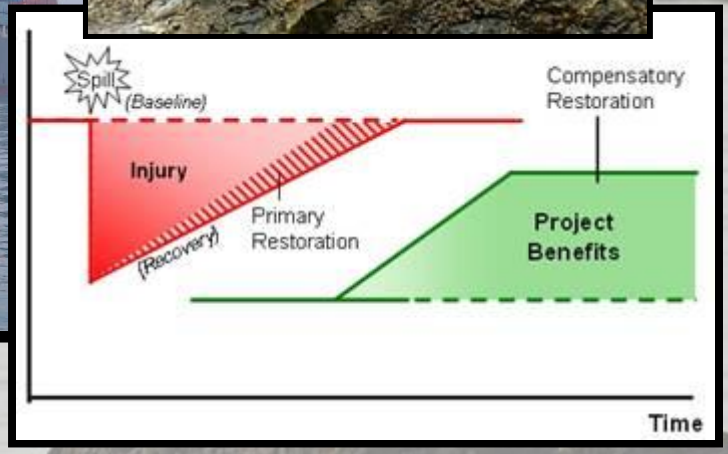
Cosco Busan Oil Spill

Natural Resource Damage Assessment (NRDA)



January, 2008 **Cosco Busan Oil Spill**

Presentation by the
natural resource trustee agencies

Overview

- **What are Natural Resource Damages?**
- **Who are the Trustee Agencies?**
- **Coordination with Others**
- **Process and Methodologies**
- **Next Steps**

Potential Components of a Pollution Case Settlement

- response and 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 the public whole (OPA, Lempert-Keene)

Legal Authority

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

Who are the Trustees?

California Department of Fish & Game (CDFG)

California State Lands Commission (CSLC)

National Oceanic and Atmospheric Administration (NOAA)

United States Fish & Wildlife Service (USFWS)

National Park Service (NPS)

Bureau of Land Management (BLM)

Coordination

Regal Stone Ltd.

Calif. Department of Parks and Recreation

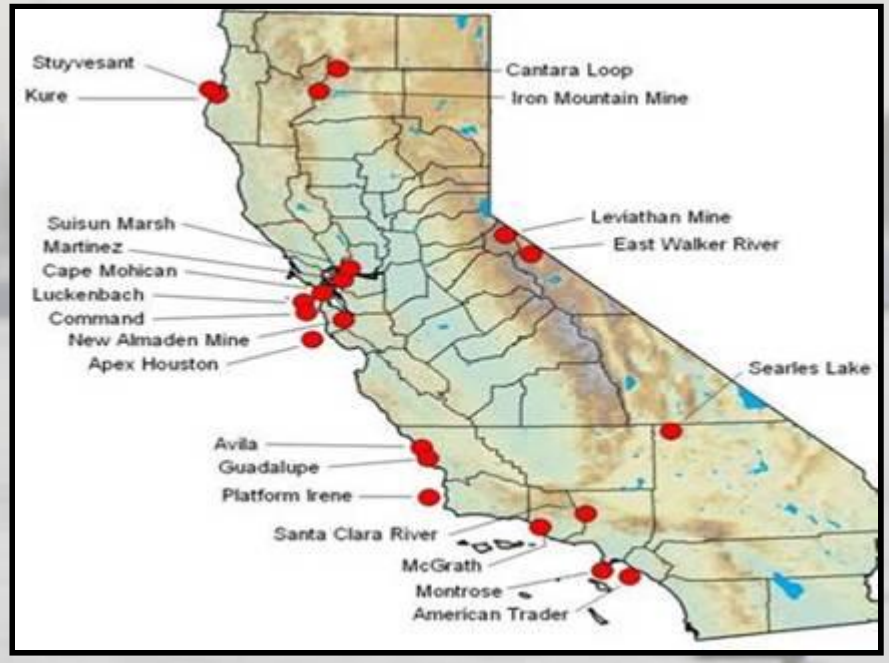
State Water Board

Many cities, counties, and districts

Many non-government organizations

Local and national experts

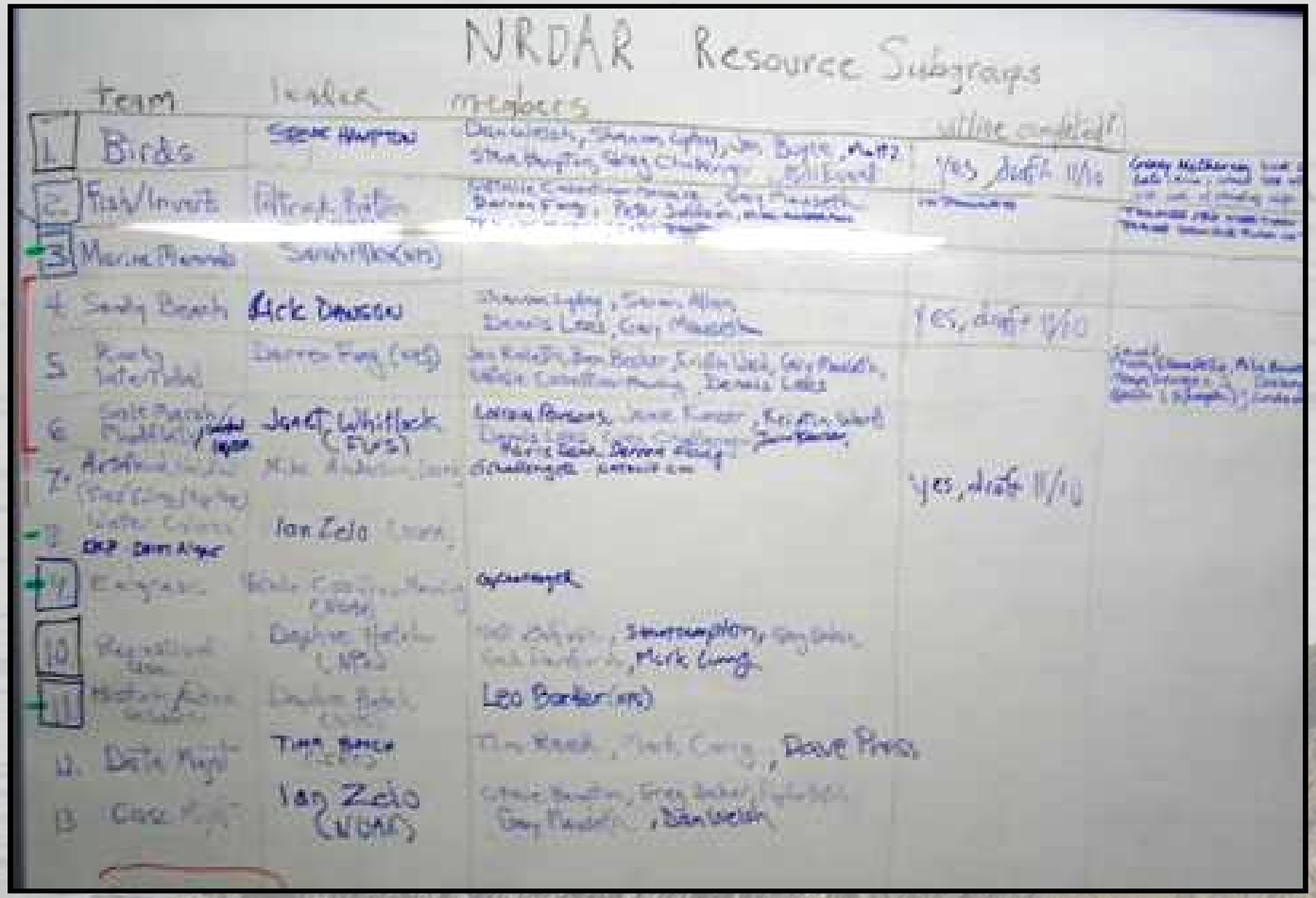
The Process



9) Oil Spill
2) Data Collection
3) Public Information Meetings ⟸ **WE ARE HERE**
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

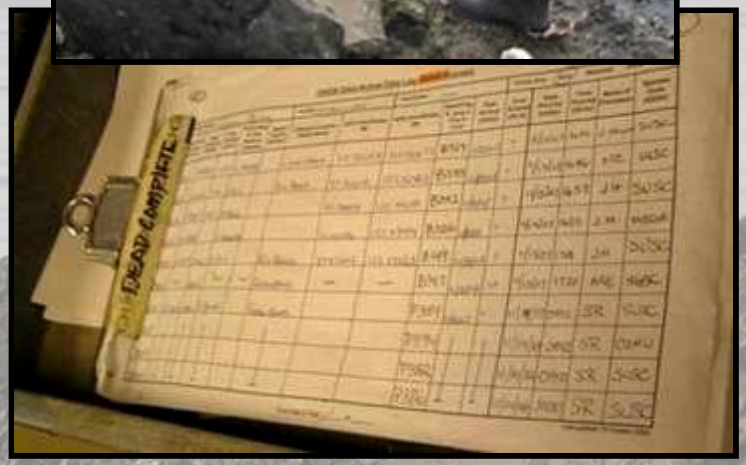
Cosco Busan NRDA to Date

- Multi-disciplinary, multi-agency team
- Collecting data and planning NRDA tasks since Nov 7



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



Injury Quantification

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

For Wildlife and Habitat

Methods are Restoration-based

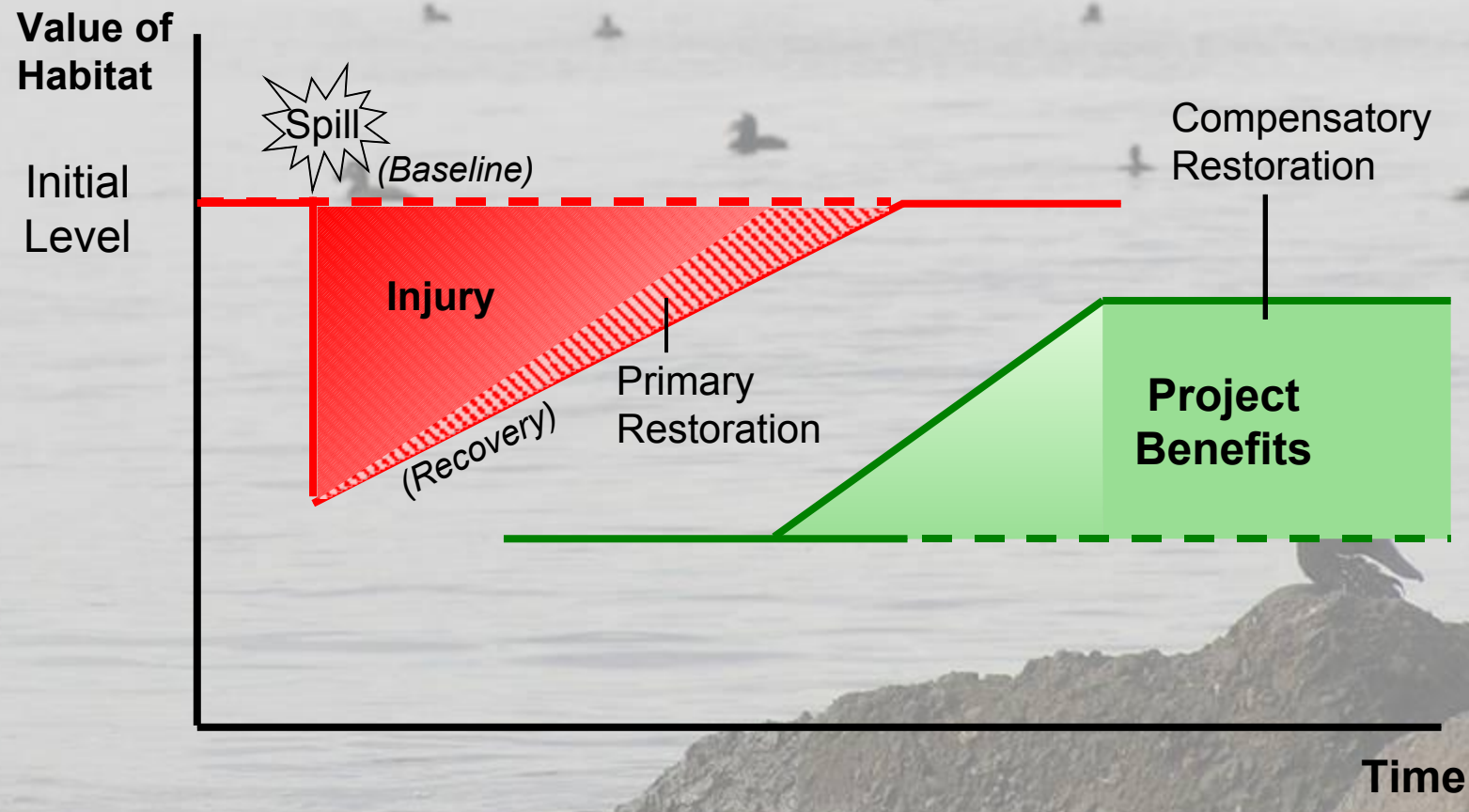
KEY QUESTIONS:

- 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

Acre-Years of Loss Due to Spill = **Acre-Years Gained from Restoration Project**

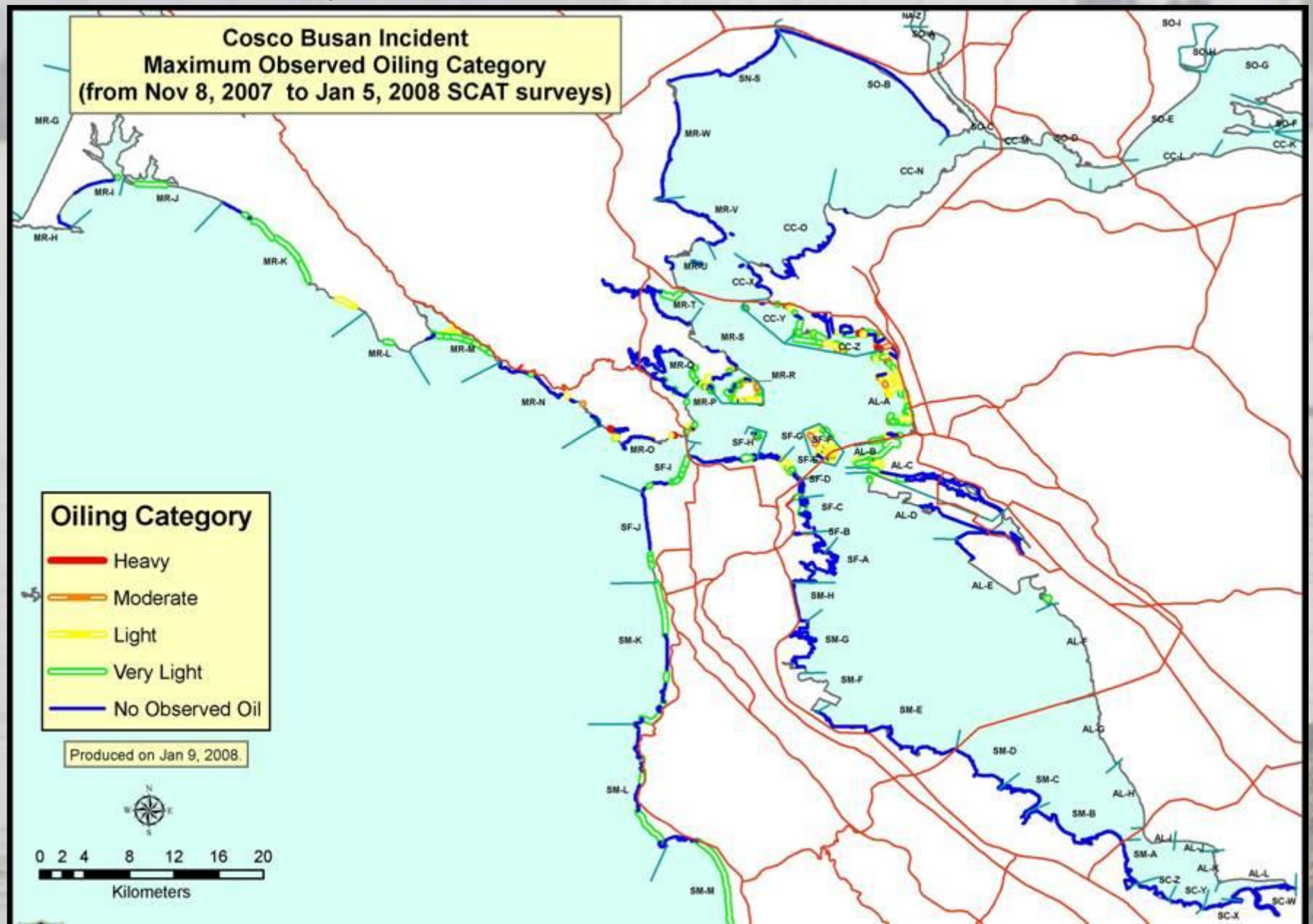


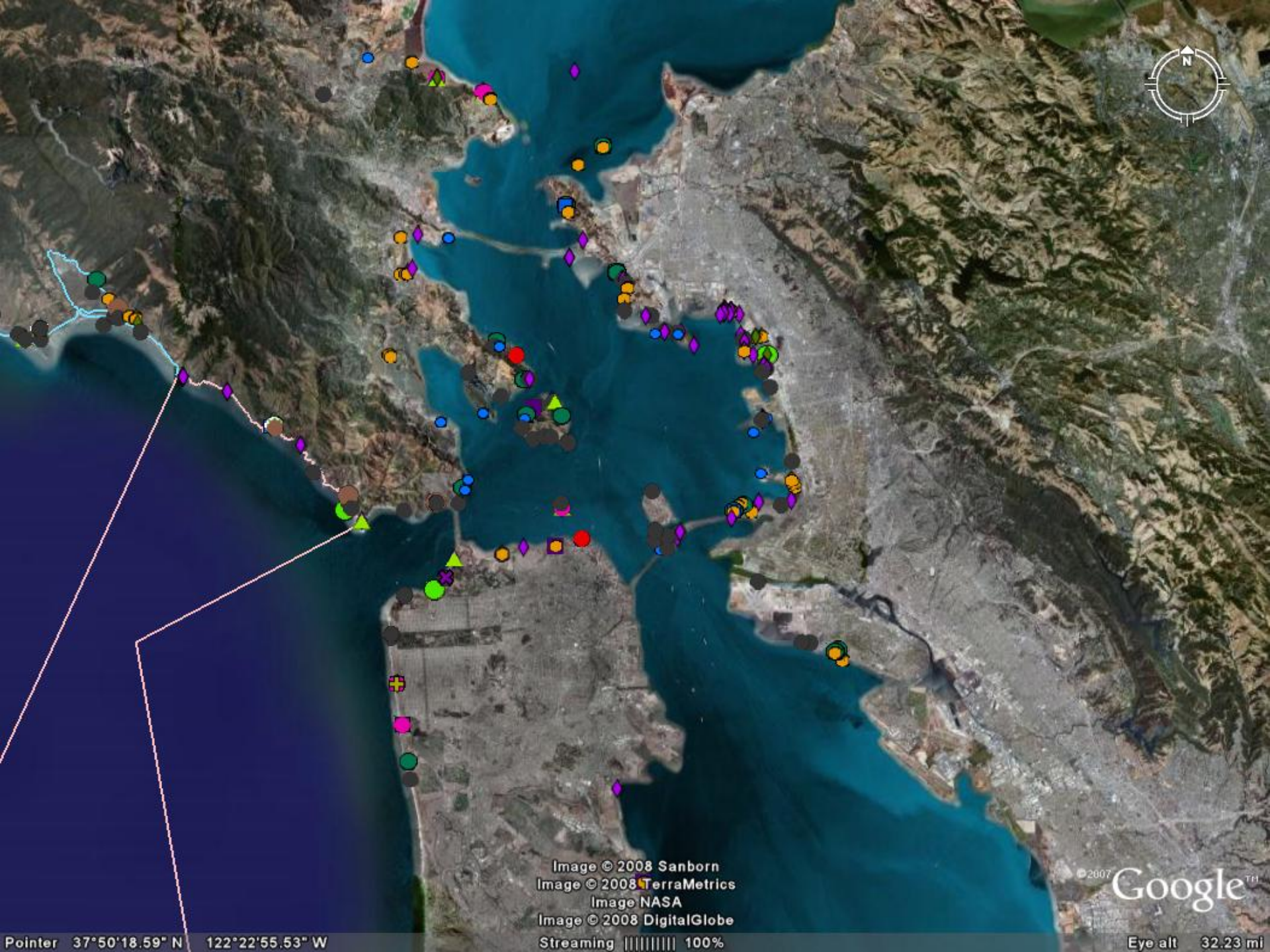
For Human Use Losses

- Basic Calculation:
  - Lost Use =
    (# of Lost User-days) X
    ($Value per Lost User-Day)

- 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

Preliminary Results




N
Image © 2008 Sanborn
Image © 2008 TerraMetrics
Image NASA
Image © 2008 DigitalGlobe
©2007 Google™
Pointer 37°50'18.59" N 122°22'55.53" W
Streaming 100%
Eye alt 32.23 mi

Preliminary Results

Birds
1,084 collected live
(421 rehabbed and released)
1,858 collected dead

Mammals
1 collected live, which died
2 collected dead
at least 223 observed oiled

Human Uses
more than 50 beaches, piers, and coastal access points closed

Rocky Intertidal Habitat
50 miles of coastline oiled
(3.1 moderately or heavily oiled)

Sandy Beach Habitat
41 miles of coastline oiled
(2.3 moderately or heavily oiled)

Saltmarsh Habitat
7.5 miles of coastline oiled
(0.7 moderately or heavily oiled)

Eelgrass Habitat
200 acres within impacted area

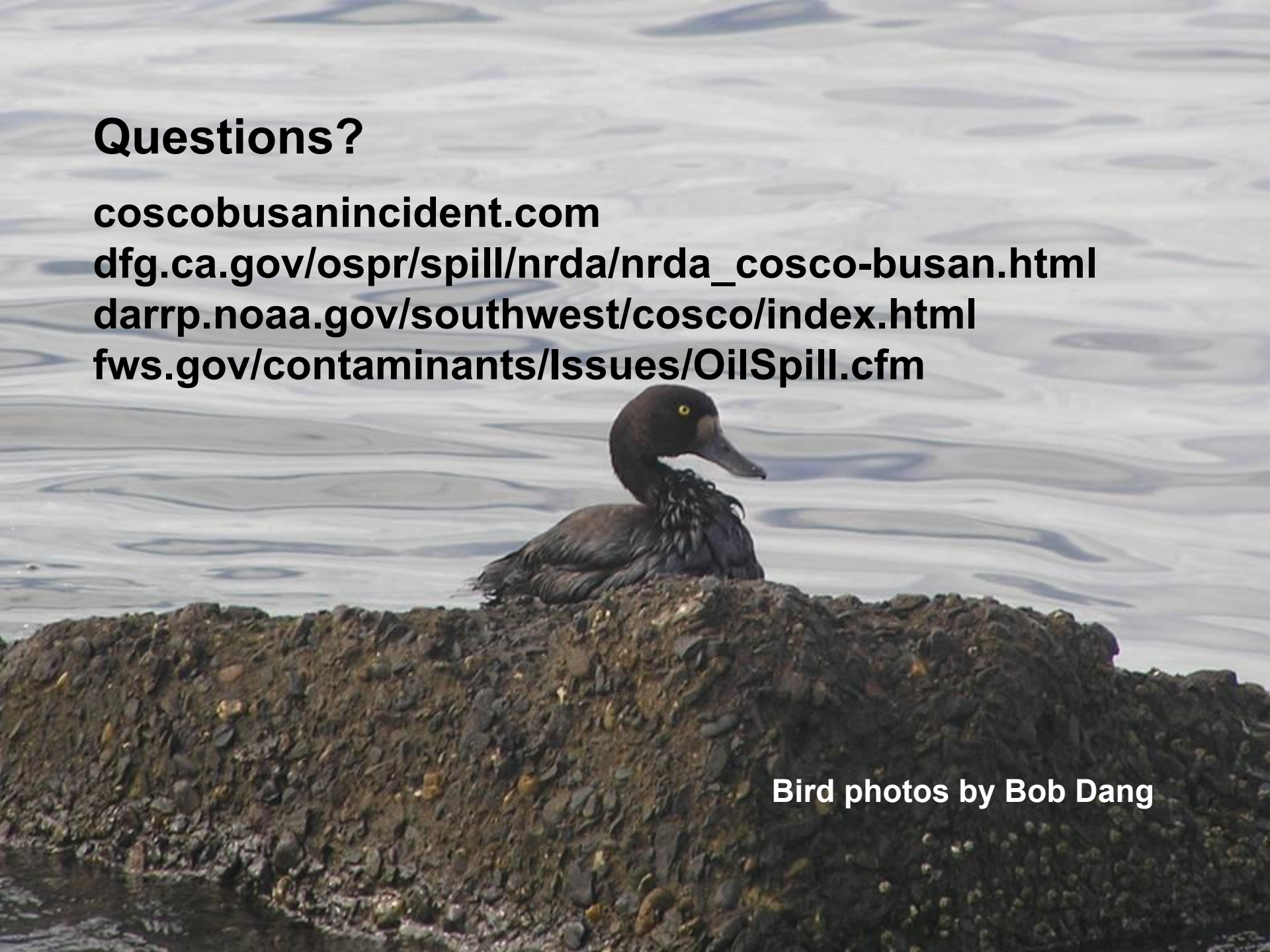
These numbers are subject to further refinement and analysis.

Restoration Projects

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

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



Questions?

coscobusanincident.com
dfg.ca.gov/ospr/spill/nrda/nrda_cosco-busan.html
darrp.noaa.gov/southwest/cosco/index.html
fws.gov/contaminants/Issues/OilSpill.cfm

Bird photos by Bob Dang