

damage complaints. In most instances, State permits are required as well.

Conflicts and Impacts

Conflicts between geese and people affect or damage several types of resources, including property, human health and safety, agriculture, and natural resources. Common problem areas include public parks, airports, public beaches and swimming facilities, water-treatment reservoirs, corporate business areas, golf courses, schools, college campuses, private lawns, athletic fields, amusement parks, cemeteries, hospitals, residential subdivisions, and along or between highways.

Property damage usually involves landscaping and walkways, most commonly on golf courses, parks, and waterfront property. In parks and other open areas near water, large goose flocks create local problems with their droppings and feather litter (Conover and Chasko, 1985). Surveys have found that, while most landowners like seeing some geese on their property, eventually, increasing numbers of geese and the associated accumulation of goose droppings on lawns, which results in a reduction of both the aesthetic value and recreational use of these areas, cause many landowners to view geese as a nuisance (Conover and Chasko, 1985).

Negative impacts on human health and safety occur in several ways. At airports, large numbers of geese can create a very serious threat to aviation. Resident Canada geese have been involved in a large number of aircraft strikes resulting in dangerous landing/take-off conditions, costly repairs, and loss of human life. As a result, many airports have active goose control programs. Excessive goose droppings are a disease concern for many people. Public beaches in several States have been closed by local health departments due to excessive fecal coliform levels that in some cases have been traced back to geese and other waterfowl. Additionally, during nesting and brood-rearing, aggressive geese have bitten and chased people and injuries have occurred due to people falling or being struck by wings.

Agricultural and natural resource impacts include losses to grain crops, overgrazing of pastures, and degrading water quality. In heavy concentrations, goose droppings can overfertilize lawns and degrade water quality, resulting in eutrophication of lakes and excessive algae growth (Manny *et al.*, 1994). Overall, complaints related to personal and public property damage, agricultural damage, public safety

concerns, and other public conflicts have increased as resident Canada goose populations increased.

We have further described the various impacts of resident Canada geese on natural resources, public and private property, and health and human safety in our draft EIS on resident Canada goose management. Due to the volume of technical information, we refer the reader to the draft EIS for specific details. Procedures for obtaining a copy of the draft EIS are described in the **ADDRESSES** section of this document.

Environmental Consequences of Taking No Action

We fully analyzed the No Action alternative with regard to resident Canada goose management in our draft EIS, to which we refer the reader (U.S. Fish and Wildlife Service 2002). In summary, we expect that resident Canada goose populations will continue to grow. Within 10 years, populations could approach 1.6 million in the Atlantic Flyway, 2.0 million in the Mississippi Flyway, 1.3 million in the Central Flyway, and 450,000 in the Pacific Flyway. Additionally, resident Canada goose problems and conflicts related to goose distribution are likely to continue and expand. Resident Canada geese will continue to impact public and private property, safety, and health, and impacts are likely to grow as goose populations increase. Lastly, both Federal and State workloads related to dealing with these increasing conflicts and populations will also increase.

Environmental Consequences of Proposed Action

We fully analyzed our proposed action in the draft EIS on resident Canada goose management, to which we refer the reader for specific details (U.S. Fish and Wildlife Service 2002). In summary, under our proposed action, entitled "State Empowerment," we expect a reduction in resident Canada goose populations, especially in problem areas. We also expect significant reductions in conflicts caused by resident Canada geese; decreased impacts to property, safety, and health; and increased hunting opportunities. We expect some initial State and Federal workload increases associated with implementation of the management strategies; however, over the long term, we expect that workloads would decrease. Lastly, we expect our proposed action to maintain viable resident Canada goose populations.

Proposed Resident Canada Goose Regulations

Recently completed resident Canada goose modeling in Missouri (Coluccy 2000; Coluccy and Graber 2000), when extrapolated to the entire Mississippi Flyway, indicates that reduction of the Mississippi Flyway's resident population from the current 1,335,683 geese to the Flyway Council's goal of 989,000 geese would require one of several management actions: (1) The harvest of an additional 240,000 geese annually over that already occurring; (2) the take of an additional 426,000 goslings per year; (3) a Flyway-wide nest removal of 264,000 nests annually; or (4) a combination of harvesting an additional 120,000 geese annually and the take of an additional 160,000 goslings per year. Each of these management alternatives would be required annually for 10 years to reach the Flyway's population management goal. In the Atlantic Flyway, where the resident Canada goose population is even further above established Flyway goals, these numbers would be even greater. Similar numbers would be expected in the Central Flyway, while numbers would be correspondingly smaller in the Pacific Flyway.

Thus, to reduce the four Flyways' resident populations from the current level of approximately 3.5 million to the Flyway Councils' goals of approximately 2.1 million geese would require, at a minimum for the next 10 years, either the harvest of an additional 480,000 geese annually, the take of an additional 852,000 goslings per year, a Flyway-wide nest removal of 528,000 nests annually, or a combination of the harvest of an additional 240,000 geese annually and the take of an additional 320,000 goslings per year. We believe the only way possibly to attain these numbers is to give the States *the flexibility* to address the problems caused by resident Canada goose populations within their respective States. By addressing population reductions on a wide number of available fronts, we believe the combination of various damage management strategies and population control strategies would successfully reduce numbers of resident Canada geese in those priority areas identified by the States. Since the States are the most informed and knowledgeable local authorities on wildlife conflicts in their respective States, we believe it is logical to authorize them to take the necessary actions within specified parameters.

To give States the needed flexibility to address the problems caused by resident Canada geese, this proposed rule would