

Data documentation of dead and debilitated oiled wildlife: California's approach

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A critical but sometimes neglected and underappreciated component of oil spill response is the collection of data on all dead and debilitated wildlife affected by a spill. Such documentation is the basis for assessing an oil spill's overall impact on seabird and other wildlife populations (Carter et al., 2003), and can also link oiled wildlife to a specific oiling event. With much focus on containment, cleanup, and rehabilitation, in some regions documenting dead oiled wildlife receives almost no attention. This is even true despite the higher frequency with which dead birds are often found compared to live debilitated wildlife, and the fact that birds that wash ashore dead can represent different species than those found alive. In addition, non-medical data (e.g., morphometrics, collection location, extent of oiling) on live animals can be overlooked in the face of rehabilitation needs.

Documentation of both dead and debilitated wildlife is the basis for assessing an oil spill's impact on wildlife populations (Heubeck et al., 2003), and without it inaccurate estimations will be made regarding mortality in impacted populations. It can also play a critical role in determining which species or populations to focus on for restoration and monitoring efforts following a spill event. Through evidence collection, such documentation can also link oiled wildlife to a specific oiling event: this can aid in the identification of the responsible party liable for payment of wildlife damages to mitigate the effects of the spill on impacted wildlife.

Having standardized protocols for these elements of oil spill response incorporated into overall response plans, as well as having individuals identified to conduct this work, will ensure that such documentation is conducted during an actual spill response. California Department of Fish and

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Game's Office of Spill Prevention and Response (OSPR) includes such data documentation protocols for oiled wildlife as an integral component of their wildlife response plan (OSPR, 2005). Standardized beach search effort is obviously a necessary counterpart to these efforts (Heubeck et al., 2003; OSPR, 2005). In practice, deployment of methods for data documentation is closely linked with rehabilitation, and in California the process is made possible through a partnership between OSPR, rehabilitation and response experts from the Oiled Wildlife Care Network (OWCN), and biologists from PRBO Conservation Science. A Memorandum of Understanding was created between the state of California and PRBO to define the roles of all parties.

PRBO Conservation Science, a scientific private non-profit organization, is officially deployed to conduct wildlife processing in all sizeable events in California, working under the Oiled Wildlife Care Network during these responses. PRBO maintains a team (called the Wildlife Processing Unit; WPU) of over 50 biologists from both within and outside the organization who can be called upon to respond in the event of a spill. Biologists are from various wildlife agencies and organizations throughout the state in an effort to increase response capabilities to spills in different geographic regions. The WPU is part of the incident command structure in California. Annual training courses identify and train new members of the WPU in data documentation protocols for oiled wildlife and provide Hazard Communication (HAZCOM) training necessary to work with oiled wildlife in a rehabilitation facility during oil spills. PRBO's WPU team leaders conduct the annual training courses, participate in annual oil spill drills and are permanently on call in the event of a spill in California.

Elements of data documentation for every animal collected during a spill event include: 1) information specific to the oil spill (e.g., collection date, collection location); 2) data reflecting the condition of the bird (oiling status, percent of body oiled, where oiling occurs, freshness of carcass, evidence of scavenging), 3) information to help understand which populations are affected (species, identification, age, sex, morphometrics, federal band recoveries), and 4) evidence collection (oiled feather or fur samples, photographs, carcass storage).

We recommend that all countries, states and provinces vulnerable to oil spill events that have not already done so develop response plans that not only include wildlife components, but also specifically include standardized data documentation protocols for both live and dead wildlife. We recommend that regional response plans also involve steps to ensure preparedness (e.g., trainings and development of protocols) in case of such an event. Similar steps are important to prepare for conducting beach surveys for dead or debilitated wildlife, which is also an integral component of the response. Preparedness includes: (1) identifying individuals or organizations to conduct data documentation during a response, and maintaining agreements to do so; (2) maintaining a network of potential responders from the local scientific community who have the level of expertise required for such elements of the response; (3) developing partnerships between pertinent organizations, individuals, and agencies, including engagement between the scientific community and appropriate members of the rehabilitation community and government agencies; and (4) readying equipment to

ensure immediate response capabilities, including both specialty items (e.g., scientific supplies) and an initial amount of other necessary supplies.

Our recommendations stem directly from the collective experience of decades of oil spill response and population impact determination in California, and from comparing the effectiveness of responses before and after initiation of oiled wildlife data documentation protocols.

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