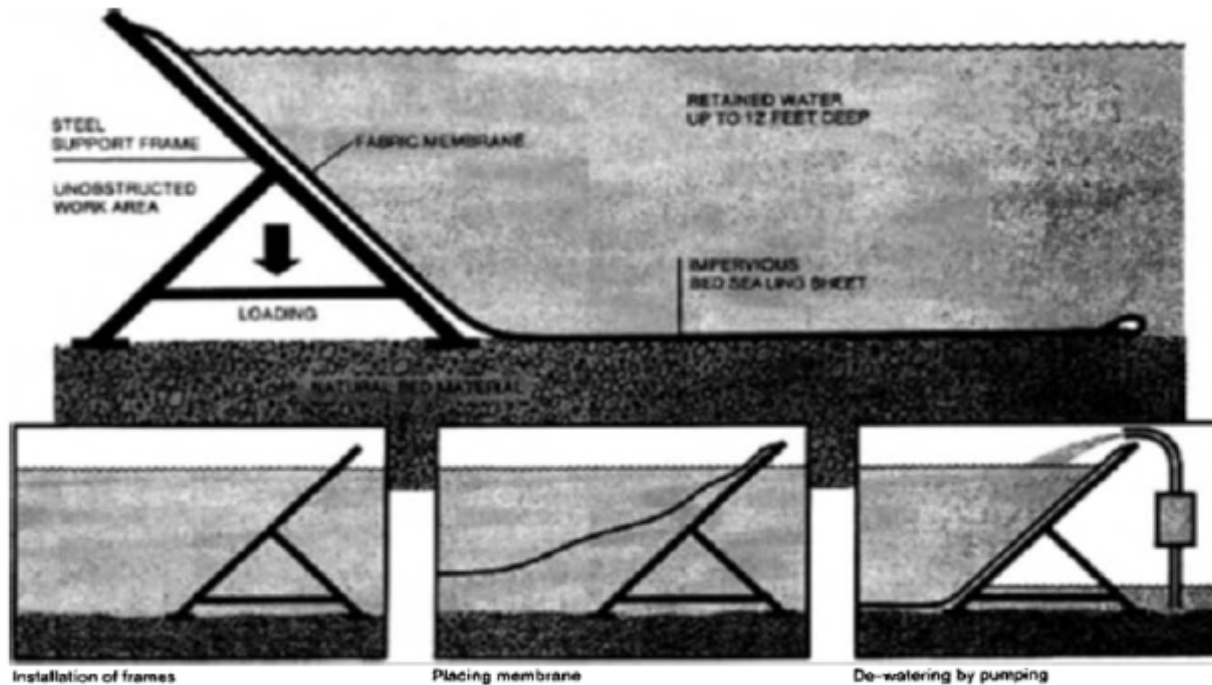
Environmental Concerns

- Short-term adverse impacts to water quality
- Temporary loss of mudflat benthic infauna related to dredging and backfilling of tidal remediation area
- Potential impacts to eelgrass habitat

Mitigation and Monitoring Measures

- Dredging and backfilling activities “in the dry”
- Work July 1 – September 30
- Temporary turbidity control structure
 - Avoid sedimentation of adjacent essential fish habitat
 - Exclude fish from entering excavation area
- Water quality monitoring to confirm effectiveness of structure
 - Turbidity not to increase more than 20% above background
- Eelgrass surveys and benthic sampling to determine future mitigation requirements

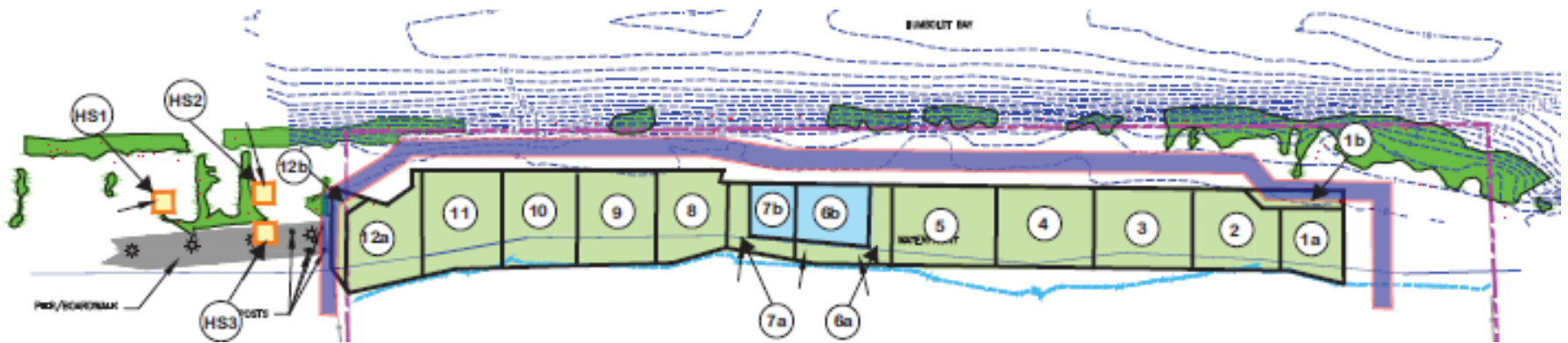
Turbidity Control - Proposed



Portadam - Temporary dam structure with impermeable liner, would exclude water from work area

Turbidity Control - Revised

- Portadam frame structure with a permeable textile liner
 - Stable structure in soft bay mud
 - Provide turbidity control but allow water to pass
 - Allowed within permit project description



Turbidity Control - Installation



Turbidity Control - Installation



Turbidity Control - Installation



Turbidity Control - Installation

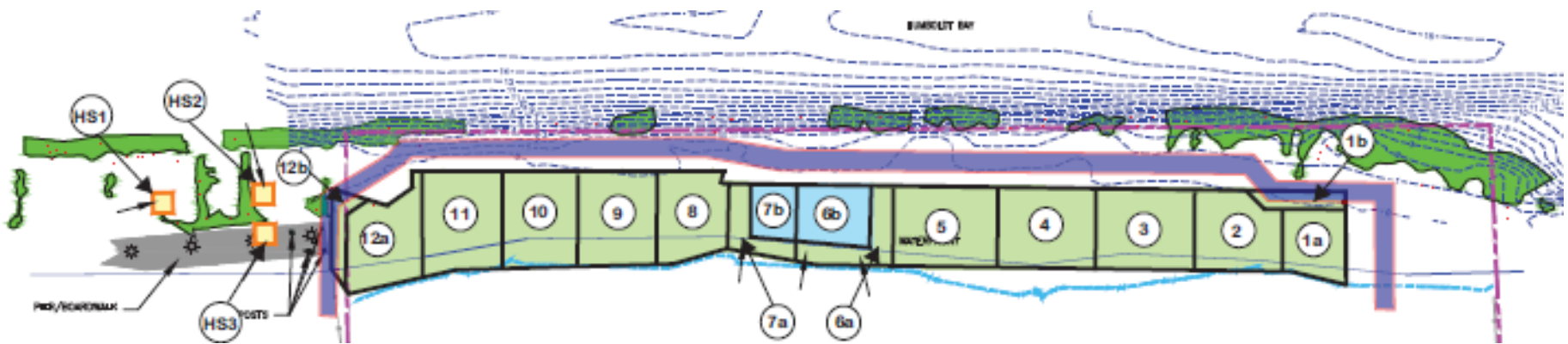


Turbidity Control - Installation



Waterfront Remediation

- Completed sediment removal during low tides
- Excavated and backfilled cells ranging from approximately 250 CY to 350 CY



Waterfront Remediation - Removal



Waterfront Remediation - Backfill



Turbidity Control – In Action



Hot Spot Removal



Hot Spot Removal



Waterfront Remediation



Site Status

- On-site soil and sediment removal from upland and waterfront areas complete
- Ongoing monitoring
 - Eelgrass
 - Benthic
 - Erosion control
 - Mitigation as needed



Imagine the result

