



2021 PIPELINE P00547 SPILL AFTER ACTION REPORT



Workers in boats try to clean up floating oil near gulls in the Talbert Marsh in Newport Beach. Source: AFP via Getty Images

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FOREWORD

Per the Emergency Services Act, Article 9.5, Government Code Section 8607 subdivision (f), the California Governor's Office of Emergency Services (Cal OES), in cooperation with involved state and local agencies, shall complete an After Action Report (AAR) after each gubernatorial-proclaimed disaster. This report shall provide a review of public safety response and disaster recovery activities and conclusions and recommendations based on the findings. Cal OES shall make the report available to all interested public safety and emergency management organizations.

An After Action Report serves the following essential functions:

- Provides a source for documenting response and early recovery activities
- Identifies successes and areas needing improvement during emergency operations
- Analyzes the effectiveness of the different components of the Standardized Emergency Management System
- Describes and defines a plan of corrective action for implementing recommended improvements to existing emergency response efforts

Representatives of public safety or emergency management organizations can obtain a copy of this report by submitting a request to:

SharedMail.CalAAR@CalOES.ca.gov.

EXECUTIVE SUMMARY

On October 1, 2021, a vessel off the coast of Southern California reported an oil sheen. Later, a release was identified from the San Pedro Bay (Oil) Pipeline, located approximately 10 miles southwest of Newport Beach, CA, in an underwater transfer line between oil platforms. Beta Offshore Operating Co., LLC, a subsidiary of Amplify Energy Corporation (Amplify Energy), was responsible for the release. After inspection of the pipeline, it was discovered that a 4,000-foot section of pipe was displaced, with a maximum lateral movement of approximately 105 feet and a 13-inch split running parallel to the pipe. By the time of remediation, an estimated minimum spill volume of 24,696 gallons was released off the West Coast.

Unified Command was established with members from the United States Coast Guard (USCG), California Department of Fish and Wildlife's (CDFW) Office of Spill Prevention and Response (OSPR), Governor's Office of Emergency Services (Cal OES), California State Parks, California Environmental Protection Agency's (Cal EPA) Office of Environmental Health Hazard Assessment (OEHHA), Amplify Energy, Orange County, and San Diego County. Unified Command coordinated all response activities, monitored several closed beaches and harbors, and assessed damages due to the oil spill. Thirteen sites were identified to have cultural/historical significance or as sensitive sites due to special-status species.

A collaborative effort between government agencies and the private sector led to a response focused on public safety, environmental protection, and information sharing. Seafood collected by contractors and commercial fishermen was sent to a laboratory for analysis to help ensure seafood safety and determine the health of the affected fisheries. Partnerships contributed to over 10,000



Oil spill cleanup underway at the beach. Source: Los Angeles Times

registered volunteers. These affiliated and community volunteers led to the distribution of information to local areas, beach cleanups, and gross oil removal.

Approximately 1,800 personnel participated in the response and recovery efforts. Personnel recovered 8,063 gallons of oil in the water and an additional 964 gallons on shore; 13 sensitive sites were protected; and 19 birds were cleaned and released. OSPR's newly founded Public Health Assessment Unit (PHAU) addressed public health issues and analyzed the collected data throughout the response. Non-governmental organization (NGO) partners contributed to the recovery efforts by catching fish for laboratory testing, providing information to the community, and participating in wildlife operations.

During the incident, reimbursement concerns arose for small businesses and the affected counties. OSPR acted as the Finance Section's lead and helped answer questions and provide reimbursement information. The Finance Section educated counties, agencies, and local citizens on navigating through those mechanisms and helped them recover from the financial hardships caused by the disaster. Cal OES and local jurisdictions hosted presentations introducing reimbursement mechanisms for cost recovery and economic assistance.

SUMMARY OF SUCCESSES

- The PHAU was formed during this incident and was considered a success because of its ability to coordinate the actions of local, state, and federal public health agencies.
- OSPR trained state and federal agencies and core staff from the Oiled Wildlife Care Network (OWCN), ensuring consistency in approach and expectations and providing the highest-quality care for wildlife.
- Environmental and public health agencies provided subject matter expertise in data analysis, which allowed for more accurate impact assessments of water and sediments, including timely public information advisories related to beach safety and recreation.
- CDFW served as the lead for Volunteer Coordination and activated a Volunteer Hotline and online registration portal, receiving over 10,000 volunteer applications.

SUMMARY OF AREAS NEEDING IMPROVEMENT

- There were no uniform communication plans to address information sharing on social media.
- There were coordination and communication challenges between Cal OES, local OES, and Unified Command.

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- Adhering to multiple COVID-19 guidelines was challenging during the incident as first responders had to wear face masks and follow protocols to maintain distance.

DESCRIPTION OF EVENTS

INCIDENT PERIOD

October 1, 2021 – December 30, 2021

DECLARATIONS AND PROCLAMATIONS

LOCAL PROCLAMATIONS

Orange County	October 4, 2021
City of Huntington Beach	October 4, 2021
City of Newport Beach	October 5, 2021
City of Laguna Beach	October 5, 2021

STATE OF EMERGENCY

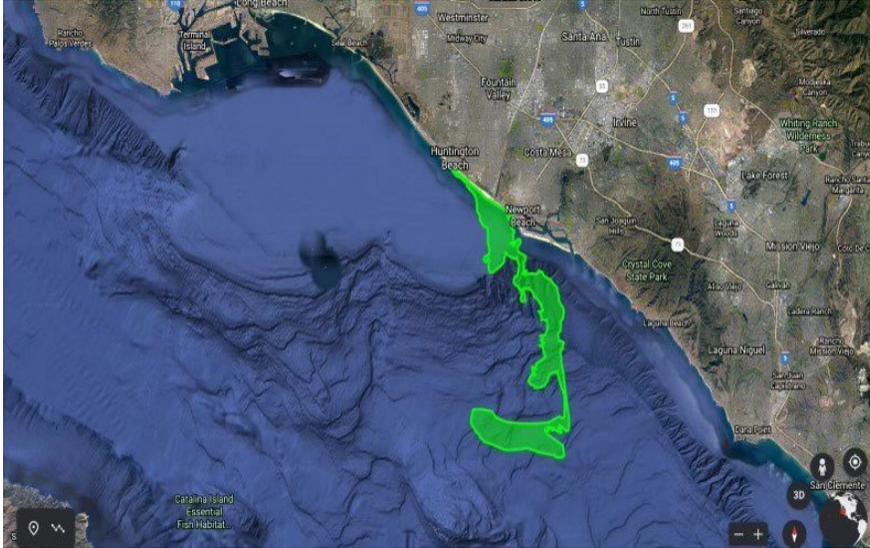
Orange County	October 4, 2021
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INCIDENT BACKGROUND

On October 1, 2021, a fishing vessel off the coast of Huntington Beach in Southern California identified an oil sheen. Due to poor visibility, the oil spill was not identified until the following day. Several reports were received in the morning, and at 8:55 AM, Amplify Energy, a party responsible for the spill, delivered a statement confirming the release of crude oil from a pipeline near Platform Elly. The initial assessment estimated a potential maximum of over 144,000 gallons of released oil. However, a resulting major marine casualty investigation, which evaluates significant harm to marine life, concluded that only 24,696 gallons of oil had spilled. Amplify Energy identified a 4,000-foot section of its San Pedro Bay Pipeline (Pipeline P00547) that was displaced. The pipeline had a maximum lateral movement of approximately 105 feet and a 13-inch split parallel to the pipe.

Representatives from USCG, OSPR, Cal OES, Cal EPA, Orange County, San Diego County, and Amplify Energy quickly established a Unified Command. Amplify Energy hosted and led the initial Incident Command Post (ICP) at their building, until it was moved to the Orange Coast College in Costa Mesa a few days later. The National Contingency Plan Framework required Amplify Energy to integrate into the Unified Command structure and coordinate with state and federal partners.

There were also issues early on in this incident, with state and Operational Area (OA) representatives not included in the coordination. Incorporating Cal OES and San Diego County into Unified Command was delayed and required multiple requests, indicating that the oil spill, which started along the Orange County coastline, was quickly approaching and impacting San Diego County waters and wildlife.



Oil spill map of the coast in Southern California. Source: City of Huntington Beach

Next, the PHAU was established as part of the incident Planning Section. The PHAU objectives focused on coordinating efforts between local, state, and federal agencies to address public health concerns. The unit also served as a central public health information distribution point within the Incident

Command structure. PHAU regulated sampling methodologies and action levels appropriate for local health officers to issue public health advisories that reflected the severity of the incident.

As a result of the oil spill and its hazards, commercial fisheries were closed on October 3, 2021. The fishery closure was expanded twice after the National Oceanic and Atmospheric Administration identified new spill trajectories. OEHHA performed seafood sampling to identify hazardous chemical levels in the fish. On November 30, 2021, testing showed the fish were clear of hazardous chemicals and safe for consumption, leading to the reopening of fisheries.

During the oil spill response, COVID-19 created challenges for agencies and staff to work at the site due to safety protocols intended to limit the spread of the virus. Implementing new COVID-19 protocols required updated strategies for the organizations. Workers needed to be tested at work and have test kits available when they went home. COVID-19 protocols also required organizations to provide on-site nurses, contact tracing, mask mandates, temperature checks, and guidelines for distancing and sanitization, which maintained a low positive test rate.

This operation resulted in a coordinated response utilizing over 1,800 personnel who either worked in the field, remotely, or at the ICP to assess, clean up, and manage the oil spill incident. By December 27, 2021, OEHHA met the cleanup objectives, which moved the oil spill response into a monitor phase to look for tar balls.

RESPONSE ACTIVITIES – STATE AGENCIES

CALIFORNIA GOVERNOR'S OFFICE OF EMERGENCY SERVICES RESPONSE OPERATIONS

The California State Warning Center, staffed 24 hours a day, received, coordinated, verified, and disseminated notifications to all levels of government.

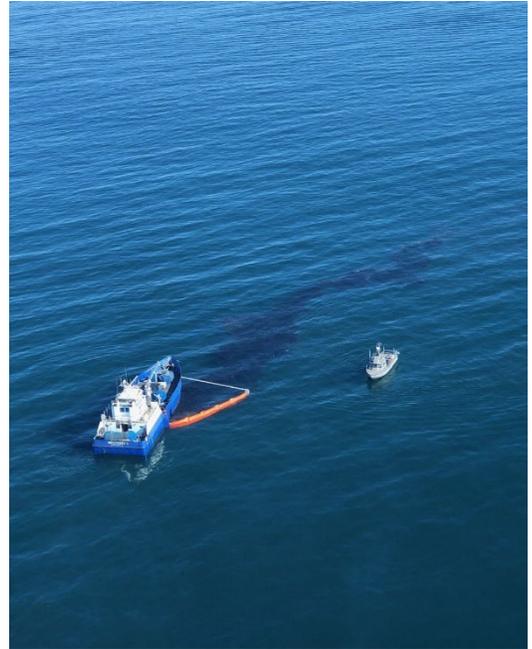
The Situation Cell activated to identify emerging and near-term threats and trends, analyzing potential impacts, developing situation analysis reports, and updating the SOC Planning Section with initial situational awareness and intelligence information.

The SOC served as the central hub for state coordination during the emergency. In coordination with federal, state, regional, local, tribal, and non-governmental organizations, the SOC carried out state emergency responsibilities, supported state leaders' strategic direction and operational decisions, and fulfilled requests for resource needs.

As a close liaison with local partners and providing a physical presence at the local level and the SOC, Cal OES Southern Region coordinated information sharing and resources between the state and local levels of SEMS to support local response and recovery operations.

Cal OES established a Joint Information Center with participation from partner agencies involved in the response. PIOs created and distributed original, accessible graphics, video, and image-driven content across social media platforms. They monitored press conferences and media coverage, compiled key findings, and shared reports with leadership and fellow PIOs. Additionally, PIOs coordinated and responded to media inquiries, ensuring timely and accurate communication.

Cal OES coordinated with the USCG, the US Navy, and the Port of LA, resulting in cargo vessel movement and decontamination. Cal OES, CDFW, and the League of California Cities collaborated on a high-level briefing for coastal city



Crude oil shown in the Pacific Ocean offshore of Orange County. Source: U.S. Coast Guard

mayors and city managers to provide incident response and recovery information.

SUCSESSES

1. Cal OES Maritime Unit coordinated with Surflife for the first time to provide the ICP with access to 160 coastal shoreline cameras to monitor the spill.
2. Cal OES and its partners collaborated to produce information-sharing resources, such as consolidated situation reports, Liaison Reports, and Quad Sheets.
3. Cal OES Legislative Affairs notified and coordinated with state and federal legislative offices, ensuring policymakers received timely, accurate information. They organized briefings and compiled key statewide situation messages to inform legislative offices about spill containment and cleanup efforts while addressing their concerns.

AREAS NEEDING IMPROVEMENT

1. State agencies mission tasked to support the incident should be trained in advance on cost recovery procedures.
2. Not all relevant response partners participated in scheduled legislative calls, resulting in delays in responding to legislative offices.

CORRECTIVE ACTION RECOMMENDATIONS

1. State agencies supporting incident response should receive a briefing on cost recovery procedures before deployment to ensure proper documentation, compliance with funding requirements, and timely reimbursement.
2. Participation from all relevant stakeholders should be required for legislative briefings to ensure accurate, timely, and coordinated responses to legislative inquiries.

CALIFORNIA DEPARTMENT OF FISH & WILDLIFE – OFFICE OF SPILL PREVENTION RESPONSE

OSPR served as the State On-Scene Coordinator throughout the incident. They created objectives to ensure safety and welfare, secure the source of the spill, implement a Pipeline Repair Plan, and maximize the protection of environmentally, economically, and culturally sensitive areas. There was also a focus on maximizing the recovery of offshore and shoreline oil-impacted areas. This included identifying and rehabilitating impacted wildlife through fixed-care facilities and specialists to provide the best achievable veterinary care and animal husbandry. The utilization of volunteers was also a significant contributor to the success of the response, as specialized volunteers assisted in the care of the affected animals, participated in information sharing, and filled technical roles that required pre-incident training.



A federally threatened snowy plover receives an examination at the International Bird Rescue in San Pedro, Calif., on Oct. 8, 2021. Source: U.S. Coast Guard

SUCCESSSES

1. OSPR led the initial activation of the PHAU to coordinate local, state, and federal agencies to safeguard public health.
2. OSPR implemented enhanced processes, practices, templates, and software applications to strengthen response functions, including shoreline assessment, wildlife response, volunteer registration, and data management.
3. Virtual meetings expedited communication with elected officials, cooperating agencies, and NGOs through the Liaison Officer.
4. PHAU successfully activated its first incident response and coordinated with local, state, and federal agencies tasked with protecting public health.

5. The United States Environmental Protection Agency, the OSPR Regional Response Team IX co-chair, and the OSPR Administrator issued timely approval requests for vessel and equipment decontamination.
6. OSPR established and implemented the Data Collection Sharing Plan and appointed a Documentation Leader to ensure all response data is shared with participating parties.
7. OSPR utilized multiple fixed-care facilities with trained staff and on-site OWCN core staff, allowing for the highest quality care for wildlife.
8. Affiliated and community volunteers were integrated early in the response. In addition, the Volunteer Unit worked with the Liaison Officer to distribute information on opportunities with local NGOs to over 10,000 individuals who registered through the Volunteer Registration Portal.
9. OSPR coordinated with Tribes to integrate their knowledge into the response and utilize their cultural monitors to evaluate sites affected by the spill.
10. A full-time Ephemeral Data Coordinator position assisted with activity coordination with the Unified Command for the first time. It directed daily natural resource damage assessment field activities during the initial spill response.

AREAS NEEDING IMPROVEMENT

1. OSPR has no dedicated liaison officer positions during non-spill periods that provide ongoing outreach and education to key stakeholder groups, develop and maintain regional outreach lists, plans, and protocols, and coordinate with key agency partners.
2. A request for an assistant liaison officer from another agency was delayed due to the lack of a request process.
3. Different federal historical property specialists were present during the response, which resulted in a lack of continuity for those working with them, including the incident tribal liaison and liaison officer.

CORRECTIVE ACTION RECOMMENDATIONS

1. No corrective action recommendations were reported.
2. OSPR should develop a formalized process with other agencies for requesting an assistant liaison officer and incorporate staff in quarterly training and exercises.

3. OSPR and USCG should work with state and federal partners to provide cross-training for historical property specialists and familiarity training for responders on the needs, roles, and responsibilities to facilitate continuity and mutual understanding.

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY – OFFICE OF ENVIRONMENTAL HEALTH HAZARD ASSESSMENT

OEHHA developed a safety sampling plan with OSPR, completed seafood sampling within the closure area, and performed risk assessments on the collected seafood samples.

Three technical specialists were assigned to the field to assist with seafood sampling. Four subject matter experts and technical specialists were involved in fishery closures, and three in-water and sediment-related activities.

Bioaccumulation research was done on the affected regional species, chemicals in crude oil, and state and federal cleanup values. The study reviewed surface water and sediment data collected from beaches in Orange and San Diego Counties. Concentrations of oil spill-related chemicals were then measured and compared to short-term cleanup screening levels.

OEHHA recommended closing and reopening fisheries in Orange and San Diego Counties and communicated the fishery closure process to the public and media.

OEHHA communicated with other agencies and groups participating in workgroups, meetings, and other briefings and reported results and recommendations to Unified Command.

SUCSESSES

1. OEHHA collaborated with environmental consulting companies and commercial fishermen who were knowledgeable and efficient at collecting seafood samples.
2. OEHHA subject matter experts quickly reviewed water and sediment data, provided statistical analysis, and delivered input to the Water and Sediment Working Group and the Fisheries Closure/Seafood Safety Group.
3. OEHHA developed fishery closure signs in the six most commonly spoken non-English languages.
4. OEHHA, CDFW Marine Region, and OSPR collaborated to develop and execute the sampling and analysis plan.

5. All published online resources complied with the Americans with Disabilities Act.
6. Affiliated and community volunteers were integrated early in the response.
7. OEHHA subject matter experts quickly reviewed water and sediment data, provided statistical analysis, and delivered input to the multi-agency workgroup.

AREAS NEEDING IMPROVEMENT

1. No areas needing improvement were reported.

CORRECTIVE ACTION RECOMMENDATIONS

1. No corrective action recommendations were reported.

CALIFORNIA STATE PARKS

State Parks played a key role in managing the impact on state-owned land and coordinated the immediate closure of beaches and ocean waters to protect public health and safety. The spill released crude oil, which affected Huntington Beach State Park, Crystal Cove State Park, and Bolsa Chica State Beach, among others. The spill prompted a massive cleanup effort, state park and beach closures, and a temporary ban on fishing. State Parks worked in collaboration with CDFW to prevent oil from entering the Huntington State Beach Wetlands and Bolsa Chica Wetlands by blocking the inlet and outlet with sand. Bulldozers were used to actively move sand to protect this sensitive habitat. State Parks lifeguards, peace officers, and rangers gathered information, provided park visitors with updates, and observed the surf line for oil contamination.

State Parks assessed internal capabilities, including the number of staff that are trained in oil spill response, and created mutual aid schedules to assist in managing the beach closures and impacts from oil washing up on the beach. State Parks was also responsible for testing water quality periodically to assess the reopening status of the beach and parks. State Parks collaborated with local tribal archaeologists to conduct surveys at creeks and river mouths for oil contaminants.

As restoration efforts began, State Parks were used as a staging area for resources, equipment, and contractors hired to clean up the spill.

SUCSESSES

1. State Parks staff were on the ground, actively supporting various elements of the response and coordinating with other state and federal agencies involved in the cleanup and investigation.

AREAS NEEDING IMPROVEMENT

1. No areas needing improvement were reported.

CORRECTIVE ACTION RECOMMENDATIONS

1. No corrective action recommendations were reported.

CALIFORNIA STATE LANDS COMMISSION

The California State Lands Commission (Commission) is responsible for managing 4 million acres of tide and submerged lands and beds of natural navigable rivers, streams, lakes, bays, estuaries, inlets, and straits. The Commission secures and safeguards the public's access rights to navigable waterways and the coastline and preserves irreplaceable natural habitats for wildlife, vegetation, and biological communities.

For any spill in California waters, the Commission acts as a key trustee by participating in the Natural Resource Damage Assessment (NRDA) process during the incident. Under the NRDA, the Commission conducted assessments to identify the impacts on wildlife, the coastal environment, the public trust, and human uses from the oil spill in Orange County. The assessment quantified the impacts and developed a restoration plan. The Trustees ultimately made a claim for funds from Amplify Energy Corporation, the responsible party, to implement the restoration projects designed to restore and compensate for the damaged and lost use of these resources.



Tar is shown on the cliffside in Crystal Cove Beach in Newport Beach, California. Source: U.S. Coast Guard

SUCSESSES

1. The Commission collaborated with other state and federal trustee agencies to ensure the development of plans that would restore and protect affected natural resources.

2. The Trustees quickly began identifying and assessing the oil spill damage and formed technical groups to address the restoration of beaches, wildlife, and state parks.

AREAS NEEDING IMPROVEMENT

1. No areas needing improvement were reported.

CORRECTIVE ACTION RECOMMENDATIONS

1. No corrective action recommendations were reported.

CAL VOLUNTEERS

Early in the incident, Unified Command identified the need for a volunteer coordinator who could assess the volunteers' safe deployment needs for oil spill cleanup. Cal Volunteers, along with OSPR, established a Volunteer Unit to register, train, and deploy volunteers based on their experience and training in the field. Cal Volunteers provided NGO opportunities to share with volunteers, offered Hazardous Waste Operations and Emergency Response training to 200-300 volunteers, drafted a Volunteer Project & Training Plan, and assisted OSPR with volunteers and donations management during the incident.

SUCSESSES

1. The first-time volunteer training was conducted virtually due to COVID restrictions.
2. Cal Volunteers was successful in using an affiliated local volunteer organization, such as CERT.

AREAS NEEDING IMPROVEMENT

1. Some agency staff assigned to the Volunteer Unit lacked Incident Command System (ICS) experience and training.

CORRECTIVE ACTION RECOMMENDATIONS

1. Cal Volunteers should coordinate with volunteer agencies to support participation in ICS training, including drills and exercises.

RESPONSE ACTIVITIES – OPERATIONAL AREAS

ORANGE COUNTY

Orange County participated in Unified Command as the Local Government On-Scene Coordinator and collaborated with other Incident Commanders to organize a response to remove oil from the state's coastline and surrounding waters. The county assisted with spill containment, shoreline and habitat inspections, coordinating cleanup efforts, reporting, assessments, and signing off on impacted or potentially impacted areas. The county had decision-making authority for the cities within its jurisdiction. The county staff performed shoreline and habitat analysis to identify areas that required cleanup. They shared this information with those managing the cleanup efforts and implemented protective actions like booming, berming, and closing beaches and shorelines when needed.

The county also supported communication efforts during the event, providing information to the public and holding weekly agency representative calls.

SUCCESSSES

1. No successes were reported.

AREAS NEEDING IMPROVEMENT

1. Gaps in the county's public information coordination with state and federal partners limited the effectiveness of timely, accurate, and consistent messaging.

CORRECTIVE ACTION RECOMMENDATIONS

1. The county should establish formal public information coordination protocols with its partners, including defined roles, early engagement requirements, and regular information-sharing checkpoints.

INITIAL RECOVERY ACTIVITIES – STATE AGENCIES

CALIFORNIA GOVERNOR’S OFFICE OF EMERGENCY SERVICES

The Recovery Directorate managed disaster recovery and assisted local governments, special districts, specific nonprofit organizations, individuals, businesses, and agricultural communities impacted by the disaster in navigating through state and federal recovery processes. The Recovery Directorate coordinated recovery assistance for individuals, businesses, and the agricultural community, served as the grantee for federally funded disaster assistance programs, and was the state California Disaster Assistance Act program grantor. Recovery staff provided expert reviews on environmental concerns, historic preservation activities, and technical support to reduce overall disaster costs and streamline the process of future recovery efforts. In support of these responsibilities, the Recovery Directorate also performed extensive liaison activities with local, state, and federal agencies at various Local Assistance Centers or Disaster Recovery Centers.

Cal OES submitted the official paperwork to the Small Business Administration to garner financial support for Orange County, as they qualified for the Economic Disaster Loan.

Also, Cal OES, the state agencies' incident liaison, and local jurisdictions hosted a financial presentation on cost recovery and economic assistance to businesses that needed to file claims or seek economic relief after the incident.

SUCCESSSES

1. No successes were reported.

AREAS NEEDING IMPROVEMENT

1. No areas needing improvement were reported.

CORRECTIVE ACTION RECOMMENDATIONS

1. No corrective action recommendations were reported.

CALIFORNIA DEPARTMENT OF FISH & WILDLIFE – OFFICE OF SPILL PREVENTION RESPONSE

OSPR served as the State On-Scene Coordinator during the recovery phase, providing strategic leadership to support long-term environmental and community recovery. Efforts focused on oversight of pipeline repair and restoration activities; protection and restoration of environmentally, economically, and culturally sensitive areas; and continued remediation of offshore and shoreline impacts. Recovery operations also included coordinating wildlife rehabilitation and release through established care networks, as well as a structured transition from response to sustained recovery activities, supported by trained personnel and volunteers.

SUCCESSSES

1. No successes were reported.

AREAS NEEDING IMPROVEMENT

1. No areas needing improvement were reported.

CORRECTIVE ACTION RECOMMENDATIONS

1. No corrective action recommendations were reported.

INITIAL RECOVERY ACTIVITIES – OPERATIONAL AREAS

ORANGE COUNTY

The county participated in recovery efforts under the direction of Unified Command. They coordinated with federal and state agencies to activate the Small Business Administration Economic Injury Program, which provided recovery opportunities for impacted businesses. In addition, county officials are connected with the Natural Resource Damage Assessment process outside the incident response.

CONTRIBUTING AGENCIES

STATE AGENCIES

California Department of Fish and Wildlife (CDFW)

Governor's Office of Emergency Services (Cal OES)

California Environmental Protection (Cal EPA)

LOCAL AGENCIES

Orange County

LIST OF ACRONYMS

AAR	After Action Report
ADA	Americans with Disabilities Act
Cal EPA	California Environmental Protection Agency
Cal OES	California Governor's Office of Emergency Services
CDFW	California Department of Fish and Wildlife
ICP	Incident Command Post
ICS	Incident Command System
NRDA	Natural Resource Damage Assessment
NGO	Non-governmental Organization
OEHHA	Office of Environmental Health Hazard Assessment
OA	Operational Area
OSPR	Office of Spill Prevention and Response
OWCN	Oiled Wildlife Care Network
PHAU	Public Health Assessment Unit
PIO	Public Information Officer
SCAT	Shoreline Cleanup Assessment Technique
SOC	State Operations Center
USCG	United States Coast Guard