

# **Cosco Busan Incident**



**Oil Spill Response Operations**

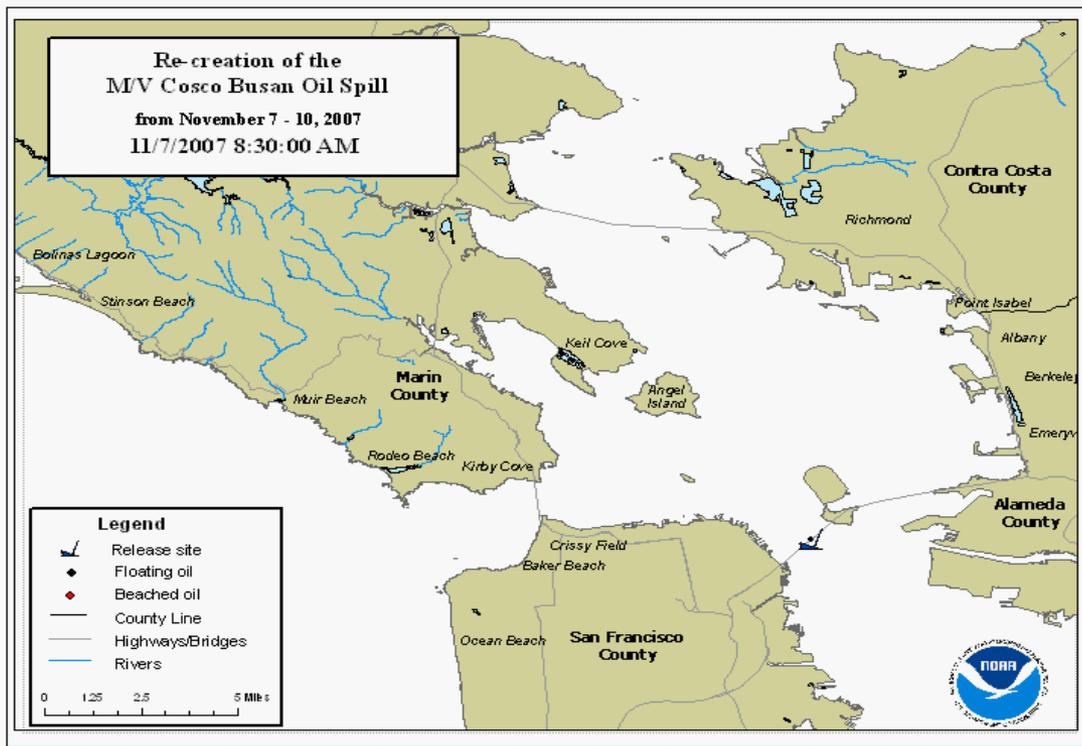
**San Francisco Bay and Coast**

# Incident History

- November 7, 2007: the container ship M/V Cosco Busan strikes the San Francisco Bay Bridge tearing a 100 ft. long gash in its hull over the fuel tanks.
- 58,000 gals of bunker fuel discharges into the Bay in approximately 10 seconds.
- The USCG and DFG are notified of an incident and respond immediately, on-scene in 50 minutes.
- At its farthest extent, the spill impacts beaches and wildlife as far north as Richmond San-Rafael Bridge and Point Reyes, and as far south as Oyster Point and Half Moon Bay.

# Incident History

## Release Trajectory





**Nov. 11, 2007**

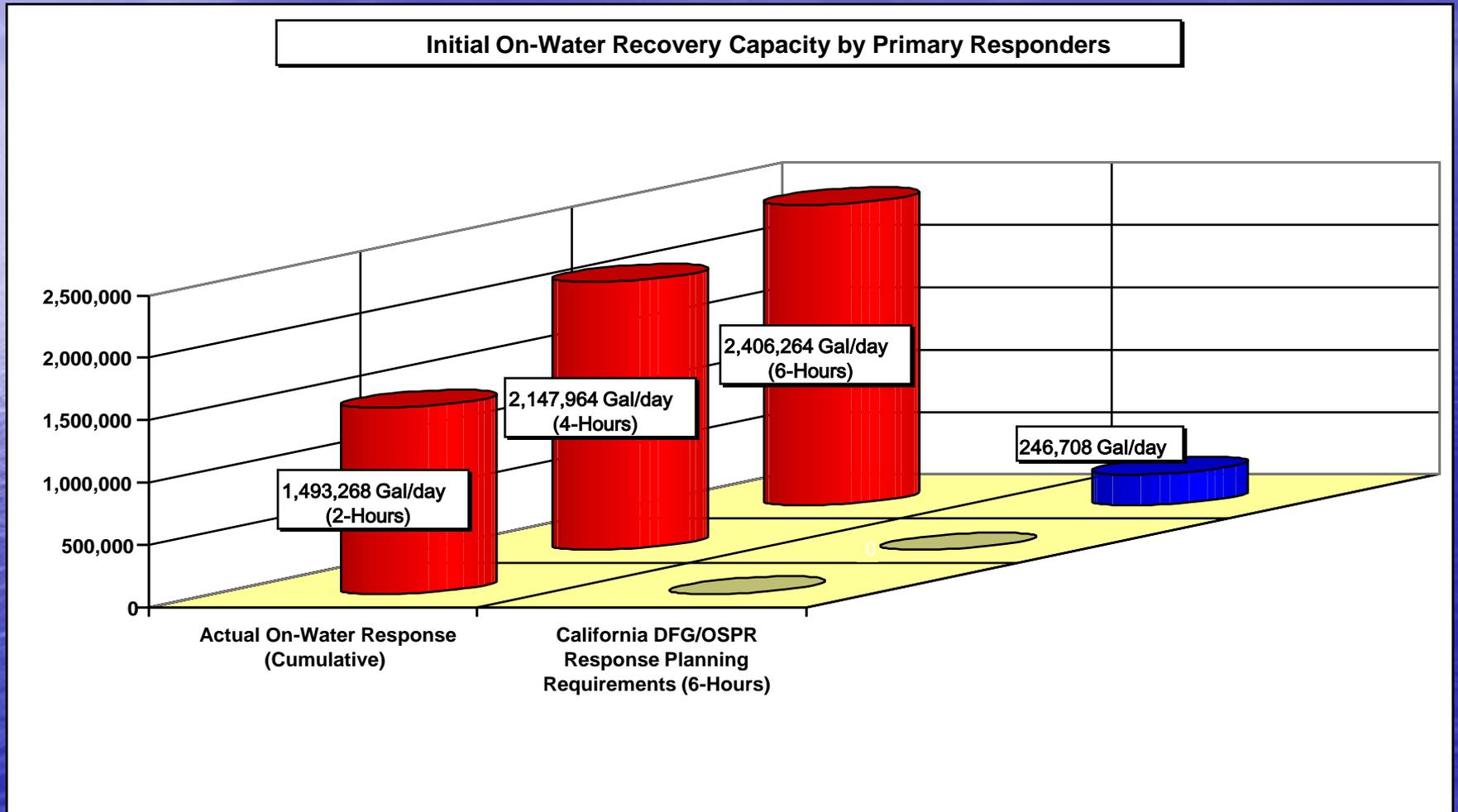
# Response Operations

## COSCO BUSAN Overflight Footage



# Response Operations

## Response Standards





**Incident Command Briefing**



# SKIMMING OPERATIONS

# HELICOPTER DIRECTS ON-WATER SKIMMING OPERATIONS



**FISHING VESSEL DRAGGING  
SNARE BOOM TO PICK UP PRODUCT**



# Response Operations

## Oil Recovery Operations Overflight Footage





**ON-WATER BOOM DEPLOYMENT**

# BOOM DEPLOYED ON CRISSY FIELD



# Response Operations

## Booming Operations at Crissy Field Overflight Footage



# BOOM DECON IN ALAMEDA



# Response Operations

Boom Deployment for East Bay Wetlands Protection  
Overflight Footage



# Phases Of Shoreline Clean-Up

## Phase 1 - Heavy Oil Removal

## Phase 2 - Cleanup of Oil to the Lowest Practical Level

- SCAT inspects and directs clean-up until no oil observed/ no further treatment

## Phase 3 - Maintenance & Monitoring

- Operations conducts maintenance removal activities.
- Teams monitor segments on predetermined schedule for re-oiling events.
- Operations conducts cleanup as needed.
- Determine if segment meets cleanup endpoints

## Phase 4 - Final Inspection & Sign-Off

- Inspection of each previously oiled segment by multi-agency & land owner/ manager teams.

# RESPONSE PERSONNEL ON OUTER COAST BEACH





# EXTRAORDINARY MEASURES FOR REMOTE AREAS

29 NOV 07

# HOTWASH FOR ROCKS IN EAST BAY





**DETAIL CLEANING OF  
RODEO BEACH SANDS**



# CLEAN-UP OPERATIONS

# SIFTING SAND TO REMOVE TAR BALLS



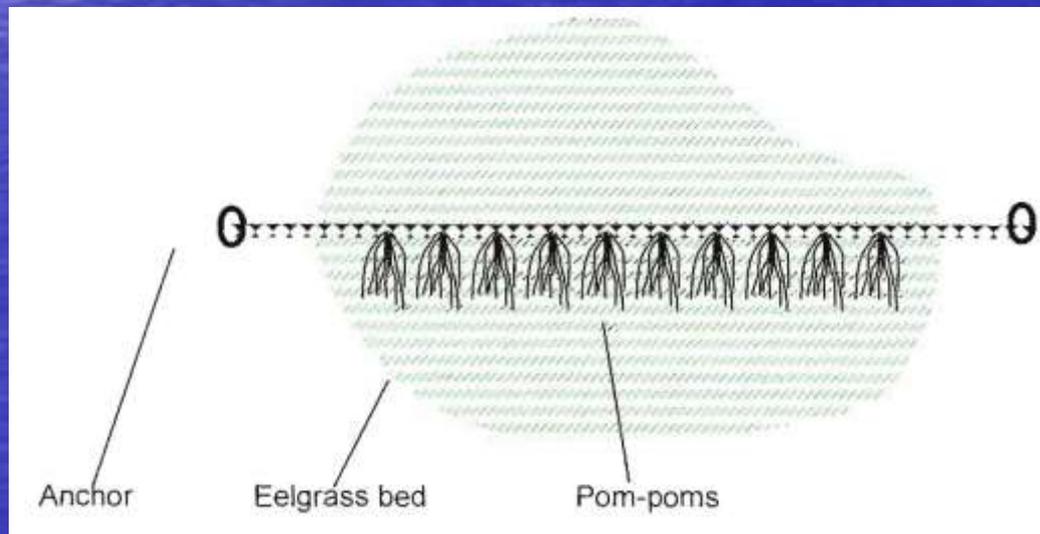
# POM-POM BOOM TO REDUCE RE-OILING



# Submerged Oil Screening Survey

- **Rapid assessment for the presence/absence of oil**
- **The survey sites were areas near herring spawning grounds and areas likely to contain submerged oil.**
- **Two types of screening methods were used:**
  - **Passive-anchored pom-poms in 6 eel grass beds known to be used by herring**
  - **Boat-based pom-poms towed in 3 sites in the East Bay that had moderate to heavy shoreline oiling.**
- **No oil observed on pom-poms in either the passive-anchor method or the boat-based method.**

# Submerged Oil Screening Survey



# Response Operations

## Oiled Wildlife Rehabilitation



**READY FOR RE-HAB**



# Response Community

## Unified Command

- California Department of Fish and Game Office of Spill Prevention and Response (OSPR)
- U.S. Coast Guard
- Ship-owner's representatives including incident management professionals, oil spill response professionals, and contracted scientists.

# **Response Community**

## **Federal and State Responders**

### **Federal Agencies**

**NOAA Emergency Response  
Div.**

**NOAA NMFS**

**NOAA CBNMS**

**NOAA GFNMS**

**US EPA Region 9**

**Nat'l Park Service GGNRA**

**Nat'l Park Service Point**

**Reyes NS**

**Nat'l Park Service, SF Maritime  
(Aquatic Park)**

**United States Park Police**

### **State Agencies**

**State Parks & Recreation**

**Coastal Commission**

**Regional Water Board**

**Cal Volunteers**

**CALTRANS**

**SF Bay Conservation &**

**Development Commission**

**Office of Emergency Services**

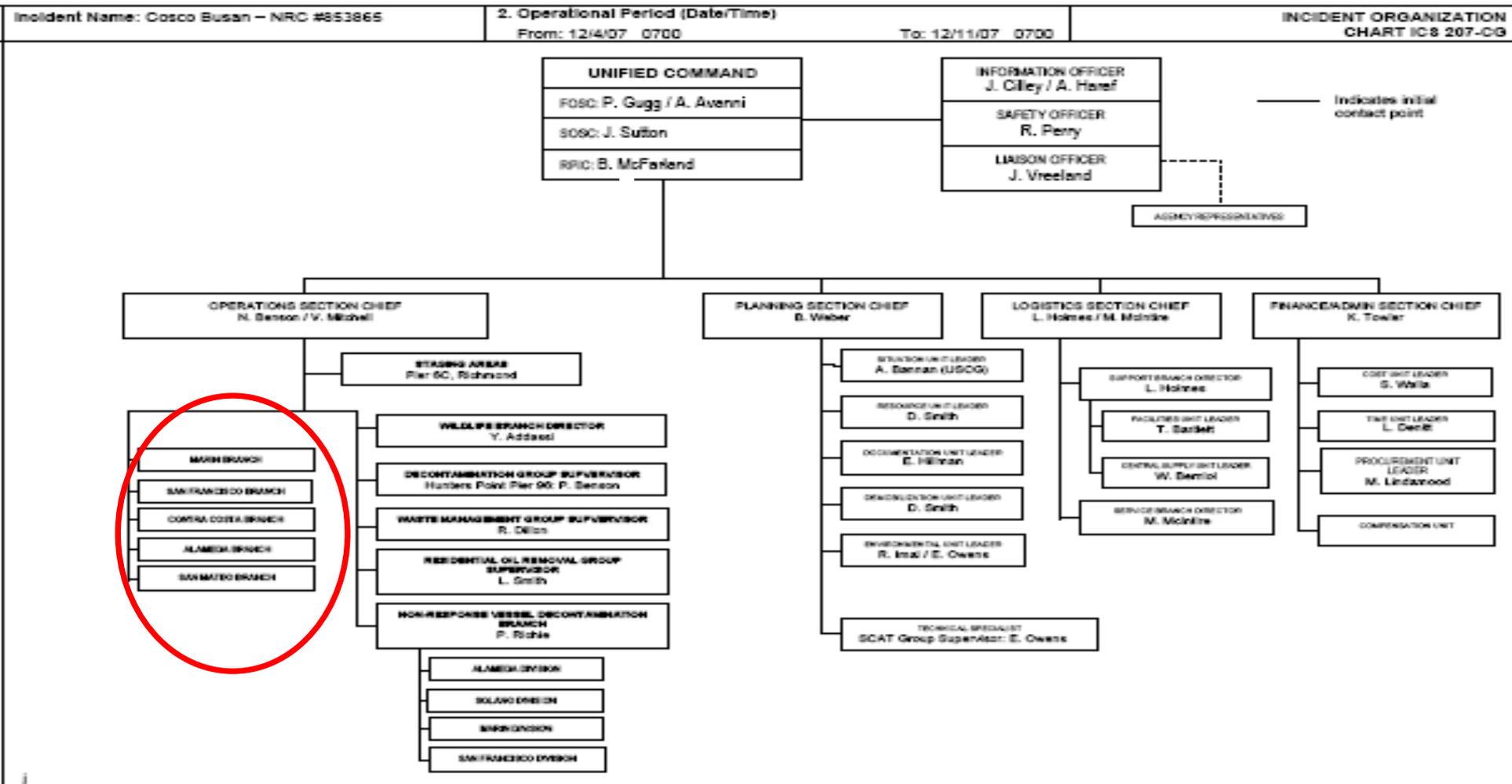
# Response Community

## Local Responders

City of Albany  
City of Berkeley  
City Of Emeryville  
City of Oakland Fire  
City of Oakland OES  
City of Richmond  
SF Dept of Environment  
SF Fire Department  
SF Police Dept.  
SF OES  
SF Parks & Recreation  
SF County Env. Health  
SF Water Control  
Alameda Co Public Works  
Alameda County Env. Health  
Alameda County OES

Contra Costa County Health /HazMat  
Contra Costa County Sheriff  
Marin County Fire  
Marin County OES  
Marin County Sheriff  
San Mateo Co Health Dept  
San Mateo Co OES  
San Mateo Co Sheriff's Office  
San Mateo Police Department  
Sonoma Co OES  
Berkeley Marina  
Emeryville Cove Marina  
Emeryville Marina  
East Bay Regional Parks  
Port of Oakland  
Port of Richmond  
Port of San Francisco

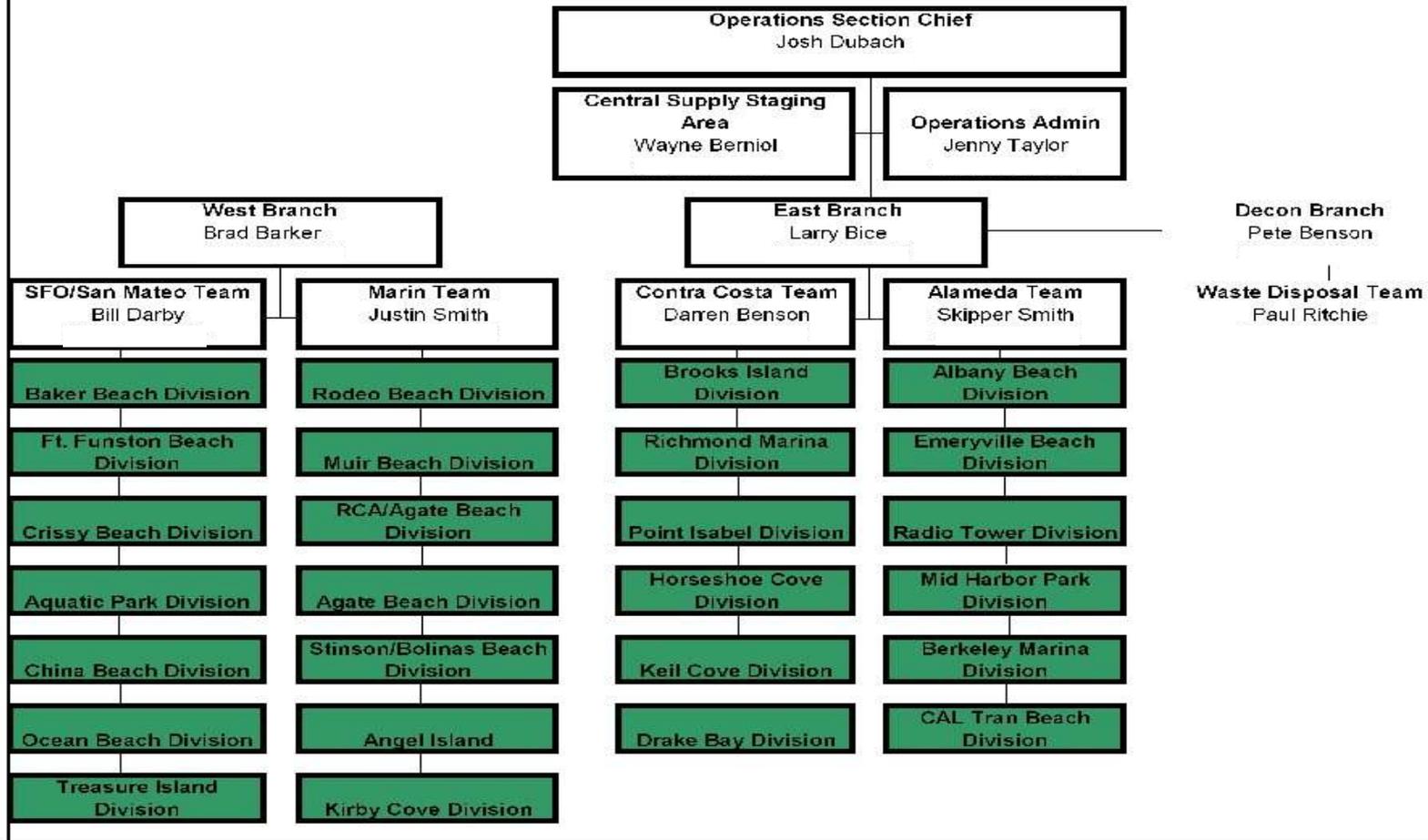
# Response Community



# Response Community

## COSCO BUSAN OPS ORGANIZATION CHART

Monday, December 17, 2007



# **Response Community**

**SF Bay & Delta Area Committee  
and the Area Contingency Plan**

## **Area Contingency Plan (ACP)**

- Sensitive Site Summaries
- Site Response Strategies
- Site Diagrams and Descriptions
- Economic, Cultural, and Archeological Concerns Outlined

# Response Community

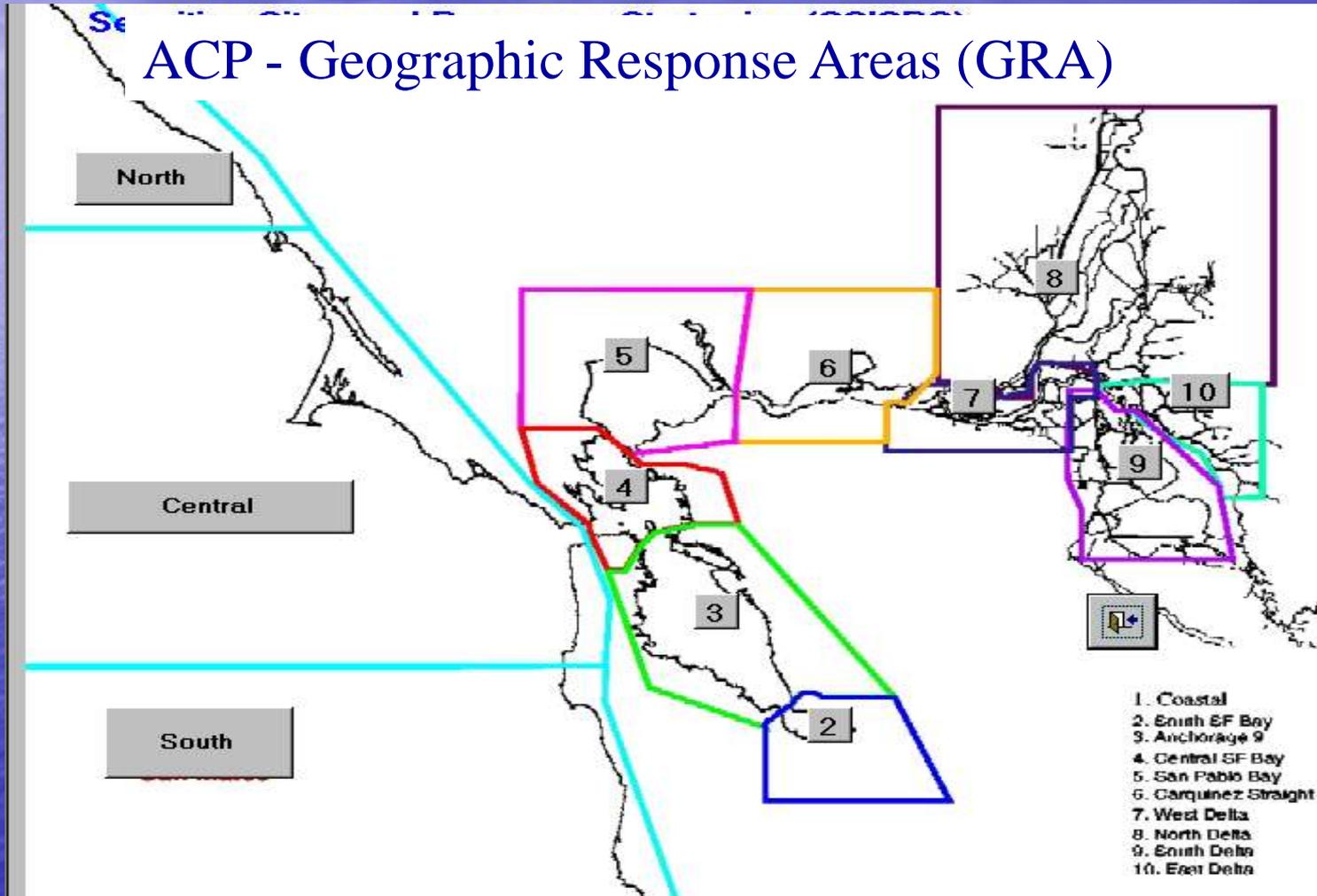
## Area Contingency Plan

- Broad-based and continuous participation by local and regional governments is a key element of the Area Contingency Plan (ACP).
- On-going participation in the ACP process and drills and exercises will be very important for continuing improvement and preparedness for future response efforts.

# Response Community

## Area Contingency Plan

### ACP - Geographic Response Areas (GRA)

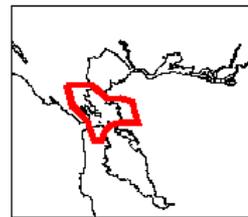
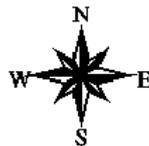
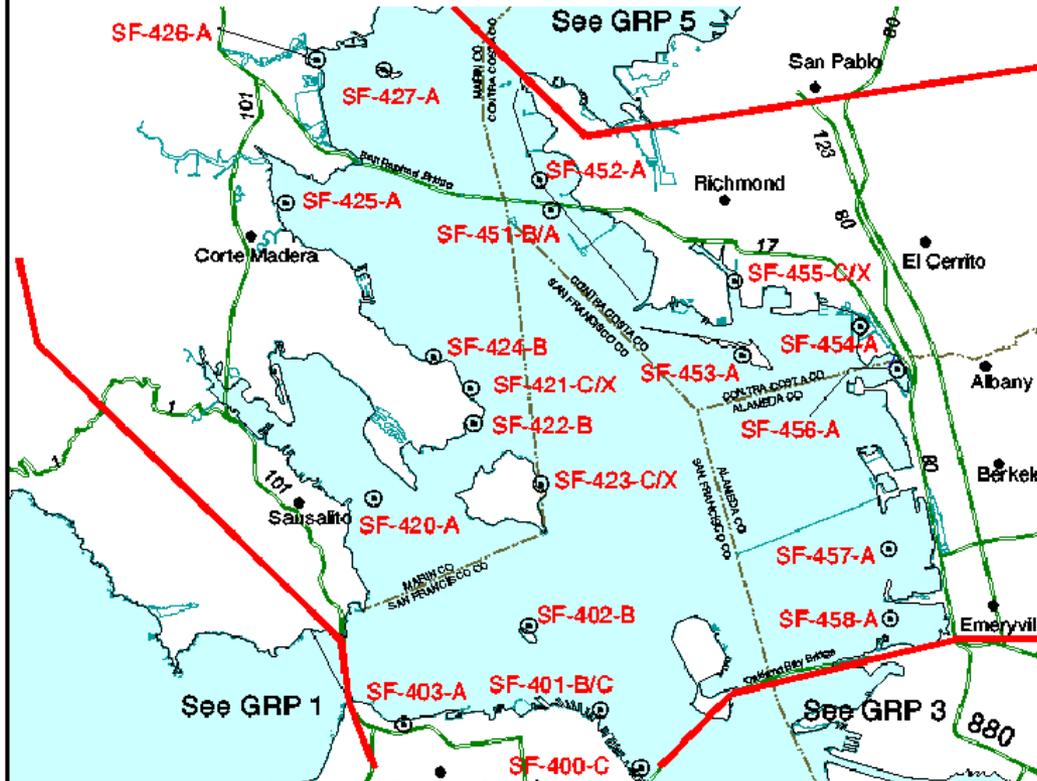




SF Geographic Response Area 4  
Central SF Bay  
Environmentally Sensitive Sites



DETAIL FOR  
SENSITIVE SITES  
IN GRA #4



Note: Marker symbols (⊙) are only site reference and do not indicate full extent of sites.

# Response Community

## Resource Statistics

- 40 agencies involved
- 1,400 trained response professionals
- Response vessels:
  - 13 skimming vessels / 20 fishing boats
- 28,500 feet of boom deployed
- 250,000 field contractor staff hours

# Response Community

## Volunteer Response

- Community response was substantial and its scope unprecedented.
- The partners involved recognize that there are opportunities to more fully incorporate the community into the response process for this incident and for future incidents.

# Response Community

## Volunteer Response

### Volunteers for Beach Cleanup

Volunteer Plan was Activated Nov. 12th

- Training Sessions: 17
- People Trained: 2275
- Volunteers Deployed: 1007

# **Response Community**

## **Oiled Wildlife Care Network**

- **OWCN is an established and integral partner in oil spill response. OWCN facilities can readily call upon ~1,500 pre-trained volunteers to assist with wildlife recovery and rehabilitation.**
- **Statistics:**
  - 400 Volunteers utilized in this spill**
  - 1,100 live oiled birds recovered**
  - 410 birds washed and released**
- **Trustee agencies will recover all costs from the responsible party (Cosco-Busan) for wildlife recovery and care.**



**VOLUNTEERS AT OWCN FACILITY IN CORDELIA**



**VOLUNTEERS NEEDED  
FOR MANY TASKS AT OWCN**

# Marin County



10 NOV 07

**Before**

**After**



01 DEC 07

# Angel Island

**Before**



**After**

# Contra Costa County



**Before**

**After**



# Moving Forward

- Active participation by cities and counties in the Area Contingency Plan is critical for improving these plans. Local communities should send a representative to every ACP meeting.
- Participate in drills and exercises; more than 300 conducted statewide every year.
- There was extensive debriefing and evaluating of the incident response identifying opportunities for improvement.

# Lessons Learned

- **An after action report will be generated in accordance with federal and state requirements.**
- **Efforts are ongoing and the results are pending.**

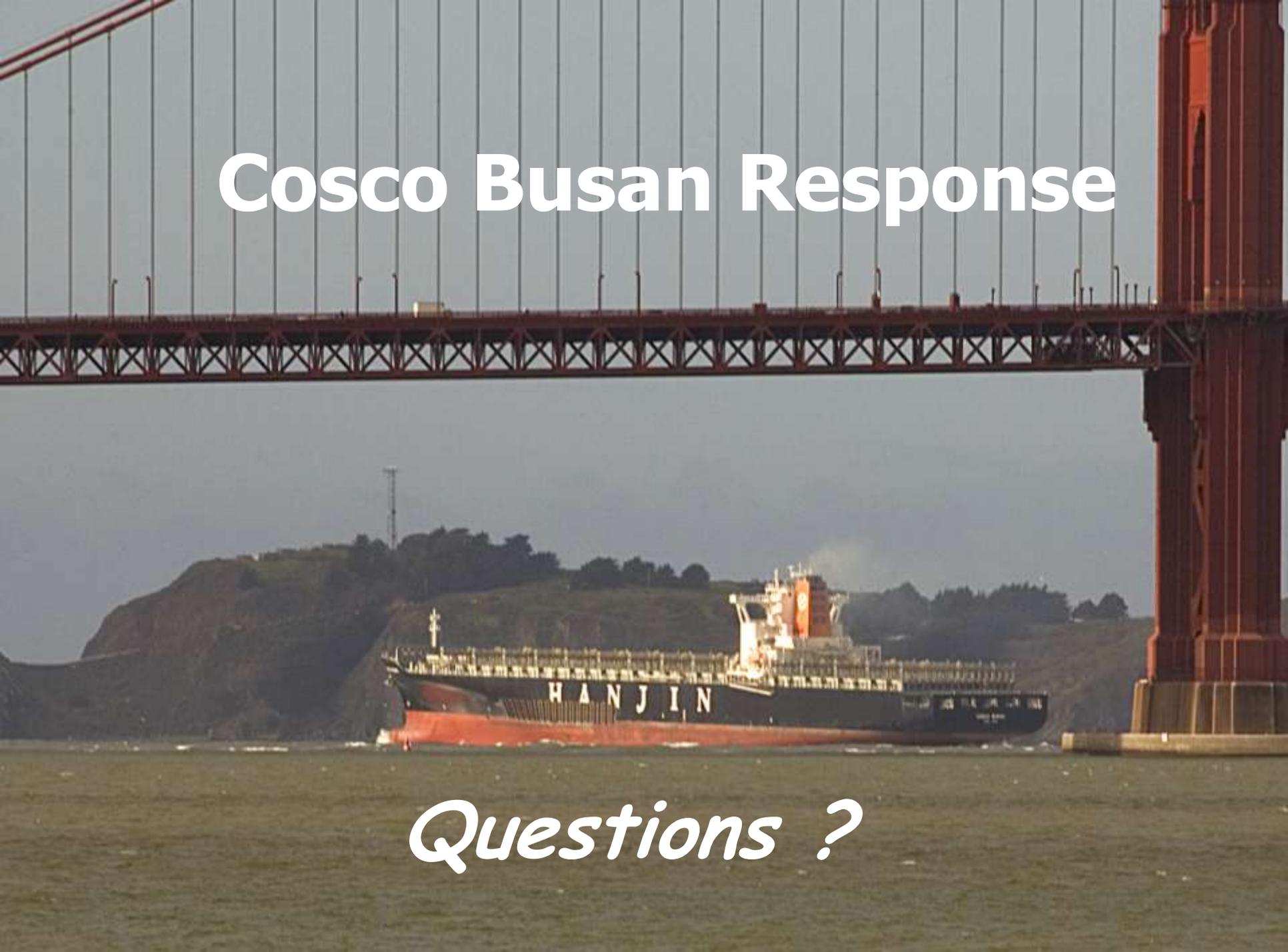
# Investigations

- ISPR started within a week of the incident
- NTSB began investigation-cause/response
- US Homeland Security Inspector General
- Governor asked for internal state investigation (executive branch)
- Bureau of State Audits did extensive OSPR
- Various county after-action reports

# **Natural Resource Damage Assessment (NRDA)**

- **Federal & state agencies early into the spill started NRDA which continues long after spill response ends.**
- **The goal is to restore resources injured by the spill.**
- **Resources being assessed:**
  - **Birds/Mammals/Fish**
  - **Shoreline Habitats**
  - **Historic & Cultural Resources**
  - **Human Uses (e.g. Recreation)**
- **Coordination with local land management entities and public participation is an essential element of NRDA.**
- **All NRDA costs will be covered by responsible party**<sub>50</sub>

# Cosco Busan Response



*Questions ?*