

QUARTERLY WILDLIFE MORTALITY REPORT
October 1988 to December 1988

Location	State	Date	Species	Mortality	Diagnosis
<u>Atlantic Flyway</u>					
Highlands Co.	FL	10/9/88-10/10/88	White ibis, boat-tailed grackles, snakes, turtles, fish	15 (e)	Toxin: Chlorpyrifos
Lake Walter F. George	GA	10/4/88-10/6/88	Mallards	9	Toxin suspect
Harlem	GA	12/15/88-12/17/88	English sparrows	17	Open
Pawtucket Res./Jenks Pond	RI/MA	10/20/88-11/1/88	Canada geese	125	Lead poisoning
Fairfield Co.	SC	12/4/88-12/5/88	Ring-billed gulls	60 (e)	Toxin suspect
Oyster Bay	VA	12/27/88-12/29/88	Herring gulls	150	Toxin suspect
Great Neck Lake	VA	10/4/88-10/5/88	Mallards	2	Toxin: organophosphate
Norfolk	VA	10/10/88-10/11/88	Mallards	3	Toxin: organophosphate
Lynn Haven	VA	10/12/88-10/17/88	Double-crested cormorants	1,000 (e)	Drowning
<u>Mississippi Flyway</u>					
Wheeler NWR	AL	10/11/88-10/29/88	Coots	500	Trauma
Daphne area	AL	12/9/88-12/12/88	Red-winged blackbirds	200 (e)	Toxin: organophosphate
Rice Lake	IA	10/22/88-11/15/88	Canada geese	250	Lead poisoning
Riverton Wildlife Area	IA	11/22/88-12/27/88	Snow geese, mallards, coots	580	Avian cholera
West Chicago	IL	11/30/88-12/4/88	Canada geese	18	Lead poisoning suspect
Lacassine NWR	LA	11/25/88-12/13/88	Snow geese white-fronted geese	111	Avian cholera, lead poisoning

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<u>Mississippi Flyway</u>					
St. Louis Area	MO	10/1/88-11/1/88	Golden eagles, great-horned owls, barred owl, Cooper's hawk	30 (e)	Toxin suspect
Great Miami River; Troy	OH	10/14/88-10/22/88	Mallards, domestic ducks	15 (e)	Botulism type C
Geauga Co.	OH	10/14/88-10/19/88	Domestic geese, Canada geese, mallards	8	Open
Clyman	WI	10/17/88-10/19/88	Canada geese	6	Necrotizing conjunctivitis
Rush Lake	WI	10/24/88-11/11/88	Canada geese	500 (e)	Lead poisoning
Lake Maria	WI	11/7/88-11/10/88	Canada geese	188	Open, Lead poisoning
Lake Puckaway/Green Lake	WI	11/17/88-11/17/88	Red-tailed hawk, starlings, juncos, blue jays, opossums	38 (e)	Toxin suspect
<u>Central Flyway</u>					
Monte Vista NWR	CO	11/29/88-ongoing	Unidentified ducks, Canada geese, sandhill cranes, mallards	1,050 (e)	Avian cholera
Southern Manitoba		10/15/88-11/1/88	Snow geese, Canada geese	1,000 (e)	Necrotic enteritis
Devils Lake WMD	ND	10/22/88-10/22/88	Snow geese	50	Open
Devils Lake WMD	ND	10/27/88-10/27/88	Snow geese	30	Salt toxicosis
Shilling WMA	NE	11/27/88-12/8/88	Snow geese	190 (e)	Avian cholera
Fort Sill	OK	12/29/88-ongoing	Ring-necked ducks	50	Open

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<u>Central Flyway (Cont.)</u>					
Watertown	SD	10/30/88-11/11/88	Snow geese	1,850	Necrotic enteritis, salt toxicosis
Buffalo Lake NWR	TX	9/25/88-10/31/88	Green-winged teal, blue-winged teal, pintails, mallards, coots	2,062	Open, botulism suspect
Brookshire	TX	11/1/88-11/15/88	Unidentified geese	400 (e)	Aflatoxicosis
Spearman	TX	11/14/88-11/16/88	Canada geese, white-fronted geese	74	Open
Buffalo Lakes NWR	TX	11/15/88-11/17/88	Canada geese	223	Toxin: organophosphate
Brazoria NWR	TX	12/1/88-12/5/88	Snow geese	25	Avian cholera
Attwater Prairie Chicken NWR	TX	12/5/88-ongoing	Snow geese, unidentified ducks	7,000 (e)	Avian cholera
<u>Pacific Flyway</u>					
Near Colusa NWR	CA	10/20/88-11/15/88	Mallards, pintails, wigeon	55	Toxin: Furadan
Sacramento NWR	CA	9/12/88-ongoing	Wigeon, coots, snow geese	104	Avian cholera, lead poisoning
Colusa NWR	CA	10/4/88-11/5/88	Mallards, shovelers, pintails	70	Botulism type C
Sacramento NWR	CA	10/20/88-ongoing	White-fronted geese	6	Lead poisoning
Elk Hills Naval Reserve	CA	11/7/88-11/7/88	California quail	10	Toxin: Hydrogen Sulfide

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<u>Pacific Flyway (Cont.)</u>					
Klamath Basin NWR	CA	11/29/88-ongoing	Snow geese, Ross' geese wigeon, white-fronted geese, mallards	250	Avian cholera suspect
Butte Sink	CA	12/1/88-ongoing	Snow geese, Ross' geese, white-fronted geese, mallards, pintails, wigeon	100	Avian cholera
Merced NWR	CA	12/18/88-ongoing	Snow geese	8	Avian cholera suspect
Utah Lake	UT	9/1/88-11/1/88	Mallards, green-winged teal, gadwall, coots, shorebirds	15,000 (e)	Botulism type C
Sutter NWR	CA	12/15/88-ongoing	Snow geese, pintails, ring-necked ducks	35	Avian cholera, lead poisoning
Bow River, Calgary		12/20/88-ongoing	Mallards		Avian cholera
Lac La Biche, Alberta		9/88-9/88	Double-crested cormorants	1,000 (e)	Avian cholera
Delevan NWR	CA	12/13/88-onging	Snow geese, white-fronted geese	100 (e)	Lead poisoning
<u>UPDATE</u>					
Virginia Beach	VA	9/6/88-9/7/88	Mallards, Muscovy ducks, black ducks, blue-winged teal, green-winged teal	120 (e)	Open
Mississippi River	IL	9/10/88-10/25/88	Gulls, shovelers, green- winged teal, blue-winged teal, pintails, mallards	713	Botulism type C
Kachemak Bay	AK	8/17/88-9/15/88	Black-legged kittiwakes	40	Open, emaciation

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<u>UPDATE (Cont.)</u>					
Stillwater NWR	NV	7/5/88-9/28/88	Gulls, pintails	462	Botulism type C
Lahonton Valley	NV	9/24/88-10/26/88	Pintail, green-winged teal, shovelers	15,378	Botulism type C
Oregon Coast	OR	7/9/88-11/30/88	Common murre, rhinoceros auklets	857	Open, emaciation

Prepared by the NWHRC. For specific information, contact the following Resource Health Team members: Pacific Flyway, Kathryn Converse; Central Flyway, Ronald Windingstad; Mississippi Flyway, Karen Roertgen; Atlantic Flyway, Thomas Roffe.

This information was submitted to NWHRC by the following groups: National Wildlife Health Research Center (NWHRC); Southeast Cooperative Wildlife Disease Study (SCWDS); other Federal agencies; State conservation organizations; Canadian Wildlife Service; and private organizations.

(e) = estimated mortality

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Quarterly Wildlife Mortality Report. The following highlights wildlife mortality reported to the NWHR for October-December, 1988. *

NWHR received reports of 49 wildlife die-offs. Avian cholera was diagnosed in 11 (22%) of the die-offs, and was suspected in three more; toxins were responsible for seven (14%), and were suspected in another five; causes for seven die-offs remain open; and another toxin, lead poisoning, was diagnosed in nine (18%) of the die-offs and suspected in one.

Avian cholera once again followed the movement of waterfowl down the Central Flyway. Snow geese were the primary species involved in all of the die-offs. Mortality began in late October at Forney Lake and Riverton Wildlife Area, Iowa, and in late November at Schilling Wildlife Management Area (WMA), in eastern Nebraska. Mortality due to avian cholera was reported for the first time at Lacassine National Wildlife Refuge (NWR), in western Louisiana, in late November. The most severe outbreak of avian cholera reported to date from southeast Texas began in early December. A low-level of mortality from avian cholera continues in the Pacific Flyway at Tule Lake, Sacramento, Sutter, Butte Sink, and Merced NWR's in California.

Necrotic enteritis, a disease which traditionally occurs in birds that use alkaline wetlands, occurred in snow and small Canada geese at five new areas of southern Saskatchewan and southern Manitoba in mid-October. About 2-weeks later, necrotic enteritis was diagnosed in snow geese dying near Watertown, South Dakota. Concurrently, snow geese died from salt toxicosis after drinking water on two highly saline wetlands less than a mile apart, also near Watertown, South Dakota. A second episode of salt poisoning occurred at Devil's Lake WMA after freezing of freshwater wetlands forced snow geese to use highly saline areas.

Lead poisoning die-offs have been reported in Canada geese from Rush Lake, Wisconsin; Rice Lake, Iowa; Pawtucket Reservoir, Rhode Island; Jenk's Pond, Massachusetts; and in white-fronted geese from Sacramento and Delevan NWR's in California. These areas tend to have yearly episodes of lead poisoning.