The Migratory Bird Treaty Act - Protecting Wildlife on Our National Refuges - California's Kesterson Reservoir, a Case in Point

Betsy Vencil
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Protecting Wildlife on Our National
Refuges—California’s Kesterson Reservoir, a Case in Point

The Bureau of Reclamation (Reclamation) built Kesterson Reservoir (Kesterson) to collect irrigation tailwaters from the San Joaquin Valley in California, and to replace marshland drained for agriculture that had been used by migratory birds. Kesterson was part of the joint use wildlife refuge system.

The San Joaquin Valley is located in the west-central part of California’s Central Valley. Its climate is good for agriculture and its soils are rich, but soil salinity is a problem, and there is not enough water for irrigation. Reclamation constructed the San Luis Unit, which removes thousands


2. Reclamation believed the irrigation water would not harm the birds and the project would satisfy public concern for wildfowl preservation. SPECIAL TASK FORCE, REPORT ON SAN LUIS UNIT 171 (DOI #024-003-00123-6) (1978) [hereinafter cited as SPECIAL TASK FORCE].

3. In 1969, Reclamation and Fish and Wildlife Service agreed to co-manage Kesterson as a Waterfowl Management Area. Ultimately this area became known as Kesterson National Wildlife Refuge, through a formal agreement in mid-1970. However, Reclamation reserved its operations as the primary activity for the reservoir. OFFICE OF INSPECTOR GENERAL, REPORT OF INVESTIGATION 12 (1985) [hereinafter cited as INSPECTOR GENERAL REPORT].

4. Most of the Central Valley was covered by a prehistoric sea.

5. Farming was attempted in the San Joaquin Valley as soon as the gold rush was over. By the 1900s, thousands of acres had been forced out of production due to salt balance and drainage problems. Available groundwater was saline, therefore, only salt tolerant crops could be grown until electric pumps in the 1930s allowed farmers to access the deeper aquifer. Pumping lowered the water table and allowed reclamation of most of the damaged lands. I DOI, SAN LUIS UNIT TECHNICAL RECORD OF DESIGN AND CONSTRUCTION 2 (1974) [hereinafter cited as SAN LUIS UNIT I].

6. The San Luis Unit of the Central Valley Project is a massive waterworks system. Water from the Sacramento-San Joaquin Delta is lifted into the California Aqueduct and the Delta-Mendota Canal, where it flows into O’Neill Forebay. The water then enters the San Luis Canal and flows 102.5 miles to a point near Kettleman City. Id. at 9.
of gallons from the Sacramento—San Joaquin Delta and transports it south to San Joaquin fields.\textsuperscript{7} The irrigation tailwaters then run north to Kesterson. Unfortunately, salt and minerals, especially selenium, which is particularly hazardous to waterfowl, were leached from the San Joaquin Valley farmlands and collected in the water at Kesterson. During 1984, high selenium content at Kesterson resulted in the deaths of thousands of migratory birds\textsuperscript{8} that are protected by the federal Migratory Bird Treaty Act (MBTA).\textsuperscript{9} The Department of the Interior (DOI) closed the San Luis Drain in March, 1985, and plans to close Kesterson by the summer of 1986. This solution led to assurances from the Justice Department to DOI that neither it nor Fish and Wildlife Services (F & W) would be liable for violations of the MBTA.\textsuperscript{10}

Reports indicate selenium is concentrated in other wildlife refuges.\textsuperscript{11} Solutions for removing such pollutants from agricultural runoff are only in the experimental stage.\textsuperscript{12}

This comment discusses the recent use of the MBTA as an environmental statute. The elements of the MBTA are examined to understand the government's potential liability for Kesterson had a settlement agreement not precluded litigation. Finally, the MBTA is discussed as it applies to other Reclamation projects that impact wildlife refuges.

**RECLAMATION PROJECTS AND THEIR IMPACT ON WILDLIFE—THE KESTERSON RESERVOIR STORY**

Cultivating arid soils requires proper application of water. Because rainfall is usually scarce in arid regions, minerals remain in the dry soils unwashed by rainfall. Adding sufficient quantities of water to grow

\textsuperscript{7} For a further explanation of Reclamation projects, see Ellis & DuMars, *Two Tiered Water Market*, 57 Neb. L. Rev. 333 (1978).

\textsuperscript{8} See infra notes 43-44.


\textsuperscript{10} On May 31, 1985, DOI's Solicitor issued a memorandum that stated "a court could conceivably construe the MBTA to subject federal employees to criminal prosecution if the continued operation of the Kesterson Reservoir leads to the loss of migratory waterfowl due to selenium poisoning." Memorandum, United States Department of the Interior, Office of the Solicitor I (May 31, 1985) [hereinafter cited as Solicitor's Memorandum].

\textsuperscript{11} Selenium has been confirmed in high levels on wildlife refuges in California, Arizona, Nevada, Montana, New Mexico, and South Dakota. Selenium: Conspiracy of Silence, reprint, Sacramento Bee, Sept. 8-10, 1985, at 2, col. 1.

\textsuperscript{12} Excess minerals enter rivers, harbors and lakes through irrigation tailwaters. Agricultural pollutants are not listed under RCRA or CERCLA, although salinity and nitrogen in tailwaters are growing public concerns. Comment, *Tragedy at Kesterson Reservoir: Death of a Wildlife Refuge Illustrates Failings of Water Law*, 15 Env'l. L. Rep. 10386, 10393 (1985). The Environmental Defense Fund has proposed, in conjunction with Westlands Water District, that San Joaquin tailwaters be recycled through solar ponds, desalinization, deep well injection, or selenium removal. Environmental Defense Fund & Westlands Water District, A Research Project for Managing Subsurface Agricultural Drainage Water in the San Joaquin Valley in an Environmentally and Economically Sound Manner, 8 (1985). Congress recently funded the feasibility study.
"desirable" crops leaches salt and minerals from the soil and adds them to the water system. Throughout history, irrigators have extensively planned delivery canals and left drainage as an afterthought. In the United States, an easy solution to the problem has been to dump irrigation tailwaters into marshlands and estuaries that are breeding and wintering grounds for migratory birds. Kesterson Reservoir is a prime example of this kind of system.

A Lack of Attention to Bird Protection Led to the Current Crisis at Kesterson

The San Joaquin Valley was part of the marshy wetlands which extended south from the Sacramento-San Joaquin delta and provided prime wintering and breeding grounds for many bird species that migrate between Canada and the United States. Much of this area was privately

13. Certain crops are more salt tolerant than others. See Bernstein, Tolerance of Plants to Salinity, 87 ASCE IRRIG. AND DRAINAGE Div. J. 1 (1961); Reeve & Fireman, Salt Problems in Relation to Irrigation, reprinted in IRRIGATION OF AGRICULTURAL LANDS 988 (Hagan, Haise & Edminster eds. 1967). Generally, corn is more salt tolerant than wheat, although the higher protein content of wheat makes it a more "profitable" crop. F.M. LAPPE, DIET FOR A SMALL PLANET 81-85 (1971).

14. The primary purpose of leaching is to remove salt and minerals from soil through application of large volumes of water. Many procedures exist for leaching salt from arid lands. Intensive flooding and removal with drying in between is a common method. ENVIRONMENTAL EFFECTS OF ARID LAND IRRIGATION IN DEVELOPING COUNTRIES 20 (G.F. White ed. 1978). Leaching either drives salts and minerals to a lower soil level or adds them to irrigation tailwaters. Two other purposes of leaching are to maintain salt balance in the crop root zone, and to control the salinity taken up by the crops. Hill, 87 ASCE IRRIG. AND DRAINAGE Div. J. 5 (1961). Crops may prosper with different salinity levels at different stages in their growth. Reeve & Fireman, supra note 13, at 994.

15. Historically, lack of attention to drainage has caused many irrigation disasters which forced farmers to abandon their fields. In the San Joaquin Valley thousands of acres were lost around the turn of the century due to drainage problems and were not reclaimed until federal project assistance became available in the 1930s. SPECIAL TASK FORCE, supra note 2 at 161. In West Pakistan, until recently, some 100,000 acres were lost from cultivation each year due to drainage problems. Batisse, Problems Facing Arid-Land Nations, reprinted in ARID LANDS IN PERSPECTIVE 7 (W. McGinness & Goldman eds. 1969). After 1960, lack of attention to irrigation drainage in the Welton-Mowhawk Division in Arizona increased the salinity of the Colorado River. Mexicali Valley farmers in Baja, California and the San Luis Valley in Sonora, Mexico were forced to abandon agricultural lands due to the diminished supply of useable water. See Oyarzabal-Tamargo & Young, International External Diseconomies: The Colorado River Salinity Problem in Mexico, 18 NAT. RES. J. 76 (1978). "There is a temptation to overevaluate natural drainage and at the same time to underevaluate seepage at all levels. . . . Artificial drainage is costly and unattractive compared with irrigation. When working with a fixed budget, administrators are inclined to spend money for enlarging the irrigated area rather than to irrigate and drain a smaller area." WHITE, supra note 14, at 19.

16. Some projects create artificial marshlands to dump irrigation waste, which replace those that were drained for reclamation. Approximately 130 million acres, one-third of all United States cropland, is drained artificially. SOIL CONSERVATION SERVICE & U.S. DEPARTMENT OF AGRICULTURE, DRAINAGE OF AGRICULTURAL LAND 1 (Water Information Center) (1973).

17. Kesterson has been the wintering and breeding home of 10% of the birds on the Pacific Flyway, especially mallards, gadwalls, stilts, grebes, and coots. During its existence, over one million birds have wintered there. Wheeler, Tale of a Toxic Marsh, NOT MAN APART 10 (Mar.-Apr. 1985). More rare species have also frequented Kesterson, such as egrets and white cranes. Farm Water Poisons Wildlife, Washington Post, Mar. 10, 1985, at A9, col. 1.
owned, undeveloped land until the last decades. Steady draining of the land for agriculture, and urban encroachment reduced the amount of land available to the wild birds. Reclamation, therefore, thought that irrigation waste from the San Joaquin Valley could "replenish" some of these lost marshes.

Kesterson reservoir was ready for use in 1972. Drain tiles were not in place in the San Joaquin Valley, so no drain water was available for the refuge. Fresh water was diverted into Kesterson from the Delta-Mendota Canal. Migratory coots, grebes, stilts, gadwalls, and mallards prospered along with large populations of striped bass, largemouth bass, catfish, and carp. By 1980, when most of the San Joaquin drains were connected to the San Luis Drain, the situation at Kesterson radically changed.

In 1981, a new F & W wildlife manager, Gary Zahm, came to Kesterson. He recognized the lack of species diversity as atypical of a marsh: the cattails were dying; algae was blooming; there were no muskrats, crayfish, or turtles; the only surviving fish was the mosquitofish; and use by waterfowl was declining. Zahm suspected either a pesticide spill or excess salinity from irrigation drainage was the problem, and suggested that F & W study the situation to find a solution.

In May 1982, two F & W research biologists took samples of mosquitofish for contaminant analysis. The results of their study, in October, 1982, showed selenium concentrations in mosquitofish at 120 parts per

19. Id.
20. Kesterson is a complex series of discharge ponds covering 1,200 acres. The ponds are held by low dikes which collect irrigation tailwaters from the San Joaquin Valley through the San Luis Drain. The design allowed the sun to penetrate the water, thereby reducing algae growth. Additionally, the ponds were shallow to encourage birds that engage in bottom feeding to use the refuge. SPECIAL TASK FORCE supra note 2, at 164, 168.
22. Id. Kesterson was operating as a refuge from 1972 until 1980 without irrigation drainage, although DOI continues to emphasize that Kesterson was primarily a regulation pond for later discharge into the Bay. DOI letter from Olson to Habicht 2, (Mar. 28, 1985) [hereinafter cited as DOI letter].
24. INSPECTOR GENERAL REPORT, supra note 3, at 14; Washington Post, Mar. 10, 1985, at A9, col.3. Reclamation considered that drainage water would be the poorest during the early years of irrigation and drainage, as salts leached from the soils would be in maximum concentration. Additional pollutants expected in the drainage water included: dissolved salts or sodium, calcium, magnesium; nitrates; sulfates; suspended solids; and trace elements, such as boron, arsenic, mercury, copper, molybdenum and selenium. INSPECTOR GENERAL REPORT, supra note 3, at 10; SPECIAL TASK FORCE, supra note 2, at 167; Wheeler, supra note 17.
26. INSPECTOR GENERAL REPORT, supra note 3, at 18; Washington Post, Mar. 10, 1985, at A9, col.3.
28. INSPECTOR GENERAL REPORT, supra note 3 at 17.
29. Id.
30. Id. at 19.
million dry weight. The level was compared to mosquitofish in an area that did not receive drain water, and was 100 times higher. F & W was unsure what these results meant, and Reclamation tended to disregard the significance of the figures.

By 1983, selenium was taking its toll on wildfowl at Kesterson. An astounding number of deformities and embryonic deaths were found in the nests of coots and grebes inhabiting the refuge. Similar effects were noted in mallards, northern pintails, cinnamon teals, gadwalls, and black-necked stilts. The deformities were typical of selenium poisoning: missing or abnormal eyes, beaks, wings, legs, and feet; edema of the head and neck; and anomalies of the brain, heart, liver and skeleton. Continued sampling of water, sediment, aquatic plants, aquatic invertebrates, and fish from Kesterson revealed high levels of selenium. Further studies revealed no coot nests where over 100 had been reported the year before, and the average weight of adult coots was 25 percent lower than the year before. Tissue samples revealed high levels of selenium in coot and stilt livers.

In March, 1984, 15,683 birds died at the refuge. By the time the birds were autopsied, only fifteen adults were intact. These fifteen bird deaths were attributed to selenium toxicosis. F & W responded to the crisis by instituting a hazing program. In addition to automatic gunshots firing periodically over the Reservoir, F & W employees patrolled the Reservoir in protective clothing and fired additional shots into the air. DOI announced that migratory birds' use of Kesterson was declining as a result of the program, although the program seemed to be ineffective at removing nesting birds.

There was widespread media coverage of the crisis and citizen groups

31. Id.
32. Id.
33. Id. at 19-20.
34. Id. at 20. Young, Selenium in the Western San Joaquin Valley, (The Environmental Defense Fund, 1985), [hereinafter cited as Selenium Report].
36. INSPECTOR GENERAL REPORT, supra note 3, at 20-21.
38. Id.
39. INSPECTOR GENERAL REPORT, supra note 3, at 9.
40. Id. at 27.
41. Hazing in this instance consisted of the routine firing of propane guns over the Reservoir in an effort to frighten the birds. Id. at 27. The hazing project cost approximately $500,000. U.S. To Stop Farms' Toxic Runoff, Washington Post, Mar. 16, 1985, at A1, col.3.
42. Toxic Chemical Threatens West, Sacramento Bee, Sept. 8, 1985, at A1, col.1.
43. INSPECTOR GENERAL REPORT, supra note 3, at 29; DOI letter, supra note 22, at 4.
44. INSPECTOR GENERAL REPORT, supra note 3, at 29.
and individuals expended much effort trying to halt further disaster.\textsuperscript{46} California issued an order to the federal government to clean up the Reservoir to prevent seepage into a neighboring county’s groundwater.\textsuperscript{47} As a result, DOI began a detailed study to determine whether any of the allegations against DOI were valid.\textsuperscript{48}

On March 28, 1985, DOI announced that water delivery to San Joaquin water users would cease in order to abandon the use of Kesterson Reservoir. Protests by Westlands Water District resulted in the signing of an agreement between Westlands and DOI that would allow water delivery to continue, provided use of the San Luis Drain would cease immediately and Kesterson would be destroyed by June 1986.\textsuperscript{49} The agreement was submitted to the Justice Department to insure no prosecution of DOI employees or any Westlands users would take place, and such assurances were received.\textsuperscript{50}

Because Kesterson will no longer exist after the summer of 1986, there will be no "subject matter" for litigation. The MBTA charges in both lawsuits filed over Kesterson are therefore moot and have been dismissed on that issue. However, the decision to close Kesterson may have been motivated by fear that a lawsuit against government officials under the MBTA would have been successful.\textsuperscript{51}

The Geography of The San Joaquin Valley Made Selenium a Forseeable Problem at Kesterson

The San Joaquin Valley lies directly east of the Coast Range in California’s Central Valley.\textsuperscript{52} It is a semi-arid region with less than ten inches of annual rainfall. A proper charge brought by Justice against DOI would be under the Fish and Wildlife Coordination Act, 16 U.S.C. § 661 et. seq. (1976), which names the Secretary of the Interior solely responsible to investigate "the effects of...other polluting substances on wildlife" in national refuges.

Numerous individuals indicated to DOI that the MBTA had been violated, one of whom, James Claus, filed a lawsuit against DOI. INSPECTOR GENERAL REPORT, supra note 3, at 10, 28-29. NRDC also filed suit, Natural Resources Defense Council, Inc. v. Hodel, No. S85-1214LKK, (E.D. Cal. complaint filed Aug. 23, 1985). See comment supra note 12 at 10386, 10391.

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\textsuperscript{47} State of California, State Water Resources Control Board, Order WQ 85-1 (Feb. 5, 1985); INSPECTOR GENERAL REPORT, supra note 3, at 28. See also U.S. Won’t Appeal Order to Clean Up Kesterson Refuge, Sacramento Bee, Mar. 8, 1985, at A9, col. 6.

\textsuperscript{48} INSPECTOR GENERAL REPORT, supra note 3, at 8.


\textsuperscript{50} INSPECTOR GENERAL REPORT, supra note 3, at 29. A proper charge brought by Justice against DOI would be under the Fish and Wildlife Coordination Act, 16 U.S.C. § 661 et. seq. (1976), which names the Secretary of the Interior solely responsible to investigate "the effects of...other polluting substances on wildlife" in national refuges.

\textsuperscript{51} DOI concluded that agency employees might be liable for violation of the MBTA and recommended that Kesterson be closed, stating, "a court could conceivably construe the MBTA to subject federal employees to criminal prosecution if the continued operation of the Kesterson Reservoir leads to the loss of migratory waterfowl due to selenium poisoning." Solicitor’s memorandum, supra note 10, at 1.

\textsuperscript{52} The Central Valley of California is shaped like a platter, sheltered by the Sierra Nevada Mountains on the east, the Coast Range on the west, Mount Shasta to the north, and the Tehachapi Mountains to the south. The San Joaquin Valley lies directly east of the Coast Range in California’s Central Valley. It is a semi-arid region with less than ten inches of annual rainfall. A proper charge brought by Justice against DOI would be under the Fish and Wildlife Coordination Act, 16 U.S.C. § 661 et. seq. (1976), which names the Secretary of the Interior solely responsible to investigate "the effects of...other polluting substances on wildlife" in national refuges.
of rainfall per year. Its soils were deposited from the bed of a prehistoric sea which covered the entire Central Valley, and from later alluvial action and slopewash. Underlying the Valley’s western soils is a relatively impermeable clay layer that causes the water table to be high, in some places only five feet below the surface.

As the San Luis Unit was planned, scientists proposed leaching the salt and minerals from the soils prior to cultivation. It was known that intensive application of water to the western San Joaquin Valley would dissolve salt and heavy metals, such as cadmium, mercury, and copper that had been accumulating for thousands of years from streams originating in the mineral rich Coast Range and from lake sediments. Scientists were also concerned by the large amounts of boron in the Valley. However, selenium was a lurking menace.

Selenium originates in the pyrite of the Cretaceous marine sandstone and siltstone shale deposits in the coast range and under the valley soils. Hydrologic forces dissolve selenium and transport it to the surface, where it may be found in secondary soil deposits. Seleniferous soils occur throughout farmland in the west which were covered by inland seas during Range to the south. It is almost 500 miles long and 50 miles wide, and contains approximately 10,000,000 acres. Its rim is broken only at the San Francisco Bay. There, the flat marshland of the Sacramento-San Joaquin delta intrudes, a 1,000 square mile region of rich peat soils and a diverse brackish-water ecology. Approximately three-fourths of California’s surface water runoff travels to the Delta in the Sacramento River. The San Joaquin River carries 9 percent of the state’s surface runoff. It flows through the trough of the San Joaquin Valley to the Delta. All of the water in the Delta eventually flows out through the San Pablo and San Francisco Bays to the Pacific Ocean. Taken from SAN LUIS UNIT I, supra note 5, at 1; B. ANDREWS & SANDSTONE, WHO RUNS THE RIVERS 25-26 (1983).

53. SAN LUIS UNIT I, supra note 5, at 1. Aridity affects approximately half the countries of the world. BATISSE, supra note 15, at 3.

54. SAN LUIS UNIT I, supra note 5, at 17. Some of the soils resemble tropical lateric red soils. Id. at 14.

55. Id. This deposit is known as the Corcoran Clay, composed of diatomaceous clay, which is of lake bed origin. The clay is as much as 150 feet thick in places and continuously underlies approximately 5,000 square miles of the San Joaquin Valley. BERRY & STETSON, supra note 1, at 101.

56. The San Joaquin Valley needed to be leached because the prior methods of irrigation had caused salt accumulations in the upper few feet of soil. Berry and Stetson, supra note 1, at 103. Leaching requires that large volumes of water be applied on the land surface; percolated through the soil; and disposed as drainage effluents which contains accumulated salt. R. Hill, Leaching Requirements in Irrigation, 87 ASCE IRRIG. AND DRAINAGE J. 5 (1961).

57. Berry and Stetson, supra note 1, at 103. Normally, extensive soaking would drive the salts to a lower layer of soil; however, the clay underlying the soil prevents this.

58. Id. at 102.

59. Selenium had been studied extensively in the 1930s, and was the subject of government publications, e.g., UNITED STATES DEPARTMENT OF AGRICULTURE, SELENIUM IN AGRICULTURE (U.S.D.A. Handbook No. 200) (1961), [hereinafter cited as Agriculture Handbook No. 200]; as well as books, e.g. ROSENFIELD & BEATH, SELENIUM (1964), a compilation of earlier works by the authors on the topic of selenium.

60. Selenium Report, supra note 34, at 3.
the Cretaceous period. Because the average rainfall is light, the deposits tend to remain imbedded in the soils. It is usually the advent of irrigation that leaches the land of selenium, greatly increasing its presence in surface water. Because western soil and water are alkaline, leached selenium takes the form of selenate. Selenate is a stable form and adsorbs onto heavy metals rather than precipitating into elemental selenium. This makes selenium more likely to be trapped in an estuary depository and to be taken up the food chain to accumulate in waterfowl and other animals that feed off the plant forms. Because of its tendency to accumulate within estuaries, it may not be possible to dilute adsorbed selenate by adding fresh water. The amount of selenium in soil does not correlate with soil salinity, so that if poorer quality farmlands were removed from production in the San Joaquin Valley, the selenium problem would not correct itself.

THE MIGRATORY BIRD TREATY ACT

Until the twentieth century, American wildlife legislation was minimal. Relatively unrestricted game laws were a response to England’s strict regulation of hunting, where only the rich could enjoy wild game. Consequently, animals were slaughtered on an unprecedented scale for specialty markets, and some “for the sheer hell of it.” Congress’ power to regulate the situation was not clearly established. By the twentieth century, however, public attitude was changing.

61. Selenium is a problem in areas all over the western United States. The most common contributor is Cretaceous shale, found wherever seas covered the land during the Cretaceous period. Agriculture Handbook No. 200, supra note 59, at 12. Most of these shales lie beneath later soil deposits, although some are exposed, for example, the Pierre Shale region of Wyoming, North Dakota, and Nebraska. Id. at 12. The shales were former sea beds onto which selenium precipitated through adsorption. Selenium continually precipitates from sea water onto iron and manganese hydroxides and iron sulfides.

62. ROSENFELD & BEATH, supra note 60, at 52-53.

63. Agriculture Handbook No. 200, supra note 60, at 9, discussing the Colorado River Basin.

64. Report on Selenium, supra note 34, at 3.

65. Id. at 26.

66. Id., at 4. In the San Joaquin Valley, the prime contributor to the selenium problem has been the west lands, most particularly the region around the Panoche Fan. Id.


68. T. Lund, Early American Wildlife Law, 51 N.Y.U.L. REV. 703, 704 (1976). The MBTA clearly reserves the right to enjoy wild game. Hunting is allowed under 16 U.S.C. § 703. Raising migratory birds is allowed under 16 U.S.C. § 711, so long as they are “bred on farms and preserves and the sale of birds so bred under proper regulation for the purpose of increasing the food supply.”


70. An early decision by the Supreme Court in the field of wildlife regulation was Geer v. Connecticut, 161 U.S. 519 (1896), in which the state’s right to control the conditions for killing game and its subsequent transfer across state lines did not violate Congress’ dormant commerce power. M. BEAN, THE EVOLUTION OF NATIONAL WILDLIFE LAW 18 (1977).
Congress attempted to protect migratory birds in 1913, with the Migratory Bird Act, but federal courts held it unconstitutional. To ensure Congress' authority to protect migratory birds, the United States entered into a treaty with Great Britain on behalf of Canada, to protect birds that migrated between Canada and the United States. The Convention states "being desirous of saving from indiscriminate slaughter and of insuring the preservation of such migratory birds as are either useful to man or are harmless, [we] have resolved to adopt some uniform system of protection which shall effectively accomplish such objects. . . ." The Migratory Bird Treaty Act of 1916 was enacted pursuant to the Canadian Treaty and was upheld by the Supreme Court in the landmark case of Missouri v. Holland. The Act did not deny hunters the right to take migratory birds, but controlled the needless carnage that resulted from no government restriction. Since that time other treaties have been incorporated into the MBTA.

Thousands of birds died in the dust bowl during the Great Depression of the 1930s, after their winter nesting grounds had been drained and plowed under to make way for agriculture. Public concern led to the enactment of the Migratory Bird Conservation Act that allowed the federal government to purchase lands to create wildlife refuges through the sale of hunting stamps.

MBTA Protects Waterfowl Through Hunting Regulation and Prevention of Habitat Destruction

The MBTA has been construed largely as a hunting statute, although

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74. Id. at preamble.
76. 252 U.S. 416 (1920). The Court held that Treaties and federal statutes are the supreme law of the land and override contrary administrative practice or state law. Id. at 174. In the opinion, Justice Holmes stated, "[t]o put the claim of the State upon title is to lean upon a slender reed. Wild birds are not in the possession of anyone, and possession is the beginning of ownership." Id. at 434-35.
77. Coggins & Patti, supra note 68, at 168; MATHEISEN, supra note 68 at 167-80.
79. MATHEISEN, supra note 68, at 218-220. See also WATERFOWL TOMORROW 6 (Linduska ed. 1964).
it has never prohibited hunting altogether. However, Congress' express concern with hunting abuses does not foreclose the Act's implicit application in other contexts. The main purpose of the statute was to prevent the needless destruction of "game" species. However, the MBTA is not limited to game species, but includes other species such as warblers, robins, and gulls. The MBTA has been applied both to hunting violations and to other needless destructions of migratory birds.

Section 703 of the MBTA provides:

Unless and except as permitted by regulations . . . it shall be unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, kill, attempt to take, capture, or kill, possess, offer for sale, sell, offer to barter, barter, offer to purchase, purchase, deliver for shipment, ship, export, import, cause to be shipped, exported, or imported, deliver for transportation, transport or cause to be transported, carry or cause to be carried, or receive for shipment, transportation, carriage, or export, any migratory bird, any part, nest, or egg of any such bird, . . .

The language "by any means or in any manner" has been construed by the courts to include poisoning and hunting over a baited area that had been baited several days earlier.

More recent legislation, enacted after Congress' commerce power in this area had been well established, has directly regulated wildlife and has eclipsed the MBTA in public awareness. However, most of the recent legislation protects only certain species whose survival is actually threatened. The MBTA is generally broader, and protects migratory birds regardless of their populations.

81. The right to hunt is considered so absolute that regulations permitting hunting may stand even if a species is declining, if there is no proof that the hunting has or will contribute to the decline. Humane Soc. of United States v. Watt, 550 F. Supp. 47, 48 (1982).
82. See infra notes 130-135.
83. "Game" species referred to here include birds sought both for food and for beautiful feathers. See supra note 70.
87. Corbin Farms, 444 F. Supp. at 531; FMC, 572 F.2d at 905-906.
90. Coggins & Patti, supra note 68, at 206.
91. Id.
92. The desirable numbers for each species are promulgated by the Secretary of the Interior annually. 16 U.S.C. § 712 (1976); 50 C.F.R. §§ 12, 21.
Private Citizen Standing Under the MBTA

The MBTA was enacted in 1918, and typical of statutes of that time, did not include a provision outlining who would have standing to sue to enforce the statute. When private individuals bring suits seeking injunctive or declaratory action against a federal agency, a threshold requirement is that the citizen(s) can demonstrate standing. Courts have consistently granted citizen standing to sue on the regulations promulgated under the MBTA, and for improper refuge maintenance. Whether a private party has a cause of action under the MBTA is an issue that has lingered, undecided by the Supreme Court, since its enactment. The Supreme Court will grant citizen standing under a statute if the party can

93. Perhaps the statute was considered to grant citizen standing. In California v. Sierra Club, 451 U.S. 287 (1981), reversed 610 F. 2d 581 (19 ), vacated 451 U.S. 965 (19 ); Justice Stevens considered the Rivers and Harbors Act of 1898. He stated, "I believe the lawyers in Congress simply assumed that private parties... would have a remedy for any injury suffered by reason of a violation of the new federal statute." Id. at 298 n.2.

94. There is no doubt that citizens may use their political clout to press the Justice Department to enforce the MBTA against violators. The Audubon Society was successful in urging the government to protect Canadian Geese from death in oil pits maintained by oil companies. 75 AUDUBON 114 (May/June 1973); 73 AUDUBON 116 (May/June 1971). This resulted in criminal penalties being brought against three oil companies. See infra note 129.

95. MBTA standing may be argued by analogy to other environmental statutes, like ESA and CERCLA, which contain express standing provisions. However, this approach may lead nowhere. Congress has amended the MBTA many times to include later conventions and to add the stiffer penalty provision for commercial offenders in § 707(b). Congress could have added a standing provision to the MBTA, in light of the environmental concern which lead to standing provisions of the other recent statutes. See Humane Society of the United States v. Watt, 551 F.Supp. 1310 (D.D.C. 1982) where standing to challenge the affirmative duty of F & W to promulgate regulations under the ESA was not comparable to the MBTA. The court stated "[i]ndeed the MBTA and the [ESA] concern two distinct, although related, problems; to read the requirements of the [ESA] into the MBTA would be to render the latter act to some extent superfluous." Id. at 1319.


98. Citizens may have standing to sue under the MBT as a treaty. This depends on whether the MBT and subsequent treaties incorporated into the MBTA are self-executing. This theory has not been brought before the courts. See Note, The Migratory Bird Treaty: Another Feather in the Environmentalist's Cap, 19 S. Dak. L. Rev., 307 (1974), for a discussion of this problem. The courts have on occasion found treaties to be self-executing. Id. at 312.

99. "Whenever a treaty operates of itself, it is to be regarded in the courts as equivalent of an act of Congress. But if it is only promissory, it is then clearly within the province of Congress to enact legislation necessary to put it into effect." Missouri v. Holland, 252 US at 424, argument for appellee, citing Foster v. Neilson, 27 U.S. (2 Pet.) 253 (1829), and United States v. 43 Gallons of Whiskey, 93 U.S. (3 Otto) 188, 196 (1876).
satisfy the four-part test set out in *Cort v. Ash.* Finding standing under the *Cort* test is difficult, but not impossible.

**MBTA's Range of Applicability**

Because of its broad application to numerous species the MBTA may prove more effective than the Endangered Species Act as a tool for environmentalists. The MBTA applies only to protected species, thus, whether a species is "protected" is critical. The MBTA incorporates the Treaties between the United States and Canada, Mexico, Japan and Russia, and the categories under it are exhaustive. It is not necessary for a bird species to be listed in every Treaty in order to be protected by the

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100. 422 U.S. 66 (1975). The four prongs of the *Cort* test are: (1) is the plaintiff one of the class for whose especial benefit the statute was enacted, (2) is there any indication of legislative intent, explicit or implicit, either to create such a remedy or to deny one, (3) is it consistent with the underlying purposes of the legislative scheme to imply such a remedy for the plaintiff, (4) is the cause of action one traditionally relegated to state law. *Id.* at 293. A caveat in applying the four-part *Cort* test was added by Burger. Justice Rehnquist, joined by the Chief Justice, Justice Stewart and Justice Powell in their concurrence, which states: "In deciding an implied-right-of-action case courts need not mechanically trudge through all four of the factors when the dispositive question of legislative intent has been resolved." *Id.* at 302.

101. In California v. Sierra Club, 451 U.S. 287 (1981), the Supreme Court construed § 10 of the Rivers and Harbors Act of 1899, 33 U.S.C. § 403 et. seq. (1976). The issue was whether a private right of action can be implied from a federal statute which does not expressly provide such a right. The Court unanimously reversed the Ninth Circuit which had recognized a private cause of action under the statute by applying the *Cort* test, but the Court disagreed on the appropriate application.


106. Cf the Convention between the United States and Great Britain for the protection of migratory birds, August 16, 1916, 39 Stat. 1702, states:

The High Contracting Powers declare that the migratory birds included in the terms of this Convention shall be as follows:

1. Migratory Game Birds:
   (a) Anatidae or waterfowl, including brant, wild ducks, geese and swans.
   (b) Gruidae or cranes, including little brown, sandhill, and whooping cranes.
   (c) Rallidae or rails, including coots, gallinules and sora and other rails.
   (d) Limicolae or shorebirds, including avocets, curlew, dowichers, godwits, knots, oyster catchers, plover birds, sandpipers, snipe, stilts, surf birds, turnstones, willet, woodcock and yellowlegs.
   (e) Columbidae or pigeons, including doves and wild pigeons.

2. Migratory Insectivorous Birds:
   Bobolinks, catbirds, chickadees, cuckoos, flickers, flycatchers, grosbeaks, humming birds, kinglets, martins, meadowlarks, nighthawks or bull bats, nut-hatches, orioles, robins, shrikes, swallows, swifts, tanagers, titmice, thrushes,
MIGRATORY BIRD TREATY ACT

Some species are protected even if they are neither migratory, nor wild. Originally, the MBTA covered species deemed "valuable" or harmless. This included game birds, insectivorous birds, and other non-game birds. The categories in the regulations under the MBTA broadened as other less "valuable" species became endangered. The Secretary of the Interior has broad discretion to determine the type and manner of regulations under the MBTA. This provision makes the MBTA more flexible than the ESA because the Secretary of the Interior may promulgate regulations without a species being in imminent danger of extinction and without an act of Congress.

The Concept of "Taking" a Species Is Subject to Broad Application

Killing one bird is sufficient to constitute a violation of the MBTA. The language of the MBTA includes a broad proscription against violations "by any means or in any manner," therefore the statute has been interpreted on its face to prohibit taking by means other than those stated in the Act. Any activity that results in the death of a migratory

vireos, warblers, wax-wings, whippoorwills, woodpeckers and wrens, and all other perching birds which feed entirely or chiefly on insects.

3. Other Migratory Nongame Birds:

Auks, auklets, bitterns, fulmars, gannets, grebes, guillemots, gulls, herons, jaegers, loons, murrels, petrels, puffins, shearwaters, and terns.

Congress probably meant to include any species listed under any Convention. A contrary reading would invalidate the Act, e.g., few species that migrate to Mexico also migrate to Japan. Coggins and Patti, supra note 68, at 177.

In United States v. Richards, 583 F.2d 491 (10th Cir. 1978), a professor who had raised sparrow hawks for falconry was convicted on three concurrent six-month jail terms, although the birds in his possession were not wild and their parents were legally acquired. The court distinguished 16 U.S.C. § 701 (1976), which uses "wild," from the original MBTA, which has no mention of "wild." The court found that wild birds, such as falconidae, had been added by the United States-Mexico Convention 49 Stat. 1555, 1556. Id. at 493. Additionally, 50 C.F.R. § 10.12 defines wildlife to include any wild bird "whether or not raised in captivity." Id. at 494. See also, Koop v. United States, 296 F.2d 53 (8th Cir. 1961).


Raptors such as hawks, which were once shootable pests, and owls are now listed in the regulations although they were not included in any Convention. Coggins and Patti, supra note 68, at 172.

Forming the regulations is a duty delegated to F & W. 50 C.F.R. §§ 12, 21.

50 C.F.R. § 10.13 lists practically all North American birds, but excludes some non-migratory game birds, such as quail, prairie chickens, and turkeys; and other non-migratory birds, such as cardinals. Coggins and Patti, supra note 68, at 180.


See Corbin Farms, 444 F. Supp. at 532, where the court extended the taking prohibition to include poisoning. See also FMC, 572 F.2d at 908.
bird, or possession of such, or destruction of its nest or eggs, is a violation of the MBTA. The only exceptions are hunting regulations under §704 promulgated by the Secretary of the Interior, and takings when migratory birds "become injurious to agriculture and constitute plagues."

Since its enactment the MBTA has withstood legal challenges that it exceeds constitutional authority, that it violates taking provisions, that it is void for vagueness, and that authority to promulgate regulations thereunder violates the Act. Regulations promulgated under the MBTA have withstood constitutional challenges as well.

The MBTA Imposes Strict Liability

Section 707(a) of the MBTA imposes the penalty for violating the act: "any person, association, partnership, or corporation who shall violate any provisions of said conventions or of this subchapter, or who shall violate or fail to comply with any regulation made pursuant to this subchapter shall be deemed guilty of a misdemeanor." Section 707(a) has been consistently held to impose strict liability for violations of the Act.

115. See Andrus v. Allard, 444 U.S. 51 (1979), where a penalty under the MBTA for possession of artifacts made from migratory bird parts was upheld although the seller acquired the artifacts prior to the species becoming protected. See also, Richards, 583 F.2d at 494-495, where a conviction was upheld under the MBTA for possession of migratory birds raised in captivity although their parents were acquired prior to the statute protecting raptors.

116. 16 U.S.C. § 704 (1976). Section 708 allows state regulation of migratory birds which does not conflict with the MBTA provisions, but preempts less stringent regulations by negative inference.


119. See Cerritos Gun Club v. Hall, 96 F.2d 620 (9th Cir. 1938). The appellate court affirmed a denial of an injunction to Plaintiffs that would shield them from prosecution under the MBTA by government agents for hunting at a private duck club, stating: "The migratory wild fowl are owned by the states, [and,] . . . wandering from one state to another, are in interstate commerce as [sic] they move across state boundary lines. The commerce clause supports the act and the regulation." Id. at 623. See also Cochrane v. United States, 92 F.2d 623 (7th Cir. 1937); and Bishop v. United States, 126 F. Supp. 449 (Ct. Cl. 1954). The court in Bishop held that a hunter does not have a property right to hunt which is denied by the Act.

120. Defendants have argued that if the Act is construed broadly, every activity that results in the death of a migratory bird will be a criminal offense, e.g., cutting down a tree which contains a robin's nest. The absurdity of this argument has been noted. See BEAN, supra note 71, at 85; Corbin Farms, 444 F. Supp. at 535; and FMC, 572 F.2d at 905. In FMC, the court limited the interpretation of the statute to avoid a "construction that would bring every killing within the statute, such as deaths caused by automobiles, airplanes, plate glass modern office buildings or picture windows in residential dwellings into which birds fly, . . . [so as not to] offend reason and common sense. Id.


122. See infra note 125. See also Coggins & Patti, supra note 68, at 182 n.139; and BEAN, supra note 71, at 76-85.

or its implementing regulations. The leading case of United States v. Reese has been faithfully followed since it was decided in 1939. There, the court stated:

There appears no sound basis . . . [that] Congress intended to place upon the Government the extreme difficulty of proving guilty knowledge of bird baiting on the part of persons violating the express language of the applicable regulations . . . it is more reasonable to presume that Congress intended to require that hunters shall investigate at their peril conditions surrounding the fields in which they seek their quarry.

The Supreme Court recently refused to review a Sixth Circuit decision that upheld the concept that hunters act at their “peril” when engaging in an action that may result in the death of migratory birds.

Strict liability also applies to corporations whose activities cause migratory bird deaths. In United States v. Corbin Farm Service, the defendant was charged with violating the MBTA when his application of aerial pesticide was contrary to its labeling and twelve migratory birds died. The court found “[t]he instant case is one in which the guilty act alone is sufficient to make out the crime.”

Federal appellate courts have upheld the constitutionality of the MBTA’s strict liability standard. See United States v. Brandt, 717 F.2d 955 (6th Cir. 1983); United States v. Green, 571 F.2d 1 (6th Cir. 1977); United States v. Jarman, 491 F.2d 764 (4th Cir. 1974); United States v. Ireland, 493 F.2d 1208 (4th Cir. 1973); United States v. Ray, 488 F.2d 15 (10th Cir. 1973), and Rogers v. United States, 367 F.2d 998 (8th Cir. 1966). But see United States v. Delahoussaye, 573 F.2d 910 (5th Cir. 1978), where the court upheld a minimum form of scienter, that the hunter must be able to reasonably ascertain the whereabouts of “bait” in order for a conviction to stand.

Federal district courts have also upheld strict liability under the MBTA. See United States v. Ardoin, 431 F. Supp. 493 (W.D. La. 1977); United States v. Bryson, 414 F. Supp. 1068 (D. Del. 1976); United States v. Schultz, 28 F. Supp. 234 (W.D. Ky. 1939); United States v. Reese, 27 F. Supp. 833 (W.D. Tenn. 1939). In United States v. Atkinson, 468 F. Supp. 834 (E.D. Wis. 1979), the court applied 50 C.F.R. § 20.21(i), which defines an area as baited for 10 days after the “bait” is removed. Although the defendant hunted after the bait was removed and had no knowledge that the area was ever baited, a penalty was imposed. Id. at 836.

The MBTA falls into a category of statutes known as “public welfare offenses.” As Justice Jackson described them in Morissette v. United States, 342 U.S. 246 (1952), public welfare offenses are not positive aggressions or invasions, as in typical common law offenses, but are in the nature of neglect where the law requires care, or inaction
In *United States v. FMC Corporation*, the Second Circuit held a chemical manufacturer liable for the escape of a pesticide into a ten acre waste storage pond that resulted in the death of 92 migratory birds. FMC’s procedure to remove the chemicals from the waste water failed, and although several good faith efforts were made to prevent birds from using the pond, the court upheld the conviction, analogizing to abnormally dangerous activities under Tort law. The Court found that FMC was aware of the “danger of carbofuran to humans . . . and FMC failed to prevent this chemical from escaping into the pond and killing birds. This is sufficient to impose strict liability on FMC.”

The courts in *Corbin Farms* and *FMC* have added a forseeability test to convict corporations under the MBTA. This element limits capricious enforcement of the MBTA. Primarily, it preserves the spirit of the MBTA to prevent needless and avoidable destruction of migratory birds.

**Penalties Under the MBTA**

The court can tailor penalties under the MBTA so that a defendant may be convicted of multiple counts. Section 707(a) of the MBTA provides: “any person, association, partnership, or corporation who shall violate any provisions of said conventions or of this subchapter . . . shall be fined not more than $500 or be imprisoned not more than six months, or both.”

Because this language is not entirely clear on its face, some difficulty arises with regard to sentencing. It is clear the taking of one migratory bird under §703 is sufficient to constitute a violation. It is not clear whether multiple takings result in multiple liability for the number of birds, or for the number of occurrences, or both.

Defendants who are not in the business of marketing migratory birds where it imposes a duty. . . . While such offenses do not threaten the security of the state in the manner of treason, they may be regarded as offenses against its authority, for their occurrence impairs the efficiency of controls deemed essential to the social order as presently constituted.

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*Id. at 255-256.*

131. 572 F.2d 902 (2d Cir. 1978).

132. *Id. at 907.*

133. *Id.* at 908.

134. As the court in *Corbin* pointed out, “[t]he driver is not reasonably in a position to prevent the bird’s death where a person applying pesticide might be able to foresee the danger and prevent it. 444 F. Supp. at 535.


137. Defendants who commercially market migratory birds, their parts, eggs, or nests are subject to the felony provisons of MBTA § 707(b).
who are found guilty of hunting violations are typically charged by counts. Defendants may be charged by the category of bird taken. Or, defendants may be charged for each date on which migratory birds were taken. The latter is the type of charge adopted in the corporate cases.

The court in *Corbin Farms* held that although a defendant was charged with ten counts under the MBTA, he could be convicted for only one count because only one application of pesticide caused the migratory bird deaths. In *FMC*, defendants were charged with thirty-six counts, were fined $100 on each of eighteen counts, but the fine was remitted on all but five counts. In *United States v. Equity Corp.*, defendants were charged and pled guilty to fourteen counts and were fined $7000. The defendants in *United States v. Stuarco Oil Co.* pled nolo contendere to seventeen counts and were fined. The latter cases reflect the number of days on which birds died.

The sentencing in these cases suggest that the penalty does not reflect a "value" of the birds destroyed, but rather the magnitude of the offense. Seemingly, defendants who maintain an ongoing nuisance are charged for each date that migratory birds are killed, and the courts have upheld this form of sentencing. The MBTA does not exempt agents of the United States government from its application.

**THE MIGRATORY BIRD TREATY ACT WOULD APPLY TO KESTERSON**

A court could find DOI or its employees guilty of violating the MBTA if it found the defendants' actions were responsible for the death of any migratory bird. DOI managed and maintained the waterworks which

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138. In *United States v. Richards*, 583 F.2d 491 (10th Cir. 1978), a defendant who sold three sparrow hawks was charged with three concurrent six month terms for a first offense. On appeal, the court found the sentence appalling but within statutory limits, and therefore could not modify the sentence. In *United States v. Green*, 571 F. 2d 1 (6th Cir. 1977), one of 64 mourning dove hunters was sentenced to six months, with all but 15 days suspended, and fined $450.

139. In *Rogers v. United States*, 367 F.2d 998, 999 (8th Cir. 1966), the court upheld a conviction under the MBTA for four counts of possession and sale of wild ducks and geese. The penalty was imprisonment of 90 days for each count, to be served concurrently, and a fine of $500 on count 1.

140. In *FMC*, 428 F.Supp. 615 (W.D.N.Y. 1977), count 1 was for the death of 26 Canadian geese on April 23, 1975, count 2 was for the death of 12 migratory ducks on April 23, 1975, and count 7 was for the death of 1 Canadian goose on May 7, 1975. *Cited by* the court in *Corbin Farms*, 444 F. Supp. at 528.

141. 444 F. Supp. 510.

142. *Id.* at 531.

143. 572 F.2d at 903.

144. *Id.*


146. *Cited in* *Corbin Farms*, 444 F. Supp. at 527.


148. *Cited in* *Corbin Farms*, 444 F. Supp. at 527.

delivered selenium to the reservoir, and was aware that minerals in the wastewater might have a deleterious effect on agriculture and possibly animals.\textsuperscript{150} A finding that a defendant was aware of a potential deleterious effect, regardless of what the effect would be on migratory birds, has been sufficient to convict when the effect of defendants' action is migratory bird deaths.\textsuperscript{151} At Kesterson, thousands of migratory birds protected by the MBTA were killed. At least fifteen of these bird deaths were directly attributed to selenium that was present at Kesterson as a result of DOI sponsored irrigation.\textsuperscript{152}

DOI could have been charged under the MBTA at Kesterson by either of two methods. It might have been charged for each day that migratory birds died, or for the number of each species that died. Fining DOI under either system would serve no logical purpose, because it would only transfer federal funds between departments.

However, if the court issued an order to DOI to clean up Kesterson, its terms might have exceeded California's order and the current efforts that are taking place. So, for DOI to avoid a court order, resolving the problem on its own terms was preferable. Additionally, if DOI were sued under the Fish and Wildlife Coordination Act,\textsuperscript{153} the Secretary of the Interior could have been found liable for his failure to investigate the effects of selenium at Kesterson.\textsuperscript{154}

The implications of a successful suit against DOI would be staggering. DOI would be subject to suits everywhere Reclamation or F & W maintain a national refuge where a migratory bird has died from introduction of irrigation waste or other pollutants into the water.\textsuperscript{155} The cost to the government to clean up these refuges would be tremendous.

APPLICATION OF THE MBTA TO OTHER IRRIGATION PROJECTS

Citizens using the MBTA have attempted several times to enjoin federal irrigation projects.\textsuperscript{156} Settlement agreements have precluded actual liti-
gation in each of the cases. If DOI is reluctant to restrict irrigation drainage that is hazardous to migratory birds, citizen initiated suits that charge the government and other irrigators under the MBTA may be inevitable.

In order for citizen suits to be successful, the standing issue must be resolved favorably. Perhaps the best reason for granting standing to citizens under the MBTA is the nature of the act itself. The MBTA is found with other statutes which impose a duty on the federal government to protect wildlife for the public trust. As Justice Holmes explained in Missouri v. Holland, "Here a national interest of very nearly the first magnitude is involved. . . . But for the treaty and the statute there soon might be no birds for any powers to deal with." Perhaps migratory bird populations are not greatly harmed by the deaths of a few thousand birds. It may be that the public will never try to replenish the masses of wild birds which once dominated American skies. Nevertheless, the MBTA stands for protecting migratory birds from needless destruction and it may be applied in other situations like Kesterson to prevent a similar result.

BETSY VENCIL

157. In National Audubon Society, Inc. v. Watt, Appeal of the State of North Dakota, 678 F.2d 299 (US Ct. App. 1982), a citizen group sued DOI for injunctive relief, charging the federal government had violated environmental statutes, including the MBTA, in planning the Garrison Unit Diversion, a massive North Dakota reservoir and irrigation project. The case was heard on whether an earlier stipulation agreement entered into by the parties, was still binding, and therefore the opinion does not discuss the MBTA, although the claim was probably not ripe. See also James River Flood Control Ass'n v. Watt, 553 F.Supp 1284 (D. S.D. 1982); and In re Garrison Diversion Unit Litigation No. 348, 458 F. Supp. 223 (Judicial Panel on Multidistrict Litigation, 1978).

158. For a discussion of state rights to protect wildlife which are beyond the scope of the federal powers, see Bean, supra note 71, at 34-45.

159. 252 U.S. at 435.

160. "It was a great memorable day when the first flock of passenger pigeons came to our farm . . . I have seen flocks streaming south in the fall so large that they were flowing over from horizon to horizon in an almost continuous stream all day long, at the rate of forty or fifty miles an hour, like a mighty river in the sky, widening, contracting, descending like falls and cataracts, and rising suddenly here and there in huge ragged masses like high-splashing spray." P. Matthiessen, Wildlife in America, quoting Teale, Wilderness World of John Muir: Story of My Boyhood and Youth, 182 (1959).