

Optimizing the value of near misses in wildlife response preparedness: The Kulluk Incident

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ABSTRACT 300114:

Mitigating the impact of an oil spill on wildlife is one of the stated priorities in nearly every oil spill. Wildlife in some way is regularly included in drills and exercises in many places around the world. While planning, training, and exercising are critical to wildlife preparedness, responders know that nothing compares to real world experience. In many spills and near miss situations, the Wildlife Branch is not activated until after there are documented wildlife impacts. Most incident management teams will only bring in professional oiled wildlife responders when oiling of wildlife has occurred or is imminent. During the December 2013 response to the Kulluk Tow Incident, a small Wildlife Branch was activated as an integral part of the Incident Command structure put in place. The Wildlife Branch proceeded to provide a detailed plan for an active response, if one was needed. Over the next week, while the rig grounded, refloated and finally towed to a place of refuge, the Wildlife Branch, working with the Environmental Unit, developed a wildlife plan that identified the resources at risk, the wildlife response options and the personnel, equipment and facilities that would be needed if oil were to be released. The Alaska Wildlife Response Center was prepared for activation, wildlife responder's availability, and travel time was documented and incident specific equipment gaps were identified and sourced. Additionally, specific incident plans were developed for hazing (bird deterrence), solid waste and wastewater that stood ready for implementation. While Alaska has a robust preparedness and exercise program, the quick decision by Shell and the Unified Command to ensure wildlife response was in place, if needed, provided a real test of the oiled wildlife response system with all the problems, challenges and changing parameters of a real event. It added real value by showing the public and trustees the importance that was placed on wildlife protection as well as by increasing integration, confidence and teamwork in the Alaskan response community.

INTRODUCTION:

Over the 25 years since the Exxon Valdez oil spill, wildlife response has made great strides in the professionalism in which it is conducted, in planning and preparedness and integration into the incident management framework that is critical in the gaining of resource efficient, cost effective results in a spill response. The legal requirements for oiled wildlife response capabilities, if they exist, vary widely among countries, states and regions, and how

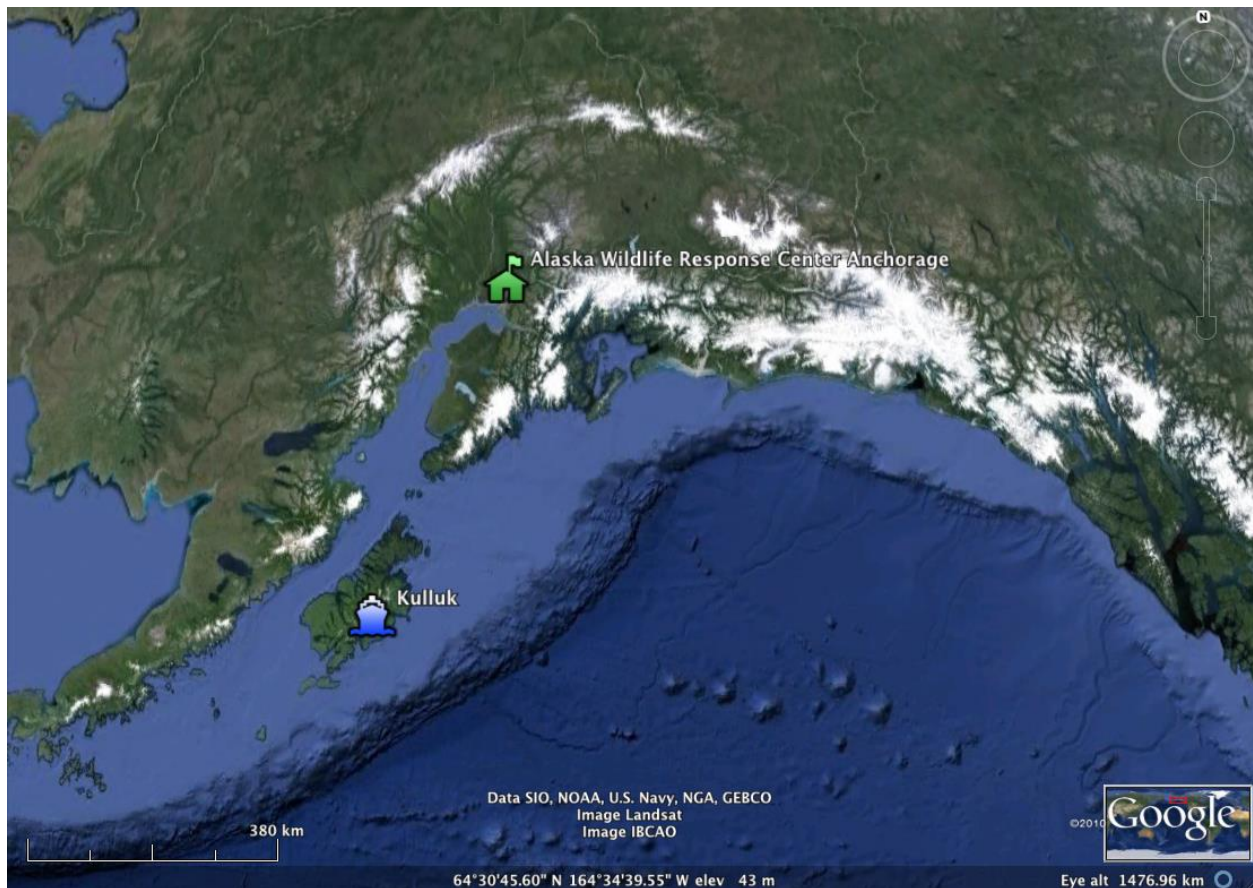
these capabilities must be demonstrated vary as well. Some authorities require stockpiled equipment or turnkey facilities but not guaranteed personnel levels. In some areas deployment of equipment and facilities may be required to be demonstrated on a regular basis. Many tabletop and deployment exercises include wildlife issues and may deploy actual wildlife response resources including equipment, facilities and limited personnel as tests, practice or training. In some cases exercises may be designed solely for wildlife response issues but more often they are part a large-scale exercise such as a worst-case scenario, or as part of a national preparedness for response program.

While these exercises are critical in developing wildlife issue awareness among response managers and increasing integration of wildlife response personnel and incident management personnel, most exercises do not test specific wildlife plans or systems to the level necessary to test wildlife plan assumptions and identify weaknesses. Even the largest exercises with budgets in the millions will require financial planning and trade-offs that will be much different than those made in a real incident where the legal, financial, public image and environmental stakes may total hundreds of millions or even billions. As any one who has worked a real response will tell you, table top and deployment exercises provide valuable training but there is nothing like a real event to provide the experience needed to develop skills, test systems and identify gaps in all areas of oil spill response including wildlife. There are many incidents where after hours or even days of uncertainty disaster is averted and significant environmental impacts are avoided. This may occur due to luck as well as the skill of the first responders in preventing any oil being released, or if released it is quickly contained. In many of these cases an extensive incident management system may be activated as a precaution, ready to jump into action if the worst occurs. While this may require a significant financial investment, it will be money well spent if needed. Should rescue of oiled wildlife not be needed this will at the very least boost public confidence in the response system as well as provide real world experience and team building for the responders involved.

In many of these incidents the activation of the wildlife branch is most often delayed until wildlife impacts are reported thus losing a valuable opportunity to increase real world preparedness in an area that often has one of the highest profiles in an oil spill response. Early activation of a Wildlife Branch can provide high value in cases where the risk is eventually averted as well as in cases where animals are eventually oiled and a full-blown response is required. In December 2012 in Alaska the Kulluk Incident provided an excellent example of the potential value of near misses to oiled wildlife response preparedness. . It was in essence a response without the oil but with a very real threat of oil. While a typical exercise in Alaska may include a Wildlife Branch developing a wildlife plan for the exercise and identifying an oiled wildlife facility, potential wildlife personnel, and available equipment few exercises in Alaska or anywhere else get past the first few hours in any realistic way. They generally assume that everything will go according to the plan and in most cases facilities, equipment and personnel are not activated or tested and in even the biggest exercises the testing is quite limited in both time and scope to keep costs reasonable.

METHODS:

Early on the morning of Dec 28, 2012, the MV Aiviq lost power to its main propulsion engines while towing the Shell contracted Kulluk, a conical drilling unit in heavy weather about 50 miles off Kodiak island. The use of power generators allowed the ship and rig to maintain position until power was restored to one of the four main engines, as Coast Guard Cutter Alex Haley stood by to assist and additional Shell contracted response and support vessels were en-route to the scene. The US Coast Guard, Shell and Edison Chouest Offshore established a Unified Command in response to the incident in Anchorage. The difficult weather and engine problems continued through Dec 29 until the towlines parted late in the afternoon on Dec 30. The weather was consistently pushing towards Kodiak Island so by the early hours of December 31, when the Kulluk was again secured by towline first to the Tug Alert and then the Aiviq, they were only 19 miles south east of Kodiak. By daylight the Kulluk was again adrift and estimated to be within 4 miles of land with difficult weather expected throughout the day with little hope of averting grounding. By late that evening the Kulluk grounded on the northern shore of Ocean Bay on Sitkalidak Island, east of the town of Old Harbor on Kodiak Island.



On the morning of Dec 29, International Bird Rescue received a call on from the Shell National Response Team requesting four people to set up a Wildlife Branch in Anchorage. Barbara Callahan, based in Anchorage reported to the Incident Command Center later that day with the remaining three Wildlife Branch staff on site by that evening.

While the Wildlife Branch would normally sit within the Operations Section in an incident command structure, in this situation it was initially positioned next to the Environmental Unit within the Planning Section because no actual operations would be implemented at this point and the information and resources needed to develop a plan were found there.

The initial focus for the Wildlife Branch was to develop a flexible response plan that could be effective in whatever scenario might unfold over the next few days or until the towing vessel and the drilling rig no longer posed a threat. The plan would identify exactly how a safe effective wildlife response would play out in the current conditions if a worst-case release should occur. This would include identifying the actions and resources required to initiate a appropriate wildlife response readying a one or more facilities to receive animals, identifying personnel to staff the collection, stabilization and rehabilitation of oiled wildlife at risk, and securing any equipment needed in addition to the stockpiles already in Alaska. The planning became increasingly challenging as the towlines parted and eventually the Kulluk grounded. With the current sea conditions collection of wildlife from boats would not be safe in the open seas of Ocean Bay.

DISCUSSION:

Wildlife Branch planning challenges

Any oiled wildlife response action plan requires a number of key components that have to be developed in detail to ensure that a wildlife response can be accomplished safely and effectively. An oiled wildlife response depends on seamlessly combining three parts: facilities, equipment and personnel. Each must match the needs of the situation, the plan and the other parts to be effective.

Wildlife facilities

The foundation of any oiled wildlife response is the rehabilitation facility. Without a place to care for the oiled wildlife effectively most of the other efforts are pointless. The first step was to develop a plan to bring the Alaska Wildlife Response Center in Anchorage to full readiness to receive oiled wildlife if that should be needed. This included an evacuation plan for the Bird Treatment and Learning Center (Bird TLC); a wildlife rehabilitation and education organization that utilizes much of the facility during the times it is not needed for spill response. While Bird TLC lease has always contained a clause requiring them to evacuate the center within 24 hours in the case of an oil spill, there had not been an event that actually necessitated it since they had moved in and many of their current staff and volunteers were unaware of it. The fact that it was happening during the Christmas holidays and that it was not yet certain that the center would be needed only made it more difficult.

Wildlife equipment

The wildlife response requires specialized equipment that is generally foreign to even a very experienced Logistics Section. Supplies and equipment for veterinary care, animal husbandry, specialized capture and cleaning are often very specific and can be difficult to source. In many spills a lack of understanding for the specialized needs and time sensitive nature of the wildlife branch has resulted in delays or inappropriate equipment or supplies being ordered. This

results in frustration to both personnel in both the Logistics Section and the Wildlife Branch and in some cases has cost animal lives. If a release of oil during the Kulluk response should occur it would be critical that the system minimize miscommunication and delay in securing the facilities, equipment and personnel needed to safely and successfully rescue oiled wildlife.

Wildlife personnel

While all areas of the Wildlife Branch require personnel with specialized training and experience, much of that knowledge is similar to responding to a spill anywhere. The most challenging aspect for both managers and personnel of any wildlife response in Alaska is the field operations. The vast distances and a lack of robust transportation infrastructure in many areas of the state makes finding, collecting and stabilizing wildlife prior to transport to a center with the resources and support required to successfully rehabilitate them a huge endeavor. This remoteness and the fast changing and often extreme weather make working safely even more important. In this case it would require identifying and securing vessels that could safely work in conditions found in midwinter in exposed Alaskan waters and outfitting them with specialized wildlife equipment and responders who knew how to work safely and could successfully find and capture oiled wildlife under those conditions. Also a stabilization center near the collection area would be required to stabilize what would likely be cold debilitated animals prior to the hours long transport from Kodiak to the rehabilitation facility in Anchorage. Finally a transportation plan would be needed to assure the safe and timely transport to the rehabilitation center.

The Kulluk response

From December 29 to January 7 when the Kulluk reached its safe harbor in Killuda Bay the Wildlife Branch, staffed by four International Bird Rescue responders on scene in Alaska as well other members of International Bird Rescue's Response Team working remotely prepared for a full wildlife response. Plans were developed to a level of detail never reached in one or two day exercises. Four key areas were tested to a degree beyond any previous exercise and showed that if oil had been released an appropriate level of wildlife response could have been put into place quickly and effectively.

Wildlife facilities

The Kulluk Incident provided an excellent test of the centralized facility philosophy of the oiled wildlife plan for Alaska and demonstrated the readiness of the Alaska Wildlife Response Center. Although a total evacuation by the Bird Treatment and Learning Center was never needed, the Kulluk Incident showed that Bird TLC could evacuate the facility in a timely manner and the center would have been ready to intake and care for oiled birds within 24 hours of the center's activation. It also identified actual facilities near the grounding for the stabilization of oiled birds and the stabilization and rehabilitation of otters if collected.

Sourcing equipment and supplies

Wildlife Branch staff worked directly with the Logistics Section personnel to facilitate the timely identification and sourcing of the specialized equipment needed for wildlife response while meeting the needs of both the Wildlife Branch and the Logistics Section for documentation, approvals and quality. They also collaborated directly to identify specific needs for additional wildlife facilities and determine options for fulfilling these needs in multiple

locations to fulfill evolving or potential needs and were able to work through a number of issues ordering resources that resulted from the Wildlife Branch staff's lack of familiarity with the incident management software.

Wildlife response personnel

One of the critical factors identified as affecting the success of an oiled wildlife response is the timely collection and rehabilitation of oiled animals by trained and experienced personnel. Staffing needs for collection stabilization and rehabilitation were identified based on the wildlife plan and experienced wildlife responders from within and outside of Alaska were contacted to determine availability, response time (including available flights) and skill sets. These responders remained on standby and any changes in availability were tracked until the Wildlife Branch was demobilized.

Wildlife collection plan

The wildlife collection plan listed three incident specific objectives for the bird group, it identified by name actual crab fishing vessels and their availability, response time and mission compatibility were also documented. It also specified equipment needed to outfit them for effective capture and stabilization. Available but not yet activated responders were assigned to staff collection/stabilization teams on the vessels as well as a field stabilization facility to be located at the Kodiak National Wildlife Refuge Office in Kodiak.

CONCLUSIONS:

The Kulluk Incident provided an excellent opportunity to test existing wildlife response plans and capabilities within Alaska, develop additional depth for existing wildlife plans and increase the general response awareness for what is needed to successfully mount a safe and effective oiled wildlife response. The continuing threat of a real disaster combined with the evolving situation to maintain a sense of utmost urgency over a prolonged period provided experience that cannot be gained in exercises. The threat demanded the best possible response and the extended period allowed a level of detail unachievable in a two or three day exercise. This level of detail is often when problems or gaps are discovered. Shell's decision to activate the Wildlife Branch early on and staff it with professional wildlife responders who are experienced within Alaska, its environment and its responders was a clear sign of how seriously the company takes the wildlife component of oil spill response.

That the incident ended without oil reaching the water or wildlife teams in the field did not make that decision ill advised. Massey *et al* (2005) discussed the value of oiled wildlife care as it related to public confidence and brand value for responsible parties in oil spills and concluded that there was significant value in public trust that may be lost or gained. The preparations to collect and rehabilitate oiled wildlife should it be needed during the response satisfied the public's expectation. It also fully realized the value of this opportunity to increase preparedness in Alaska, adding an important additional layer of experience and building or strengthening communication, understanding and teamwork between the wildlife branch and the other sections. The cost of activating this small number of wildlife responders was insignificant in the overall cost of the response yet the benefits were very significant. It demonstrated the

value of responding quickly and fully before the disaster when a serious risk exists but also the value of using every opportunity to “practice” under the most realistic conditions possible.

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