

Bird Kills in Contained Oil: A Biopolitical/ Enforcement Strategy

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Abstract: Extensive bird mortality was documented from oil contained in pits and open-topped tanks in New Mexico, Oklahoma, and Texas. Annual mortality easily exceeded 300,000 birds including 100,000 ducks. An enforcement strategy was developed that included negotiations with state oil regulating agencies, seminars presented to oil industry associations, a news media campaign, and criminal and civil enforcement actions initiated at the state and federal level.

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It is commonly known that birds frequently die in oil spills. Much of this mortality goes undetected; however, Piatt and Lensink (1989) present an overview of estimated bird kills from some well documented oil spills.

Probably the best known oil spill in the world was the grounding of the "Exxon Valdez" in Alaska that killed an estimated 300,000 birds (Piatt et al. 1990). What is generally unknown, however, is that through the 1980s the number of birds killed annually in oil contained in pits and tanks in New Mexico, Oklahoma, and Texas was even greater.

A 2-year Bureau of Land Management survey (V. L. Grover, unpubl. rep. Bur. Land Manage., Carlsbad, N.M., 1983) estimated that 225,000 birds were killed annually in 5,649 oil pits in southeastern New Mexico alone. Flickinger (1981) reported finding 394 dead birds in 61 pits in Texas. Flickinger and Bunc (1987) found 533 birds in 87 pits in another Texas study. The number of pits and tanks in Oklahoma and Texas is unknown but the total for each state is many times greater than in New Mexico (K. Schriefer, pers. commun.; J. J. Hubert, pers. commun.).

It is generally thought that birds are attracted to contained oil because it appears to be water. For some light wavelengths the reflectance values of water and oil overlap (E. B. Fish, pers. commun.). Additionally, birds may be attracted to seeds, insects, and bird carcasses on the surface of exposed oil.

In 1976 an oil-covered alkali basin in Texas was found with hundreds of oiled duck and grebe carcasses (M. Erskin, pers. commun.). This discovery lead to a 2-

year investigation by the U.S. Fish and Wildlife Service. Several other similar sites were discovered that contained comparable levels of bird mortality.

It was learned that oil producers were disposing of waste oil and produced water into these basins. Produced water is chemically laden brine water that is pumped from the oil bearing formation along with crude oil. The oil and water are separated but minute amounts of oil remain suspended in the water. This oil eventually floats to the surface if the mixture is not disturbed. Before the development of reinjecting this water back into the oil formation, it was simply pumped into pits or natural basins where it caused extensive pollution and killed large numbers of wildlife, especially birds.

By 1978 much of the dumping into large basins in Texas was eliminated through negotiations with the U.S. Department of Justice, the U.S. Fish and Wildlife Service, and the Railroad Commission of Texas (RRC). The RRC regulates the discovery, production, and transportation of crude oil in Texas. There was no federal or state prosecution initiated.

While the problem was no longer obvious it was still as serious. The producers simply began dumping into smaller, less visible pits. The RRC initiated action in the early 1980s to eliminate pits. The objective was to reduce water pollution and conserve oil. The pits in many parts of Texas were eliminated and were replaced with open-topped tanks. This effort was not uniform throughout the state and in some areas operators continued to use pits illegally. While the tanks got much of the water and oil off the ground, the oil in the tanks continued to attract and kill large numbers of birds annually. There was no similar effort in New Mexico and the situation in Oklahoma was unknown at that time.

In April 1987, the U.S. Fish and Wildlife Service, Division of Law Enforcement, opened a new field office in Lubbock, Texas. The primary objectives of this office were to determine the scope of migratory bird mortality in pits and tanks in west Texas and to develop an enforcement strategy to eliminate this problem statewide.

During the first year enforcement and biological personnel summarized what was known about this problem. Government employees and conservation activists previously involved in this issue were interviewed. Conservation officers identified sites where birds were being killed. State agency regulations were reviewed. Safety procedures and collecting techniques were developed so that evidence could be safely and effectively collected for possible litigation. The investigation concentrated on the panhandle and south plains of Texas, eastern New Mexico, and western Oklahoma.

Hundreds of pits, open tanks, and spills were found and about 900 dead oiled birds were collected. The number of birds found represented only a fraction of the number killed since carcasses sink, decay (Flickinger and Bunck 1987), and are scavenged (V. L. Grover, unpubl. rep., Bur. Land Manage., Carlsbad, N.M., 1983).

These results indicated that the mortality was extensive, possibly biologically significant for some species, and easily preventable. Duck mortality probably ex-

ceeded 100,000 annually which is more than the legal kill from hunting in this 3-state area (J. J. Hubert, pers. commun.).

Since many of the pits were in violation of existing state regulations, much of the problem could be eliminated by stricter enforcement. Open-topped tanks are not in violation of any law. This situation is easily corrected by requiring the tanks to be covered with small mesh netting.

In November 1988, the U.S. Fish and Wildlife Service (FWS) regional director, the regional biologist, and special agents met with officials of the RRC, Texas Water Commission (TWC), and Texas Parks and Wildlife Department (TPW) to discuss a cooperative solution. The TPW was aware of the problem but by policy did not prosecute for the unintentional killing of wildlife in contained oil. The TWC expressed interest in developing regulations within their jurisdiction. The RRC declined to develop new regulations and suggested that the Fish and Wildlife Service use federal law to protect migratory birds. The RRC did agree to notify all operators in Texas of the problem and possible federal prosecution. FWS agreed to withhold publicity and not to initiate prosecution for violations substantiated prior to 1 October 1989. This was to allow the oil industry to voluntarily comply with FWS recommendations to prevent bird deaths. The recommendations were: (1) clean up spills and unnecessary pits, (2) consolidate facilities where possible to reduce hazards, and (3) cover all remaining pits and tanks that may contain oil with 2.5-cm netting. Similar actions were taken in New Mexico and Oklahoma.

The regional biologist developed a multimedia program and presented dozens of seminars to government agencies and oil industry organizations.

Prior to the 1 October 1989 deadline, the New Mexico Corporation Commission adopted new rules that require all sized pits and tanks >4.87 m in diameter to be covered. While this exempted most of the open tanks, the industry response was to cover smaller tanks as well. Field checks have shown that $> 90\%$ of the facilities that were killing birds in November 1988 were eliminated or covered by spring 1990.

By October 1989 most major corporations and many independent companies voluntarily complied with FWS recommendations. This cooperation was spotty and represented only a small proportion of facilities that were hazardous to birds. Spills and illegal pits found by FWS special agents were referred to state agencies for cleanup action.

On 3 October 1989 FWS issued its first press release and began the enforcement phase of the investigation. Media coverage was extensive and widespread. Requests for information and interviews from television, newspapers, and magazines were frequent. This resulted in a public interest phenomenon that has been the most significant impetus for this investigation.

In New Mexico, special agents are required to notify an operator if a dead migratory bird is found in their pit or tank. Agents must then find additional mortality before initiating prosecution. After notifying the operator, FWS also notifies the Corporation Commission who requires the pit or tank to be netted. To date, all notified operators have complied and no prosecutions have occurred.

In March 1990 the RRC proposed an advisory rule to inform operators that if migratory birds are killed by their facilities they may face federal prosecution. This proposal received much criticism from citizens, conservation groups, and FWS, and the proposal was not adopted.

In April 1990 the Oklahoma Corporation Commission adopted a similar advisory rule despite similar opposition.

Prosecution strategies in Oklahoma and Texas were similar. A combination of criminal and civil actions were used. FWS charged violators with the unauthorized take (killing) of migratory birds. This is a violation of the Migratory Bird Treaty Act (16 United States Code 703). All companies charged have settled without a trial.

A typical federal settlement in Oklahoma included: (1) a fine of \$400 per violation plus \$100 for each bird killed, (2) reimbursement for forensic expenses (necropsy and identification), and (3) a commitment to modify all facilities to prevent further mortality.

Civil actions in Oklahoma were initiated by the Department of Wildlife Conservation for the cost of the investigation when necropsy results were inconclusive or the carcass was too decayed to perform a necropsy.

In Texas, a typical settlement included: (1) a fine of \$300 plus \$50 for each bird killed, (2) restitution to the FWS for forensic expenses, (3) restitution to the TPW for each bird killed, and (4) a commitment to modify all facilities to prevent further mortality.

To date over 50 companies have paid about \$50,000 in fines, civil penalties, and restitution. While the fines are small, the real value of these cases is the implementation of FWS recommendations by these and other companies even though there is no law to require them to do so.

FWS is continuing to work with the state agencies to eliminate this problem. Additionally, similar problems have been identified in Arkansas, Colorado, Kansas, Louisiana, Nebraska, and Wyoming.

It is important for conservation officers everywhere to identify and eliminate contained oil and chemical situations that may attract and kill birds and other wildlife. This approach may seem unusual or unconventional for some law enforcement agencies but it is quite effective and certainly worth the effort.

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