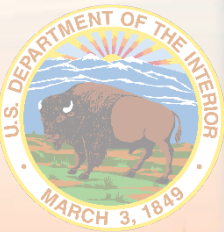
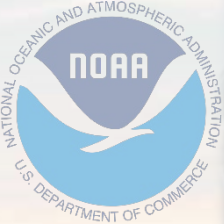


# HUMAN USES

Matthew Zafonte, CDFW  
Jason Murray, NOAA

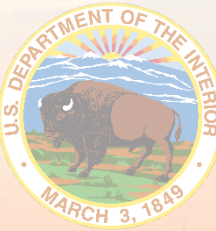
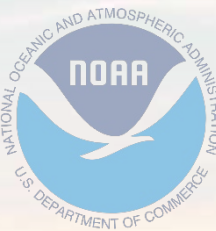


# Human Uses Along Southern California Coast

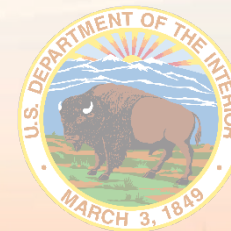
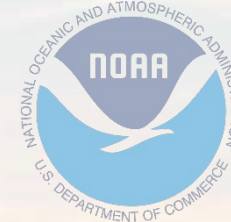
- Iconic coastline
- Heavily populated



Photo by P00547 Natural Resource Trustees

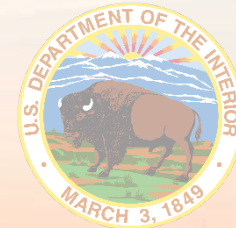
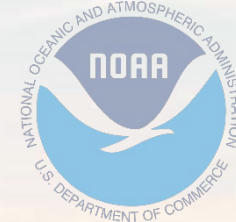


# What is Covered by the Human Use Assessment?



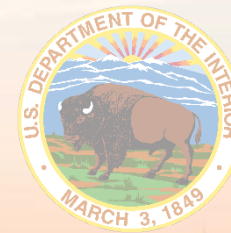
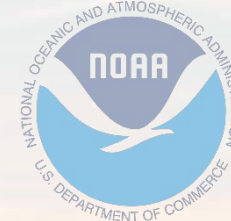
# Following an Oil Spill, People May:

- Be prohibited from using recreation areas that are closed due to the spill
- Stay home instead of recreate along the shoreline
- Switch recreation sites or activities to be farther from the spill
- Use spill-impacted sites but have a less enjoyable experience
- **These are all spill-related injuries**

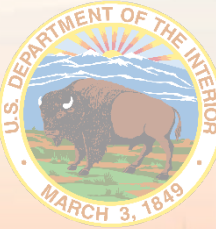
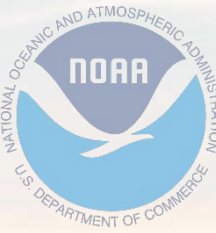


# Focus of Human Use Assessment

- **Spill-affected recreation**
- Losses to businesses addressed by private claims (not the Trustee agencies)

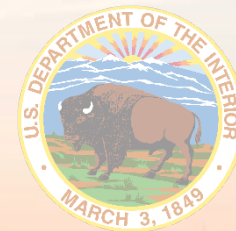
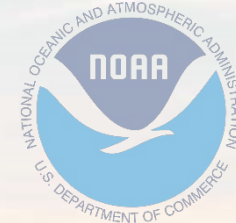


# Why Might Oil Spills Affect Recreation?

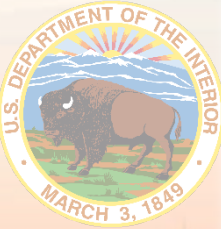


# Petroleum is Toxic and Unpleasant

- Health hazard
- Environmental hazard
- Unpleasant odor
- Sticks to skin and clothing



# Recreation Areas are Closed



# Closures to prevent contact with oil or response workers





# NO FISHING FROM BEACH OR PIER



**Fisheries Closure**  
**Pipeline P00547 Incident**  
**10/07/21**



# Closures to prevent consumption of oil

## CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE AMENDED DECLARATION OF FISHERIES CLOSURE DUE TO A PUBLIC HEALTH THREAT CAUSED BY AN OIL SPILL INTO MARINE WATERS

Pursuant to Fish & Game Code section 5654, I find and declare that:

I.  
On October 2, 2021, I received notice of a petroleum spill into marine waters.

II.  
The Office of Environmental Health Hazard Assessment (OEHHHA) was informed of this spill. OEHHHA recommended that a fisheries closure be initiated. On October 3, 2021, a closure was issued, prohibiting the catch and consumption of finfish and shellfish caught in the area of the closure. That order was amended on October 5, 2021.

III.  
OEHHHA has revised its recommendation regarding the geographic boundaries of the closed area based on current predictions of the trajectory of the spill and Shoreline Cleanup Assessment Technique (SCAT) findings.

IV.  
Therefore, in consultation with OEHHHA, I hereby amend the order of October 5, 2021, by extending the geographic boundaries of the existing fishing and shellfish harvesting closure to fall between the following points:

- Point A (West Jetty of Anaheim Bay; 33° 44.250' N, 118° 06.000' W) to;
- Point B (offshore; 33° 38.000' N, 118° 10.000' W) to;
- Point C (offshore; 33° 11.000' N, 117° 54.500' W) to;
- Point D (offshore; 33° 11.000' N, 117° 44.750' W) to;
- Point E (near the southern border of San Onofre Nuclear Power Plant; 33° 21.750' N, 117° 32.250' W)

This includes the coastal areas along the boundary, including shorelines; all bays and harbors extending from the boundary in an inland direction; and offshore areas enclosed by the boundary. This includes fishing from shorelines and boats. OEHHHA also advises that fishing be avoided in areas where there is visible sheen on the water. Attached hereto is a revised map of the closed area.

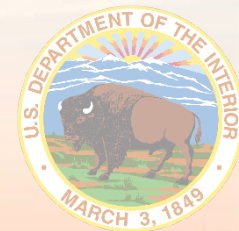
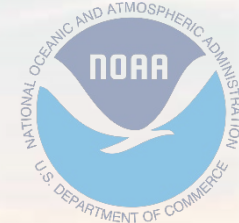
V.  
This Order is not intended to, and does not create, any rights or benefits, substantive or procedural, enforceable at law or in equity, against the State of California, its departments, agencies, or other entities, its officers or employees, or any other person.

*Thomas M. Cullen, Jr.*  
Thomas M. Cullen, Jr., Chief Deputy Director for  
Charlton H. Bonham, Director

10/7/21  
Date

Conserving California's Wildlife Since 1870

# Information Affects Recreation Choices and Enjoyment

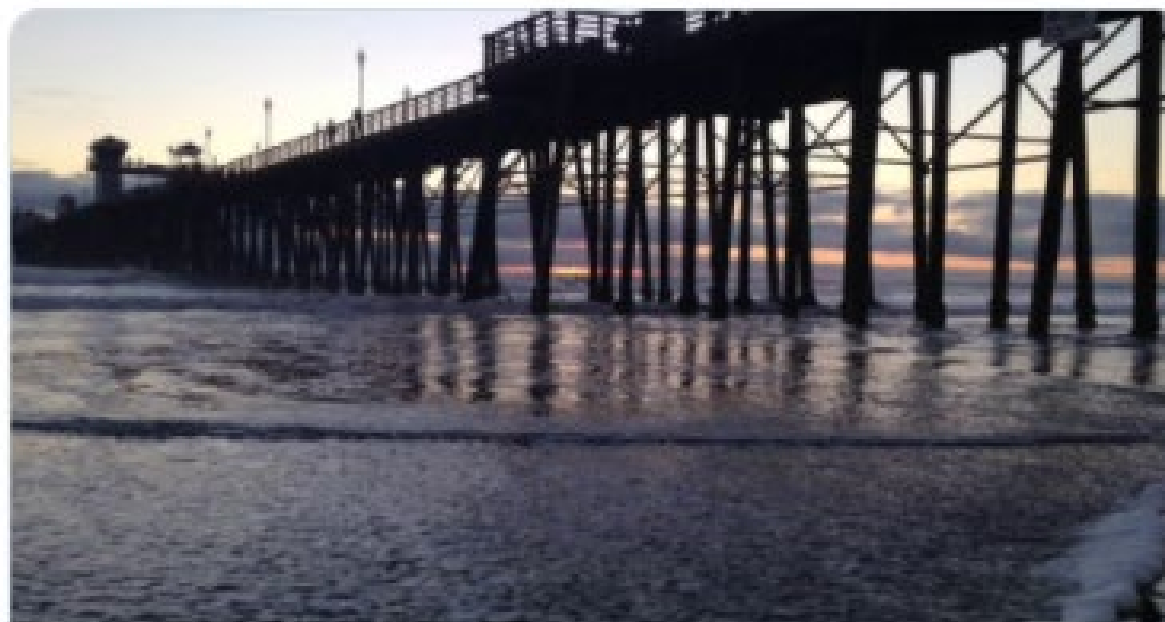


# Media Coverage



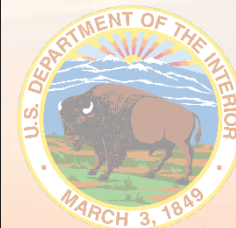
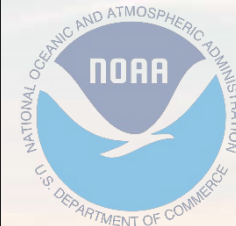
FOX 5 San Diego  
@fox5sandiego

LOCAL OIL SPILL IMPACT: County leaders confirm tar balls have been found on local beaches that are "highly likely" to be linked to last weekend's O.C. oil spill.



fox5sandiego.com

Tar balls reported at local beaches as county ramps up oil spill response  
San Diego County leaders confirm that tar balls have been spotted on beaches in Carlsbad, Oceanside, Del Mar and Encinitas, and that they are "highly likely..."



# Information Releases from Public Agencies



**City of Newport Beach** ✓

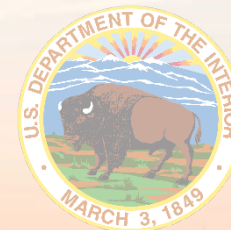
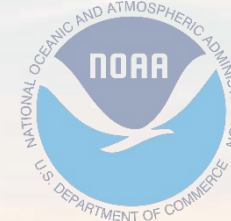
@newportbeachgov



The City of Newport Beach is advising residents and visitors to avoid contact with ocean water and oiled areas of the beach, following a large oil spill identified Saturday off the coast. Oil has been observed on shore in parts of Newport Beach. For more: [bit.ly/3oyvNuP](https://bit.ly/3oyvNuP)

12:58 PM · Oct 3, 2021 · Buffer

74 Retweets   5 Quote Tweets   114 Likes



# Advisories Posted at Recreation Sites



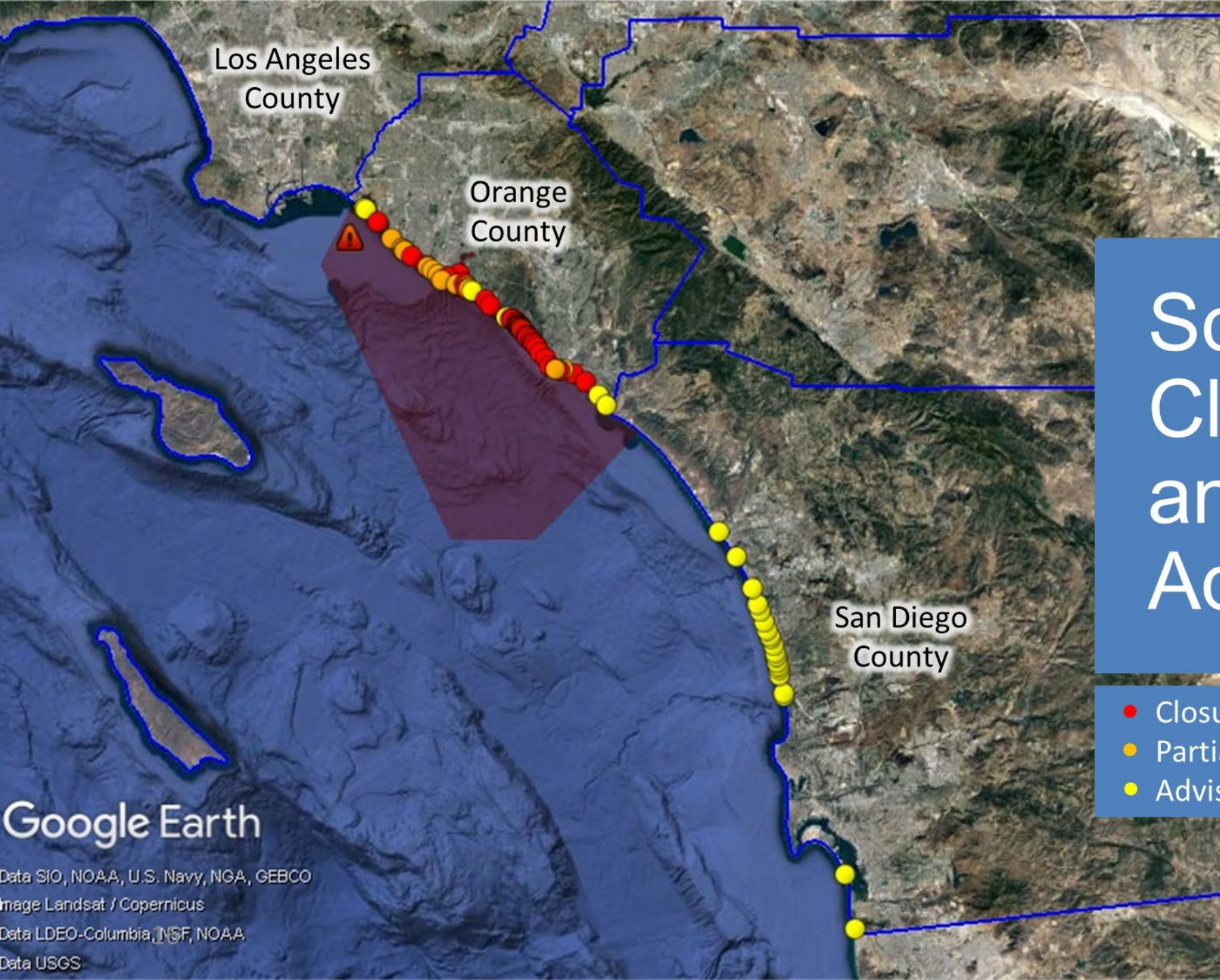
## **HEALTH ADVISORY FOR OIL SPILL**



**RECOMMENDED TO STAY  
OUT OF WATER IF OIL  
IS PRESENT**

# Response Activities at Open Beaches





Los Angeles  
County

Orange  
County

San Diego  
County

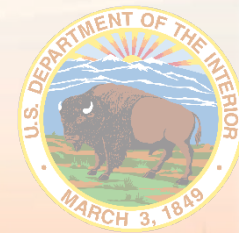
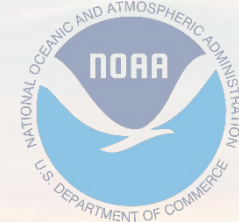
# Scope of Closures and Advisories

- Closure
- Partial Closure
- Advisory

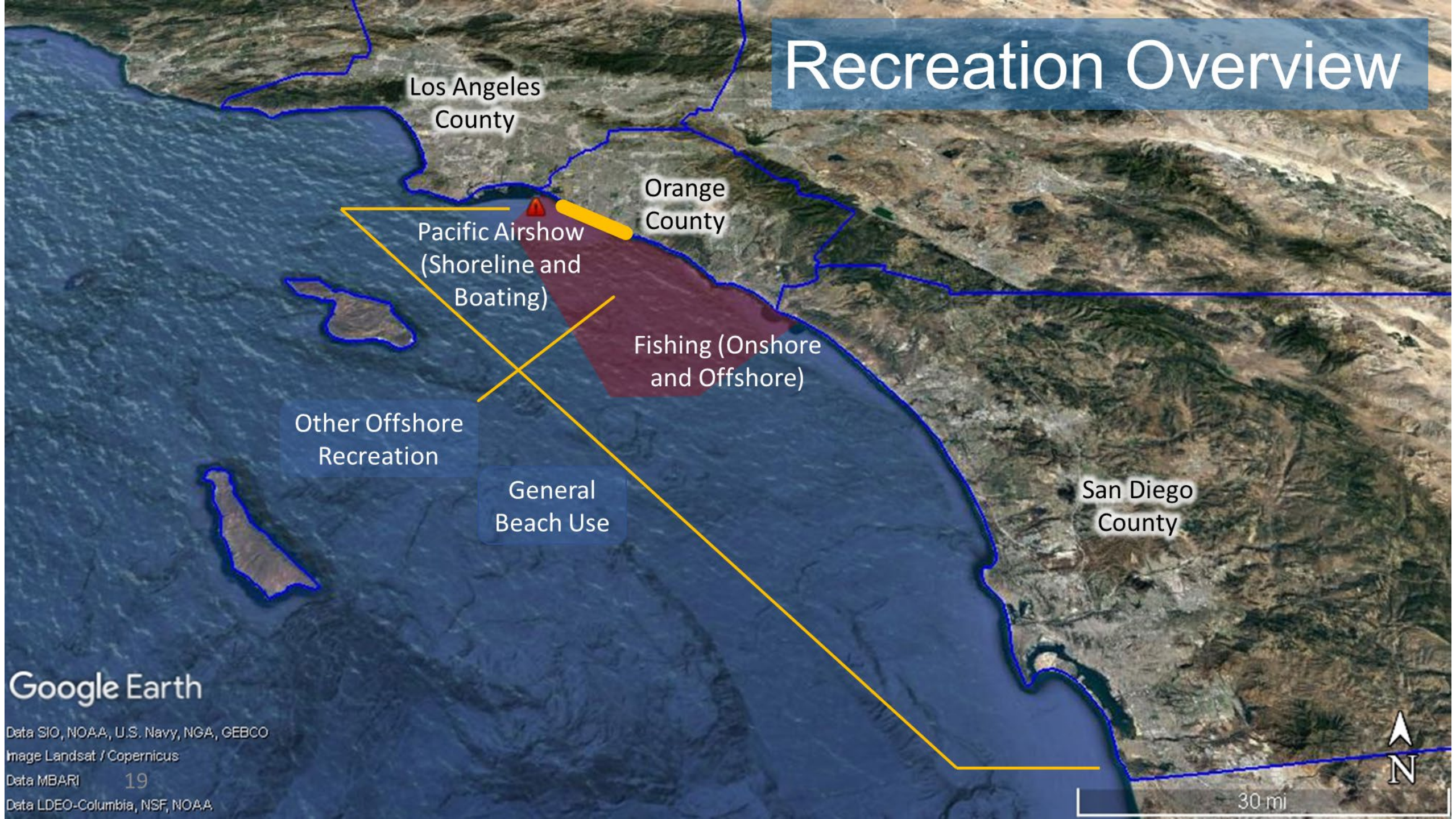
Google Earth

Data SIO, NOAA, U.S. Navy, NGA, GEBCO  
Image Landsat / Copernicus  
Data LDEO-Columbia, NSF, NOAA  
Data USGS

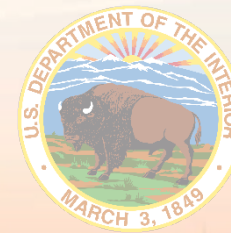
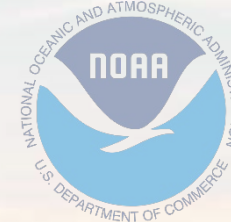
# Scope of Assessment



# Recreation Overview

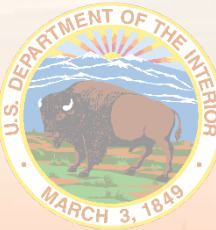


# Determining Damages



# Conventional Methodology

- Damages =  
(Number of Affected Trips) x (Lost Value per Affected Trip)



# Types of Information Collected



# During and Immediately after Spill

- Ground counts and interviews of recreators
- Documentation of spill advisories and closures
- Overflight photography of people along the shoreline
- Interviews of recreation-oriented businesses
- Mail surveys of general public

# Compiling Information Collected by Others

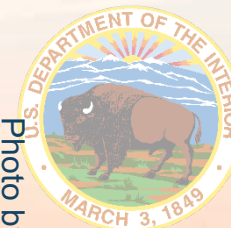
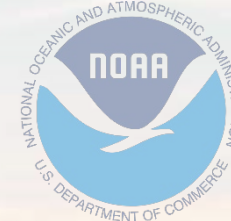
- Third party photography of Pacific Airshow
- Lifeguard estimates and counts of beachgoers
- California State Parks information on parking and visitation
- California Recreational Fishing Survey
- Coastal weather conditions in Orange and San Diego Counties (spill and reference periods)

# Anniversary Data Collection

- Ground surveys and overflight photography along Orange and San Diego County Coastline
- Ground surveys and overflight photography during Pacific Air Show
- Recreator interviews and counts on piers in the fisheries closure area
- Boat counts and ground interviews of boaters around Newport and Dana Point Harbors
- Supplemental data collection in Los Angeles County (for reference)



Photo by P00547 Natural Resource Trustees



# Next Steps

- Evaluate data
- Quantify baseline and lost use
- Estimate value of affected trips
- Combine estimates of loss across categories of use

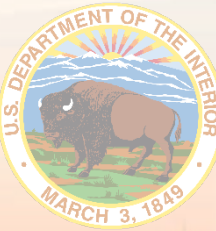
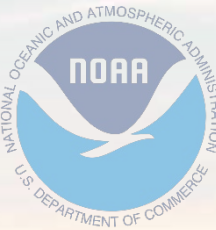




Photo by P00547 Natural Resource Trustees

