

Powerlines and Raptors, using Regulatory Influence to prevent Electrocutions

Leo R. Suazo II

ABSTRACT

The United States Fish and Wildlife Service hereafter (Service) has documented migratory bird electrocutions and collisions for almost four decades. Although great strides have been made to modify powerlines and utility structures, problems still exist. With the continuing expansion of human populations into rural areas, avian interactions with structures and lines are expected to increase. United States law protects migratory birds with treaties, statutes, and regulations. Congressional legislation used to protect birds include the Migratory Bird Treaty Act, the Bald and Golden Eagle Protection Act, and the Endangered Species Act. Aldo Leopold listed regulatory influence as one of five wildlife management tools. Accordingly, the Service uses its regulatory influence to generate voluntary compliance to protect the Nation's avian resources. The Service encourages electric utilities to retrofit old lines and to construct all new lines in a bird-friendly manner. Because many utilities are too small to have staff biologists, the Service helps these utilities identify migratory corridors and other sensitive areas, by forming partnerships and sharing biological data. Sharing biological data helps utilities identify existing or potential problem areas. If utilities do not comply voluntarily, the Service has the option of forcing compliance through civil and criminal action. Penalties can range from \$10,000 to \$500,000 and imprisonment for up to two years.

INTRODUCTION

Many papers and books have been published identifying the specific problems raptors encounter with utility structures and related powerlines. These structures and lines cause raptor mortality, mostly through electrocution (Harness 1997). Since electrocution has been identified as a significant mortality factor, government agencies and the utility industry have developed many design solutions to protect raptors (Suggested Practices for Raptor Protection on Powerlines—State of the Art 1996). Often, however, electric utilities are reluctant to implement design changes on existing equipment structures and lines, due to cost constraints. When such reluctance is encountered, regulatory influence becomes the driving force to bring about modification.

The United States Fish and Wildlife Service's mission is "to conserve, protect and enhance the Nation's fish and wildlife and their habitat for the continuing benefit of people." Every Service employee has a stewardship obligation to ensure the fulfillment of the mission statement. Special

Agents are charged with enforcing the laws passed by Congress and regulations promulgated by the Service. Special Agents have been fulfilling the protection portion of the mission statement for over one hundred years.

The Service's Office of Law Enforcement has been involved with the electrocution of migratory birds for many decades. In the early 1970s, Service Special Agents conducted an investigation into the poisoning and shooting of over 1200 eagles by residents of Wyoming and Colorado. During the investigation Special Agents and other conservationists found more than 300 eagles and other raptors near powerlines. The raptors died primarily from electrocution (Olendoff 1972). This paper discusses the involvement of the Service's Law Enforcement Office in activities associated with migratory bird electrocutions and collisions.

HISTORY

To best understand the role of the Special Agent, we must look at the history of law enforcement within the Service. At the end of the 19th century, concern arose over the slaughter and decline of game animals and migratory birds throughout the United States. These concerns attracted the attention of the American Sportsmen. The Federal government offered no protection to migratory birds. Market hunters took literally tons of game each year in violation of state laws, and shipped large quantities of illegal wildlife to city markets.

States were unable to cope with market hunting because of a disinterested public, political interference, lack of authority, insufficient law enforcement officers and finally due to the lack of jurisdiction of states when game was transported across state lines.

In 1900, John F. Lacey, United States Congressman from Iowa, introduced a bill in Congress which passed on May 25, called the Lacey Act. The purpose of the Lacey Act was to make it a violation of Federal law to transport wildlife in interstate commerce which had been taken in violation of state law. Unfortunately, due to a lack of Special Agents, the Lacey Act failed to provide adequate protection to migratory birds.

The Weeks-McLean Bill, generally known as the "Migratory Bird Law" was passed in Congress on March 4, 1913, but was vigorously attacked as unconstitutional by states' rights, resort owners, spring shooters and market hunters. The Migratory Bird Law was abandoned following the passage and ratification of the Migratory Bird Treaty Act in 1918. The Migratory Bird Treaty Act was vigorously contested in a famous test case: *Missouri vs. Holland*. Ray P. Holland, one of the original "Special Agents-Migratory Bird Law" arrested Frank McAllister, the Attorney General of Missouri, for "Spring Hunting" with friends during a closed season. The case was appealed to the United States Supreme Court where the Honorable Justice Oliver Holmes, on April 19, 1920, ruled the Migratory Bird Treaty Act was constitutionally valid (Bean 1983).

REGULATORY INFLUENCE

Three pieces of Congressional legislation mandate the Service's role in preventing avian electrocutions and collisions. The first and earliest piece of legislation is the Migratory Bird Treaty Act. Treaties were negotiated with Great Britain on behalf of Canada in 1916, Mexico in 1936, Japan in 1974 and Russia in 1978. The purpose of the Act was to afford protection to migratory birds, their parts, nests and eggs. All raptors are considered migratory and fall under the protection of the Migratory Bird Treaty Act, Title 16 United States Code, Sections 703-712. The Migratory Bird Treaty Act states that, unless permitted by regulation, it is unlawful to pursue, hunt, take, capture, kill, possess, sell, barter purchase, ship, export, or import any migratory birds, or any part, nests, eggs, or product thereof. Culpability is strict liability, that is no degree of knowledge need be proven. There are no civil provisions in the Act.

Maximum criminal penalties for the violations under the felony provisions include fines up to \$250,000 per individual, and \$500,000 per organization and up to two years imprisonment. [Note: The felony provisions apply to the sale of Migratory Bird Treaty Act species or their parts, eggs or

nests.] For misdemeanours the penalties include fines up to \$5,000 per individual, and \$10,000 per organization and up to 6 months imprisonment. Migratory bird electrocutions violate the misdemeanour provisions of the Migratory Bird Treaty Act. The Service has determined that electrical utilities fall under the provisions of the Act, as their utility structures and lines are causing a "take" when electrocutions occur.

The second piece of legislation which protects eagles is the Bald and Golden Eagle

Protection Act, Title 16 United States Code, Section 668a. This bill was first signed into law June 8, 1940, affording protection to Bald Eagles *Haliaeetus leucocephalus*. On October 24, 1962, the Bald and Golden Eagle Protection Act was amended to afford protection to the Golden Eagle *Aquila chrysaetos*. The law states that no person shall take, possess, sell, purchase, barter, offer for sale, purchase or barter, transport, export, or import any bald or golden eagle alive or dead, or any part, nests or eggs, thereof without a valid permit to do so. Provisions of this Act also define molest or disturb as a take. Thus, when eagles are electrocuted or collide with powerlines and utility structures the individual or organizations involved can be held in violation of the Act. Culpability for Bald and Golden Eagle Protection Act violations are knowingly or with wanton disregard for the consequences of their act. Under this Act there are civil provisions and the degree of culpability is strict liability.

Maximum criminal penalties for misdemeanour violations of the Bald and Golden Eagle Protection Act, include fines up to \$100,000 per individual and \$200,000 per organization and up to one year of imprisonment. For felony violations the penalties include fines up to \$250,000 per individual, and \$500,000 per organization and up to two years imprisonment. Civil penalties are \$12,500.

The last legislation which protects some raptors is the Endangered Species Act, Title 16 United States Code, Sections 1531 - 1543 which was signed into law on December 28, 1973. The law affords protection to fish, wildlife, and plants listed as endangered or threatened. The Endangered Species Act makes it unlawful to import, export, take, transport, sell, purchase, or receive in interstate or foreign commerce any species listed as endangered or threatened. "Take" under the Endangered Species Act means an act which kills, injures, or harms a listed species. Violations may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioural patterns, including breeding, feeding or sheltering. When utility companies locate a powerline or other structures in an area where it is likely to result in an electrocution or collision, thus causing death or injury to an endangered or threatened species, the utility would be in violation of Endangered Species Act. Culpability for Endangered Species Act violations is knowingly and culpability for civil actions are knowingly or strict liability.

Maximum penalties (misdemeanour) for violations include fines up to \$100,000 per individual, and \$200,000 per organization, as well as up to one year of imprisonment. Civil penalties can be assessed up to \$25,000.

LAW ENFORCEMENT ACTIONS

In 1978, the first organized electrocution project was initiated by Special Agent Lucinda Schroeder in Utah. Schroeder discovered large numbers of electrocuted eagles and other raptors in an area known as Skull Valley, Utah.

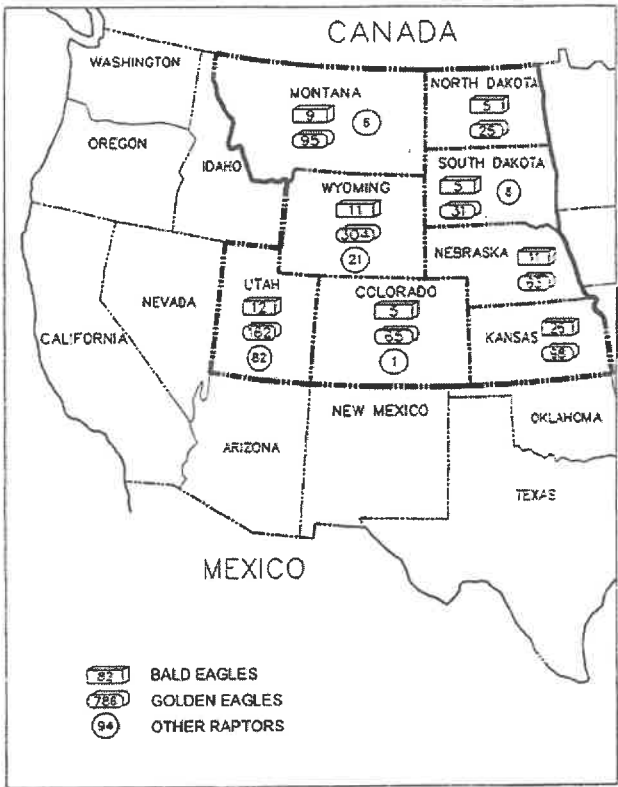
Along one mile of powerline, nine Golden Eagle carcasses were found and the birds' deaths attributed to electrocution. (Schroeder 1998, pers. comm.) Schroeder pioneered the first educational programmes and formed the first enforcement-industry partnership. Schroeder formed a partnership with Utah Power and Light to retrofit equipment structures and lines which were responsible for killing migratory birds.

The first documented prosecution occurred in 1993. Special Agents Roger Gephart and Frank Kuncir conducted an investigation into the electrocution of ten Swainson's Hawks *Buteo swainsoni* and Great Horned Owls *Bubo virginianus* under one equipment power pole. As a result of the investigation, Gephart issued a violation notice to Pacific Gas and Electric (PG&E) located in California for Migratory Bird Treaty Act violations. PG&E representatives met with Gephart and Kuncir and agreements were made to retrofit problem lines in a timely manner. Kuncir discovered

32 Red-tailed Hawks *Buteo jamaicensis*, Barn Owls *Tyto alba*, Ravens *Corvus corax*, and four Golden Eagles. During the course of the investigation, Kuncir also discovered several Red-tailed Hawks and Swainson's Hawks, on San Luis National Wildlife Refuge and Merced National Wildlife Refuge. After repeated and continued electrocutions of protected species by PG&E's power poles and powerlines, Kuncir filed additional criminal charges against PG&E for Endangered Species Act violations. Kuncir, working through the Regional Solicitor, also filed civil proceedings against PG&E. In all PG&E paid \$1500 in fines. Agreements were set into place for the continued retrofitting of PG&E equipment structures and lines. Policies and procedures also were developed to further protect raptors. (Gephart & Kuncir 1998, pers. comm.)

Since 1993 the role of the enforcement office has been one of mostly a silent partner. Service Special Agents and their regulatory influence have been used by other Service divisions, non-government organizations, other natural resource agencies, and industry biologists in a joint effort to bring the utility industry into compliance. The enforcement office in many cases is the driving force behind many utility companies forming bird protection programs and policies in their respective companies. Since the 1970s, Service Special Agents have used their regulatory influence with industry and along with other conservationists have been responsible for millions of dollars in retrofits as well the construction of new powerlines in a bird friendly manner. In most cases legal action is not necessary.

Figure 1. Reported raptor deaths in Region 6 from 1978-1998.



REACTIVE/PROACTIVE

In the past, Special Agents have investigated electrocutions and collisions of migratory birds primarily in a reactive manner. Reports of electrocuted birds are received from various sources including the utility company responsible. Once utility companies are notified of problem equipment structures or lines they usually move rapidly to repair the structures or lines causing the electrocutions or collisions. Currently, the Service is taking a proactive approach. Using the partnership approach the Service advises utility companies of impending problems with utility structures and lines before birds are killed. In many cases electrical utilities working with Service biologists and Special Agents implement proactive solutions, however some utility companies for a variety of reasons tend to only fix the specific problem as it is reported. It is in the best interest of all partners involved to act in a proactive manner. The Service will be conducting inspections on retrofits as well as new line construction, to insure that repairs meet compliance requirements.

The Service is involved with raising industry awareness by providing training on legal ramifications and providing biological support to the industry. The Service has taken a major proactive step by appointing a Special Agent to act as the first electrocution program coordinator. The role of the coordinator provides guidance to Service agents when conducting investigations and to act as a liaison with industry officials, and other conservationists. The coordinator is to provide training to all concerned participants, including the general public. This is a significant step for the enforcement office, since it is one of the smallest divisions within the Service.

ENFORCEMENT MORTALITY DATA

The Service is divided into seven geographic regions nationwide. Region 6 includes Colorado, Wyoming, Montana, Utah, Kansas, Nebraska, North Dakota, and South Dakota. Working in partnership with Industry, other Federal agencies and Conservation Organizations, the Service established a National Mortality Reporting System in 1973. During 1972 through 1975 the system documented about 300 Golden Eagles. After 1975 the system was discontinued for reasons that remain unclear (Bob Lehman 1998). However, from 1978 to date the effort has continued in Region 6; the Office of Law Enforcement has recorded all migratory bird mortality (primarily raptors). Data were obtained from 1978 to 1998 (Figure 1). The fatality reports indicated electrocution of 1045 migratory birds including 786 Golden Eagles (75%), and 82 Bald Eagles (8%). The Electrocution fatalities listed by state are in Table 1.

Table 1. Region 6: Migratory Bird Mortalities related to Power Distribution Lines

	<i>Utah</i> 1985-1995	<i>Wyoming</i> 1978-1994	<i>Montana</i> 1979-1997	<i>Kansas</i> 1989-1997	<i>Nebraska</i> 1980-1992	<i>Colorado</i> 1979-1998	<i>N. Dakota</i> 1985-1996	<i>S. Dakota</i> 1980-1993	<i>Total</i>
B. EAGLE	12	11	9	26	11	5	5	5	82
G. EAGLE	162	304	95	98	63	65	25	31	786
GHO	0	14	4	0	0	0	0	3	21
RTH	28	6	2	0	0	1	0	5	18
OWLS	24								
WTRBRD	1								
CROWS	28								
UNKN.	1								
P.FALCN	0	1	0	0	0	0	0	0	1
	256	336	110	124	74	71	30	44	1045

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Note: One (1) Sandhill Crane and one (1) unidentified owl in Wyoming flew into powerlines.

Region 6 data indicate a strong need for the renewal of a national reporting plan within the Federal government as well as the electrical industry. The need to compile all the available data is essential to help determine the scope of the problem and to determine if ongoing mitigated measures are having the desired effect.

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Leo R. Suazo II
755 Parfet Suite 230
Lakewood
Colorado 800215
USA