ABSTRACT

In recent years, the numbers of Canada geese that nest and/or reside predominantly within the conterminous United States (resident Canada geese) have undergone dramatic population growth and have increased to levels that are increasingly coming into conflict with people and human activities and causing personal and public property damage in many parts of the country. Conflicts between geese and people affect or damage several types of resources, including property, human health and safety, agriculture, and natural resources. This document evaluates alternative strategies to reduce, manage, and control resident Canada goose populations in the continental United States and to reduce related damages. The objective of this DEIS is to provide a regulatory mechanism that would allow State and local agencies, other Federal agencies, and groups and individuals to respond to damage complaints or damages by resident Canada geese. This DEIS is a comprehensive programmatic plan intended to guide and direct resident Canada goose population growth and management activities in the conterminous United States. We have analyzed seven management alternatives: 1) No Action; 2) Increase Use of Nonlethal Control and Management (no currently permitted activities); 3) Increase Use of Nonlethal Control and Management (continued permitting of those activities generally considered nonlethal); 4) New Regulatory Options to Expand Hunting Methods and Opportunities; 5) Integrated Depredation Order Management (consisting of an Airport Depredation Order, a Nest and Egg Depredation Order, a Agricultural Depredation Order, and a Public Health Depredation Order); 6) State Empowerment (PROPOSED ACTION); and 7) General Depredation Order. Alternatives were analyzed with regard to their potential impacts on resident Canada geese, other wildlife species, natural resources, special status species, socioeconomics, historical resources, and cultural resources. The Draft Environmental Impact Statement will have a 90-day comment period. We will consider all public comments received during the comment period in preparation of the Final Environmental Impact Statement.

LIST OF TABLES

Table I-1.	State responses to resident Canada goose questionnaire
	Characteristics of complaints regarding resident Canada geese received by the State ildlife resource agencies
	Comparisons of complaints received by State wildlife agencies regarding resident Canada ese during 1995-96 and most recent reports
	Current resident Canada goose population estimates and population objectives on a Flyway sis
	Current spring population estimates and population objectives for resident Canada geese States and Provinces of the Atlantic Flyway
	1999 spring population estimates and population objectives for giant Canada geese in States d Provinces of the Mississippi Flyway
	Spring indices of the number of resident Canada geese and population objectives in the entral Flyway
	Current breeding population indices, objectives, and harvest management levels for the ocky Mountain Population of Western Canada geese
Table I-9.	Harvest management levels for the Pacific Population of Western Canada geese
Table II-1.	Comparison of actions by alternative
Table III-1	. Vital statistics for various subspecies of Canada geese (from Bellrose 1980) III - 2
	Comparison of biological attributes of Canada geese of various migration havior and size (modified from Rusch et al. 1996, additional data from Hanson 1965) III - 8
Table III-3.	Stocking and translocations of resident Canada geese in the Atlantic Flyway III - 14
Table III-4	Population estimates for resident Canada geese in the Atlantic Flyway prior to 1990 III - 15
	. Estimated spring populations of resident Canada geese (1,000s of birds) in the Atlantic yway
go	Spring breeding population (BPOP) estimates (in thousands of geese) and population als for resident Canada geese in Atlantic Flyway States (adapted from Atlantic Flyway puncil 1999).
Table III-7	. A synopsis of giant Canada goose restoration efforts in the Mississippi Flyway III - 20
Table III-8	. Winter survey estimates of giant Canada geese in the Mississippi Flyway III - 24
Table III-9	. Mississippi Flyway giant Canada goose spring population estimates, 1993-2000 III - 25
	0. Population objectives and spring 2000 population estimates of giant Canada geese Mississippi Flyway States

Table III-11. Number of Canada geese released either as goslings from captive flocks or as the result of trap and transport programs in the Central Flyway.	III - 27
Table III-12. Indices of the number of Canada geese in the spring in the Central Flyway, potential population size in 2010 and population objectives.	III - 28
Table III-13. Trends of the number of Canada geese in the Central Flyway as reported by the Breeding Bird Survey	III - 29
Table III-14. Population objectives, current status, and projected indices for 2010 for Canada goose populations in the Central Flyway based on winter surveys.	III - 30
Table III-15. Pacific Population of western Canada goose breeding pair index	III - 32
Table III-16. Mid-winter waterfowl survey indices of the Rocky Mountain Population of Canada geese by reference area.	III - 33
Table III-17. Breeding population index and objective by reference area for the Rocky Mountain Population of Canada geese.	III - 34
Table III-18. Special Resident Canada Goose Seasons for the 2000-2001 Hunting Season (MBM O 2000).	III - 44
Table III-19. Special September, regular, and late resident Canada goose seasons offered in the Atlantic Flyway ^a for the take of resident Canada geese.	III - 47
Table III-20. Estimated harvest of resident Canada geese during September hunting seasons in Atlantic Flyway States	III - 48
Table III-21. Estimated harvest of resident Canada geese during regular and late hunting seasons in Atlantic Flyway States	III - 48
Table III-22. Estimates of Canada goose harvests in the Mississippi Flyway	III - 50
Table III-23. Special Canada goose seasons (daily bag limits) in Mississippi Flyway States,	III - 53
Table III-24. Special season Canada go ose harvest estimates in Mississippi Flyway States,	III - 54
Table III-25. September Canada Goose Season Dates, Hunter Activity and Harvest in North and South Dakota From State Harvest Surveys.	III - 56
Table III-26. Total and large race Canada goose (regular season) harvest in the Central Flyway	III - 56
Table III-27. Canada goose regular season harvests for Central Flyway States and Provinces	III - 57
Table III-28. Harvest of the Pacific Population (PP) of Canada geese from 1970-98.	III - 58
Table III-29. Harvest of Rocky Mountain Population of Canada geese (RMP) by reference area as measured by State surveys.	III - 59
Table III-30. Number of requests for assistance to the Wildlife Services Program from 1996-1999 for property damage by resident Canada geese in selected States.	III - 67

Table III-31. Number of stakeholders receiving technical assistance for property damage from the Wildlife Services Program for Canada geese from 1996-1999	. III - 67
Table III-32. Number of documented complaints, and estimated dollar value of associated damage and/or har assment costs, associated with resident giant Canada geese, Mississippi Flyway States, 1994-2000.	. III - 79
Table III-33. Frequency and costs of human-Canada goose conflict incidents in the Central Flyway from 1992-99.	. III - 80
Table III-34. Costs identified regarding resident Canada goose damage management by selected organizations (from public scoping).	. III - 81
Table III-35. Number of positive isolations by organisms within groups and States (from Converse et al. 2000).	. III - 92
Table III-36. Estimated annual expenditures (dollars) of State and Federal agencies on monitoring programs for resident Canada geese.	III - 94
Table V-1. Comparison of impacts by alternative.	V - 2

LIST OF FIGURES

Figure I-1. Approximate ranges of Atlantic Flyway Resident Population (AFRP), Great Plains Population (GPP), and Rocky Mountain Population (RMP) of Canada geese in North America. I - 3
Figure I-2. Approximate ranges of the Mississippi Flyway Giant Population (MFRP), the Hi-Line Population (HLP), and the Pacific Population (Pacific) of Canada geese in North America I - 3
Figure I-3. Administrative Flyway boundaries
Figure III-1. Approximate breeding range (shaded area of the giant Canada goose prior to European settlement (Hanson 1965)
Figure III-2. Location of whooping crane sightings in the Central Flyway, 1943-99 (U.S. Fish and Wildlife Service, unpublished data)
Figure III-3. Temporal distribution of whooping crane sightings in Nebraska, 1919-2000 (U.S. Fish and Wildlife Service, unpublished data)
Figure III-4. Special season Canada goose harvest in Mississippi Flyway States, 1981-99 III - 49
Figure III-5. Wildlife Services Decision Model
Figure III-6. Number of permits for resident Canada geese issued by Region 5 (Northeast U.S.) from 1995-2000.
Figure III-7. Number of nests authorized to be addled and the number reported addled in Region 5 (Northeast U.S.) from 1995-2000
Figure III-8. Number of resident Canada geese authorized to be taken for food shelf programs and the number reported taken in Region 5 (Northeast U.S.) from 1995-2000 III - 69
Figure III-9. Number of resident Canada geese authorized to be taken for depredation purposes and the number reported taken in Region 5 (Northeast U.S.) from 1995-2000 III - 69
Figure III-10. Number of resident Canada geese reportedly taken for food shelf purposes or depredation in Region 3 (Midwest/Great Lakes) from 1994-2000 III - 70
Figure III-11. Number of resident Canada geese authorized to be taken for depredation purposes in Region 6 (Rocky Mountains/Great Plains) for 1990-2000
Figure III-12. Number of permits for resident Canada geese issued by Region 1 (Pacific Northwest) in 1976-2000
Figure III-13. Number of resident Canada geese and eggs reported taken in Region 1 (Pacific Northwest) in 1990-1999