

NOAA Abandoned and Derelict Vessel Case Study



Oakland Estuary Enhancement Project Alameda County, CA

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Project Overview

Reason for project: To remove marine debris, abandoned vessels and navigational hazards from the estuary to provide visual, health and safety enhancements to the public and the estuary environment.

Date initiated: August 2013

Project duration: 12 months

Number of vessels removed: 59 vessels, including two tugs over 100 ft. in length.

Project Location

Location: Alameda County, California

Site Name(s): Oakland Estuary

General description of location: The Oakland Estuary is a tidal waterway situated between the cities of Oakland and Alameda, which connects the San Francisco Bay with the San Leandro Bay. The debris was scattered over 77 different sites within the estuary.

Average Site Depth: < 15 ft.

Habitat/Substrate Type Impacted: Marsh, mudflats and estuary bottom habitat

Jurisdictions: Alameda County and the State of California

Project Narrative

History: In late 2011 California's Department of Resources Recycling and Recovery's (CalRecycle) cleanup staff was approached by the U.S. Environmental Protection Agency (US EPA) regarding submittal of a grant for the removal of marine debris in the bay area. After reviewing the grant requirements, CalRecycle determined that the US EPA funds were not sufficient and too restrictive to allow for a substantial project to be completed. The US EPA also forwarded CalRecycle an additional grant opportunity from the U.S. Fish and Wildlife Service (USFWS) that was based on the 2011 Cosco Busan Spill legal settlement.

After a preliminary site visit, CalRecycle determined the estuary contained enough marine debris and abandoned vessels to develop an initial grant request for the 2012 Cosco Busan Recreational Use Grant Program. In April, CalRecycle submitted an initial grant request for a 50% match by USFWS for a proposed \$1.3 million dollar cleanup, which was accepted and CalRecycle was awarded a \$650,000 grant from the National Fish and Wildlife Foundation. The concept of the project was to remove abandoned vessels, marine debris, old piers and docks, and navigational hazards from the estuary to provide aesthetic and health and safety enhancements to the public and the estuary environment, and increase recreational opportunities available for the public. The initial proposal included the removal of up to eighteen illegal marine debris sites, twenty-one sunken vessels, two sunken barges, and three abandoned docks. In addition, and 20 to 25 illegally moored vessels in the estuary in an attempt to solve the illegal mooring problems in the estuary, so the California's Submerged Lands





Oakland Estuary Enhancement Project

Commission partnered with local, state, and federal marine enforcement agencies to post all illegally moored vessels in the estuary with a “Notice of Trespass” pursuant to California Public Resource Code.

In August, 2012, CalRecycle also sent a letter to US Army Corps of Engineers (USACE), US Coast Guard (USCG), and US EPA requesting their participation in a joint venture raising, evaluating, assessing, and removing four abandoned wrecks and other hazardous waste from the Oakland Estuary. Since these abandoned wrecks have been completely under water for years they were deteriorating and causing a substantial threat of releasing a hazardous substance into the environment as well as potentially impeding navigation and creating public safety hazards, the US EPA offered to be the lead federal agency while the USACE and the USCG offered resources and support to the field effort.

After receiving the grant funding and support from US EPA, USCG and USACE CalRecycle was able to leverage this support to include additional federal, state, and local agencies who all banded together and were able to provide direct and indirect expenditures totaling \$9.16 million dollars. This allowed the project to get underway and significantly increased the number of vessels and amount of debris that could be removed. By the end of the project, instead of addressing the proposed 18 debris sites, CalRecycle was able to remove 59 ADV, marine debris and hazardous substances from 77 different sites within the estuary over a 10 month period.

Why was the project initiated: CalRecycle became interested in submitting a proposal for a USFWS grant opportunity, and after conducting a preliminary site assessment, they determined the estuary contained enough marine debris, abandoned vessels and docks, and other navigational hazards to develop an initial grant request.

Who initiated the project: CalRecycle initiated the project by submitting their \$650,000 proposal to the USFWS for the Cosco Busan Recreational Use Grant Program, which was accepted and funded.

Lead agency or organization: State of California through CalRecycle.

Other collaborators/stakeholders involved: Numerous federal, state and local agencies and businesses contributed time and resources, including the California State Lands Commission, California Department of Fish and Wildlife, California Boating and Waterways Commission, Oakland Police Department, US EPA, USCG, NOAA and USACE. Other collaborators included the Alameda Police Department, Alameda Marina, Bay Conservation and Development Commission, Coastal Conservancy, the San Francisco Bay Regional Water Quality Control Board, San Francisco Baykeeper, East Bay Regional Park District, County of Alameda, CalParks: Boating and Waterways, and the Port of Oakland.

Funding source(s): Initial funding for this project was provided by the Recreational Use Grant Program through the Cosco Busan Oil Spill Settlement and a 50% match from CalRecycle with support from the California State Lands Commission, California Dept. of Fish and Wildlife, and Oakland Police Department. Additional funding and support for vessels and marine debris assessment was provided by US EPA, USCG and USACE. Through cooperation and collaboration the project was able to further leverage over \$7,000,000 to complete the project and remove the two large tug boats that were pollution and navigation threats.

Threats from ADV



Oakland Estuary Enhancement Project

Environmental: All the targeted sites posed an immediate or future threat of releasing hazardous substances to the Oakland Estuary and surrounding sensitive ecosystems.

Critical habitats involved: Sensitive estuary habitats including marsh and mudflats.

Public safety and health: There was a likelihood of direct human exposure, via ingestion and/or inhalation of hazardous substances, and the threat of future releases and migration of those substances, which posed an imminent and substantial endangerment to public health based on the factors set forth in federal and state regulations.

Navigation: Navigational hazards were present and public access to piers and shorelines was restricted by vessels and debris.

Aesthetic: The large number of abandoned and derelict vessels within the estuary also impacted the aesthetic value of this coastal ecosystem.

Summary of Removal

Number of vessels: 59

Primary vessel type: Recreational, fishing and tug boats

Primary hull type: Wood, fiberglass and steel

Average vessel size: Vessels ranged in size from small recreational vessels to tugs over 100 feet in length.

Acres restored via removal: Habitat restored included 4.94 acres of seabed and navigable waterways and over 1,000 feet of shoreline.

Approximate removal costs: A total of \$8,510,000, including grants and funds leveraged using the grant money, became available to complete this enhancement project. The initial Cosco Busan Recreational Use Grant was for \$650,000, which was matched by funds from the State of California.

Other cost information: The U.S. EPA and USCG spent over \$2.5 million to raise and remove the hazardous material off the Tug Respect, CalRecycle authorized and spent an additional \$600,000 dollars over the original matching fund of \$650,000 to complete the demolition of the Tug.

Additional debris removed: Overall the project eliminated and prevented the release of 3,894 gallons of oily water, 3,270 gallons of waste paint and related materials, 1,040 gallons of flammable liquids, 1150 cubic yards of contaminated soil (i.e., heavy metals and creosote), 3,270 tons of oily contaminated mud, 269.56 tons of treated wood, 88 tons of asbestos, 120 lbs toxic liquid, 40 lbs of acid liquid, 50 gallons of waste oil, 32 units of explosives (i.e., marine flares), 29 marine batteries, along with other household hazardous wastes. The final disposal from the project included 322.82 tons of solid waste, 741 tons of concrete, and 748.79 tons of recycled metal.

Vessel removal summary: A total of 59 vessels were removed throughout the duration of the project, including two large tugboats that contained substantial amounts of hazardous materials.

Project Removal Actions

Start date: September 23, 2013

End date: July 23, 2014

Removal options considered: All removal actions were developed on a site by site basis, and all available options were considered.



Oakland Estuary Enhancement Project

Environmental Considerations: To limit any further environmental damage to the estuary and prevent hazardous spills from occurring during the removals and into the future.

Removal Methods: Personnel, heavy equipment, and resources were mobilized by the contractors to remove the ADV, and due to the large variety of circumstances encountered at the 77 sites many different methods were utilized. Before any removal activities began, a site health and safety meeting was conducted to assess any known chemical hazards, physical hazards, loading issues, water rescue procedures, spill response, and other safety protocols. The removal project was consistent with standard waste management, engineering, spill response, and construction practices. All wastes were transported by licensed waste hauler and properly disposed.

Authorities used to take Possession of Vessels: Statutes under California's Harbor and Navigation Code (Division 3, Chapter 3). Additionally, trespassing laws under California Public Resource Code were used to remove illegally moored vessels not removed by their owners.

Permits Required: CalRecycle worked with local, state and federal agencies concerning the permitting and mitigation of the waste in the estuary.

Salvage Contractor(s): Removal of the debris was performed by Pacific States Environmental, Inc, and their subcontractors in general conformance with their work and safety plans submitted.

Vessel Disposal Process/Issues: Each responsible agencies has limited authorities to act and restrictions on their engagement. For example, the USCG, US EPA, USACE, all have the authority to act to protect the environment; however; depending on the vessel location and type of waste (e.g., hazardous and non-hazardous), only certain actions can be instituted by each agency. Coordination between all agencies involved required CalRecycle to matrix to address the various permits and jurisdictional issues.

Project Challenges

Geographical: The large extent and scope of the project within the estuary.

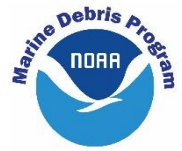
Funding: The vast amount of vessels and debris in the estuary exceeded all the state agencies responsible for ADV and marine debris operational budgets, and initially, the funding that was received from the USFWS grant (and matched by the state) was not enough to accomplish the project.

Other Challenges: The large number of vessels and the coordination that was required to remove and dispose of so much debris.

Lessons learned

There were many operational lessons learned at the Oakland Estuary Project. The key lessons focused in on preparation, coalitions, coordination, and countermeasures. The first lesson in removing abandoned vessels and marine debris is to expect that the scope of the project will evolve and change over time (i.e. historical restrictions or new vessels). Other lessons include:

- Use all available federal, state, and local resources;
- Be proactive and work with your coalition partners (i.e., Harbor Masters, local marinas, and local gov't facilities) who "know" where the high risk vessels are located.
- Use a coordinated marine enforcement action;
- Establish working relationships with all parties involved.
- Coordinate your project with other agencies to maximize your available funding and resources;



Oakland Estuary Enhancement Project

- When applicable use federal authority granted to the US EPA or USCG under CERLA to assist in navigating the federal, state and local agencies permit matrix;
- Expect the unexpected when it relates to hazardous waste, oil, and fuels.
- For large projects provide additional staff to manage the cost tracking and project documentation.

New tools, techniques or developments

CalRecycle developed a number of additional Best Management Practices relating to marine debris removal during the course of this project. And, with the partnership between agencies, they developed a matrix to solve the permit, removal, and disposal issues to remove the debris more effectively. This partnership combined authorities, resources and funding to complete the mission.

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Images:

