

**DECISION  
AND  
FINDING OF NO SIGNIFICANT IMPACT**

**ENVIRONMENTAL ASSESSMENT – CANADA GOOSE DAMAGE  
MANAGEMENT IN NEW JERSEY**

The United States Department of Agriculture-Animal Plant Health Inspection Service-Wildlife Services (WS) completed an Environmental Assessment (EA) for the management of Canada goose damage in New Jersey (USDA 2002) and a Decision and Finding of No Significant Impact (FONSI) was signed on April 18, 2002. The purpose of this new Decision/FONSI is to facilitate planning, interagency coordination, and the streamlining of program management; and to clearly communicate with the public the analysis of individual and cumulative impacts of the program since 2002.

The EA evaluated the need for WS activities and the relative effectiveness of four alternatives to meet that need, while accounting for the potential environmental effects of each alternative. The action selected by WS is an Integrated Wildlife Damage Management (IWDM) program on public and private lands in New Jersey, in which a variety of methods and approaches are used and recommended to reduce damage. This strategy uses lethal and nonlethal direct control and technical assistance to reduce damage and conflicts associated with Canada geese (*Branta canadensis*). The EA is tiered to the WS programmatic Environmental Impact Statement (EIS)(USDA 1997). Copies of the EA and FONSI are available for review from the State Director, USDA-APHIS-WS, 140-C Locust Grove Road, Pittstown, NJ 08867. Copies of the EIS are available from the USDA-APHIS-WS Operational Support Staff, 4700 River Road, Riverdale, MD 20737-1234.

Wildlife Services is the Federal program authorized by law to reduce damage caused by wildlife (Act of March 2, 1931 (46 Stat. 1468; 7 U.S.C. 426-426b) as amended, and the Act of December 22, 1987 (101 Stat. 1329-331, 7 U.S.C. 426c)). Wildlife damage management is the alleviation of damage or other problems caused by or related to the presence of wildlife, and is recognized as an integral part of wildlife management (The Wildlife Society 1992). WS uses an IWDM approach, commonly known as Integrated Pest Management (WS Directive 2.105) in which a combination of methods may be used or recommended to reduce damage. WS wildlife damage management is not based on punishing offending animals but as one means of reducing damage and is used as part of the WS Decision Model (Slate et al. 1992, USDA 1997, WS Directive 2.201). All WS wildlife damage management activities are in compliance with relevant laws, regulations, policies, orders and procedures, including the Endangered Species Act of 1973.

**Need for Action**

A description of conflicts and damage associated with Canada geese in New Jersey is provided in the EA (USDA 2002). Additional information related to conflicts and damage associated with resident Canada geese can be found in the U.S. Fish and Wildlife Service Final Environmental Impact Statement (FEIS) that has been prepared for this bird species (USFWS 2005a).

## Summary of WS Canada Goose Damage Management Activities from Fiscal Year 2002 - 2006

For the reporting period of Fiscal Year (FY) 2002-2006, WS provided direct damage management and technical assistance in response to requests for assistance throughout New Jersey, as listed in Table 1.

Table 1. Number of requests for damage management assistance regarding Canada geese received by USDA APHIS Wildlife Services during Federal Fiscal Years 1999 through 2006 (USDA-WS MIS unpublished data 2006).

County	Agriculture	Property	Natural Resources	Human Health & Safety	Total
Atlantic	20	33	4	33	90
Bergen	5	115	35	140	295
Burlington	66	107	0	61	234
Camden	0	46	2	35	83
Cape May	1	20	2	19	42
Cumberland	25	17	0	16	58
Essex	2	36	0	51	89
Gloucester	26	45	1	26	98
Hudson	1	5	0	2	8
Hunterdon	132	75	2	39	248
Mercer	38	56	1	65	160
Middlesex	22	87	0	119	228
Monmouth	31	127	1	125	284
Morris	12	139	10	193	354
Ocean	5	111	3	122	241
Passaic	3	22	3	31	59
Salem	23	7	3	10	43
Somerset	39	114	5	97	255
Sussex	11	61	3	65	140
Union	0	34	1	35	70
Warren	40	38	2	32	112
<b>Total</b>	502	1295	78	1316	3191

The following is a summary of WS Canada goose damage management activities by one year intervals during the reporting period.

### **FY 2002**

An example of WS technical IWDM assistance in New Jersey in FY 2002 included providing free, technical goose management information (including 1898 leaflets) to 629 requesters. WS employees also conducted 4 newspaper interviews, 1 radio interview, 48

personnel consultations, 1 instructional session, and 454 information transfers (includes telephone consultations, and leaflet mailings). Examples of WS direct IWDM assistance in New Jersey in FY 2002 included: (1) protection of human health and safety through removal of 274 goose nests to reduce incidents of aggressive geese attacking people, (2) protection of restored wetlands and rare native wild rice habitats through partnership programs with State agencies and (3) reduction of goose-aircraft strikes, and enhancement of public safety at two New Jersey airports.

### **FY 2003**

An example of WS technical IWDM assistance in New Jersey in FY 2003 included providing free, technical goose management information (including 2143 leaflets) to 769 requesters. WS employees conducted 3 newspaper interviews, 2 instructional sessions, and 485 information transfers (includes telephone consultations and leaflet mailings). Examples of WS direct IWDM assistance in New Jersey in FY 2003 included: (1) protection of human health and safety through removal of 274 goose nests to reduce incidents of aggressive geese attacking people, (2) protection of restored wetlands and rare native wild rice habitats through partnership programs with State agencies and (3) reduction of goose-aircraft strikes, and enhancement of public safety at one New Jersey airport.

### **FY 2004**

An example of WS technical IWDM assistance in New Jersey in FY 2004 included providing free, technical goose management information (including 1554 leaflets) to 539 requesters. WS employees conducted 2 newspaper interviews and 324 information transfers (includes telephone consultations and leaflet mailings). Examples of WS direct IWDM assistance in New Jersey in FY 2004 included: (1) protection of human health and safety through removal of 397 goose nests to reduce incidents of aggressive geese attacking people, (2) protection of restored wetlands and rare native wild rice habitats through partnership programs with State agencies and (3) reduction of goose-aircraft strikes, and enhancement of public safety at one New Jersey airport.

### **FY 2005**

An example of WS technical IWDM assistance in New Jersey in FY 2005 included providing free, technical goose management information (including 1313 leaflets) to 1190 requesters. Examples of WS direct IWDM assistance in New Jersey in FY 2005 included: (1) protection of human health and safety through removal of 448 goose nests to reduce incidents of aggressive geese attacking people, (2) protection of restored wetlands and rare native wild rice habitats through partnership programs with State agencies, and (3) reduction of goose-aircraft strikes, and enhancement of public safety at one New Jersey airport.

### **FY 2006**

An example of WS technical IWDM assistance in New Jersey in FY 2006 included providing free, technical goose management information (including approximately 1000 leaflets) to 487 requesters. Examples of WS direct IWDM assistance in New Jersey in FY 2006 included: (1) protection of human health and safety through removal of 372 goose nests to reduce incidents of aggressive geese attacking people, (2) protection of restored

wetlands and rare native wild rice habitats through partnership programs with State agencies, and (3) reduction of goose-aircraft strikes, and enhancement of public safety at one New Jersey airport.

## **Relationship of this Environmental Assessment to Other Environmental Documents**

**ADC Programmatic Environmental Impact Statement.** WS conducted a NEPA process and developed a FEIS on the national APHIS/WS program (USDA 1997). The FEIS contains detailed discussions of potential environmental impacts from various wildlife damage management methods. The EA is tiered to the WS FEIS (USDA 1997). Pertinent information available in the FEIS has been incorporated by reference into the EA and this Decision/FONSI. The FEIS may be obtained by contacting: USDA APHIS WS Operational Support Staff, 4700 River Rd., Unit 87, Riverdale, MD 20737-1234.

**Final Environmental Impact Statement: Resident Canada Goose Management.** The USFWS has issued a FEIS on the management of resident Canada geese (USFWS 2005a). Pertinent and current information available in the FEIS has been incorporated by reference into this Decision/FONSI. The FEIS may be obtained by contacting the Division of Migratory Bird Management, U.S. Fish and Wildlife Service, 4401 North Fairfax Drive, MBSP-4107, Arlington, Virginia 22203 or by downloading it from the USFWS website at <http://www.fws.gov/migratorybirds/issues/cangeese/finaleis.htm>.

## **Site Specificity**

The EA analyzes the potential impacts of Canada goose damage management and addresses activities on all public and private lands in New Jersey under Memorandum of Understandings (MOU), Cooperative Agreements, and in cooperation with the appropriate public land management agencies. It also addresses the impacts of Canada goose damage management in areas where additional agreements may be signed in the future. Because the proposed action is to reduce damage and because the program's goals and directives are to provide services when requested, within the constraints of available funding and workforce, it is conceivable that additional Canada goose damage management efforts could occur. Thus, the EA anticipates this potential expansion and analyzes the impacts of such efforts as part of the program.

Planning for the management of goose damage must be viewed as being conceptually similar to federal or other agency actions whose missions are to stop or prevent adverse consequences from anticipated future events for which the actual sites and locations where they will occur are unknown but could be anywhere in a defined geographic area. Examples of such agencies and programs include fire and police departments, emergency clean-up organizations, insurance companies, etc. Although some of the sites where goose damage will occur can be predicted, all specific locations or times where such damage will occur in any given year cannot be predicted. The EA emphasizes major issues as they relate to specific areas whenever possible, however, many issues apply wherever Canada goose damage and resulting management occurs, and are treated as such. The standard WS Decision Model (Slate et al. 1992) would be the site-specific procedure for individual actions conducted by WS in New Jersey (see Chapter 3 of the EA for a

description of the Decision Model and its application).

The analyses in the EA are intended to apply to any action that may occur *in any locale* and at *any time* within the state of New Jersey. In this way, APHIS-WS believes it meets the intent of NEPA with regard to site-specific analysis and that this is the only practical way for WS to comply with NEPA and still be able to accomplish its mission.

### **Authority and Compliance**

**Wildlife Services Legislative Authority.** The USDA is directed by law to protect American agriculture and other resources from damage associated with wildlife. The primary statutory authority for the Wildlife Services program is the Act of March 2, 1931, as amended (46 Stat. 1486; 7 U.S.C. 426-426b) as amended, and the Act of December 22, 1987 (101 Stat. 1329-331, 7 U.S.C. 426c), which provides that:

*“The Secretary of Agriculture may conduct a program of wildlife services with respect to injurious animal species and take any action the Secretary considers necessary in conducting the program. The Secretary shall administer the program in a manner consistent with all of the wildlife services authorities in effect on the day before the date of the enactment of the Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriations Act, 2001.”*

Since 1931, with the changes in societal values, WS policies and its programs place greater emphasis on the part of the Act discussing “bringing (damage) under control”, rather than “eradication” and “suppression” of wildlife populations. In 1988, Congress strengthened the legislative directive and authority of WS with the Rural Development, Agriculture, and Related Agencies Appropriations Act. This Act states, in part:

*“That hereafter, the Secretary of Agriculture is authorized, except for urban rodent control, to conduct activities and to enter into agreements with States, local jurisdictions, individuals, and public and private agencies, organizations, and institutions in the control of nuisance mammals and birds and those mammals and birds species that are reservoirs for zoonotic diseases, and to deposit any money collected under any such agreement into the appropriation accounts that incur the costs to be available immediately and to remain available until expended for Animal Damage Control activities.”*

**Executive Order 13186 of January 10, 2001 “Responsibilities of Federal Agencies to Protect Migratory Birds.”** This Order states that each federal agency, taking actions that have or are likely to have, a measurable negative effect on migratory bird populations, is directed to develop and implement, a MOU with the USFWS that shall promote the conservation of migratory bird populations. WS has developed a draft MOU with the USFWS as required by this Order and is currently waiting for USFWS approval. WS will abide by the MOU once it is finalized and signed by both parties.

**The Native American Graves and Repatriation Act of 1990.** The Native American Graves Protection and Repatriation Act requires federal agencies to notify the Secretary of the Department that manages the federal lands upon the discovery of Native American cultural items on federal or tribal lands. Federal projects would discontinue work until a reasonable effort has been made to protect the items and the proper authority has been notified.

**National Historic Preservation Act of 1966 as amended.** The National Historic Preservation Act (NHPA) of 1966, and its implementing regulations (36 CFR 800), requires federal agencies to: 1) determine whether activities they propose constitute "undertakings" that has the potential to cause effects on historic properties and, 2) if so, to evaluate the effects of such undertakings on such historic resources and consult with the Advisory Council on Historic Preservation (i.e. State Historic Preservation Office, Tribal Historic Preservation Officers), as appropriate. WS actions on tribal lands are only conducted at the tribe's request and under signed agreement; thus, the tribes have control over any potential conflict with cultural resources on tribal properties.

Each of the Canada goose damage management methods that might be used operationally by WS do not cause major ground disturbance, do not cause any physical destruction or damage to property, do not cause any alterations of property, wildlife habitat, or landscapes, and do not involve the sale, lease, or transfer of ownership of any property. In general, such methods also do not have the potential to introduce visual, atmospheric, or audible elements to areas in which they are used that could result in effects on the character or use of historic properties. Therefore, the methods that would be used by WS under the proposed action are not generally the types of activities that would have the potential to affect historic properties. If an individual activity with the potential to affect historic resources is planned under an alternative selected as a result of a decision on the EA and this Amendment, then site-specific consultation as required by Section 106 of the NHPA would be conducted as necessary.

There is potential for audible effects on the use and enjoyment of a historic property when methods such as propane exploders, pyrotechnics, firearms, or other noise-making methods are used at or in close proximity to such sites for purposes of hazing or removing nuisance geese. However, such methods would only be used at a historic site at the request of the owner or manager of the site to resolve a damage or nuisance problem, which means such use would be to benefit the historic property. A built-in mitigating factor for this issue is that virtually all of the methods involved would only have temporary effects on the audible nature of a site and can be ended at any time to restore the audible qualities of such sites to their original condition with no further adverse effects. Site-specific consultation as required by Section 106 of the NHPA would be conducted as necessary in those types of situations.

**State of New Jersey Office of the Attorney General Statement of USDA APHIS WS' Legal Use of Carbon Dioxide (CO<sub>2</sub>) as a Euthanasia Method for Canada Geese.** On June 8, 2006, the NJ Office of the Attorney General responded to requests from the NJ Department of Agriculture and the NJ Division of Fish and Wildlife regarding WS use of CO<sub>2</sub> to euthanize Canada within New Jersey. The Attorney General determined that "...USDA's use of CO<sub>2</sub> to euthanize Canada geese comports with State laws." This statement is supported by the Attorney General's conclusions that: 1. WS take of Canada geese is authorized on a Federal permit that is

cosigned by the NJ Division of Fish and Wildlife, 2. use of CO<sub>2</sub> is a method of euthanasia that is generally accepted by the veterinary profession as reliable, appropriate and capable of producing loss of consciousness and death as rapidly and painlessly as possible, 3. according to the American Veterinary Medical Association, CO<sub>2</sub> is an acceptable method of euthanasia for birds, including Canada geese, because it consistently produces a humane death, and 4. activities of USDA are not covered by language contained within NJSA 4:22-19, since this Federal agency is not a kennel, pet shop, shelter, or pound, or other place of confinement. Additionally, WS conducts Canada goose damage management activities pursuant to a Memorandum of Understanding (2002) among WS, NJ Department of Agriculture, NJ Department of Health and Senior Services, NJ Division of Fish and Wildlife, and Rutgers University where these state entities recognize USDA APHIS WS as the responsible entity in handling Canada goose damage management needs within the State of New Jersey.

### **Consistency**

The analyses in the EA demonstrate that Alternative 1: 1) best addresses the issues identified in the EA, 2) provides safeguards for public health and safety, 3) provides WS the best opportunity to reduce damage while providing low impacts on non-target species, and 4) balances the economic effects to agricultural resources.

### **Monitoring**

The New Jersey WS program will annually review its impacts on target Canada goose populations and other species addressed in the EA to ensure that WS program activities do not impact the viability of target and non-target wildlife species populations. In addition, the EA will be reviewed each year to ensure that it and the analysis are sufficient.

### **Public Involvement**

The pre-decisional EA was prepared and released to the public for a 30-day comment period (March 13-April 12, 2002) by a legal notice in the *The Press of Atlantic City*, the *Courier-Post*, and the *Star Ledger*. The Legal Notice was placed in each paper for three days (March 13, 14, and 15, 2002). The pre-decisional EA was also mailed directly to a total of 75 agencies, organizations, and individuals with probable interest in the proposed program. A total of seventeen comment documents were received from the public after review of the pre-decisional EA. All comments were analyzed to identify substantive new issues, alternatives, or to redirect the program. All letters and responses are maintained in the administrative file located at the New Jersey Wildlife Services Office, 140-C Locust Grove Road, Pittstown, NJ 08867. Wildlife Services responses to specific comments and issues are included in Appendix A of the 2002 Decision and FONSI.

The EA, the 2002 Decision/FONSI, and this Decision/FONSI are being made available for public review and comment through a legal notice in the *The Press of Atlantic City*, the *Courier-Post*, and the *Star Ledger*; WS website (<http://www.aphis.usda.gov/ws/>); and by direct mailing to agencies, organizations, and individuals with probable interest in the proposed program. New issues or alternatives raised after publication of public notices will be fully considered to

determine whether the EA and its Decision should be revisited and, if appropriate, revised.

## **Major Issues**

The EA describes the alternatives considered and evaluated using the identified issues. The following issues were identified as important to the scope of the analysis (40 CFR 1508.25).

1. Effects on Target Canada Goose Populations
2. Effectiveness of Wildlife Damage Management
3. Effects on Aesthetics
4. Humaneness and Animal Welfare Concerns of Methods Used by WS
5. Effects on Non-target Wildlife Species Populations, Including Threatened and Endangered Species

In addition to the identified major issues considered in detail, two other issues were considered but not in detail with rationale and further analysis.

**Impacts of West Nile virus on bird populations.** West Nile (WN) virus has emerged in recent years in temperate regions of North America, with the first appearance of the virus in North America occurring in New York City in 1999 (MMWR 2002, Rappole et al. 2000). Since 1999, the virus has spread across the United States and has been reported to occur in all states except Hawaii, Alaska and Oregon (CDC 2004). West Nile virus is typically transmitted between birds and mosquitoes. Mammals can become infected if bitten by an infected mosquito, but individuals in most species of mammals do not become ill from the virus. The most serious manifestation of the WN virus is fatal encephalitis in humans, horses, and birds.

West Nile virus has been detected in dead birds of at least 284 species, including waterfowl (CDC 2005). Although birds infected with WN virus can die or become ill, most infected birds do survive and may subsequently develop immunity to the virus (CDC 2003, Cornell University 2003). In some bird species, particularly Corvids (crows, blue jays, ravens, magpies), the virus causes disease (often fatal) in a large percentage of infected birds (Audubon 2003, CDC 2003, Cornell University 2003, MMWR 2002). In 2002, WN virus surveillance/monitoring programs revealed that Corvids accounted for 90% of the dead birds reported with crows representing the highest rate of infection (MMWR 2002). Large birds that live and die near humans (i.e. crows) have a greater likelihood of being discovered, therefore the reporting rates tend to be higher for these bird species and are a “good indicator” species for the presence of WN virus in a specific area (Cornell University 2003, Audubon 2003).

According to US Geological Survey (USGS), National Wildlife Health Center (2003), information is not currently available to know whether or not WN virus is having an impact on bird populations in North America. USGS states that it is not unusual for a new disease to cause high rates of infection or death because birds do not have the natural immunity to the infection. Furthermore, it is not known how long it will take for specific bird population to develop sufficient immunity to the virus. Surveys of wild birds completed in the last three years have shown that some birds have already acquired antibodies to the virus (USGS-WHC 2003). Based

upon available Christmas Bird Counts and Breeding Bird Surveys, USGS-WHC (2003) states that there have been declines in observations of many local bird populations, however they do not know if the decline can be attributed to WN virus or to some other cause. A review of available crow population data by Audubon (2003) reveals that at least some local crow populations are suffering high WN virus related mortality, but crow numbers do not appear to be declining drastically across broad geographic areas. USGS does not anticipate that the commonly seen species, such as crows and blue jays, will be adversely affected by the virus to the point that these bird species will disappear from the U.S. (USGS-WHC 2003).

### **Affected Environment**

The proposed action will affect private and public lands in New Jersey including, but not necessarily limited to property on or adjacent to airports, golf courses, athletic fields, recreational areas, swimming beaches, parks, corporate complexes, subdivisions, businesses, industrial parks, schools, agricultural areas, natural areas, habitat restoration sites, roadways, and cemeteries.

### **Alternatives Analyzed in Detail**

Four potential alternatives were developed to address the issues identified above. One additional alternative was considered but not analyzed in detail. A detailed discussion of the anticipated effects of the alternatives on the issues is contained in the EA. The following summary provides a brief description of each alternative and its anticipated impacts.

#### **Alternative 1: Integrated Wildlife Damage Management (Proposed Action/No Action)**

The proposed action is for the WS program to conduct an IWDM program that responds to requests for Canada goose damage management to protect property, agricultural crops, natural resources, quality of life, human health, and human safety in New Jersey. Requests for assistance may occur anywhere and anytime in New Jersey. An IWDM approach would be implemented which would allow the use of legal techniques and methods, used singly or in combination, to meet requestor needs for reducing conflicts with waterfowl. Cooperators requesting assistance would be provided with information regarding the use of effective non-lethal and lethal techniques. Non-lethal methods used by WS may include resource management, physical exclusion, and deterrents. Lethal methods used by WS may include nest and egg treatment/destruction, live capture and transportation to a licensed poultry processing facility, live capture and euthanasia, and/or shooting. In many situations, the implementation of non-lethal methods such as habitat alteration, repellents, and exclusion type barriers would be the responsibility of the requestor to implement. Canada goose damage management by WS would be allowed in New Jersey, when requested, on private property or public facilities where a need has been documented and, upon completion of an *Agreement for Control*. All management actions would comply with appropriate federal, state, and local laws. Under this alternative local Canada goose populations would be reduced but not to the extent that statewide, regional or Atlantic Flyway populations would be adversely affected. Other wildlife species, including threatened and endangered species are not expected to be negatively impacted by this alternative with some species receiving beneficial effects. This alternative would allow WS to respond to all requests for assistance and has high potential of reducing damage and conflicts to acceptable levels. Some

person's aesthetic values would be both positively and negatively affected by this alternative. Species removed during control activities would remain common and abundant throughout their range. Lethal control methods used by WS would be considered humane by most people, but others may consider any method of killing to be inhumane.

### **Alternative 2: Technical Assistance Only by WS**

This alternative would not allow for WS operational Canada goose damage management in New Jersey. WS would only provide technical assistance and make recommendations when requested. Producers, property owners, agency personnel, or others could conduct Canada goose damage management using any legal lethal or nonlethal method. Currently, alpha-chloralose is only available for use by WS employees. Therefore, use of this chemical by private individuals would be illegal and unavailable for use. Appendix B of the EA describes a number of methods that could be employed by private individuals or other agencies after receiving technical assistance advice under this alternative. WS would have no direct impacts under this alternative. Impacts of other persons conducting control activities would be variable dependent upon actions taken. This alternative would allow WS to respond to requests for technical assistance, but would leave some people without a means to effectively reduce Canada goose damage and conflicts.

### **Alternative 3: Non-lethal Only by WS**

This alternative would require WS to use or recommend nonlethal methods only to resolve Canada goose damage problems. Persons receiving technical assistance could still employ lethal methods that were available to them. Currently, alpha-chloralose is only available for use by WS employees. Therefore, use of this chemical by private individuals would be illegal. Appendix B of the EA describes a number of nonlethal methods available for use by WS under this alternative. WS would not lethally remove any target bird species under this alternative and would expect to have no adverse effects on other wildlife species including threatened and endangered species. This alternative would not allow WS to respond to all requests for assistance and would not reduce damage and conflicts to acceptable levels for some individuals. Some person's aesthetic values would be both positively and negatively affected by this alternative. Target species populations would remain common and abundant throughout their range. Most people would consider this alternative humane since WS would not be conducting lethal removal activities. Impacts of other persons conducting control activities would be variable dependent upon actions taken.

### **Alternative 4: No Federal WS Canada Goose Damage Management**

This alternative would eliminate Federal involvement in Canada goose damage management in New Jersey. WS would not provide direct operational or technical assistance and requesters of WS services would conduct damage management without WS input. Information on Canada goose damage management methods may be available to producers and property owners through other sources such as USDA Agricultural Extension Service offices, universities, or pest control organizations. Alpha-chloralose is only available for use by WS employees. Therefore, use of this chemical by private individuals would be illegal and unavailable for use. WS would have no direct impacts under this alternative. Impacts of other persons conducting control activities would be variable dependent upon actions taken. This alternative would not allow WS to respond to any requests for assistance and would leave some people without a means to effectively reduce Canada goose damage and conflicts.

## Canada Goose Damage Management Methods

Program activities and methods have not changed from those analyzed in the EA. A description of the Canada goose damage management methods that could be used or recommended by WS is provided in Appendix B of the EA (USDA 2002) and Chapter 2 (pages 1-9) (“*Management Techniques*”) of the USFWS Canada Goose FEIS (USFWS 2005a).

**Nicarbazin (NCZ)** (OvaControl–G™) is a EPA registered chemical reproductive inhibitor that can be used to reduce Canada goose egg production and viability. NCZ is registered for use at site specific locations in highly populated urban areas. The user of this chemical product must adhere to all EPA use restrictions. VerCauteren et al. (2000) examined the use of NCZ to reduce Canada goose egg production and viability, and found that NCZ did experimentally reduce egg viability, but that there were difficulties in delivery methods and acceptance of treated feed. Canada geese have a long life span once they survive their first year (Cramp and Simmons 1977, Allan et al. 1995); leg-band recovery data indicate that some geese live longer than 20 years. The use of NCZ would not reduce the damage caused by the overabundance of the goose population since the population of Canada geese would remain relatively stable.

NCZ is not currently registered for use in New Jersey. If and when this chemical method becomes available for use, and prior to WS operational use of this method, WS will review and update the EA for NEPA compliance, as appropriate.

## Standard Operating Procedures

Mitigation measures are any features of an action that serve to prevent, reduce, or compensate for effects that otherwise might result from that action. As appropriate, mitigation measures are incorporated in WS Standard Operating Procedures (SOPs). The current WS program, nationwide and in New Jersey, uses many such SOPs and these are discussed in Chapter 4 of the EA (USDA 2002) and Chapter 5 of the FEIS (USDA 1997).

## Environmental Consequences

Wildlife Services has reviewed the EA and has determined that the environmental impacts on the quality of the human environment from activities conducted pursuant to the EA will continue to be insignificant, and that no substantive changes in the analysis are necessary at this time. The following is a brief summary of potential impacts for each of the major issues analyzed in the EA.

***Effects on Target Canada Goose Populations:*** Analysis of this issue is limited to birds killed during WS damage management activities. The analysis for magnitude of impact generally follows the process described in Chapter 4 of USDA (1997). Magnitude is described in USDA (1997) as “ . . . a measure of the number of animals killed in relation to their abundance.” Magnitude may be determined either quantitatively or qualitatively. Quantitative determinations are based on population estimates, allowable harvest levels, and actual harvest data. Qualitative determinations are based on population trends and harvest data when available. Generally, WS

only conducts damage management on species whose population densities are high and usually only after they have caused damage. WS take is monitored by comparing numbers of animals killed with overall populations or trends in populations to assure the magnitude of take is maintained below the level that would cause significant adverse impacts to the viability of native species populations (USDA 1997).

The EA concluded that WS Canada goose damage management activities in New Jersey would have no cumulative adverse effects on the populations of Canada geese in New Jersey or the Atlantic Flyway. The target species analyzed in the EA is the Canada goose, of which up to 5% (5218 geese in 2006) of the resident Canada goose population and up to 1% (1900 geese in 2006) of the migratory population could be removed by WS annually.

### **Population Status**

*Resident Canada geese* - Existing analysis within the USFWS FEIS regarding resident Canada goose management states that resident Canada geese have increased dramatically within recent history. The USFWS estimated that there are 3.5 million resident Canada geese in the U.S. and resident Canada goose populations in the Atlantic Flyway now exceed 1 million birds and have increased an average of 1 percent per year, respectively, over the last 10 years (USFWS 2005a). As reported by the North American Breeding Bird Survey, resident breeding populations of Canada geese in New Jersey, the Eastern Breeding Bird Survey Region and USFWS Region 5 have increased annually at rates of 6.9%, 16.7% and 15.6% respectively, from 1966-2005 (Sauer et al. 2006). The 2006 resident Canada goose population remains above the NJ Division of Fish and Wildlife, and the Atlantic Flyway Council supported statewide goal of 41,000 geese (Atlantic Flyway Council 1999). The total annual statewide population of resident Canada from 1993-2006 is provided in Table 2.

*Migratory Canada geese* - In the Atlantic flyway, migratory Canada geese consist primarily of the Atlantic Population (AP), North Atlantic Population (NAP), and the Southern James Bay Population (SJB) (USFWS 2005b). In 2005, the number of breeding pairs for the AP was estimated to be 162,400, 7% less than the 2004 estimate. This population continues to increase from a low of 29,000 breeding pairs in 1995. The breeding pairs estimates have increased 20% per year since 1995. In 2005, there were an estimated 51,300 pairs of geese in the NAP, 24% fewer than the 2004 estimate. Indicated pair estimates have declined an average of 3% per year since 1996. In 2005, a spring population for the SJB was estimated to be 46,300, 54% less than the 2004 estimate. These estimates have decreased an average of 6% per year since 1996. New Jersey Christmas Bird Count data from 1966-2005 shows an increasing trend for wintering populations of Canada geese throughout the state (National Audubon Society 2006). Based upon the Mid-winter Waterfowl Survey conducted in January by the NJ Division of Fish and Wildlife and the US Fish and Wildlife Service each year, the average annual number of wintering Canada geese in New Jersey was 204,000 geese for the period 2001-2005 (NJ Division of Fish and Wildlife, Midwinter Waterfowl Survey, unpublished reports). The winter population includes resident and migratory Canada geese.

Table 2. Number of resident Canada goose pairs and total number of resident Canada geese in

New Jersey, determined from the Atlantic Flyway Breeding Waterfowl Plot Survey conducted by the New Jersey Division of Fish and Wildlife (Serie and Raftovich 2006).

<b>Year</b>	<b>Number of Resident Canada Goose Pairs</b>	<b>Total Number of Resident Canada Geese</b>
1993	12,993	41,270
1994	19,429	65,372
1995	24,202	68,855
1996	22,872	69,549
1997	23,091	85,339
1998	24,900	85,970
1999	30,862	82,283
2000	36,243	106,279
2001	33,783	83,418
2002	31,908	96,828
2003	37,872	99,575
2004	34,182	97,661
2005	34,867	98,506
2006	38,746	104,360

Number of Canada geese, goose nests and goose eggs taken by WS in New Jersey during FY 2002-2006 fell within the range analyzed in the EA and are presented in Tables 3. The number of Canada geese harvested by hunters in New Jersey is presented in Table 4.

Table 3. Number of Canada geese, goose nests and goose eggs taken by USDA APHIS Wildlife Services in New Jersey during Federal Fiscal Years 1993-2006. Take was conducted pursuant to federal and state authorities, such as depredation permits.

<b>Year</b>	<b>Number of Geese</b>	<b>Number of Nests</b>	<b>Number of Eggs*</b>
1993	0	0	0
1994	0	8	38
1995	0	12	56
1996	0	72	350
1997	2	105	482
1998	39	103	401
1999	6	396	1647
2000	4	360	1834
2001	2	289	1490
2002	715	274	1339
2003	2025	355	1722
2004	1045	397	2025
2005	1145	448	2286
2006	707	372	1942

Total	5,690	3,191	15,612
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\* Take of eggs does not have the same management implications as the take of adult geese. These numbers are presented to fully disclose take of adult geese and nests/eggs by WS during 1993-2006.

Table 4. Estimated number of Canada geese harvested in New Jersey during Winter, September and Regular Hunting Seasons during 1993-2006 (Serie and Raftovich 2006).

Year	Number of Geese Harvested Winter Season	Number of Geese Harvested September Season	Number of Geese Harvested Regular Season*
1993	No Season	4,981	29,819
1994	No Season	5,877	21,223
1995	839	7,815	0
1996	2,731	12,734	0
1997	5,211	12,308	0
1998	5,407	12,494	0
1999	7,070	17,300	5,300
2000	7,900	18,700	4,000
2001	3,500	18,700	19,300
2002	5,200	11,000	15,000
2003	1,800	7,600	16,300
2004	2,000	9,800	12,800
2005	2,000	4,000	19,200
2006	1,000	n/a	n/a

\* Harvest numbers include geese taken during the Regular Season, which typically runs from October through January. For example, the 2005 Regular Season harvest includes geese taken by hunters from October 2005 through January 2006.

The following is a summary of management activities and impacts on Canada goose populations in New Jersey for FY 2002-2006.

### **FY 2002**

In FY 2002, WS direct management activities related to Canada geese took a total of 715 resident Canada geese statewide (254 under a permit issued to WS, 461 under permits issued to other NJ entities), which is well below the sustainable take levels presented in the EA. No migratory Canada geese were taken by WS in NJ during FY 2002. Other sources of goose mortality in NJ are hunter harvest and take pursuant to depredation permits. In NJ during FY 2002, hunters harvested 43,200 geese during three hunting seasons (September Season 2001, Regular Season 2001-02, and Winter Season 2002). During FY 2002, the USFWS issued 285 depredation permits to New Jersey entities (other than WS); a total of 2843 geese were taken by permittees (or their non-WS subpermittees) pursuant to these permits (925 shot, 1918 captured and euthanized). New Jersey WS' take of 715 geese represented only 1.53% of the combined take of 46,758 geese (taken by hunters, WS, and non-WS permittees), or <1 % of the estimated spring resident population.

### **FY 2003**

In FY 2003, WS direct management activities related to Canada geese took a total of 2,025 resident Canada geese statewide (1,086 under a permit issued to WS, 939 under permits issued to other NJ entities), which is well below the sustainable take levels presented in the EA. No migratory Canada geese were taken by WS in NJ during FY 2003. Other sources of goose mortality in NJ are hunter harvest and take by non-WS entities pursuant to depredation permits. In NJ during FY 2003, hunters harvested 27,800 geese during three hunting seasons (September Season 2002, Regular Season 2002-03, and Winter Season 2003). During FY 2003, the USFWS issued 270 depredation permits to New Jersey entities (other than WS); a total of 4,002 geese were taken by permittees (or their non-WS subpermittees) pursuant to these permits (2,090 shot, 1,912 captured and euthanized). New Jersey WS' take of 2,025 geese represented only 6% of the combined take of 33,827 geese (taken by hunters, WS, and non-WS permittees), or 2 % of the estimated spring resident population.

#### **FY 2004**

In FY 2004, WS direct management activities related to Canada geese took a total of 1045 resident Canada geese statewide ( 664 under a permit issued to WS, 381 under permits issued to other NJ entities), which is well below the sustainable take levels presented in the EA. No migratory Canada geese were taken by WS in NJ during FY 2004. Other sources of goose mortality in NJ are hunter harvest and take by non-WS entities pursuant to depredation permits. In NJ during FY 2004, hunters harvested 25,900 geese during three hunting seasons (September Season 2003, Regular Season 2003-04, and Winter Season 2004). During FY 2004, the USFWS issued 222 depredation permits to New Jersey entities (other than WS); a total of 3735 geese were taken by permittees (or their non-WS subpermittees) pursuant to these permits. New Jersey WS' take of 1045 geese represented only 3.4% of the combined take of 30,680 (taken by hunters, WS, and non-WS permittees), or 1% of the estimated spring resident population.

#### **FY 2005**

In FY 2005, WS direct management activities related to Canada geese took a total of 1145 resident Canada geese statewide (315 under a permit issued to WS, 830 under permits issued to other NJ entities), which is well below the sustainable take levels presented in the EA. No migratory Canada geese were taken by WS in NJ during FY 2005. Other sources of goose mortality in NJ are hunter harvest and take by non-WS entities pursuant to depredation permits. In NJ during FY 2005, hunters harvested 24,600 geese during three hunting seasons (September Season 2004, Regular Season 2004-05, and Winter Season 2005). During FY 2005, the USFWS issued 264 Canada goose depredation permits to New Jersey entities (other than WS). A total of 2,068 geese were taken by permittees (or their non-WS subpermittees) pursuant to USFWS permits in 2005. New Jersey WS' take of 1145 geese represented only 4.1% of the combined take of 27,813 (taken by hunters, WS, and non-WS permittees), or less than 1.2% of the estimated spring resident population.

#### **FY 2006**

In FY 2006, WS direct management activities related to Canada geese took a total of 707 resident Canada geese statewide (140 under a permit issued to WS, 567 under permits issued

to other NJ entities), which is well below the sustainable take levels presented in the EA. No migratory Canada geese were taken by WS in NJ during FY 2006. Other sources of goose mortality in NJ are hunter harvest and take by non-WS entities pursuant to depredation permits. In NJ during FY 2006, hunters harvested 24,200 geese during three hunting seasons (September Season 2005, Regular Season 2005-06, and Winter Season 2006). During FY 2006, the USFWS issued 237 Canada goose depredation permits to New Jersey entities (other than WS). A total of 2,068 geese were taken by permittees (or their non-WS subpermittees) pursuant to USFWS permits in 2005 (the latest year for which permitted take data is available, D. Dobias, USFWS, pers. comm.). New Jersey WS' take of 707 geese represented only 2.62% of the combined take of 26,975 (taken by hunters, WS, and non-WS permittees), or less than .68% of the estimated spring resident population in 2006.

WS damage management activities were site specific, and although local populations of geese were reduced or dispersed, there was no probable adverse impact on statewide or Atlantic Flyway populations of these birds from WS activities. Program activities and their potential impact on Canada geese have not changed from those analyzed in the EA. Based upon the information provided above, WS management actions will have no adverse affect on state or Atlantic Flyway resident or migratory goose populations. The effects of WS activities on Canada goose populations are expected to remain insignificant.

***Effectiveness of Wildlife Damage Management:*** The EA concluded that an IWDM approach to Canada goose damage management has the greatest potential of successfully reducing goose damage and conflicts. FY 2006 was the fifth year of IWDM activities in New Jersey under this EA. It is reasonable to assume that the methods used by WS and their application have been effective. The methods are also highly selective for the target species. Conflicts with Canada geese were reduced at each location that WS provided direct management assistance. Technical assistance was provided in a timely manner to all requestors. Potential impacts on the effectiveness of wildlife damage management have not changed from those analyzed in the EA. Impacts of the program on this issue are expected to remain insignificant.

***Effects on Aesthetics:*** The EA concluded that effects on aesthetics would be insignificant. WS take represented only 1.53%, 6.0%, 3.4%, 4.1% and 2.62% of the combined statewide take in FY 2002, 2003, 2004, 2005 and 2006, respectively. The public's ability to view and aesthetically enjoy Canada geese was not limited, since at all locales where WS implemented IWDM activities, some geese remained at the site, and were available for people to enjoy. Conflicts with Canada geese were reduced at each location that WS provided direct management assistance thereby improving the aesthetic values of affected properties. Program activities and methods and their potential impacts on aesthetics have not changed from those analyzed in the EA. Impacts of the program on aesthetics are expected to remain insignificant.

***Humaneness and Animal Welfare Concerns of Methods Used by WS:*** WS personnel are experienced and professional in their use of management methods, and methods are applied as humanely as possible. The EA concluded that the methods used by WS to manage Canada goose damage are relatively humane, but that some persons will view some methods used as inhumane. Program activities and methods and their potential impacts on humanness and animal welfare

concerns have not changed from those analyzed in the EA. The EA concluded that effects on humaneness and animal welfare concerns would be insignificant. During the 2002-2006 summer molt period (June-July), geese were captured by surrounding the birds with nets and moving them into coral-type enclosures. During FY 2002-2006, WS IWDM actions were 100% selective for the target species, which indicates suffering of non-target species was nonexistent. Impacts of the program on humaneness and animal welfare are expected to remain insignificant.

***Effects on Non-target Wildlife Species Populations, Including Threatened and Endangered Species:*** The EA concluded that no adverse effects on other wildlife species (nontarget), including T&E species, would result from WS Canada damage management activities. No non-target species of wildlife were taken by WS during direct goose management assistance during FY 2002-2006, nor was there take of any Federal or State threatened and endangered species. No negative effects on non-target wildlife species populations or their habitats have been identified. A review of T&E species listed by the U.S. Fish and Wildlife Service showed that no additional listings of T&E species in New Jersey have occurred since the completion of the EA in 2002. Thus, WS's determination of no effect is still valid for the proposed action.

Program activities and their potential impacts on non-target wildlife species, including T&E species have not changed from those analyzed in the EA. Impacts on non-target wildlife species, including threatened and endangered species populations are expected to remain insignificant.

**Alternatives considered but not analyzed in detail were:**

***Non-lethal Methods Implemented Before Lethal Methods:*** This alternative is similar to Alternative 1 except that WS personnel would be required to always recommend or use non-lethal methods prior to recommending or using lethal methods to reduce Canada goose damage. Both technical assistance and direct damage management would be provided in the context of a modified IWDM approach. Alternative 1, the Proposed Action, recognizes non-lethal methods as an important dimension of IWDM, gives them first consideration in the formulation of each management strategy, and recommends or uses them when practical before recommending or using lethal methods. However, the important distinction between the Non-lethal Methods First Alternative and the Proposed Alternative is that the former alternative would require that all non-lethal methods be used before any lethal methods are recommended or used.

While the humaneness of the non-lethal management methods under this alternative would be comparable to the Proposed Program Alternative 1, the extra harassment caused by the required use of methods that may be ineffective could be considered less humane. As local Canada goose population increase, the number of areas negatively affected by geese would increase, and greater numbers of geese would be expected to congregate at sites where non-lethal management efforts were not effective. This may ultimately result in a greater number of geese being killed to achieve the local Wildlife Acceptance Capacity (WAC) than if lethal management were immediately implemented at problem locations (Manuwal 1989). Once lethal measures were implemented, Canada goose damage would be expected to drop relative to the reduction in localized population of Canada geese causing damage.

Since in many situations this alternative would result in greater numbers of geese being killed to achieve the local WAC, at a greater cost to the requester, and result in a delay in reaching the local WAC in comparison to the Proposed Alternative, the Non-lethal Methods Implemented Before Lethal Methods Alternative is removed from further discussion in this document.

### **Finding of No Significant Impact**

The analysis in the EA, 2002 Decision/FONSI, and this Decision document indicates that there will not be a significant adverse impact, individually or cumulatively, on the quality of the human environment as a result of implementing the proposed action. I agree with this conclusion and therefore find that an EIS need not be prepared. This determination is based on the following factors:

1. Canada goose damage management as conducted by WS in New Jersey is not regional or national in scope.
2. The proposed action would pose minimal risk to public health and safety. Risks to the public from WS methods were determined to be low in a formal risk assessment (USDA 1997, Appendix P).
3. There are no unique characteristics such as park lands, prime farm lands, wetlands, wild and scenic areas, or ecologically critical areas that would be significantly affected. Built-in mitigation measures that are part of WS's standard operating procedures and adherence to laws and regulations will further ensure that WS activities do not harm the environment.
4. The effects on the quality of the human environment are not highly controversial. Although there is some opposition to wildlife damage management, this action is not highly controversial in terms of size, nature, or effect.
5. Based on the analysis documented in the EA and the accompanying administrative file, the effects of the proposed damage management program on the human environment would not be significant. The effects of the proposed activities are not highly uncertain and do not involve unique or unknown risks.
6. The proposed action would not establish a precedent for any future action with significant effects.
7. No significant cumulative effects were identified through this assessment. The EA, 2002 Decision/FONSI, and this Decision document discussed cumulative effects of WS on target and non-target species populations and concluded that such impacts were not significant for this or other anticipated actions to be implemented or planned within the State.
8. The proposed activities would not adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places, nor would

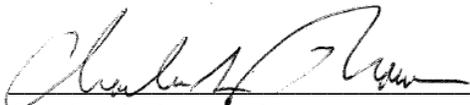
they likely cause any loss or destruction of significant scientific, cultural, or historical resources.

9. WS has determined that the proposed program would have no effect any Federal listed T&E species and would not adversely affect New Jersey State listed threatened or endangered species.
10. The proposed action would be in compliance with all federal, state, and local laws.

### **Decision**

I have carefully reviewed the EA, input resulting from the 2002 public involvement process, and this Decision/FONSI. I believe the issues identified in the EA would be best addressed through implementation of Alternative 1 (the Proposed Action). Alternative 1 is therefore selected because it offers the greatest flexibility in achieving effectiveness while minimizing cumulative adverse impacts on the quality of the human environment with respect to the issues raised for consideration in this process. The WS program will implement the proposed action in compliance with all applicable standard operating procedures in Chapter 3 of the EA. This Decision/FONSI will take effect 30 days after publication of a Legal Notice making the EA, the 2002 Decision/FONSI, and this Decision/FONSI available to the public for review and comment. New issues or alternatives raised after publication of public notices will be fully considered to determine whether the EA and its Decision should be revisited and, if appropriate, revised, or if a Notice of Intent to prepare an EIS should be issued.

For additional information concerning this decision, contact State Director, 140-C Locust Grove Rd., Pittstown, NJ 08867.



Charles S. Brown, Director  
USDA APHIS WS Eastern Region

11/4/07  
Date

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