

Castro Cove, Richmond, CA



Introduction

Castro Cove is a remote shallow embayment of San Pablo Bay not readily accessible to the public. Historically, wastewater from industrial, commercial, and municipal operations, including the Chevron petroleum refinery in Richmond, California, was discharged into Castro Cove. Chevron stopped discharging wastewater into Castro Cove in 1987 and other pollution sources have been eliminated, but sediments inside the Cove still have elevated levels of contaminants, including mercury and polycyclic aromatic hydrocarbons. Chevron is currently removing the most highly contaminated sediments under order of the California Regional Water Quality Control Board, an effort estimated by the Natural Resource Trustees to cost Chevron \$20–\$30 million. In addition, Chevron is liable for **natural resource damages** due to the contamination.



What are Natural Resource Damages?

Natural Resource Damages are compensation for the injury to, destruction of, or loss of natural resources. Monetary damages collected by the government in these cases are used to pay for natural resource restoration projects that have sufficient benefits to compensate for the loss of resource value caused by the pollution. These monetary damages are paid by the responsible party in addition to any cleanup costs and/or fines that it may owe. Under state and federal law, natural resource damages must be used to "restore, replace, rehabilitate, or acquire the equivalent" of the natural resources that were injured.



Who are the Natural Resource Trustees?

NOAA, the United States Fish and Wildlife Service, and the California Department of Fish and Game are the federal and state trustee agencies ("Trustees") for the natural resources injured in Castro Cove. These agencies act on behalf of the public to assess injuries from the contamination, recover damages, and implement a restoration plan intended to make the environment and the public whole.

What is the status of the Castro Cove damage assessment?

In 2005, the Trustees began a natural resource damage assessment (NRDA) to identify and quantify both the injuries to natural resources and the amount and type of restoration needed to compensate for those injuries. Representatives of Chevron and the Trustees coordinated technical activities for the NRDA. The Trustees have prepared a Draft Damage Assessment and Restoration Plan/Environmental Assessment (DARP/EA) to inform the public of the NRDA and the restoration planning conducted thus far for Castro Cove. The Draft DARP/EA describes the injuries and proposes restoration alternatives. The document has been prepared in accordance with the National Environmental Policy Act and the California Environmental Quality Act. The Trustees are seeking comments from the public on the Draft DARP/EA, especially on the preferred restoration alternative it describes.

How was the injury quantified?

The Trustees quantified injuries to intertidal mudflat, salt marsh, and other shallow subtidal habitats using Habitat Equivalency Analysis, a standard method of scaling injuries and restoration actions. They estimated the amount of environmental benefit that these habitats would have provided if they had not been contaminated. Scientists analyzed mortality rates for amphipods (a type of small crustacean that lives in mudflats), and used this information to estimate the total environmental injury caused by the contamination.

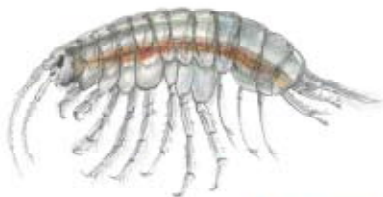


Image of a gammarid amphipod.

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How much restoration is needed to compensate for the injury?

The Trustees evaluated a range of possible projects that could provide ecological benefits similar to those lost due to the contamination. The Trustees also calculated how large such a restoration project would have to be to compensate for the losses caused by the contaminants. The Trustees' best estimate is that approximately 200 acres of tidal wetland habitat restoration is needed to offset the loss.

How were the restoration projects evaluated?

The Trustees consulted with local scientists, public and private organizations, and other state and federal experts to identify a reasonable range of potential restoration projects that would be comparable to the resources that were injured. They then evaluated potential projects to see if they met two essential criteria: (1) Would the project provide ecological services of the type injured in Castro Cove? and, (2) Would the project be in reasonable proximity to Castro Cove? The Trustees looked for but did not identify any projects that could significantly enhance the ecological functioning of Castro Cove itself, beyond the ongoing sediment clean-up. Thus, the focus of restoration analysis for this site has been on creating or restoring additional similar habitats in the surrounding ecological sub-region. The Trustees generally considered projects within the San Pablo Bay ecological sub-region to be in reasonable proximity to Castro Cove. Other criteria determined which projects would provide the greatest resource benefits in the most efficient manner, resulting in the preferred restoration alternative.

The Preferred Restoration Alternative

The Trustees identified as their preferred alternative the two highest ranking projects from among 10 evaluated in the Draft DARP/EA. These two projects best satisfy the evaluation criteria and provide appropriate compensation to restore habitats and biological communities similar to those injured in Castro Cove. The Trustees propose to provide settlement funds for a proportional share of the Cullinan Ranch restoration project (estimated contribution: 173 acres of the 1,500 acre project) and for a proportional share of the Breuner Marsh restoration project (estimated contribution: 30 acres that plans currently designate for tidal marsh habitat). Based on past experience, funding portions of these two projects may enable additional funding from other sources to hasten their overall completion.

Cullinan Ranch: Total project consists of returning approximately 1,500 acres of diked baylands to mature tidal marsh. A 173-acre share of this project would be funded by the settlement with Chevron to compensate for Castro Cove injuries. This project ranks high in technical feasibility because most of the planning activities have been completed and it is nearly ready for implementation. It will provide resource benefits similar to those that would have been provided by an uncontaminated Castro Cove habitat.

Breuner Marsh: Recently acquired by the East Bay Regional Park District, this project is still in the conceptual stage. Castro Cove settlement funds would be used to restore up to 30 acres of land suitable for tidal marsh as part of a broader set of habitat improvements, including public access and recreation areas. This project ranks high because it is close to Castro Cove, and the tidal marsh restoration eventually will provide resource benefits similar to those that would have been provided by an uncontaminated Castro Cove habitat.



View of Chevron refinery from Wildcat Marsh and Castro Cove, Richmond, California.

Next steps in the NRDA process

The Trustees have scheduled a 45-day public review period for the Draft DARP/EA, from **November 25, 2008 until January 9, 2009**. A copy is on file at the Main Branch of the Richmond Library (325 Civic Center Plaza, Richmond, CA) and available at www.dfg.ca.gov/ospr/spill/nrda/nrda_castro.html or www.darrp.noaa.gov/southwest/castro/index.html. Comments may be sent to the attention of: Carolyn Marn, USFWS, by fax at (916) 414-6713), in writing (2800 Cottage Way, Rm W-2605, Sacramento, CA, 95825), or via e-mail (castrocove@noaa.gov).

The Trustees will carefully consider and respond to comments in preparing a final DARP/EA. The Trustees have negotiated a tentative legal settlement with Chevron and anticipate that the funds from a completed settlement will be sufficient to implement the preferred alternative in the Draft DARP/EA.