

OVERVIEW OF BIRD SEARCH AND RESCUE, RESPONSE EFFORTS DURING THE EXXON VALDEZ OIL SPILL

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ABSTRACT: The Exxon-Valdez oil spill presented the International Bird Rescue Research Center (IBRRC) with a variety of unique and unprecedented challenges. One of which was the development and management of two search and rescue programs in Prince William Sound, with the home base being Valdez and the other along the Kenai Peninsula, with Seward as the designated home base. Local fishing boats, float planes, and personnel were organized to create two functional search and rescue fleets that combed approximately 900 miles of coastline in search of live oiled birds and oiled carcasses. This effort resulted in the capture of 1,630 live oiled birds and the recovery of thousands of dead oiled bird and mammals.

During most oil spills only one oiled bird rehabilitation center is needed to care for all the effected birds. Strong currents began moving oil out of Prince William Sound and north along the Alaskan coastline. At the same time, public pressure to save the victims of the spill increased. It became evident that animal care services in even the most remote areas needed to be developed. Four oiled bird care centers and four search and rescue programs were strategically located near the most heavily effected areas to care for live oiled animals.

This paper will focus on how both of the oiled bird search and rescue programs were created and functioned throughout the six month long oiled bird rescue and rehabilitation effort. Emphasis will be placed on the chronology of the planning and decision making processes during this crisis. Further discussion will highlight how the search and rescue fleets coordinated their efforts with the rehabilitation centers to initiate the most effective impact. It will also take a look at the capture and safety techniques used during the actual pursuit of animals and the initial care and transportation of captured birds.

INTRODUCTION

At 6:30 am. on the morning of March 24, 1989 the International Bird Rescue Research Center was contacted by officials from Alyeska Pipeline and asked to leave for Valdez immediately to organize an oiled bird rehabilitation program for birds that may be affected by the Exxon Valdez oil spill. The spill had occurred only six hours prior to the notification. By 6 pm. that evening, four IBRRC oil spill response team members arrived in Anchorage. They were Alice Berkner, Jay Holcomb, Nicolette Heaphy and Jessica Porter, DVM. They arrived in Valdez at 9 am. the next morning to begin setting up the oiled bird rehabilitation center and evaluate the potential impact on local bird populations. IBRRC has been on contract to Alyeska Pipeline for over 10 years.

During this time basic bird cleaning and care supplies were stored and kept updated at the Alyeska terminal in Valdez. Upon arrival in Valdez, the supplies were removed from storage and were made available for review. At that same time, arrangements were being made to locate a facility that could house oiled birds from the Prince William Sound area. Adequate facilities that had heat control, ventilation, telephone outlets and the water and electrical capabilities that oiled bird programs require were virtually non-existent in Valdez. Although a few warehouses were considered, the Copper Basin dormitory of Prince William Sound Community College was secured as the bird rehabilitation center. The facility lacked in some of the basic needs such as proper ventilation and water availability but it was spacious enough to potentially house a

maximum of 500 birds if needed. While the facility was being modified to meet the needs of an oiled bird rehabilitation program and as pools and specially designed bird pens were being constructed, IBRRC staff met with representatives from Exxon and the Department of Interior to discuss the next step. How to capture and transport oiled birds.

PRINCE WILLIAM SOUND SEARCH AND RESCUE PROGRAM

On March 26, the third day of the oil spill, high winds blew through Prince William Sound and large volumes of the oil that had been securely boomed around the tanker began to break loose and follow the currents. The likelihood of birds being affected by oil became a definite possibility as oil was seen hitting the shore of Naked Island and moving towards some of the other adjacent islands in the sound. Daily over flights indicated that there was a variety of bird species foraging near these islands and that the oil was spreading quickly towards the north western section of the sound. Public concern for migrating shorebirds and waterfowl that use Prince William Sound as a stop over during the northward migration was strong and well publicized. As public hysteria began to build and the oil continued to move through the sound, IBRRC staff worked vigorously in an attempt to stay a step ahead of the situation and plan appropriately. If oil was already hitting some of the islands and moving towards the west than it was very likely that a variety of sea birds, Bald Eagles and Sea Otters would be effected as well as the migrating bird species.

"Calling the shots" on how to proceed in a situation like this is difficult at best. Personnel could only guess as to where the oil was going to go and what impact it would have on wild animals living in the sound. Capturing oiled wildlife can be difficult with good sea and weather conditions. The unpredictability of the weather at that time of year and the rugged terrain of Prince William Sound made it potentially dangerous to humans. Human safety was the primary concern as the subject of rescuing oiled wildlife was considered. In order to attempt to minimize the oils impact on native wildlife species it was agreed that a search and rescue pilot program commence immediately to evaluate whether or not a full scale search and rescue program was logistically feasible. Basic supplies were quickly gathered together and a small fleet of 5 local fishing boats was hired. Approximately 25 Alaskans were hired to staff these boats. The staff chosen for the pilot program had experience with sea conditions in Alaska and many had boating experience in the sound. Enough zodiacs were acquired so that each boat had at least one available to be used for beach access. The program was directed by three IBRRC staff persons. The protocol for the search and rescue program was developed during the 8 hours we were in route to the location of the oil. All three IBRRC staff members shifted from boat to boat, training the crews in the art of capturing and handling oiled birds and Sea Otters. Basic care techniques such as giving fluids via a stomach tube and how to keep birds warm and quiet was covered. Human safety procedures were emphasized as the primary concern. Discussions and demonstrations ranged from how to capture fleeting oiled birds on slippery oiled beaches and look out for bears at the same time, to what to do if you fell in the extremely cold water. The importance of picking up oiled carcasses as to avoid secondary poisoning by predators and scavengers was emphasized. A triple buddy system was created so that two people could work together to capture animals and the captain of the boat would stand watch and stay near the radio for help or updates. It was further agreed that all of the boats would stay in contact with each other as much as possible for safety reasons, so a boat buddy system was also developed. Kelly Weaverling, a resident of Cordova who was very experience in traversing the sound during all seasons and weather conditions was hired as the fleet coordinator and reported directly to IBRRC. By the time the pilot fleet arrived at the oiled areas the entire crew had been given basic training in all of these areas and everyone felt comfortable in proceeding with their mission. It

was evening when the fleet arrived at Naked Island. The search for oil-contaminated wildlife was postponed until morning.

At sunrise the boats were split up into teams and began looking for oil on the water and oiled wildlife. The weather was cold with snow flurries and light winds throughout the day. It didn't take long to locate oil and oily debris in the water and shorelines coated in thick oil. On some beaches the oil was over a foot thick and birds heads could be seen sticking up out of the oil. Birds were also sighted flying into the oil then beginning to bath in order to rid themselves of the oil. Birds often drowned within minutes due to the added weight of the oil on their feathers and the cold temperature of the water. Occasionally opportunistic Bald Eagles picked struggling birds out of the water before the rescuers could get to them. Birds that beached themselves were heavily preyed upon by eagles. Eagles were also seen perching on trees and rocks feeding on oiled bird carcasses. This justified the concern that secondary poisoning may affect the eagles and other predators who forage on live or dead oiled wildlife.

Sea Otters were discovered high on the shorelines attempting to groom oil out of their fur. Long handled fishing nets of various sizes were used to net birds and otters. Sea Otters are fairly clumsy on land and easy to net if they are far enough away from the waters edge. Carrying them in a long handled net to the boats seemed to be an efficient way to keep their powerful jaws away from the catcher. Birds are usually faster and can retreat back to the water when they see a human approaching. Stalking techniques were used to approach beached birds and otters in order to avoid startling them. Once captured the birds were put in boxes with towels or rags in the bottoms and since there were no proper holding cages for otters at that time, most of the otters spent the night in the holds of the boats lined in cardboard boxes for insulation. A 24-hour watchman monitored the otter's behavior on a regular basis. Overheating was our greatest concern. During the trip back to Valdez, a makeshift pen was built on the deck of one of the boats to provide the animals with ventilation and prevent overheating during the day. Birds traveled in boxes and were given fluids every 4 hours throughout the day to help combat dehydration.

The pilot project took three days to complete. Two days travel time and one day to capture animals. In one day, 50 water birds and 9 Sea Otters were captured. Based on the results of the pilot trip it was decided that a full scale search and rescue program in Prince William sound be put immediately into effect. It was assumed that the cost of such an effort would be high but it was a necessary expense in order to capture oiled animals. Exxon made the commitment to fund the project and support all other efforts to capture and rehabilitate wild animals impacted by the oil spill.

The Prince William Sound (PWS) search and rescue program was developed with three main goals. They were, (1) to collect as many live animals as possible, (2) to pick up dead oiled carcasses in order to prevent secondary poisoning to other animals, and (3) to pick up oily debris on the beach and in water through which scavengers search for carrion, as well as kelp, which Black Tailed Deer use as winter forage.

After the pilot trip was completed, a separate otter rescue fleet was developed with trained otter handlers. IBRRC's search and rescue fleet focused on bird capture. Both otter and bird fleets kept in contact with each other so that animal sightings could be relayed. Local fishing boats and personnel from Cordova, Whittier, and Anchorage were hired to staff the operation. A map of the sound was strategically divided into 8 areas of coverage. Smaller fleets of boats were assigned to work each area so that all of the impacted areas received equal coverage. Kelly

Weaverling, the fleet coordinator set up the home radio base in Cordova and coordinated the entire fleet from there. Faster and larger vessels were used as transport boats so that captured wildlife could be brought to the center in Valdez on a daily basis and supplies and relief staff could get to their destinations in a reasonable amount of time. At the height of the program 40 boats were being utilized and hundreds of employees were hired to staff the boats. As the oil was being cleaned up by beach crews and being carried by currents out of Prince William Sound the impact on birds in this area began to drop off. Boats and personnel were removed according to what results they were able to produce. The Prince William Sound oiled wildlife search and rescue program began on March 31, 1989 and ran through July 21, 1989. During that time 419 live oiled birds were captured and approximately 3500 carcasses were retrieved.

SEWARD SEARCH AND RESCUE AND OILED BIRD REHABILITATION CENTER

During the first week in April, the oil had begun to exit Prince William Sound and move in a northwestward direction along the Gulf of Alaska. Unpredictable weather and sea conditions made it impossible to attempt to transport oiled wildlife from the Kenai Peninsula area to Valdez for care. It was also be dangerous and too long of a journey for the PWS search and rescue boats to make. The next logical step was to set up another oiled bird rehabilitation facility in an area that allowed accessibility by boat and aircraft to the Kenai Peninsula. Seward was chosen as the most realistic site due to its central location and close proximity to Anchorage. Seward is approximately 3 hours driving distance from Anchorage which made supply acquisition easier and the town contained a harbor needed for vessel transportation.

On April 8 two IBRRC response team members, Jay Holcomb and Mimi Wood flew to Seward to set up an oiled bird care facility and a search and rescue program for that area. That evening IBRRC met with the people of Seward at a town meeting and explained IBRRC's plans and the urgency of setting up an oiled bird rehabilitation center before birds were being impacted. By the next day, Linda Harrington, a resident of Seward and a licensed vessel operator was hired to direct the Seward search and rescue program. Linda May an experienced wildlife rescuer and rehabilitator was hired in addition to train the search and rescue personnel on how to capture and give basic care to oiled wildlife. All hired bird capture staff were required to attend a VECO safety training. Ms. Harrington began to gather names of available boats and individuals that were interested in being hired for this project. Contacts were made with Exxon and the Coast Guard and daily meetings were attended to stay updated with the movements of the oil so that the search and rescue fleets would focus on areas that were being impacted.

Concurrently the search for a building that could be used as an oiled bird rehabilitation center was on. The Air Force Recreation Camp in Seward was designated as the Seward oiled bird rehabilitation center but within 48 hours the air force personnel in charge of the facility changed withdrew their agreement to let the facility be used for oiled bird care and the search for another facility resumed. On April 11 the first boats from the Seward search and rescue fleet were dispatched and an approximately 100' X 80' warehouse was secured as the Seward oiled bird facility. This warehouse was located 9 miles outside of town on the edge of Resurrection Bay which made it convenient for releasing rehabilitated birds. Plans for plumbing and construction of bird pools and cages began immediately. A bird cleaning room, food preparation and storage area within the warehouse was designed and built to suit the needs of oiled birds. Set backs due to bureaucracy and supply acquisition were aggravating and delayed the completion of the center. By April 18 the center was open but had limited capabilities.

The Seward search and rescue fleet covered approximately 500 miles of coastline along the southern side of the Kenai Peninsula and 100 miles between Seward and the northern entrance to Prince William Sound. The area was divided into 4 different zones with a small fleet assigned to each zone. They were labeled the white, red, blue and yellow fleets. Each fleet had a designated group leader who's responsibilities included receiving daily information from the home base and relaying it to the other vessels in their fleet, maintaining contact with other fleet members throughout the day and reporting live and dead bird counts to the office on a regular basis.

The terrain was completely different from the sound so more precautions were taken. Jagged cliffs and frequent violent seas made bird capture difficult. Zodiacs were launched from larger boats and used to patrol the hundreds of bays and fiords that the oil became trapped in. Emphasis was placed on the Chiswell Islands and the surrounding cliffs where millions of sea birds would be arriving to nest and spend the summer raising their young. Some species had already begun to arrive by mid April and they were the first to be impacted by oil. Pelagic and Red faced Cormorants along with Common Murres were the most numerous. Biologist from the Kenai Fiords National Park and the U.S. Fish and Wildlife Service provided the information that indicates when each particular sea bird species would arrive, mate, nest and fledge their young. This information was invaluable to the search and rescue coordinator. and the rehabilitation staff. IBRRC search and rescue staff used this information to focus search and rescue efforts on areas where certain species of returning sea birds might encounter oil. The rehabilitation staff was also able to prepare for the different caging and care requirements of each different species that were expected to be effected by oil. Like clock work the birds began to show up at their nesting areas and when weather permitted we patrolled those areas in search of oiled birds and carcasses.

Bird capture techniques were much the same as they were in the PWS search and rescue program. Beaches and accessible areas were patrolled by foot. However, the rough terrain that included cliffs, jagged rocks and high seas in much of this area sometimes made it difficult to capture birds on land. In order to capture oil affected birds the search and rescue teams had to become more pelagic in their techniques. Capturing birds in open water was practiced with the use of zodiacs with a high-speed motor. The person netting the bird would lean over the front of the boat as the captain maneuvered to follow the bird. Certain species of diving birds such as Common Murres have a diving pattern that is regularly used during escape. There movements were easier to predict making capture attempts on the water more successful. Puffins and some of the other diving birds were more erratic when diving to escape making them more difficult to capture. These techniques worked well when birds were cold and tired from loss of insulation.

Some of the boats traveled hundreds of miles in order to locate oiled birds. This did not allow for easy or quick transportation of birds to the bird center in Seward. When weather permitted, float planes were made available to transport birds to Seward. Aircraft was used regularly throughout the program to spot moving oil and relay information to the IBRRC search and rescue headquarters in Seward.

Occasional storms forced members of the fleet to hold up in bays and fiords sometimes hundreds of miles from Seward. In preparation for this, every boat was equipped with enough supplies to keep birds hydrated and stabilized for up to 5 days. In addition, most of the capture crew had been trained at stomach tubing birds. As new personnel were added they were visited by the IBRRC training director and educated on the capture and emergency care of oiled birds. The longest time that any bird had to stay on a boat was 4 days.

At the height of the Seward search and rescue program 42 boats were being used and hundreds of employees were employed to man the bird rescue teams. The Seward search and rescue program was in operation from April 8 until September 5, 1989. A total of 849 live birds were captured and approximately 10,264 carcasses were recovered.

The Seward oiled bird rehabilitation facility was completed by the end of April and became the central facility for all of IBRRC's bird rehabilitation efforts during the Exxon Valdez oil spill. As the other centers began to demobilize, arrangements were made for the occasional animal to be shipped to the Seward center. The Seward facility included 8 6' X12' pools, 2 40' X 15' Bald Eagle aviaries, and 4 8' X 8' flight cages and small eagle holding pens. 50 smaller specially designed net bottom pens were used indoors to hold oiled water birds prior to washing. The cleaning facility had a large 4' X 12' table to wash birds on and 4 bird rinsing stations. The facility worked well for rehabilitating oiled water birds and eagles, (refer to paper #117 of this proceedings, The Rehabilitation of Oiled Seabirds and Bald Eagles Following the Exxon Valdez).

KODIAK OILED BIRD REHABILITATION FACILITY

The oil from the Exxon Valdez continued following currents passing the tip of the Kenai Peninsula. Some oil entered the entrance to Cook Inlet and the rest continued out towards Kodiak and the Alaskan Peninsula. IBRRC's oil spill response team staff was already stretched to the limit and opening another bird care center was not only expensive it required qualified people to staff it. It seemed inevitable that the remote location of Kodiak Island would in its self justify the need for a third oiled bird rehabilitation center. Most people do not understand the logistics in setting up a bird rehabilitation facility. Without pre planning the costs are high and untrained volunteers cannot realistically manage an oiled bird rehabilitation center. However, these factors are ignored by the public who provides political pressure especially during times of crisis. In Kodiak, local persistence made it even more evident that a facility must be established in a short amount of time. On April 18 IBRRC staff was still in the process of setting up the facility in Seward. Mimi Wood was sent to Kodiak to direct the oiled bird rehabilitation efforts. Alice Berkner had already examined the local Armory in Kodiak as the possible site of the oiled bird rehabilitation center. This facility was perfect for oiled bird rehabilitation. It had high volumes of water, good ventilation and the electrical capabilities that are needed to function properly. The only other requirements were the construction of a few pools and bird cages and the acquisition of animal care supplies. Search and rescue efforts were already underway and being managed by the U.S. Fish and Wildlife Service.

The Kodiak oiled bird center washed and gave additional care to some of the birds they received while the facility was in operation but most of their birds were transferred to Seward where trained staff could give adequate care to the animals. The Kodiak search and rescue fleet functioned from April 20 to September 5, 1989. The fleet peaked at approximately 25 boats and 47 live oiled birds were captured and 22,000 carcasses were recovered. The Kodiak rehabilitation center closed on July 3, 1989 due to the significant reduction in the number of live birds and carcasses being found. A local veterinary hospital gave temporary care to all birds that were brought in after the center was closed. Once stabilized, the birds were then transferred to the Seward facility for washing and rehabilitation.

HOMER

As the oil followed currents around the tip of the Kenai Peninsula, there was panic in the town of Homer that many more oiled birds would be discovered. IBRRC staff managed to convince the people of Homer that it was not necessary to set up another full scale oiled bird rehabilitation facility in Homer when Seward was only 5 to 6 hours away by car.

Oiled birds that were captured were taken to a temporary care facility in Homer where basic care was given to the birds prior to being sent to Seward for long term rehabilitation. A small room with limited water use was utilized. A van and driver were on 24-hour call to transfer animals from Homer to Seward at our request. The temporary care facility in Homer was directed by a local bird enthusiast and an experienced veterinarian. IBRRC oversaw the program and trained these people in the basic care of oiled birds.

The Homer search and rescue program was managed by the U.S. Fish and Wildlife Service and at its busiest time employed 8 boats. The fleet captured 192 live birds in the Homer area. The amount of carcasses recovered was not available. The Homer search and rescue program functioned from April 9 through September 6, 1989. The Homer temporary care facility opened on April 12 and closed on July 30, 1989.

CONCLUSION

A total of 1,630 live oiled birds were captured and brought to IBRRC's four oiled bird rehabilitation centers in Alaska during the six months that they were in operation. Approximately 36,471 carcasses were recovered during this time. This was the first time in history that an oiled wildlife search and rescue program of this magnitude was developed and implemented. Public outcry influenced many of the decisions that Exxon was to make. Although sometimes unrealistic in their expectations the voice of the public is a powerful force that can bring about radical change in social responsibility. A precedent was set during the Exxon Valdez oil spill in how oil companies and clean up contractors must respond to oil spills. Current state and federal government legislation reflects this trend. This legislation is attempting to improve response capabilities by making funds available for contingency planning and mandating that oil companies better prepare for spills.

There is always a certain amount of risk when transporting oil. Fragile environments like Prince William Sound and the Gulf of Alaska need to be protected and the wild animals effected by oil spills require the immediate rescue and care given by trained individuals. The cost of rehabilitating oiled wildlife during this spill was extremely high. Pre-identified facilities, supplies and functional response plans that are activated at the onset of a spill could significantly reduce the overall cost of the operation and produce better results in animal survivability and clean up efforts.

More information is available on IBRRC's website: <http://www.ibrrc.org>

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