

# Improving Outcomes for Wildlife and Industry through Oiled Wildlife Response Training

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## Objective

Address industry, environmental and regulatory needs for oiled wildlife preparedness and response.

## Issues

- **Human Health Impacts.** Lack of oiled wildlife response training can lead to increased risks to the public and local responders who attempt to help affected wildlife. Members of the public will attempt to help wildlife impacted by oil spills. Untrained responders without proper protective equipment are at risk of acute and chronic petroleum effects (Carrasco et al 2006).
- **Wildlife Morbidity and Mortality.** Delays in initiating a response leads to worse outcomes for impacted wildlife. Animals exposed to oil can succumb to direct toxicity or secondary effects from oiling. Their ability to swim, hunt, and even protect themselves from the elements are potentiated by oil exposure. Additionally, internal effects of oil can further worsen prognosis if not addressed quickly (Callahan 2008, Massey 2006).
- **Public Perception.** Media and Perceived impacts on wildlife and locals populations can lead to negative perception of industry. During an oil spill, the response to oiled wildlife is a highly publicized and scrutinized activity. The effectiveness and speed of a wildlife response can significantly influence media, public perception and outcomes for oiled wildlife (Chilvers et al 2016).

## Solutions

### Improved preparedness through training

- Decreases response time
- Improves animal survival
- Mitigates risks to responders and the public
- Improves public perception

### Develop a training program using global standards

- Expands response capabilities
- Reduces response costs
- Engages the public in the process



Blue Penguins Released After the Rena Oil Spill



Oiled Common Murre

[www.owrt.org](http://www.owrt.org)

## Methods

An evaluation was made of controllable and uncontrollable factors in oil spill response (table 1). These results were analyzed to determine what factors could be addressed to improve oiled wildlife response. Equipment, Planning, and Training are all important to a spill response. Planning can be accomplished in coordination with outside consultants and industry personnel. Similarly equipment can be stockpiled or purchased from contractors at the time of an oiled wildlife event. Training however, requires considerable resources and time before an actual event occurs. Training local personnel not only allows for having responders in place in the event of a spill, but also allows for local evaluation of equipment and establishment of plans. Therefore, a focus on training was determined to be capable of improving all aspects of an oil spill response. Using compiled information and knowledge we developed a modular, online and in-person training program using global standards and examples.

**Table 1:**  
**Factors affecting Oiled Wildlife Response**

Controllable Factors	Preparedness Training Equipment Availability Speed of Response
Uncontrollable Factors	Weather Location Product Time of Year Source Wildlife affected

## Course Structure

- Online training provides flexibility and accessibility
- In-person trainings to reinforce online learning and teach hands-on skills
- Modular design allows for directed learning (fig 1)
- Courses to meet needs of all levels of responders and managers
- Instructors with real-world global spill response experience



Figure 1: Modular Course Design



## References

- Callahan B. 2008. Integrated Response Planning for Oiled Wildlife. In *Proceedings: International Oil Spill Conference - IOSC 2008*, pp. 973-976.
- Carrasco JM, Lope V, Perez-Gomez B, Aragones N, Suarez B, Lopez-Abente G, Rodriguez-Artalejo F, Pollan M. 2006. Association between health information, use of protective devices and occurrence of acute health problems in the Prestige oil spill clean-up in Asturias and Cantabria (Spain): a cross-sectional study. *BMC Public Health* 6: 1.
- Chilvers BL, Finlayson G, Ashwell D, Low SJ, Morgan KJ, Pearson HE. 2016. Is the way an oil spill response is reported in the media important for the final perception of the clean-up? *Mar Pollut Bull* 104(1-2): 257-261.
- IPIECA. 2014. *Wildlife Response Preparedness*. IPIECA, London, UK. pp.
- Kelway P, Holland R, Sessions S, Nijkamp H. 2014. Towards a Tier 3 Infrastructure for Oiled Wildlife Response. *International Oil Spill Conference*. Allen Press Savannah, Georgia, USA. pp.
- Massey JG. 2006. Summary of an Oiled Bird Response. *Journal of Exotic Pet Medicine* 15(1): 33-39.
- Morgan AD, Pearce M, Bellingham I, Lewis A, Pendoley K. 2014. Development of Oiled Wildlife Preparedness and Response Management Systems and Their Integration with Oil Spill Contingency Planning and Oil Spill Response. In *Proceedings: SPE Middle East Health, Safety, Environment & Sustainable Development Conference and Exhibition*. Society of Petroleum Engineers. pp.
- Newman SH, Ziccardi MH, Berkner AB, Holcomb J, Clumpner C, Mazet JA. 2003. A historical account of oiled wildlife care in California. *Mar Ornithol* 31(1): 59-64.
- Ziccardi M. 2008. Reducing the effects of oil spills on wildlife: avian rehabilitation methods. *RIOS PROJECT-Reducing the Impact of Oil Spills* 14.