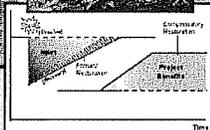


## Cosco Busan Oil Spill

### The Natural Resource Damage Assessment (NRDA) Process

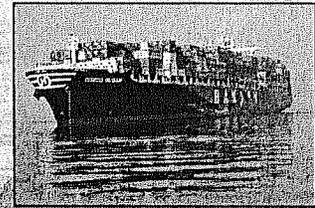
December 18, 2007  
Alameda County  
District Attorney's Office

Presentation by:  
Kathy Verrue-Slater, Attorney  
Steve Hampton, Ph.D., Resource Economist  
of California Department of Fish and Game



## Overview

- What are Natural Resource Damages?
- Authority and Guidance
- Coordination
- Process and Methodologies



## Potential Components of a Pollution Case Settlement

- outstanding clean-up costs
- penalties
- natural resource damages
- other claims
  - public entities (lost tax revenue, lost parking fees, extra staff time, etc.)
  - private claims (lost income, injury to property, etc.)



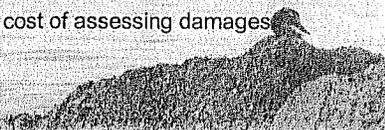
## What are Natural Resource Damages?

- Compensation for natural resource injuries
- Compensation for loss of use and enjoyment
- "Injuries" are biological impacts  
"Damages" are monetary
- Damages are based upon the amount of restoration needed to make the environment and public whole (OPA, Lempert-Keene)



## For NRD, Trustees may recover...

- Cost to restore, rehabilitate, replace, or acquire the equivalent of the injured resources (primary and compensatory restoration)
- Lost human use value (lost use and enjoyment of resources, public beaches, public resources)
- Reasonable cost of assessing damages



## Legal Authority

- OPA 90 – oil
- Other Federal Laws (e.g. Clean Water Act)
- Lempert-Keene-Seastrand – marine oil
- Other State Laws



## Legal Authority: Federal

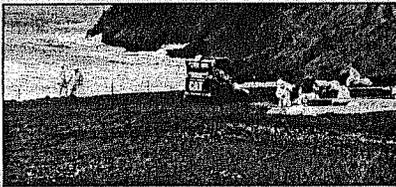
- OPA 90 – oil
  - NRDA regulations by NOAA
  - 15 CFR Part 990
  - requires Trustee coordination
  - requires cooperation with RP
  - requires public participation

## Trustees

- OPA –
  - Federal → DOI (USFWS, NPS, BLM), Commerce (NOAA), DOD
  - State – Secretary of Resources and Secretary for Environmental Protection (for resources within their purview)
  - Foreign
  - Tribes

## Legal Authority: State

- Lempert-Keene-Seastrand – marine oil
  - Govt. Code 8670.56.5 (h)
- Other State Laws (e.g. Fish and Game Code §§ 2014, 12016)



## State Trustees

- Fish and Game Code §§ 711.7 & 1802
  - CDFG is trustee for fish, wildlife, habitat
- Lempert-Keene-Seastrand § 8670.7 (h)
  - Administrator shall ensure assessment of NRDA
  - Administrator shall coordinate all actions req'd by state or local agencies to assess natural resource damages

## Coordination

- Trustees – DOI (USFWS, NPS, BLM), NOAA, CDFG, CSLC, CDPR
- Responsible Party – Funding Agreement
- Local Agencies – Assessment Coordination & Restoration Planning
- Public – Restoration Planning



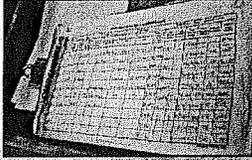
## The Process

- 1) Oil Spill
- 2) Data Collection ← WE ARE HERE
- 3) Public Information Meeting
- 4) Injury and Damage Quantification
- 5) Public Scoping Meeting
- 6) Draft Restoration Plan
- 7) Public Comment Period
- 8) Final Restoration Plan
- 9) Implement Restoration Projects



## Cosco Busan NRDA to Date

- Multi-disciplinary, multi-agency team
- Collecting data and planning NRDA tasks since Nov 7
- Working cooperatively with the RP and their consultants



## Cosco Busan NRDA to Date

- Currently divided into nine teams according to injured resource category:

- birds
- mammals
- fish
- saltmarsh habitat
- rocky intertidal habitat
- sandy beach habitat
- eelgrass habitat
- human uses
- historical and cultural resources



- Also have teams for: sample coordination, liaison to ICC, data management, public outreach

## Injury Quantification

- Wildlife (birds, mammals, fish): size (#), duration (years lost)
- Habitat: size (acres), degree (%), duration (years)
- Human Uses: size (# of lost user-days, diminished user-days)



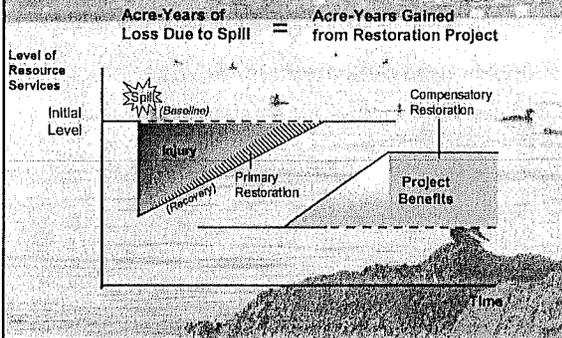
## For Wildlife and Habitat

### Methods are Restoration-based

#### KEY QUESTIONS:

- How big of a restoration project do we need to compensate for the injury? How much will that cost?
- Use Habitat Equivalency Analysis (HEA) as the tool to scale restoration to injuries.

## Habitat Equivalency Analysis



## For Human Use Losses

#### Basic Calculation:

- Lost Use = (# of Lost User-days) X (\$Value per Lost User-Day)
- Diminished Use = (# of Diminished User-Days) X (\$Value per Diminished User-Day)

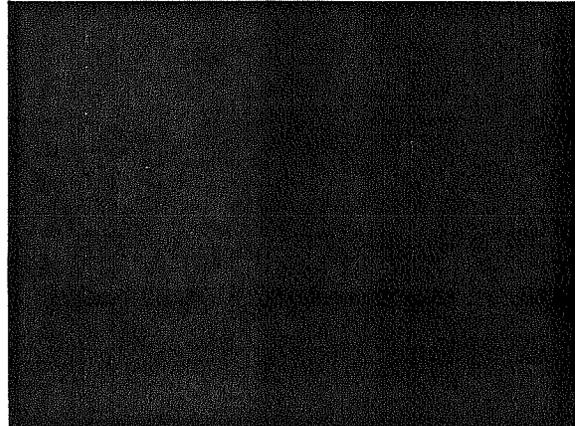
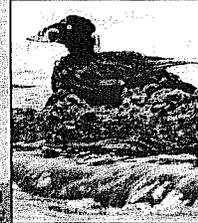


## Human Use Losses

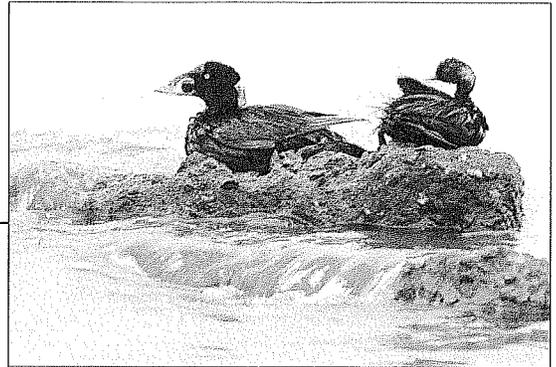
- Types of Recreational Use
  - Water-related activities (e.g., surfing, sailing, swimming)
  - Fishing (e.g., pier, shoreline, charter boat)
  - General beach use
  - Jogging/Bicycling/Dog-walking
  - Sightseeing and Special Events
- Access points are numerous
  - Some sites collect relatively systematic data of historical data on use
  - Other sites may not collect systematic data
  - Document Closures

## Restoration Project Selection Criteria

- Nexus to Injured Resources
- Technical Feasibility
- No Duplicate or Replacement Funding
- Legality
- Likelihood of Success
- Cost Effectiveness
- Multiple Resource Benefits
- Duration of Benefits
- Public Health and Safety
- Avoidance of Adverse Impacts
- Opportunities for Collaboration



# Natural Resource Damage Assessment and Restoration Planning for M/V Cosco Busan



Oiled Surf Scoter and Eared Grebe. Photo by Bob Dang

**A**s a result of November 2007 M/V *Cosco Busan* oil spill that released 58,000 gallons of fuel oil into San Francisco Bay, representatives from state and federal agencies are working together with the responsible party to assess the ecological injuries and human use losses from the incident. This process is known as a natural resource

damage assessment (NRDA). With this assessment, the trustees can quantify the injuries to wildlife, habitat, lost use of those resources, and develop an appropriate restoration plan. The state and federal natural resource trustee agencies (trustees) will ultimately make a claim for funds from the responsible party to complete restoration projects designed to both restore and compensate for the injured resources and human activities.

## NRDA Resource Groups

- Birds
- Mammals
- Fish
- Sandy Beach Habitat
- Rocky Intertidal Habitat
- Saltmarsh Habitat
- Eelgrass Habitat
- Human Uses
- Historical and Cultural Resources

## Public Process

There will be a public information meeting in early 2008 that will provide an opportunity for the public to learn about the NRDA process. The meeting will also allow the trustee agencies to learn about additional observations and data collected by the public or other organizations. The trustees will seek public input on appropriate restoration projects that will compensate for the injuries. When the trustees complete the process of quantifying injuries and identifying potential restoration projects, a draft restoration plan will be presented to the public. The trustees will hold public meetings to explain the draft plan and seek input on the suggested restoration projects.

## Assessment Activities

The trustees started working immediately during the spill response to characterize the full extent of the injury in both geographic scope and scale. Figure 1 shows NRDA sampling locations. There are nine major habitat types/resources that the NRDA teams are currently assessing.

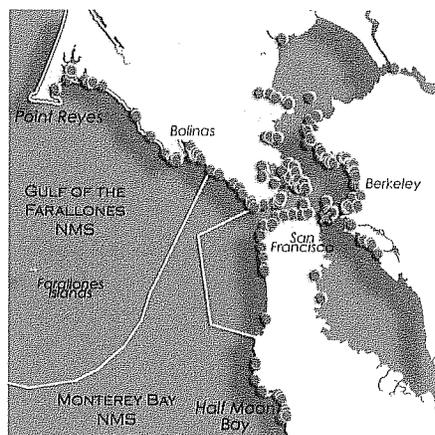


Figure 1. NRDA sampling locations.

Specialized resource teams have been deployed to the field daily since the spill, collecting the time-critical data necessary to document information about degree of oiling in each of the important habitats, oil toxicity, observations of dead and oiled wildlife, and other impacts. All of this information will be used to select and scale appropriate restoration projects.

Hundreds of environmental samples have been collected throughout the assessment area, including sediment, plant, fish, mollusk, water column, and others. These samples are being prioritized and analyzed using high resolution chemistry for "fingerprinting," which helps confirm source, composition, and physiochemical properties.

## Trustees

**State of California:** Department of Fish and Game; Department of Parks and Recreation; State Lands Commission

**United States Department of the Interior:** Fish and Wildlife Service; National Park Service; Bureau of Land Management

**National Oceanic and Atmospheric Administration:** Damage Assessment, Remediation and Restoration Program; National Marine Sanctuary Program

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Al Donner: [Al\\_Donner@fws.gov](mailto:Al_Donner@fws.gov), (916) 414-6566

## Web sites

[coscobusanincident.com](http://coscobusanincident.com)  
[dfg.ca.gov/ospr/spill/nrda/nrda\\_cosco-busan.html](http://dfg.ca.gov/ospr/spill/nrda/nrda_cosco-busan.html)  
[response.restoration.noaa.gov](http://response.restoration.noaa.gov)  
[fws.gov/contaminants/Issues/OilSpill.cfm](http://fws.gov/contaminants/Issues/OilSpill.cfm)

