



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Washington, D.C. 20240



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In Reply Refer To:
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Memorandum

To: Chief, Division of Migratory Bird Management

From: Chief, Branch of Consultation and Habitat Conservation Planning *Michael E. Dagers Jr.*

Subject: Section 7 Consultation on the Proposed Regulation for Resident Canada Goose Management

This memorandum responds to a request by the Division of Migratory Bird Management for review and concurrence regarding an Intra-Service Section 7 Consultation to consider whether any listed, proposed, or candidate species could be affected as a result of the proposed regulations. We have completed informal consultation on the program which included discussions with your staff and our Regional and Field Offices.

Our informal consultation concluded that the Proposed Regulations could potentially adversely affect the light-footed clapper rail; California clapper rail; Yuma clapper rail; California least tern; southwestern willow flycatcher; least Bell's vireo; western snowy plover; California gnatcatcher; California red-legged frog; valley elderberry longhorn beetle and its critical habitat; vernal pool fairy shrimp; conservancy fairy shrimp; California tiger salamander; San Diego fairy shrimp; Riverside fairy shrimp; Butte County meadowfoam; large-flowered woolly meadowfoam; Cook's lomatium; Contra Costa goldfields; Hoover's spurge; fleshy Valley Orcutt grass; San Joaquin Valley Orcutt grass; slender Orcutt grass; California Orcutt grass; spreading navarretia; San Jacinto Valley crownscale; and critical habitat for vernal pool species. To avoid adverse effects to these species, and any other listed species, measures were developed to modify the proposed action. Language describing the measures was added to the final Environmental Impact Statement and final Rule. The inclusion of this language as a part of the proposed regulations satisfies our concerns about the revised regulations and we therefore concur with your determination that the proposed action is not likely to adversely affect any species or designated critical habitat.

This concludes Section 7 consultation on the Proposed Regulation for Resident Canada Goose Management. If you have any questions or concerns about this consultation, please feel free to contact me or Jim Serfis of my staff at 703-358-2438.

Attachment



INTRA-SERVICE SECTION 7 BIOLOGICAL EVALUATION FORM

I. Region: 1-6 and the California and Nevada Operations

II. Service Activity: The Service is proposing to control and manage resident Canada geese by authorizing State management agencies and their agents to conduct depredation/damage/conflict management and population reduction/control in the Continental United States.

Species Profile

This Proposed Action applies specifically to the conterminous United States and to the subspecies of Canada geese (*Branta canadensis*) that nest and/or reside predominately within this portion of the continent. Canada geese nesting within the conterminous United States are considered subspecies or hybrids of the various subspecies originating



in captivity and artificially introduced into numerous areas throughout the conterminous United States. Canada geese are highly philopatric to natal areas and no evidence presently exists documenting breeding between Canada geese nesting within the conterminous United States and those subspecies

nesting in northern Canada and Alaska. The geese nesting and/or residing within the conterminous United States in the months of March, April, May, June, July, and August will be collectively referred to in this BE as "resident" Canada geese.

The number of Canada geese that nest and/or reside predominantly within the conterminous United States has increased dramatically in the past 20 years.

Figure I-1. Administrative Flyway boundaries.

See attached proposed rule and draft EIS for further species and habitat description.

EXISTING CONDITIONS

Normally, complex Federal and State responsibilities are involved with Canada goose control activities. All control activities, except those intended to either scare geese out of, or preclude them from using, a specific area, such as harassment, habitat management, or repellents (as described below), require a Federal permit issued by the Service. Additionally, permits to alleviate migratory bird depredations are issued by the Service in coordination with the Wildlife Services (formerly Animal Damage Control) program of the Animal Plant Health Inspection Service (APHIS/WS). APHIS/WS is the Federal Agency with lead responsibility for dealing with wildlife damage complaints. In most instances, State permits are required as well. As the number of problems with resident Canada geese has continued to grow, the Service, with its State and Federal partners, believes the development and evaluation of alternative strategies to reduce, manage, and control resident Canada goose populations in the continental United States and to reduce related damages, beyond those presently employed, are needed so that all agencies can provide the most responsible, cost-effective, biologically-sound, and efficient assistance available.

Until recently, the Service attempted to control and manage growing populations of resident Canada geese through existing annual hunting season frameworks (special and regular seasons), the recommendations of using non-lethal means, and the issuance of control permits on a case-by-case basis. While this approach provided relief in some areas, it did not completely address the problem. On June 17, 1999, we published a final rule establishing a new special Canada goose permit (Federal Register 1999b). The new permits are specifically for the management and control of resident Canada geese. Permits may be issued to State conservation or wildlife management agencies on a State-specific basis, so States and their designated agents can initiate resident goose damage management and control injurious geese within the conditions and restrictions of the permit program. The permits, restricted to the period between March 11 and August 31, allow increased availability of control measures, facilitate a decrease in the number of injurious resident Canada geese in localized areas, have little impact on hunting or other recreation dependent on the availability of resident Canada geese, and allow injury/damage problems to be dealt with at the State and local level, thereby resulting in more timely control activities. These new special permits result in biologically sound and more cost-effective and efficient resident Canada goose damage management. We believe this permit satisfies the need for a more efficient/cost-effective program in the short term while allowing us to maintain direct management control.

In the long-term, however, we realize that more management flexibility will be necessary. Because of the unique locations where large numbers of these geese nest, feed, and reside, we continue to believe that new and innovative approaches and strategies for dealing with bird/human conflicts are necessary. The proposed action works to control and manage resident Canada geese and develop a long-term strategy to integrate our management of these birds into a larger Flyway management-plan system.

DESCRIPTION OF EXISTING GOOSE MANAGEMENT TECHNIQUES THAT DO NOT REQUIRE FEDERAL PERMIT (this encompasses only non-MBTA permitted activities for the public to utilize to manage resident Canada geese on their property):

A variety of existing methods are available regarding the management of damage from resident Canada geese. Presently, there are a variety of non-lethal or

indirect options that landowners, agencies, and individuals can utilize without obtaining a MBTA permit from the Service. However, in some cases these options may trigger the need for compliance with other Federal laws and regulations (e.g., the prohibitions against take of listed wildlife under the Endangered Species Act).

1. Resource Management

Resource management includes a variety of practices that may be used by resource owners to reduce the potential for wildlife damage. Implementation of these practices is appropriate when the potential for damage can be reduced without significantly increasing a resource owner's costs or diminishing his/her ability to manage resources pursuant to goals. Resource management recommendations are made through Wildlife Services technical assistance efforts.

Habitat Alteration: Habitat alteration can be the planting of vegetation unpalatable to wildlife or altering the physical habitat (Conover and Kania 1991, Conover 1992). Conover (1991a, 1991b) found that even hungry Canada geese refused to eat some ground covers such as common periwinkle (*Vinca minor*), English ivy (*Hedera helix*) and Japanese pachysandra (*Pachysandra terminalis*). Planting less preferred plants or grasses to discourage geese from a specific area could work more effectively if good alternative feeding sites are nearby (Conover 1985). However, the manipulation of turf grass varieties in urban/suburban, heavy use situations such as parks, athletic fields and golf courses is often not feasible.

Fences, hedges, shrubs, boulders, etc. can be placed at shorelines to impede goose movements. Restricting a goose's ability to move between water and land will deter geese from an area, especially during molts (Gosser et al. 1997). However, people are often reluctant to make appropriate landscape modifications to discourage goose activity (Breault and McKelvey 1991, Conover and Kania 1991). Both humans and geese appear to find lawn areas near water attractive (Addison and Amernic 1983, Cooper³ In Press), and conflicts between humans and geese likely will continue wherever this interface occurs.

Removal of water bodies would likely reduce the attractiveness of an area to waterfowl. Urban/suburban Canada geese tend to feed near bodies of water with good visibility over short grass (Conover and Kania 1991). Draining/removal of water bodies should not be done.

Lure Crops: Lure crops are food resources planted to attract wildlife away from more valuable resources (e.g., agricultural crops). This method is largely ineffective for urban resident Canada geese since food resources (turf) are readily available in urban landscapes. For lure crops to be effective, the ability to keep birds from surrounding habitats and fields would be necessary, and the number of alternative feeding sites must be minimal (Fairaizl and Pfeifer 1988). Additionally, lure crops reduce damage for only discrete periods of time (Fairaizl and Pfeifer 1988) and potential damage by resident Canada geese is generally throughout the year. Furthermore, the resource owner is limited in implementing this method contingent upon ownership of, or otherwise ability to manage the property. Finally, unless the original waterfowl_human conflict is resolved, creation of additional waterfowl habitat could increase future conflicts in the long-term.

Modify Human Behavior: Food provided by people attracts and sustains more waterfowl in an area than could be supported by natural food supplies. This unnatural food source exacerbates

damage by resident geese and should be eliminated. The elimination of feeding of waterfowl is a primary recommendation made by Wildlife Services, the Service, and State wildlife agencies, and many local municipalities have adopted policies prohibiting it. Some parks have posted signs, and there have been efforts made to educate the public on the negative aspects of feeding waterfowl. However, many people do not comply, and the policies are poorly enforced in some areas.

Alternatively, some entities encourage/permit the feeding of geese because the goose population in the location has not exceeded their wildlife acceptance capacity. It is unlikely that the feeding of geese in these locations would significantly contribute to conflicts with geese in other communities or locations.

Alter Aircraft Flight Patterns: In cases where the presence of waterfowl at airports results in threats to air traveler safety and when such problems cannot be resolved by other means, the alteration of aircraft flight patterns or schedules may be recommended. However, altering standard operations at airports to decrease the potential for hazards is not feasible unless an emergency situation exists. Otherwise, the expense of interrupted flights and the limitations of existing facilities make this practice prohibitive.

Removal of Domestic Waterfowl: Flocks of urban waterfowl are known to act as “decoys” and attract migrating waterfowl (Crisley et al. 1968, Woronecki 1992, AAWV undated). Rabenold (1987) and Avery (1994) reported that birds learn to locate food resources by watching the behavior of other birds. The removal of domestic waterfowl from ponds removes birds that act as “decoys” in attracting Canada geese. Domestic and feral geese could also carry diseases which threaten wild populations (AAWV undated). Resource owners may be reluctant to remove some or all decoy birds because of the enjoyment of their presence.

Physical Exclusion and Deterrents

Physical exclusion and deterrents restrict the access of wildlife to resources and/or alter behavior of target animals to reduce damage. These methods provide a means of appropriate and effective prevention of resident Canada goose damage in many situations. No Federal migratory bird permits are needed for nonlethal aggressive harassment activities to harass geese out of an area. However, we note that some States have regulations which prohibit harassment of geese and other wildlife.

Electric Fence: The application of electrified fencing is generally limited to rural settings due to possible accidental interactions with people and pets. This practice has been used to keep geese enclosed within wetland complexes, and to exclude them from adjacent agricultural fields susceptible to goose damage during certain times of the year. The efficiency of electrical fencing can vary with the number of multiple landowners along the wetland, and the size of the agricultural field and its proximity to wetlands inhabited by resident geese. While electric fencing may be effective in repelling geese in some urban settings, its use can be prohibited in municipalities for human safety reasons. Problems that typically reduce the effectiveness of electric fences include; vegetation on fence, flight capable geese, fencing knocked down by other animals (e.g., white_tailed deer and dogs), time of year (seasonally effective) and inadequate electrical power.

Barrier Fence: The construction or placement of physical barriers has limited application for resident geese. Barriers can be temporary or permanent structures. Lawn furniture/ornaments,

vehicles, boats, snow fencing, plastic hazard fencing, metal wire fencing, and multiple strand fencing have all been used to limit the movement of resident geese. Reports from cases in Minnesota indicate that permanent barriers were perceived to be highly effective, while temporary barriers were moderately effective (Cooper and Keefe 1997). The application of this method is limited to areas that can be completely enclosed and do not allow geese to land inside enclosures. Similar to most abatement techniques, this method has been most effective when dealing with small numbers of breeding geese and their flightless goslings along wetlands and/or waterways. Unfortunately, there have been situations where barrier fencing designed to inhibit goose nesting has entrapped goslings and resulted in starvation (Cooper 1998).

The preference for geese to walk or swim, rather than fly, during brood raising and molting contributes to the success of barrier fences. Geese that are capable of full or partial flight render this method useless, except for enclosed areas small enough to prevent landing. However, site-specific habitat alterations have merit, provided that landscape designs are based on biological diversity and human safety objectives (Cooper, In Press).

Surface Coverings: Canada geese may be excluded from ponds using overhead wire grids (Fairaizl 1992, Lowney 1993). Overhead wire grids have been demonstrated to be most applicable on ponds \leq two acres, but wire grids may be considered unsightly or aesthetically unappealing to some people. Wire grids render a pond unusable for boating, swimming, fishing, and other recreational activities. Installation costs are about \$1,000 per surface acre for materials. The expense of maintaining wire grids may be prohibitive for some people.

Floating plastic balls approximately five inches in diameter can be used to cover the surface of a pond. A "ball blanket" renders a pond unusable for boating, swimming, fishing, and other recreational activities. This method is very expensive, costing about \$131,000 per surface acre of water.

Visual Deterrents: Reflective tape has been used successfully to repel some birds from crops when spaced at three to five meter intervals (Bruggers et al. 1986, Dolbeer et al. 1986). Mylar flagging has been reported effective at reducing migrant Canada goose damage to crops (Heinrich and Craven 1990). Conversely, other studies have shown reflective tape ineffective (Tobin et al. 1988, Bruggers et al. 1986, Dolbeer et al. 1986, Conover and Dolbeer 1989). While sometimes effective for short periods of time, reflective tape has proven mostly ineffective in deterring resident geese. Flagging is impractical in many locations and has met with some local resistance due to the negative aesthetic appearance presented on the properties where it is used.

Mason et al. (1993) and Mason and Clark (1994) have shown white and black plastic flags to be effective at repelling snow geese from pastures when alternative grazing areas were available. However, some farmers in Wisconsin have reported that black plastic flags can actually attract geese to a location (R. Christian, Wisconsin APHIS/WS, April, 2000, pers. comm. as cited in USDA 2000).

Dogs: Dogs can be effective at harassing geese and keeping them off turf and beaches (Conover and Chasko 1985, Woodruff and Green 1995). Around water, this technique appears most effective when the body of water to be patrolled is less than two acres in size (Swift 1998). Although dogs can be effective in keeping geese off individual properties, they do not contribute to a solution for the larger problem of overabundant goose populations (Castelli and Sleggs 1998). Swift (1998) reported that when harassment with dogs ceases, the number of geese return

to pre_treatment numbers. Wildlife Services has recommended and encouraged the use of dogs where appropriate. Permits may be required.

Repellents: Methyl anthranilate (MA) is a registered repellent for Canada geese marketed under the trade names ReJeX_iT and Bird Shield. Results with MA appear mixed. Cummings et al. (1995) reported that MA repelled Canada geese from grazing turf for four days. However, Belant et al. (1996) found it ineffective as a grazing repellent when applied at 22.6 and 67.8 kg/ha which is the label rate and triple the label rate, respectively. MA is water soluble, therefore moderate to heavy rain or daily watering and/or mowing render MA ineffective. Permits may be required to use chemical repellents for goose damage management in some States.

Research continues on other avian feeding repellents. A 50% anthraquinone product (FlightControl), shows promise for Canada geese (Dolbeer et al. 1998). Like MA, anthraquinone has low toxicity to birds and mammals. Activated charcoal has also been evaluated for use in deterring goose damage, but it requires frequent re-application to be effective (Mason and Clark 1995). Further, laboratory and field trials are needed to refine minimum repellent levels and to enhance retention of treated vegetation (Sinnott 1998).

Hazing: Hazing reduces losses in those instances when the affected geese relocate to a more acceptable area. Achieving that end has become more difficult as local goose populations have increased. Birds hazed from one area where they are causing damage, frequently move to another area where they cause damage (Brough 1969, Conover 1984, Summers 1985, Swift 1998). Smith et al. (1999) noted that others have reported similar results, stating: "...biologists are finding that some techniques (e.g., habitat modifications or scare devices) that were effective for low to moderate population levels tend to fail as flock sizes increase and geese become more accustomed to human activity". In most instances, birds tend to habituate to hazing techniques (Zucchi and Bergman 1975, Blokpoel 1976, Summers 1985, Aubin 1990).

Scarecrows: The use of scarecrows has had mixed results. Effigies depicting alligators, humans, floating swans and dead geese have been employed, with limited success for short time periods in small areas. An integrated approach (swan and predator effigies, distress calls and non_lethal chemical repellents) was found to be ineffective at scaring or repelling nuisance Canada geese (Conover and Chasko 1985). While Heinrich and Craven (1990) reported that using scarecrows reduced migrant Canada goose use of agricultural fields in rural areas, their effectiveness in scaring geese from suburban/urban areas is severely limited because resident geese are not afraid of humans as a result of nearly constant contact with people. In general, scarecrows are most effective when they are moved frequently, alternated with other methods, and are well maintained. However, scarecrows tend to lose effectiveness over time and become less effective as goose populations increase (Smith et al. 1999).

Distress Calls: Aguilera et al. (1991) found distress calls ineffective in causing either migratory or resident geese to abandon a pond. Although, Mott and Timbrook (1988) reported distress calls as effective at repelling resident Canada geese 100 meters from the distress unit, the geese would return shortly after the calls stopped. The repellency effect was enhanced when pyrotechnics were used with the distress calls. In some situations, the level of volume required for this method to be effective in urban/suburban areas would be prohibited by local noise ordinances. A similar device, which electronically generates sound, has proven ineffective at repelling migrant Canada geese (Heinrich and Craven 1990).

Pyrotechnics: Pyrotechnics (screamer shells, bird bombs, and 12_gauge cracker shells) have been used to repel many species of birds (Booth 1994). Aguilera et al. (1991) found 15mm screamer shells effective at reducing both resident and migrant Canada geese use of areas of Colorado. However, Mott and Timbrook (1988) and Aguilera et al. (1991) doubted the efficacy of harassment and believed that moving the geese simply redistributed the problem to other locations.

Fairaizl (1992) and Conomy et al. (1998) found the effectiveness of pyrotechnics highly variable among flocks of waterfowl. Some flocks in urban areas required continuous day long harassment with frequent discharges of pyrotechnics. The geese usually returned within hours. A minority of resident Canada goose flocks in Virginia showed no response to pyrotechnics (Fairaizl 1992). Some flocks of Canada geese in Virginia have shown quick response to pyrotechnics during winter months, suggesting that migrant geese made up some or all of the flock (Fairaizl 1992). Shultz et al. (1988) reported fidelity of resident Canada geese to feeding and resting areas is strong, even when heavy hunting pressure is ongoing. Mott and Timbrook (1988) concluded that the efficacy of harassment with pyrotechnics is partially dependent on availability of alternative loafing and feeding areas. Although one of the more effective methods of frightening geese away, more often than not they simply move geese to other areas. There are also safety and legal implications regarding their use. Discharge of pyrotechnics is inappropriate and prohibited in some urban/suburban areas. Pyrotechnic projectiles can start fires, ricochet off buildings, pose traffic hazards, trigger dogs to bark incessantly, and annoy and possibly injure people.

Propane Cannons: Propane cannons are generally inappropriate for urban/suburban areas due to the repeated loud explosions, which many people would consider a serious and unacceptable nuisance. Although a propane cannon can be an effective dispersal tool for migrant geese in agricultural settings, resident geese in urban areas are more tolerant of noise and habituate to propane cannons in a relatively short period of time.

POPULATION REDUCTION METHODS: THE FOLLOWING ARE A LIST OF ACTIVITIES THAT CAN CURRENTLY BE IMPLEMENTED ONLY AFTER ISSUANCE OF A MBTA PERMIT FROM THE SERVICE:

Generally, as mentioned above, the Service has stressed the need to manage geese on a population unit basis, guided by cooperatively developed Flyway management plans. However, the development of a strategy for dealing with resident Canada goose damage presents several potential problems. Because resident Canada goose populations interact and overlap with other Canada goose populations during the fall and winter, these other non-target goose populations potentially could be affected by any management action or program aimed at resident Canada goose populations during the fall and winter. Thus, to avoid potential conflicts with other Canada goose populations, most management actions for resident Canada geese have been restricted to either special early September or late winter hunting seasons when migrant populations are largely absent or, to permitted actions during the period March 11 through August 31. These spring and summer dates encompass the period when sport hunting is prohibited throughout the United States by the Migratory Bird Treaty (1916) and resulting regulations promulgated under the Migratory Bird Treaty Act (1918).

Regulations governing the take, possession, and transportation of migratory birds under sport hunting seasons are annually promulgated in 50 CFR, part 20, subpart K, while regulations covering the issuance of permits to take, capture, kill, possess, and transport migratory birds are

promulgated in 50 CFR parts 13 and 21. Furthermore, in subpart C of part 21, Specific Permit Provisions, section 21.26 is the Special Canada Goose Permit, issued only to State wildlife agencies, authorizing certain resident Canada goose management and control activities. Section 21.27 pertains to special-purpose permits which allow for the taking of migratory birds with compelling justification. In subpart D of part 21, section 21.41 pertains to general depredation permits and section 21.42 concerns the authority to issue depredation orders to permit the killing of migratory game birds. Sections 21.43 through 21.46 deal with special depredation orders for specific species of migratory birds and/or specific geographic areas to address particular depredation problems. All of these sections establish a precedent for allowing the take of migratory birds, under compelling circumstances, of a specific species, including resident Canada geese, and in specific geographic areas.

Nest and Egg Destruction: Addling, oiling, freezing, replacement, or puncturing of eggs can be effective in reducing annual recruitment into the local population (Christens et al. 1995, Cummings et al. 1997). While egg removal/destruction can reduce production of goslings, merely destroying an egg does not reduce a population as quickly as removing immature or breeding adults (Cooper and Keefe 1997). As with other species of long-lived geese, which require high adult mortality to reduce populations (Rockwell et al. 1997), it is likely that adult resident Canada geese must be removed to reduce the population to a level deemed acceptable to communities. Approximately five eggs must be removed to have the effect of preventing one adult from joining the breeding population (Rockwell et al. 1997, Schmutz et al. 1997). Keefe (1996) estimated egg destruction to cost \$40 for the equivalent of removing one adult goose from the population. In addition, nest destruction is estimated to cost significantly more than other forms of population management (Cooper and Keefe 1997). Egg destruction, while a valuable tool, has fallen short as a single method for reducing local goose populations. Many nests cannot be found by resource managers in typical urban settings due to the difficulties in gaining access to search the hundreds of private properties where nests may occur. In addition, geese which have eggs oiled in successive years may learn to nest away from the water making it more difficult to find nests.

Mute Swans: Mute swans are ineffective at preventing Canada geese from using or nesting on ponds (Conover and Kania 1994). Mute swans are now re-classified as a migratory bird species, and this practice can not be used without permits. Additionally, swans can be aggressive towards humans (Conover and Kania 1994, Chasko 1986) and may have undesirable effects on native aquatic vegetation (Allin et al. 1987, Chasko 1986). Furthermore, Executive Order 11987 May 24, 1977, states that federal agencies shall encourage states, local governments, and private citizens to prevent the introduction of exotic species into the environment.

Capture With Alpha Chlorolose: Alpha Chlorolose may be used only by Wildlife Services personnel to capture waterfowl. Pursuant to FDA restrictions, waterfowl captured with Alpha Chlorolose for subsequent euthanasia must be killed and buried or incinerated, or be held alive for at least 30 days, at which time the birds may be killed and processed for human consumption.

Hunting and Depredation Permits: See above.

Shooting: "Shooting" is the practice of selectively removing target birds by shooting with a firearm. Shooting a few individuals from a larger flock can reinforce birds' response to harassment techniques. Shooting is used to reduce goose problems when other lethal methods are determined to be appropriate. The birds are killed as quickly and humanely as possible.

Capture with Option to Process for Human Consumption: The most efficient way to reduce the size of an urban flock is to increase mortality among adult geese. Nationwide, hunting is the major cause of goose mortality, but in an urban environment geese may seldom be available to hunters (Conover and Chasko 1985, Smith et al. 1999). For purposes of lethal control, resident geese are usually captured with rocket nets, drive traps, net guns, dip nets, and/or by hand. Rocket netting involves the setting of bait in an area that can be completely contained within the dimensions of a fully-deployed propelled net. Rocket nets are launched too quickly for the geese to escape. Rocket netting may take place anytime during the year.

The molt process, which renders Canada geese flightless, occurs during a short period in the summer. Migrant Canada geese are not present in the conterminous U.S. during the summer months, nor do they cause many of the conflicts in urban/suburban locations. Therefore, to target resident Canada geese for human consumption, capture would be restricted to the summer period. Resident Canada geese captured during this period may be processed for human consumption and donated to charitable organizations.

It is estimated to cost \$18-25 per goose for capture and processing for human consumption (Keefe 1996, Cooper and Keefe 1997).

III. Pertinent Species and Habitat: (organized by Region)

A. Listed species and/or critical habitat within the action area:

* Denotes species with critical habitat designations

Region 1:

Light-footed clapper rail	(<i>Rallus longirostris levipes</i>) [E]
California clapper rail	(<i>Rallus longirostris obsoletus</i>) [E]
Yuma clapper rail	(<i>Rallus longirostris yumanensis</i>) [E]
California least tern	(<i>Sterna antillarum</i>) [E]
Brown pelican	(<i>Pelicanus occidentalis</i>) (Pacific coast population) [E]
Southwestern willow flycatcher	(<i>Empidonax trailii extimus</i>) [E]
California condor*	(<i>Gymnogyps californianus</i>) [E]
Least Bell's vireo*	(<i>Vireo belli pusillus</i>) [E]
Western snowy plover*	(<i>Charadrius alexandrinus nivosus</i>) [T]
Bald eagle	(<i>Haliaeetus leucocephalus</i>) [T]
California gnatcatcher*	(<i>Polioptila californica</i>) [T]
Inyo California towhee*	(<i>Pipilo crissalis eremophilus</i>) [T]
Marbled murrelet*	(<i>Brachyramphus marmoratus</i>) [T]
Northern spotted owl*	(<i>Strix occidentalis caurina</i>) [T]
San Clemente sage sparrow	(<i>Amphispiza belli</i>) []
Mountain plover	(<i>Charadrius montanus</i>) [P]
Giant Garter Snake	(<i>Thamnophis gigas</i>) [T]
Fenders blue butterfly	(<i>Icaricia icarioides fenderi</i>) [E]
Bay checkerspot butterfly	(<i>Euphydryas editha bayensis</i>) [T]
Behren's silverspot butterfly	(<i>Speyeria zerene behrensii</i>) [E]
San Joaquin adobe sunburst	(<i>Pseudobahia peirsonii</i>) [T]
Willamette daisy	(<i>Erigeron decumbens</i> var. <i>decumbens</i>) [E]
Yellow-billed cuckoo	(<i>Coccyzus americanus</i>)

vernal pool fairy shrimp	(<i>Branchinecta lynchi</i>) [T]
conservancy fairy shrimp	(<i>B. conservatio</i>) [E]
longhorn fairy shrimp	(<i>B. longiantenna</i>) [E]
vernal pool tadpole shrimp	(<i>Lepidurus packardi</i>) [E]
delta green ground beetle	(<i>Elaphrus viridus</i>) [T]
California tiger salamander	(<i>Ambystoma californiense</i>) [E, proposed threatened]
San Diego fairy shrimp	(<i>B. sandiegonensis</i>) [E]
Riverside fairy shrimp	(<i>Streptocephalus woottoni</i>) [E]
Butte County meadowfoam	(<i>Limnanthes floccosa</i> ssp. <i>californica</i>) [E]
large-flowered wooly meadowfoam	(<i>L. f.</i> ssp. <i>grandiflora</i>) [E]
Cook's lomatium	(<i>Lomatium cookii</i>) [E]
Contra Costa goldfields	(<i>Lasthenia conjugens</i>) [E]
Hoover's spurge	(<i>Chamaesyce hooveri</i>) [T]
fleshy owl's clover	(<i>Castilleja campestris</i> ssp. <i>succulenta</i>) [T]
Colusa grass	(<i>Neostapfia colusana</i>) [T]
hairy Orcutt grass	(<i>Orcuttua pilosa</i>) [E]
Solano grass	(<i>Tuctoria mucronata</i>) [E]
Greene's tuctoria	(<i>T. greene</i>) [E]
Sacramento Valley Orcutt grass	(<i>Orcuttua. viscida</i>) [E]
San Joaquin Valley Orcutt grass	(<i>Orcuttua. Inaequali</i>) [T]
slender Orcutt grass	(<i>Orcuttua tenuis</i>) [T]
California Orcutt grass	(<i>Orcuttua californica</i>) [E]
spreading navarretia	(<i>Navarretia fossalis</i>) [T]
San Jacinto Valley crownscale	(<i>Atriplex coronata</i> var. <i>notatior</i>) [E]

Region 2

Attwater's greater prairie-chicken	(<i>Tympanuchus cupido attwateri</i>) [E]
Masked bobwhite	(<i>Colinus virginianus ridgewayi</i>) [E]
Red-cockaded woodpecker	(<i>Picoides borealis</i>) [E]
Cactus ferruginous pygmy-owl*	(<i>Glaucidium brasilainum cactorum</i>) [E]
Yuma clapper rail	(<i>Rallus longirostris yumanensis</i>) [E]
Least tern	(<i>Sterna antillarum</i>) [E]
Northern aplomado falcon	(<i>Falco femoralis septentrionalis</i>) [E]
Brown pelican	(<i>Pelicanus occidentalis</i>) [E]
Southwestern willow flycatcher	(<i>Empidonax traillii extimus</i>) [E]
Black-capped vireo	(<i>Vireo atricapillus</i>) [E]
Golden-cheeked warbler	(<i>Dendroica chrysoparia</i>) [E]
California condor*	(<i>Gymnogyps californianus</i>) [XN]
Mexican spotted owl	(<i>Strix occidentalis lucida</i>) [T]
Bald eagle	(<i>Haliaeetus leucocephalus</i>) [T]
Piping plover*	(<i>Charadrius melodus</i>) [T]
Audubon's crested caracara	(<i>Polyborus plancus audubonii</i>) [T]
Lesser prairie-chicken	(<i>Tympanuchus pallidicinctus</i>) [C]
Whooping crane*	(<i>Grus americana</i>) [E]
Eskimo curlew	(<i>Numenius borealis</i>) [Extinct?]
Western prairie fringed orchid	(<i>Platanthera praeclara</i>) [T]

Region 3

Piping plover*	(<i>Charadrius melodus</i>) [T]
Least tern	(<i>Sterna antillarum</i>) (Interior population) [E]
Bald eagle	(<i>Haliaeetus leucocephalus</i>) [T]
Kirtland's Warbler	(<i>Dendroica kirtlandii</i>) [E]
Karner blue butterfly	(<i>Lycaeides melissa samuelis</i>) [E]
Mead's milkweed	(<i>Asclepias meadii</i>) [T]
Virginia sneezeweed	(<i>Helenium virginicum</i>) [T]
Decurrent false aster	(<i>Boltonia decurrents</i>) [T]
Prairie bush-clover	(<i>Lespedeza leptostachya</i>) [T]
Western prairie fringed orchid	(<i>Platanthera praeclara</i>) [T]
Eastern prairie fringed orchid	(<i>Platanthera leucophaea</i>) [T]
Indiana bat	(<i>Myotis sodalis</i>) [E]

Region 4

Ivory-billed woodpecker	(<i>Campephilus principalis</i>) [E]
Red-cockaded woodpecker	(<i>Picoides borealis</i>) [E]
Mississippi sandhill crane*	(<i>Grus canadensis pulla</i>) [E]
Piping plover*	(<i>Charadrius melodus</i>) [E]
Least tern	(<i>Sterna antillarum</i>) (Interior population) [E]
Everglade snail kite*	(<i>Rostrhamus sociabilis plumbeus</i>) [E]
Wood stork	(<i>Mycteria americana</i>) [E]
Brown pelican	(<i>Pelicanus occidentalis</i>) [E]
Cape Sable sparrow*	(<i>Ammodramus maritimus mirabilis</i>) [E]
Florida grasshopper sparrow	(<i>Ammodramus savenarum floridanus</i>) [E]
Roseate tern	(<i>Sterna douglalli</i>) [T]
Bald eagle	(<i>Haliaeetus leucocephalus</i>) [T]
Audubon's crested caracara	(<i>Polyborus plancus audubonii</i>) [T]
Florida scrub jay	(<i>Aphelocoma coerulescens</i>) [T]
Bachman's warbler	(<i>Vermivora bachmanii</i>) [Extinct?]
Whooping crane*	(<i>Grus americana</i>) [NEP]
Bog turtle	(<i>Clemmys muhlenbergii</i>) [T]
Saint Francis' satyr butterfly	(<i>Neonympha mitchellii francisci</i>) []
Schweinitz's sunflower	(<i>Helianthus schweinitzii</i>) []
Eggert's sunflower	(<i>Helianthus eggertii</i>) [T]
Spring Creek bladderpod	(<i>Lesquerella perforata</i>) [E]
Eastern prairie fringed orchid	(<i>Platanthera leucophaea</i>) [T]

Region 5

Piping plover*	(<i>Charadrius melodus</i>) [T]
Roseate tern	(<i>Sterna douglalli</i>) [E]
Bald eagle	(<i>Haliaeetus leucocephalus</i>) [T]
Plymouth redbelly turtle	(<i>Pseudemys rubriventris bangsi</i>) [E]
Bog turtle	(<i>Clemmys muhlenbergii</i>) [T]
Karner blue butterfly	(<i>Lycaeides melissa samuelis</i>) [E]
Virginia sneezeweed	(<i>Helenium virginicum</i>) [T]
Eastern prairie fringed orchid	(<i>Platanthera leucophaea</i>) [T]

Region 6

Least tern	(<i>Sterna antillarum</i>) (Interior population) [E]
Piping plover*	(<i>Charadrius melodus</i>) [T]

Mexican spotted owl	(<i>Strix occidentalis lucida</i>) [T]
Bald eagle	(<i>Haliaeetus leucocephalus</i>) [T]
Whooping crane*	(<i>Grus americana</i>) [E]
Eskimo curlew	(<i>Numenius borealis</i>) [Extinct?]
Southwestern willow flycatcher	(<i>Empidonax traillii extimus</i>) [E]
Black-capped vireo	(<i>Vireo atricapillus</i>) [E]
California condor	(<i>Gymnogyps californianus</i>) [XN]
Mead's milkweed	(<i>Asclepias meadii</i>) [T]
Western prairie fringed orchid	(<i>Platanthera praeclara</i>) [T]

B. Proposed species and/or proposed critical habitat within the action area

Region 1, 2

None

C. Candidate species within the action area:

Region 1

Western sage grouse (*Centrocercus urophasianus phaios*) [C]

Region 2

Lesser prairie-chicken (*Tympanuchus pallidicinctus*) [C]

IV. Geographic area and action: Region 1-6 and the California Nevada Operations

V. Location: Region 1-6 and the California Nevada Operations

VI. Description of Proposed Action:

Through the EIS and rulemaking process the Service proposes the resident Canada goose control and management program which will authorize State wildlife management agencies to conduct indirect and/or direct population control management activities on resident Canada goose populations. The resident Canada goose control and management program consists of five components. They are:

(1) Depredation order for resident Canada geese at airports and military airfields.

The airport depredation order for resident Canada geese authorizes airport managers at commercial, public, and private airports (airports) (and their employees or their agents) and military air operation facilities (military airfields) (and their employees or their agents) to establish and implement a resident Canada goose control and management program when necessary to protect public safety and allow resolution or prevention of airport and military airfield safety threats from resident Canada geese. Control and management activities include indirect and/or direct control strategies such as trapping and relocation, nest and egg destruction, gosling and adult trapping and culling programs, or other control strategies. Persons authorized to operate under the this Depredation Order may conduct management and control activities, including the take of resident Canada geese, between April 1 and September 15 and the destruction of resident Canada goose nests and eggs between March 1 and June 30. Methods of take for the control of resident Canada geese are at the airport's and military airfield's discretion from among the following: (a) egg oiling, (b) egg and nest destruction, (c) shooting, (d) lethal and live traps, (e) nets, and (f) registered animal drugs, pesticides, and repellents

(2) Depredation order for resident Canada geese at agricultural facilities.

The depredation order for resident Canada geese at agricultural facilities authorizes States, via the State wildlife agency, to implement a program to allow landowners, operators, and tenants actively engaged in commercial agriculture (agricultural producers) (or their employees or agents) to conduct direct damage management actions such as nest and egg destruction, gosling and adult trapping and culling programs, or other wildlife-damage management strategies on resident Canada geese when the geese are committing depredations to agricultural crops and when necessary to resolve or prevent injury to agricultural crops or other agricultural interests from resident Canada geese.

(3) Public Health depredation order for resident Canada geese.

The public health depredation order for resident Canada geese authorizes States, via the State wildlife agency, to conduct resident Canada goose control and management activities including direct control strategies such as trapping and relocation, nest and egg destruction, gosling and adult trapping and culling programs, or other wildlife damage-management strategies when resident Canada geese are posing a direct threat to human health.

(4) Depredation order for resident Canada geese nests and eggs.

The nest and egg depredation order for resident Canada geese authorizes private landowners and managers of public lands (landowners) (and their employees or their agents) to destroy resident Canada goose nests and take resident Canada goose eggs on property under their jurisdiction when necessary to resolve or prevent injury to people, property, agricultural crops, or other interests.

(5) Population control of resident Canada geese.

The resident Canada goose population control program, or managed take, is a special management action that is needed to reduce certain wildlife populations when traditional management programs are unsuccessful in preventing overabundance of the population. We are implementing a managed take program under the authority of the Migratory Bird Treaty Act to reduce and stabilize resident Canada goose populations. Managed take allows additional methods of taking resident Canada geese, allows shooting hours for resident Canada geese to extend to one-half hour after sunset, and removes daily bag limits for resident Canada geese inside or outside the migratory bird hunting season frameworks as described below. The intent of the program is to reduce resident Canada goose populations in order to protect personal property and agricultural crops, protect other interests from injury, resolve or prevent injury to people, property, agricultural crops, or other interests from resident Canada geese, and contributes to potential concerns about human health. The management and control activities allowed or conducted under the program are intended to relieve or prevent damage and injurious situations. No person should construe this program as opening, reopening, or extending any hunting season contrary to any regulations established under Section 3 of the Migratory Bird Treaty Act.

As described in the actual language of the rule, persons authorized to operate under the component 1 (Depredation Order at airports and military airfields) may conduct management and control activities, including the take of resident Canada geese, between April 1 and September 15 and the destruction of resident Canada goose nests and eggs between March 1 and June 30. Persons authorized to operate under the components 2-3 (Depredation Order at Agricultural Facilities and Public Health) may conduct management and control activities, including the take of resident Canada geese, between May 1 and August 31 and the destruction of resident Canada goose nests and eggs between March 1 and June 30. Persons authorized to operate under component number 4 (nest and eggs) may conduct resident Canada

goose nest and egg manipulation and destruction activities between March 1 and June 30. Control activities under Component 5 (Population control) may be conducted only between August 1 and August 30.

The specific control and management actions authorized under components 1-3 for the control of resident Canada geese are among the following: (a) egg oiling, (b) egg and nest destruction, (c) shotguns, (d) lethal and live traps, (e) nets, and (f) registered animal drugs, pesticides and repellents. Birds caught live may be euthanized or transported and relocated to another site approved by the state wildlife agency, if required. Authorized techniques for euthanization are: (a) firearms, (b) cervical dislocation, and CO₂ asphyxiation. All techniques used must be in accordance with other Federal, State and local laws, and their use must comply with any labeling restrictions. Persons using shotguns must use nontoxic shot, as listed in 50 CFR 20.21(j). Persons using egg oiling must use 100 percent corn oil, a substance exempted from regulation by the U.S. Environmental Protection Agency under the Federal Insecticide, Fungicide, and Rodenticide Act. As specified in the rule, component 4 (nest and eggs) methods of take are at the landowner's discretion from among the following: (a) egg oiling, using 100 percent corn oil, a substance exempted from regulation by the U.S. Environmental Protection Agency under the Federal Insecticide, Fungicide, and Rodenticide Act, (b) removal and disposal of eggs and nest material. Before any management actions can be taken, landowners must register with the U.S. Fish and Wildlife Service at <http://www.migratorybirds.gov/goosenestpermit>. Landowners must also register each employee or agent working on their behalf. As specified in the rule, component 5 (population control) would allow additional methods of hunting resident Canada geese such as, shooting hours for resident Canada geese to extend to one-half hour after sunset, and removes daily bag limits for resident Canada geese outside the migratory bird hunting season frameworks as described below.

Break-down of methods used to take resident Canada geese (Refer to Proposed and Final Rule and EIS).

Under the proposed alternative, the Service would maintain primary authority for the management of resident Canada geese, but the individual States would be authorized to implement the provisions of this alternative within the guidelines established by the Service. In addition to specific strategies, we would continue the use of special and regular hunting seasons, issued under 50 CFR §20, and the issuance of depredation permits and special Canada goose permits, issued under 50 CFR §§21.41 and 21.26, respectively. Participating States would be required to annually monitor the spring breeding population to assess population status and provide for the long-term conservation of the resource. Additionally, States or other applicable parties (such as airports or public health officials) would be required to annually report all take of geese under authorized management activities.

Shooting: Firearms used to shoot resident Canada geese is a highly target specific technique that is believed to reinforce non-lethal harassment. In the case of resident Canada geese, shooting is always conducted with shotguns or rifles. When used by trained personnel, the risk of shooting directly taking nontarget species is minimal. Shooting is used to reduce goose problems when other lethal methods are determined to be appropriate. The birds are killed as quickly and humanely as possible, during May 1-August 31.

Registered Animal Drugs, pesticides, and repellants: Alpha Chlorolose may be used only by Wildlife Services personnel to capture resident Canada geese. Pursuant to FDA restrictions, waterfowl captured with Alpha Chlorolose for subsequent euthanasia must be killed and buried or incinerated, or be held alive for at least 30 days, at which time the birds may be killed and processed for human consumption. This practice may be used only May 1 - August 31 by Wildlife Services' personnel.

Egg and Nest Destruction: Addling, oiling (with pure vegetable oil), freezing, replacement, or puncturing of eggs can be effective in reducing annual recruitment into the local population (Christens et al. 1995, Cummings et al. 1997). While egg removal/destruction can reduce production of goslings, merely destroying an egg does not reduce a population as quickly as removing immature or breeding adults (Cooper and Keefe 1997). Resident Canada goose eggs have been destroyed in attempts to reduce recruitment into populations. Egg oiling is a method of suppressing reproduction of nuisance birds by spraying a small quantity of food grade vegetable oil on eggs in nests. The oil prevents exchange of gases and causes asphyxiation of developing embryos. The EPA has ruled that use of corn oil for this purpose is exempt from registration requirements under the Federal Insecticide, Fungicide, and Rodenticide Act. This method is extremely target specific. Such control efforts are typically conducted on foot by a small number of personnel. Nest removal is the removal of nesting materials during the construction phase of the nesting cycle. Nest destruction simply involves the physical breakup of nest structures. This method may be used only March 1-June 30.

Trap and Net Capture: The most efficient way to reduce the size of an urban flock is to increase mortality among adult geese. Nationwide, hunting is the major cause of goose mortality, but in an urban environment geese may seldom be available to hunters (Conover and Chasko 1985, Smith et al. 1999). For purposes of lethal control, resident geese are usually captured with rocket nets, drive traps, net guns, dip nets, and/or by hand. Rocket netting involves the setting of bait in an area that can be completely contained within the dimensions of a fully-deployed propelled net. Rocket nets are launched too quickly for the geese to escape. This practice may only be used May 1- August 31.

The molt process, which renders Canada geese flightless, occurs during a short period in the summer. Migrant Canada geese are not present in the conterminous U.S. during the summer months, nor do they cause many of the conflicts in urban/suburban locations. Therefore, to target resident Canada geese for human consumption, capture would be restricted to the summer period. Resident Canada geese captured during this period may be processed for human consumption and donated to charitable organizations.

Cervical dislocation: Cervical dislocation is sometimes used to euthanize birds which are captured by hand or in live traps and when relocation is not a feasible option. The bird is stretched and the neck is hyper-extended and dorsally twisted to separate the first cervical vertebrae from the skull. The American Veterinary Medical Association approves this technique as a humane method of euthanasia.

CO2 asphyxiation: CO2 is sometimes used to euthanize birds which are captured by hand or in live traps and when relocation is not a feasible option. Live birds are placed in a container such as a plastic 5-gallon bucket or chamber and sealed shut. CO2 gas is released into the bucket or chamber and birds quickly die after inhaling the gas. This method is approved as a euthanizing agent by the American Veterinary Medical Association.

Population control: See rule attached.

The advantages of lethal damage management are that it would be applied directly to the problem population, its effects are obvious and immediate, and it carries no risk that the geese will return or move and create conflicts elsewhere. The primary disadvantage is that it is sometimes more socially controversial than other techniques. The use of lethal methods to reduce Canada goose damage can be very effective at alleviating damage and is more economical in this regard when compared to non-lethal methods (Cooper and Keefe 1997). Additionally, capture and removal of Canada geese is the most cost-effective lethal method to reduce damage, except for hunting (Cooper and Keefe 1997). Moreover, the use of lethal methods has longer effectiveness than non-lethal methods because it can take months to years before the original local population level of Canada geese returned. Lethal methods would also

reduce conflict among resource owners, whereas non-lethal actions only move the Canada geese among resource owners (i.e., spread the damage) (Cooper and Keefe 1997, Smith et al. 1999), and possibly leave resource owners with the fewest financial means burdened with the Canada geese and the damage.

The intent of this proposed action is to allow State wildlife management agencies sufficient flexibility, within predefined guidelines (See above and proposed rule), to manage resident Canada goose populations within their respective State utilizing both lethal and non-lethal control methods.

VII. Determination of effects:

A. Explanation of effects of the action on species and critical habitats in items III. A, B, C (Organized by region):

Region 1 (California, Idaho, Nevada, Oregon, Washington); March 1- August 30 – Nest and Egg Depredation Order, Airport and military airfield depredation order, and public health depredation order only (See Rule for specifics).

Light-footed clapper rail (*Rallus longirostris levipes*) [E] and California clapper rail (*Rallus longirostris obsoletus*) [E]: These subspecies of clapper rails frequent dense vegetation in coastal marshes. These rails are difficult to find, are reluctant to fly, and are not likely to be confused with resident Canada geese. Distinctive dissimilarities in body silhouette, habitat preferences, and behavior of resident Canada geese from that of these rails lessen the possibility that rails would be incidentally taken or adversely affected by the proposed management activities.

To avoid adverse effects to these species, all Canada goose control activities in light-footed and California clapper rail habitat will be done in coordination with the appropriate local FWS field office. When goose control actions are implemented in areas where light-footed and California clapper rails are known or likely to be present, standard local operating procedures for avoiding adverse effects to this species or its critical habitat must be adhered to and implemented (Appendix 1).

Yuma clapper rail (*Rallus longirostris yumanensis*) [E]: The Yuma clapper rail, a year-round resident in southern California, uses freshwater marsh habitats around Salton Sea. These rails frequent dense vegetation, are difficult to find, are reluctant to fly, and are not likely to be confused with resident Canada geese. Distinctive dissimilarities in body silhouette, habitat preferences, and behavior of resident Canada geese from that of the Yuma clapper rail lessen the possibility that rails would be incidentally taken or adversely affected by the proposed management activities.

To avoid adverse effects to this species, all Canada goose control activities in Yuma clapper rail habitat will be done in coordination with the appropriate local FWS field office. When goose control actions are implemented in areas where Yuma clapper rails are known or likely to occur, standard local operating procedures for avoiding adverse effects to this species or critical habitat must be adhered to (Appendix 1).

California least tern (*Sterna antillarum browni*) [E]: This subspecies nests in seacoasts, beaches, bays, estuaries, lagoons, lakes, and rivers, and rests and loafs on sandy beaches, mudflats, and salt-pond dikes. California least terns may roost at night on sandy beaches away from nesting areas for several weeks before nesting. The species nests usually on open, flat beaches along lagoon or estuary margins; sometimes on mud or sand flats a distance from the ocean or on artificial islands created from dredge spoils. California least terns usually nest in same area in successive years; they tend to return to natal sites to nest. Habitat preferences and differences in flight profile and pattern make it less likely that management actions will adversely affect this species. However, hunting and trapping of Canada geese and activities associated with destroying nests and eggs may cause disturbance at a level that could disrupt nesting of this listed species.

To avoid adverse effects to this species, all Canada goose control activities in California least tern-occupied habitat will be done in coordination with the appropriate local FWS field office. When goose control actions are implemented in areas where California least terns are present, standard local operating procedures for avoiding adverse effects to this species or its critical habitat must be adhered to and implemented (Appendix 1).

Brown pelican (*Pelicanus occidentalis*) (Pacific coast population) [E]: The brown pelican is mainly a coastal species that nests on small islands off the coast of California and Baja California. When on the mainland, it roosts in open areas where it is protected from disturbance by people and predators; such areas, such as dikes along salt ponds, wide beaches, and docks do not provide habitat for resident Canada geese. Because the proposed control measures will not be implemented in areas where brown pelicans may be nesting or roosting, the proposed action is not likely to adversely affect this species.

Southwestern willow flycatcher (*Empidonax traillii extimus*) [E]: The southwestern willow flycatcher is seasonally present (May through August) in thickets of riparian vegetation in southern California and southern Nevada. The riparian habitat preferred by this species could occur adjacent to the preferred habitat used by resident Canada geese (e.g., marshes, golf courses, and manicured regional parks).

To avoid adverse effects to this species, all Canada goose control activities in southwestern willow flycatcher-occupied habitat will be done in coordination with the appropriate local FWS field office. When goose control actions are implemented in areas where southwestern willow flycatchers are present, standard local operating procedures for avoiding adverse effects to this species or its critical habitat must be adhered to and implemented (Appendix 1).

Critical habitat for the southwestern willow flycatcher has been designated along 600 river miles in Arizona, California, and New Mexico. The proposed action does not authorize any habitat, vegetation or ground-disturbing activities. Therefore, this action is not likely to result in adverse effects to southwestern willow flycatcher critical habitat.

California condor (*Gymnogyps californianus*) [E]: The condor would be extremely unlikely to be mistaken for resident Canada geese. The proposed action does not allow the use of lead shot for hunting resident Canada geese; therefore, lead poisoning of the California condor from eating waterfowl contaminated by lead shot is not an issue in this consultation. The grasslands/oak savanna habitat preferred by condors is very different from the preferred habitat used by resident Canada geese, so the proposed management activities are not likely to adversely affect this species.

Critical habitat for the California condor has been designated in Ventura, Los Angeles, Santa Barbara, San Luis Obispo, Kern, and Tulare Counties, California and in the Grand Canyon region of Arizona. The proposed action won't affect foraging, roosting, or nesting habitat of the condor because these areas do not overlap goose habitat, therefore, no adverse effects to California condor critical habitat are anticipated.

Least Bell's vireo (*Vireo bellii pusillus*) [E]: The least Bell's vireo is seasonally present (mid-March to mid-September) in thickets of riparian woodlands in southern California. The riparian habitat preferred by these vireos could occur adjacent to the preferred habitat used by resident Canada geese (e.g., marshes, golf courses, and manicured regional parks).

To avoid adverse effects to this species, all Canada goose control activities in least Bell's vireo-occupied habitat will be done in coordination with the appropriate local FWS field office. When goose control actions are implemented in areas where least Bell's vireos are present, standard local operating procedures for avoiding adverse effects to this species or its critical habitat must be adhered to and implemented (Appendix 1).

Critical habitat for the least Bell's vireo has been designated along the southwestern coastline of California below Santa Barbara. The proposed action does not authorize any habitat, vegetation or ground-disturbing activities. Therefore, this action is not likely to result in adverse effects to least Bell's vireo critical habitat.

Western snowy plover (*Charadrius alexandrinus nivosus*) (Pacific coast population) [T]: Because of its silhouette, flight patterns, and behavior, we do not anticipate that the western snowy plover would be confused with resident Canada geese, however, management techniques used under the proposed action could occur in habitats used by the western snowy plover. Snowy plovers are known to occur with resident Canada geese at some locations along the Pacific coast, and the FWS has documented incidents of goose researchers accessing snowy plover nest sites where trampling snowy plover nests or short-term disturbance could occur. Goose baits used in proximity to snowy plover nests may attract corvids that in turn may prey on snowy plover eggs or chicks. Use of baits and hazing control methods will not occur during the plover breeding season (March 1 – September 30) in areas where the snowy plover is present. All other activities in snowy plover habitat will be done in coordination with the appropriate local FWS field office. When goose control actions are implemented in areas where western snowy plovers are present, standard local operating procedures for avoiding adverse effects to this species or its critical habitat must be adhered to and implemented (Appendix 1).

Critical habitat for the western snowy plover has been designated along the Pacific Coast of California. The proposed action does not authorize any habitat, vegetation or ground-disturbing activities. Therefore, this action is not likely to result in adverse effects to western snowy plover critical habitat.

Bald eagle (*Haliaeetus leucocephalus*) [T]: The bald eagle occurs in areas close to (within 4 km) coastal areas, bays, rivers, lakes, or other bodies of water that reflect the general availability of primary food sources including fish, waterfowl, and seabirds. Hunters generally cannot mistake the bald eagle for a Canada goose. The proposed action does not allow the use of lead shot for hunting resident Canada geese, therefore, lead poisoning of the bald eagle from eating waterfowl contaminated by lead shot is not expected to occur. Other management techniques used under the proposed action would not likely occur in habitats used by the bald eagle, however, bald eagles may occasionally be found roosting or breeding in adjacent habitats. Since wintering bald eagles may occur in Region 1 from October 31 through March 31, and resident Canada goose control will be implemented from March through August, adverse effects to roosting bald eagles are discountable during the winter timeframe. Bald eagle nesting activities typically occur over an extended period from January 1 through August 15.

Adverse effects to nesting bald eagles will be avoided through implementation of standard buffers for human activities and noise as follows. Management techniques authorized under the proposed action, including human activities occurring within line of sight of an active bald eagle nest, can not occur within 400 meters of active bald eagle nests, every attempt should be made to restrict project-related activities within 400-800 meters of a bald eagle nest during the months of June through August, and the *Bald Eagle Nesting Guidelines* must be followed.

California gnatcatcher (*Poliophtila californica*) [T]: This small bird would not be confused with resident Canada geese, but habitat used by California gnatcatchers could occur adjacent to the preferred habitat used by resident Canada geese (e.g., marshes, golf courses, and manicured regional parks), so the following measures will be required for goose management activities where this species is present: all Canada goose control activities in or adjacent to California gnatcatcher-occupied habitat will be done in coordination with the appropriate local FWS field office. When goose control actions are implemented in habitat where California gnatcatcher are present, standard local operating procedures for avoiding adverse effects to this species or its critical habitat must be adhered to and implemented (Appendix 1).

Critical habitat for the Coastal California gnatcatcher has been designated along the central coast of Los Angeles County, California. The proposed action does not authorize any habitat, vegetation or ground-disturbing activities. Therefore, this action is not likely to result in adverse effects to California gnatcatcher critical habitat.

Inyo California towhee (*Pipilo crissalis eremophilus*) [T]: This species is restricted to riparian thickets and adjacent uplands in the Argus Mountains and adjacent areas in Inyo County, California. The riparian habitat is very different from the preferred habitat used by resident

Canada geese. Management techniques used under the proposed action would not occur in habitats used by the Inyo California towhee. This medium-sized, long-tailed songbird is not likely to be mistaken for resident Canada geese or affected by management techniques covered by the proposed action.

Critical habitat for the Inyo California towhee has been designated in the Argus Range in Inyo County, California. Goose management will not occur in that area because of the lack of goose habitat, therefore, no adverse effects to Inyo California towhee critical habitat are anticipated.

Marbled murrelet (*Brachyramphus marmoratus*) [T]: The marbled murrelet occurs in several coastal forest locations within Region 1 during the breeding season (April 15 to September 15 of any year). It is unlikely that take would occur since the proposed action would not occur in coastal forests, therefore, the potential for any adverse effects to marbled murrelets is discountable.

Critical habitat for the marbled murrelet has been designated in old growth forests of Washington, Oregon, and California. This action does not affect designated critical habitat for the marbled murrelet, therefore, no adverse effects to murrelet critical habitat are anticipated.

Northern spotted owl (*Strix occidentalis caurina*) [T]: The northern spotted owl occurs in several coastal locations within Region 1. The spotted owl's nocturnal habitats, its silhouette, size, and color make it highly unlikely that it would be mistaken for resident Canada geese. Management techniques used under the proposed action would not occur in habitats used by the northern spotted owl, and spotted owls typically do not nest near stand edges, so are unlikely to be disturbed by goose control efforts under this proposed action. The potential for adverse effects to the northern spotted owl is discountable.

Critical habitat for the northern spotted owl has been designated in forest habitats of Washington, Oregon, and California. This action does not affect designated critical habitat for northern spotted owl, therefore, no adverse effects to northern spotted owl critical habitat are anticipated.

San Clemente sage sparrow (*Amphispiza belli*) []: San Clemente sage sparrow occurs in coastal locations in California. The San Clemente sage sparrows habitat, its silhouette, size, and color make it highly unlikely that it would be mistaken for resident Canada geese or disturbed by goose control efforts under this proposed action. Management techniques used under the proposed action will not occur in habitats used by the San Clemente sage sparrow, therefore no adverse effects are anticipated.

Giant Garter Snake (*Thamnophis gigas*) [T]: The giant garter snake inhabits wetland habitat within the Central Valley of California. Based on the Programmatic Biological Opinion for this species and the recommendations in the Services *Guidelines for Restoration and/or Replacement of Giant Garter Snake Habitat* and the *Standard Avoidance and Minimization Measures During Construction Activities in Giant Garter Snake Habitat*, it is highly unlikely that any of the proposed action would adversely affect this species. If the aforementioned guidelines are strictly

followed, we anticipate that no adverse effects to the giant garter snake will result from implementation of the proposed action.

California red-legged frog (*Rana aurora draytonii*) [E]: The California red-legged frog inhabits aquatic and riparian habitats in coastal and interior California. They use terrestrial riparian corridors and other habitats within 300 feet of riparian corridors for sheltering, and in warmer areas where creeks dry out, aestivation during summer months. The proposed action could result in disturbance, trampling, and/or crushing from motorized vehicles, therefore, motorized vehicle access in occupied areas will be prohibited. To avoid adverse effects to this species, all activities in suitable or occupied California red-legged frog habitat will be done in coordination with the appropriate local FWS field office. When goose control actions are implemented in areas where California red-legged frogs are known or likely to be present, standard local operating procedures for avoiding adverse effects to this species or its critical habitat must be adhered to and implemented (Appendix 1).

Habitat alteration is not anticipated to result from the proposed action, therefore, California red-legged frog critical habitat is not likely to be adversely affected.

Mountain plover (*Charadrius montanus*): On September 8, 2003, the FWS withdrew its proposal to list the mountain plover.

Fenders blue butterfly (*Icaricia icarioides fenderi*) [E]: This species occurs in native grassland habitat within the Willamette Valley, Oregon. Preferred habitats of resident Canada geese and this species do not overlap and management techniques authorized under the proposed action are not likely to occur in the butterfly's habitat.

Bay checkerspot butterfly (*Euphydryas editha bayensis*) [T]: The bay checkerspot butterfly inhabits grasslands around the San Francisco Bay Area, California. Although resident Canada goose management may occur in San Francisco Bay urban/suburban areas, the preferred habitats of resident Canada geese and this species do not overlap and management techniques authorized under the proposed action are not likely to occur in the butterfly's habitat.

Behren's silverspot butterfly (*Speyeria zerene behrensi*) [E]: The Behren's silverspot butterfly inhabits native grasslands around the San Francisco Bay Area, California. The preferred habitat of resident Canada geese differ from this species. Although resident Canada goose management may occur in San Francisco Bay urban/suburban areas, the preferred habitats of resident Canada geese and this species do not overlap and management techniques authorized under the proposed action are not likely to occur in the butterfly's habitat. Therefore, the likelihood of adverse effects to this species resulting from the proposed action is discountable.

Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*): The valley elderberry longhorn beetle (beetle) is completely dependent on its host plant, elderberry (*Sambucus* species), which is a common component of the remaining riparian forests and adjacent upland habitats of California's Central Valley. Use of the elderberry by the beetle, a

wood borer, is rarely apparent. Frequently, the only exterior evidence of the elderberry's use by the beetle is an exit hole created by the larva just prior to the pupal stage. The life cycle takes one or two years to complete. The animal spends most of its life in the larval stage, living within the stems of an elderberry plant. Adult emergence is from late March through June, about the same time the elderberry produces flowers.

To avoid adverse effects to the valley elderberry longhorn beetle and its critical habitat, standard local operating procedures for avoiding adverse effects to this species or critical habitat must be adhered to and implemented (Appendix 1). Once the standard local operating procedures are implemented and goose control actions are implemented in areas where this species is known or likely to occur and in areas of its critical habitat: a 20-foot buffer around elderberry plants will be required for activities involving the use of vehicles, and dust control measures should be implemented when working around this species' habitat. Refer to the following guidelines for avoidance and protective measures when working within the range of this species:
http://www.fws.gov/pacific/sacramento/es/documents/velb_conservation.htm.

San Joaquin adobe sunburst (*Pseudobahia peirsonii*) [T]: San Joaquin adobe sunburst are found in nonnative grasslands within California. The preferred habitat of resident Canada geese differ from this species. Preferred habitats of resident Canada geese and this species do not overlap and management techniques authorized under the proposed action are not likely to occur in the plants habitat.

Willamette daisy (*Erigeron decumbens var. decumbens*) [E]: This species occurs in native grassland habitat within the Willamette Valley, Oregon. Preferred habitats of resident Canada geese and this species do not overlap and management techniques authorized under the proposed action are not likely to occur in the plant's habitat.

Yellow-billed cuckoo (*Coccyzus americanus*) [C]: This species occurs in riparian woodlands in California. The yellow-billed cuckoo's habitat, its silhouette, size, and color make it highly unlikely that it would be mistaken for resident Canada geese or disturbed by goose control efforts under this proposed action. Given the extreme rarity of this species in Region 1 and CNO, no adverse effects caused by the proposed action are likely to occur to this species.

Vernal pool fairy shrimp (*Branchinecta lynchi*) [T], conservancy fairy shrimp (*B. conservatio*) [E], longhorn fairy shrimp (*B. longiantenna*) [E], vernal pool tadpole shrimp (*Lepidurus packardii*) [E], delta green ground beetle (*Elaphrus viridus*) [T], California tiger salamander (*Ambystoma californiense*) [E, Sonoma and Santa Barbara counties; T, remaining areas], San Diego fairy shrimp (*B. sandiegonensis*) [E], Riverside fairy shrimp (*Streptocephalus woottoni*) [E], Butte County meadowfoam (*Limnanthes floccosa* ssp. *californica*) [E], large-flowered wooly meadowfoam (*L. f. ssp. grandiflora*) [E], Cook's lomatium (*Lomatium cookii*) [E], Contra Costa goldfields (*Lasthenia conjugens*) [E], Hoover's spurge (*Chamaesyce hooveri*) [T], fleshy owl's clover (*Castilleja campestris* ssp. *succulenta*) [T], Colusa grass (*Neostapfia colusana*) [T], hairy Orcutt grass (*Orcuttia pilosa*) [E], Solano grass (*Tuctoria mucronata*) [E], Greene's tuctoria (*Tuctoria greene*) [E],

Sacramento Valley Orcutt grass (*Orcuttia. viscida*) [E], San Joaquin Valley Orcutt grass (*Orcuttia. inaequali*) [T], slender Orcutt grass (*Orcuttia tenuis*) [T], California Orcutt grass (*Orcuttia californica*) [E], spreading navarretia (*Navarretia fossalis*) [T], San Jacinto Valley crownscale (*Atriplex coronata var. notatior*) [E]: Vernal pools are found in Mediterranean climates, with a wet season when rainfall exceeds evaporation, filling the pools, and a dry season when evaporation is greater, drying the pools. The soil layer below or at the surface is impermeable or nearly impermeable to water. Vernal pools are ephemeral, occurring temporarily typically during the spring and then disappearing until the next year. Vernal pools typically occur in landscapes that, at a broad scale, are shallowly sloping or nearly level, but on a fine scale may be quite bumpy. Complex micro-relief results in shallow, undrained depressions that form vernal pools. Some vernal pool landscapes are dotted with numerous, rounded soil mounds, referred to as mima mounds. Vernal pool complexes contribute to continuity of wetland habitats along the Pacific Flyway, specifically within the Sacramento Valley of California, and are attractive to several migratory bird species. However, due to the ephemeral nature of vernal pools, many do not stand enough water for a long enough period time to attract nesting resident Canada geese. However, several vernal pool complexes in California contain year-round water in some ponds, and human activities in these areas could result in trampling or crushing of vernal pool species.

To avoid adverse impacts to vernal pool species and critical habitat in conjunction with the proposed action, will be done in coordination with the appropriate local FWS field office and standard local operating procedures for avoiding adverse effects to these species or critical habitat must be adhered to and implemented (Appendix 1). Once the standard local operating procedures are implemented in areas where vernal pool species are known or likely to occur or in areas of designated critical habitat the following measure will be implemented during the wet season: only foot travel will be allowed.

Region 2 (Arizona, New Mexico, Oklahoma and Texas) - March 1 – August 30:

Whooping crane (*Grus americana*) [E]: Whooping cranes feed and roost in wetlands and upland grain fields where they associate with ducks, geese, and sandhill cranes in the late fall and winter. The current breeding distribution of wild whooping cranes is restricted to a small area in the northern part of the Wood Buffalo National Park near Fort Smith, Northwest Territories. The population is migratory and winters in and around the Aransas National Wildlife Refuge in Texas. This population is listed as endangered. Critical habitat is designated for this wild population in specific areas (largely NWRs and State Management Areas that support whoopers during migration) within Kansas, Nebraska, Oklahoma, and Texas.

In the last 9 years, whooping cranes have been confirmed in hunt areas in the Dakotas, Nebraska, Kansas, Oklahoma, Colorado, Wyoming, and Texas during the late fall and winter. These birds were monitored and, in some instances, a small area was closed to hunting until they departed. None of these birds were injured or lost as a consequence of the legal hunting activities; however, 9 documented shootings of whooping cranes since 1989, 3 of which were in Texas and 2 were in Kansas. All incidences occurred outside legal hunting frameworks. Films, posters,

brochures, and other conservation education materials both hard copies and on the web are provided to the public as part of the contingency plan and annual implementation of the sport hunting regulations. Migration of cranes occurs after the managed take component of the proposed action closes (September 15) and therefore, reduces the likelihood of adverse affects. Other goose control activities are not likely to adversely affect this species. It should be noted that on rare occasions (33 birds 1938-2002), whoopers have remained in the United States throughout the summer. However, the final rule implementing the proposed action will indicate that the Federal-State Contingency Plan for the Whooping Crane will be followed and there will be close coordination between States and the Service.

Attwater's greater prairie-chicken (*Tympanuchus cupido attwateri*) [E]: This species appearance is slightly similar in color and size to some waterfowl, and flight patterns might be briefly confused with legally hunted migratory bird species; however not with resident Canada geese. While prairie-chickens are occasionally found in harvested rice fields where geese are commonly hunted, coloration and flight patterns of prairie-chickens are quite different from geese. Although one bird was shot by a waterfowl hunter near Sealy in 1990, this is the only such accident of which Region 2 has knowledge, and the circumstances surrounding this event make it unlikely that it could happen in the future. Other goose control activities are not likely to adversely affect this species.

Masked bobwhite (*Colinus virginianus ridgewayi*) [E]: Bobwhite quail are distinctive in their body features and their flight characteristics such that they should not be mistaken for resident Canada geese. The savanna scrub grassland habitat preferred by these bobwhite is very different from the preferred habitat used resident Canada geese, so management activities are not likely to adversely affect this species.

Red-cockaded woodpecker (*Picoides borealis*) [E]: The secretive nature, small size, and complete lack of similarity between this woodpecker and resident Canada geese preclude adverse effects from the proposed action. The mature pine forest preferred by these woodpeckers is very different from the preferred habitat used by resident Canada geese, so management activities are not likely to adversely affect this species.

Cactus ferruginous pygmy-owl (*Glaucidium brasilainum cactorum*) [E]: Cactus ferruginous pygmy-owls would not be expected to be encountered under this proposed action. Distinctive dissimilarities in body silhouettes and coloration of resident Canada geese from that of pygmy-owls lessen the possibility that owls would be incidentally taken. The oak-honey mesquite woodlands, mesquite brush and riparian areas of extreme southern Texas, and riparian woodlands and Sonoran desert scrub of south-central Arizona preferred by these owls is very different from the preferred habitat used by resident Canada geese so management activities are not likely to adversely affect this species.

Critical habitat for the Cactus ferruginous pygmy-owl has been designated in the Phoenix-Tucson area of Arizona. This action does not affect that area and no destruction or adverse modification of that critical habitat is anticipated.

Yuma clapper rail (*Rallus longirostris yumanensis*) [E]: Distinctive dissimilarities in body silhouette and behavior of resident Canada geese from that of the Yuma clapper rail lessen the possibility that rails would be incidentally taken or affected by the managed take portion of this action. If control activities are proposed in or around occupied habitats (cattail or cattail bulrush marshes) the authorized state agency will contact the Arizona Ecological Services Office (for the Colorado River and Arizona sites) or the Carlsbad Fish and Wildlife Office (for Salton Sea sites) to discuss the proposed activity and ensure that implementation will not adversely affect clapper rails or their habitats.

Least tern (*Sterna antillarum*) (Interior population) [E]: Although occasionally found in areas used by migratory bird hunters, the least tern is not similar in size, behavior, or flight characteristics to resident Canada geese. Region 2 has no knowledge of least terns being shot by migratory bird hunters and such incidental take of this species should not happen as a result of the proposed action. Least terns are more likely to be found on beaches and sandbars of large rivers and therefore the probability of indirect take is low.

Northern aplomado falcon (*Falco femoralis septentrionalis*) [E]: The Northern aplomado falcon inhabits coastal prairies and desert grasslands with scattered yuccas and mequites. The preferred habitat of these falcons is very different from the preferred habitat used by resident Canada geese, so management activities are not likely to adversely affect this species. The falcons are not similar in appearance to resident Canada geese and are not expected to be mistaken for such. Also, the infrequent occurrence of the falcon in localities subject to migratory bird hunting, lessens the possibility that falcons would be incidentally taken as a result of the proposed action.

Brown pelican (*Pelicanus occidentalis*) [E]: The small coastal islands preferred by the brown pelican during the breeding season is very different from the preferred habitat used by resident Canada geese, so management activities are not likely to adversely affect this species. Resident Canada geese are not similar to the Brown pelicans' large size, slow flight, and distinctive silhouette making it readily distinguishable during the managed take portion of the proposed action.

Southwestern willow flycatcher (*Empidonax traillii extimus*) [E]: The southwestern willow flycatcher was listed as endangered in March 1995. The species is found in dense riparian associations of willow, cottonwood, button bush, and other deciduous trees and shrubs in California, Arizona, New Mexico, Nevada, Utah, Texas and Colorado. The riparian habitat preferred by these flycatchers is very different from the preferred habitat used by resident Canada geese, so management activities are not likely to adversely affect this species. The distinct dissimilarity of flycatchers to resident Canada geese lessen the possibility that individual flycatchers would be incidentally taken as a result of the proposed action.

Black-capped vireo (*Vireo atricapillus*) [E]: Preferred habitat is scattered trees and numerous dense clumps of shrubs interspersed with open areas. The habitat preferred by these vireos is

very different from the preferred habitat used by resident Canada geese, so management activities are not likely to adversely affect this species. This small bird is unlikely to be mistaken for any of the birds covered by the proposed action.

Golden-cheeked warbler (*Dendroica chrysoparia*) [E]: Inhabits oak-juniper woodlands. The habitat preferred by these warblers is very different from the preferred habitat used by resident Canada geese, so management activities are not likely to adversely affect this species. This small bird is unlikely to be mistaken for any of the birds covered by the proposed action.

California condor (*Gymnogyps californianus*) [XN]: Hunters cannot mistake the condor for resident Canada geese covered by the proposed action. The proposed action does not allow the use of lead shot for hunting geese; therefore, lead poisoning of the California condor from eating geese contaminated by lead shot is not of concern. The oak savanna grassland habitat preferred by these condors is very different from the preferred habitat used by resident Canada geese, so management activities are not likely to adversely affect this species.

Critical habitat for the California condor has been designated in Santa Barbara County, California and in the Grand Canyon region of Arizona. This action does not affect that area and no destruction or adverse modification of that critical habitat is anticipated.

Mexican spotted owl (*Strix occidentalis lucida*) [T]: The Mexican spotted owl's nocturnal habitats, its silhouette, size, color, and habitat preferences make it highly unlikely that it would be mistaken for a resident Canada goose or adversely affected by any of the management options.

Critical habitat is proposed for the Mexican spotted owl on 4.6 million acres of National Forest Service lands in Arizona, Colorado, New Mexico, and Utah. This action does not affect that area and no destruction or adverse modification of that proposed critical habitat is anticipated.

Bald eagle (*Haliaeetus leucocephalus*) [T]: The bald eagle occurs in areas close to (within 4km) coastal areas, bays, rivers, lakes, or other bodies of water that reflect the general availability of primary food sources including fish, waterfowl, and seabirds. This species is dissimilar in appearance to resident Canada geese. Although the National Wildlife Health Research Center reports that 20 percent of the eagles they necropsy have been shot; such losses have been a result of shooting by vandals or individuals who believe the eagles were competitors for legal game. These shootings are not related to migratory bird hunting. The proposed action does not allow the use of lead shot for shooting resident Canada geese; therefore, lead poisoning from eating birds contaminated by lead shot is not of concern. Preferred nesting habitats of resident Canada geese and this species do not overlap and management techniques authorized under the proposed action are not likely to occur in the birds habitat. Management techniques authorized under the proposed action can not occur within 750 feet of an active bald eagle nest and the Bald Eagle Nesting Guidelines must be followed. This will be included in the final rule and on the web-based program.

Piping plover (*Charadrius melodus*) [T]: Piping plovers infrequently use areas where resident Canada geese would normally be found. These plovers are not similar in appearance and are not expected to be mistaken for resident Canada geese. A distinct dissimilarity in appearance of piping plovers to resident Canada geese lessen the possibility that piping plovers would be incidentally taken as a result of the proposed action.

Critical habitat for the Northern Great Plains piping plover has been designated in areas of Texas, Louisiana, Alabama and Florida for their wintering habitat along the gulf coast; and areas of Minnesota, Montana, North Dakota, South Dakota, and Nebraska for breeding habitat. This action does not affect these areas and no destruction or adverse modification of that critical habitat is anticipated.

Mountain plover (*Charadrius montanus*) [P]: Preferred habitat is high plains/shortgrass prairie and desert tablelands. Since the proposed action would not coincide with the migration and wintering period of these birds, incidental take is unlikely. Plovers have no similarity in appearance to resident Canada geese and would not be expected to be mistaken as such.

Lesser prairie-chicken (*Tympanuchus pallidicinctus*) [C]: This species' appearance is slightly similar in color and size to some waterfowl, and flight patterns might be briefly confused with legally hunted migratory bird species; however not with resident Canada geese. The prairie-chicken is an upland species found in short-, mid-, and tall-grass prairies, and shrubsteppes and it is unlikely management of resident Canada geese will occur in these areas.

Audubon's crested caracara (*Polyborus plancus audubonii*) [T]: The caracara's size and appearance virtually eliminate the possibility of this species being accidentally shot, so no adverse effect is likely. The semi-open to arid grassland, prairie, savanna, pampas, rangeland, and desert with scattered tall vegetation suitable for nesting preferred by this species is very different from the preferred habitat used by resident Canada geese, so management activities are not likely to adversely affect this species.

Eskimo curlew (*Numenius borealis*) [E]: This species historically occurred in Region 2 predominantly on tallgrass and eastern mixedgrass prairies in Texas during spring migration. Management practices of resident Canada geese will not affect this species.

Western prairie fringed orchid (*Platanthera praeclara*) [T]: This species is found in tallgrass prairie habitat making it unlikely that it will be adversely affected by management of resident Canada geese. Geese tend to favor short to medium grasses and management efforts under the proposed action will not affect tall grass prairie.

**Region 3 (Illinois, Indiana, Iowa, Michigan, Missouri, Minnesota, Ohio and Wisconsin)
March 1 – August 30:**

Piping plover (*Charadrius melodus*) [T]: Piping plovers infrequently use areas where resident Canada geese would normally be found. These plovers are not similar in appearance and are not expected to be mistaken for resident Canada geese. A distinct dissimilarity in appearance of

piping plovers to resident Canada geese lessen the possibility that piping plovers would be incidentally taken as a result of the proposed action.

Critical habitat for the Northern Great Plains piping plover has been designated in areas of Texas, Louisiana, Alabama and Florida for their wintering habitat along the gulf coast; and areas of Minnesota, Montana, North Dakota, South Dakota, and Nebraska for breeding habitat. This action does not affect these areas and no destruction or adverse modification of that critical habitat is anticipated.

Least tern (*Sterna antillarum*) (Interior population) [E]: Although this species may be migrating through areas being hunted for resident Canada geese, Region 3 has no evidence or indication that the migratory bird hunting has adversely affected in recent years. Given that this species does not resemble resident Canada geese, it is unlikely that incidental take of this species will occur. Least terns are more likely to be found on beaches and sandbars of large rivers and therefore the probability of indirect take is low.

Bald eagle (*Haliaeetus leucocephalus*) [T]: Bald eagle numbers are continuing to steadily increase in Region 3 and in the Northern States Bald Eagle Recovery Region. During the period 1990 through 2000, the number of bald eagle occupied breeding areas in eight states of Region 3 increased from an estimate of 1014 to 2100. Delisting goals were met in 1991 with 1,349 occupied breeding areas distributed over 20 states, and an estimated average productivity since 1991 of greater than 1.0.

Region 3 has no knowledge of negative impacts to the Northern States bald eagle recovery region resulting from recent past migratory bird hunting regulations. We would not expect any incidental take as a result of the proposed action. Preferred nesting habitats of resident Canada geese and this species do not overlap. Management techniques authorized under the proposed action can not occur within 750 feet of an active bald eagle nest and the Bald Eagle Nesting Guidelines must be followed. This will be included in the final rule and on the web-based program.

Kirtland's Warbler (*Dendroica kirtlandii*) [E]: The Kirtland's warbler silhouette, size, and color make it highly unlikely that it would be mistaken for resident Canada geese or disturbed by goose control efforts under this proposed action. The habitat preferred by these warblers is very different from the preferred habitat used by resident Canada geese, so management activities are not likely to adversely affect this species.

Karner blue butterfly (*Lycaeides melissa samuelis*) [E]: Karner blue butterfly habitat is characterized by wild lupine found in mesic openings of grass within pine/scrub oak barons, utility right-of-ways, and abandoned agricultural fields. Although resident Canada geese may inhabit areas surrounding this species habitat, the preferred habitats of resident Canada geese and this species do not overlap and management techniques authorized under the proposed action are not likely to occur in the birds habitat.

Mead's milkweed (*Asclepias meadii*) [T]: Mead's milkweed is found in dry mesic prairie habitat. Preferred habitats of resident Canada geese and this species do not overlap and management techniques authorized under the proposed action are not likely to occur in the plants habitat.

Virginia sneezeweed (*Helenium virginicum*) [T]: Virginia sneezeweed is found in shallow seasonal wetlands within the Pomoma, Missouri. It is unlikely control efforts will take place where this species occurs.

Decurrent false aster (*Boltonia decurrents*) [T]: Decurrent false aster is found in prairie wetlands along the Illinois River. It is unlikely that management of resident Canada geese will adversely affect this species under the proposed action.

Prairie bush-clover (*Lespedeza leptostachya*) [T]: Prairie brush clover is found in dry mesic tallgrass prairies with gravelly soils in Iowa, Illinois, Minnesota, and Wisconsin. Geese tend to favor short to medium grasses and management efforts under the proposed action will not affect tall grass prairie.

Western prairie fringed orchid (*Platanthera praeclara*) [T]: This species is found in tallgrass prairie habitat making it unlikely that it will be adversely affected by management of resident Canada geese. Geese tend to favor short to medium grasses and management efforts under the proposed action will not affect tall grass prairie.

Eastern prairie fringed orchid (*Platanthera leucophaea*) [T]: This species is found in mesic to wet tallgrass prairie and meadows as well as old fields and roadside ditches making it unlikely that it will be adversely affected by management of resident Canada geese. Geese tend to favor short to medium grasses and management efforts under the proposed action will not affect tall grass prairie.

Indiana bat (*Myotis sodalis*) [E]: This species nests in mature trees with faking bark near small to medium rivers and stream corridors. The bat occurs throughout the area affected by the proposed rule; however it is very unlikely that Indiana bats will inhabit areas that support large populations of resident Canada geese therefore, the proposed action will not likely adversely affect this species.

Region 4 (Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina and Tennessee) - March 1 – August 30:

Ivory-billed woodpecker (*Campephilus principalis*) [E]: The ivory billed woodpecker's habitat, its silhouette, size, and color make it highly unlikely that it would be mistaken for resident Canada geese or disturbed by goose control efforts under this proposed action.

Red-cockaded woodpecker (*Picoides borealis*) [E]: The secretive nature, small size, and complete lack of similarity between this woodpecker and resident Canada geese preclude adverse effects from the proposed action. The mature pine forest preferred by these woodpeckers is very different from the preferred habitat used by resident Canada geese, so management activities are not likely to adversely affect this species.

Mississippi sandhill crane (*Grus canadensis pulla*) [E]: These cranes are confined to a fairly small section of Jackson County, Mississippi. The proposed action may not occur in southwest Jackson County west of Pascagoula River and south of Van Cleave or within 1000 meters of

Mississippi sandhill crane nests. As they would not be mistaken for resident Canada geese in that area, no adverse effect is anticipated. Savannas are the preferred habitat of this crane and are inhabited year round. Because of differences in preferred habitat and the limited geographic range of this species, it is not likely that the proposed action would adversely affect it.

Critical habitat for the Mississippi sandhill crane has been designated on the Mississippi Sandhill Crane NWR in Jackson County, Mississippi. This action does not affect that area and no destruction or adverse modification of that critical habitat is anticipated.

Piping plover (*Charadrius melodus*) [E]: Any encounters with plovers would occur on the wintering ground, however, these are virtually all sandy beaches where the proposed action would not take place. The small sandy-colored plovers do not resemble resident Canada geese so incidental take is not anticipated. Because of differences in preferred habitat and timing of occurrence, it is not likely that the proposed action would adversely affect it.

Critical habitat for the Great Lakes Piping plover has been designated for breeding habitat along the shorelines of the Great Lakes in New York, Minnesota, Illinois, Indiana, Michigan, Ohio, Pennsylvania, and Wisconsin; as well as their wintering habitat along the Gulf Coast in Texas, Louisiana, Alabama, and Florida. This action does not affect that area and no destruction or adverse modification of that critical habitat is anticipated.

Least tern (*Sterna antillarum*) (Interior population) [E]: The silhouette, feeding habits, and flight patterns of the interior least tern make the likelihood of incidental take improbable. Least terns are more likely to be found on beaches and sandbars of large rivers and therefore the probability of indirect take is low. The interior population of the least tern breeds in isolated areas along the Missouri, Mississippi, Ohio, Red, and Rio Grande river systems, which include several States in Region 4. Because of differences in preferred habitat and timing of occurrence, it is not likely that the proposed action would adversely affect it.

Everglade snail kite (*Rostrhamus sociabilis plumbeus*) [E]: The Recovery Plan points out possible pre-nesting disturbance problems posed by waterfowl hunters, however, managed take of resident Canada geese will not occur beyond September 15. The Everglade snail kite can be found in a small portion of Florida. Their preferred habitat is large, shallow, inland freshwater marshes which support populations of apple snails. It is unlikely management techniques would be used in these habitats.

Critical habitat for the Everglade snail kite has been designated in three conservation areas of the Everglades National Park and the Loxahatchee NWR, Florida. This action does not affect that area and no destruction or adverse modification of that critical habitat is anticipated.

Wood stork (*Mycteria americana*) [E]: Although migratory bird hunting occurs within the range of the wood stork, they are not likely to be incidentally taken because they do not resemble resident Canada geese. The freshwater and marine-estuarine forested habitats preferred by these

storks is very different from the preferred habitat used by resident Canada geese, so management activities are not likely to adversely affect this species.

Brown pelican (*Pelicanus occidentalis*) [E]: Although this bird frequents wetlands where resident Canada geese may be hunted, the bird's large size, slow flight, and distinctive silhouette make it readily distinguishable from the species covered under this proposed action. The small coastal islands preferred by the brown pelican during the breeding season make it unlikely that management actions will have a negative affect.

Cape Sable sparrow (*Ammodramus maritimus mirabilis*) [E]: The small size, habitat, and solitary habits of this sparrow, coupled with the fact that it does not resemble resident Canada geese, preclude the likelihood of incidental take. The Cape Sable sparrow inhabits brushless, subtropical marshes of interior southern Florida, habitat that is different than the preferred habitat of resident Canada geese. It is not likely that the proposed action would result in adverse effects to this species.

Critical habitat for the Cape Sable Seaside sparrow has been designated in Collier, Dade, and Montoe Counties, Florida. No destruction or adverse modification of that critical habitat is anticipated.

Florida grasshopper sparrow (*Ammodramus savenarum floridanus*) [E]: This small brown upland sparrow would not be confused with resident Canada geese and will not likely be adversely affected by management actions. The Florida grasshopper sparrow occurs in the prairie region of south central Florida, inhabiting the stunted growth of saw palmetto, dwarf oaks, bluestems, and wiregrass. It is not likely to be adversely affected by the proposed action.

Yellow-shouldered blackbird (*Agelaius xanthomus*) [E]: Yellow-shouldered blackbird's distinct coloration and habitat preferences preclude the possibility of incidental take.

Roseate tern (*Sterna douglalli*) [T]: The silhouette, feeding habits and flight patterns of the roseate tern make the likelihood of incidental take virtually impossible. In Region 4, roseate terns are restricted to Florida. They breed primarily on small offshore islands. Their preferred habitat is coastal, thus making it not likely that they will be adversely affected by the proposed action since it does not apply to coastal waters.

Bald eagle (*Haliaeetus leucocephalus*) [T]: The bald eagle occurs in areas close to (within 4km) coastal areas, bays, rivers, lakes, or other bodies of water that reflect the general availability of primary food sources including fish, waterfowl, and seabirds. Hunters generally cannot mistake the bald eagle for any legally hunted species of birds covered by the proposed action. Some illegal shooting of bald eagles may occur during the migratory bird hunting season for waterfowl in eagle-occupied areas. These injuries and mortalities generally are the result of deliberate illegal shootings rather than misidentification by an inexperienced hunter. The proposed action does not allow the use of lead shot for hunting resident Canada geese, therefore, lead poisoning of the bald eagle from eating waterfowl contaminated by lead shot is not an issue in this consultation. Preferred habitats of resident Canada geese and this species do not overlap

and management techniques authorized under the proposed action are not likely to occur in the birds habitat. Management techniques authorized under the proposed action can not occur within 750 feet of an active bald eagle nest and the Bald Eagle Nesting Guidelines must be followed. This will be included in the final rule and on the web-based program.

Audubon's crested caracara (*Polyborus plancus audubonii*) [T]: Audubon's crested caracara is found in open grassland, prairie, pastures, or desert habitats. It is listed as threatened only in Florida. The caracara's size and appearance virtually eliminate the possibility of this species being accidentally shot, and no adverse affect is likely. Preferred habitats of resident Canada geese and this species do not overlapp and management techniques authorized under the proposed action are not likely to occur in the birds habitat

Florida scrub jay (*Aphelocoma coerulescens*) [T]: The Florida scrub jay is found only in Florida, inhabiting oak scrub on white, drained sand, in open areas without a dense canopy. The scrub jay's unique blue coloration combined with the upland habitat preference of this species make incidental take unlikely.

Bachman's warbler (*Vermivora bachmanii*) [E]: This species not only has (had?) different preferred habitat than resident Canada geese, but is believed to be extinct. The proposed action is not likely to adversely affect this species.

Whooping crane (*Grus americana*) [XN]: A non-migratory, introduced population of the whooping crane is found in a portion of Osceola County, Florida. Because of the critical status of this species and its limited geographic range, it is very unlikely that any resident Canada geese management would be conducted near enough to cause incidental take. The proposed action may not occur within 1000 meters of a whooping crane nest. The proposed action is not likely to adversely affect whooping cranes.

Bog turtle (*Clemmys muhlenbergii*) [T]: Bog turtle's nest in marshy habitat between May and June. They are only active from April to mid-October in most of the range. The proposed action is not likely to affect this species due to the potential minimal amount of water level manipulation during March and part of April.

Saint Francis' satyr butterfly (*Neonympha mitchellii francisci*) [E]: Saint Francis' satyr butterfly inhabits wet meadow habitat in North Carolina. Preferred habitats of resident Canada geese and this species do not overlapp and management techniques authorized under the proposed action are not likely to occur in the butterfly's habitat

Schweinitz's sunflower (*Helianthus schweinitzii*) [E]: Schweinitz's sunflower are found in grassland environments and along utility right-of-ways in North and South Carolina. Management activities proposed under this action are unlikely to adversely affect this species.

Eggert's sunflower (*Helianthus eggertii*) [T]: Eggert's sunflower is found in open fields and along field edges. Management activities proposed under this action are unlikely to adversely affect this species.

Spring Creek bladderpod (*Lesquerella perforata*) [E]: Spring Creek bladderpod is found floodplain agricultural fields and prefers disturbance. Management activities proposed under this action are unlikely to adversely affect this species.

Eastern prairie fringed orchid (*Platanthera leucophaea*) [T]: This species is found in mesic to wet tallgrass prairie and meadows as well as old fields and roadside ditches making it unlikely that it will be adversely affected by management of resident Canada geese. Geese tend to favor short to medium grasses and management efforts under the proposed action will not take place in tallgrass prairie habitats.

Region 5 (Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, Virginia and West Virginia) - March 1- August 30:

Piping plover (*Charadrius melodus*) [T] and roseate tern (*Sterna dougalli*) [E]: No effect. They do not resemble species covered by the proposed action in flight pattern, coloration, or behavior. This species nests on sandy beaches, sandflats, dredge islands and drained floodplains, and, therefore, likelihood of incidental take is remote due to difference in breeding habitat preferences.

Critical habitat for the Great Lakes Piping plover has been designated for breeding habitat along the shorelines of the Great Lakes in New York, Minnesota, Illinois, Indiana, Michigan, Ohio, Pennsylvania, and Wisconsin. This action does not affect any of these areas and no destruction or adverse modification of critical habitat is anticipated.

Bald eagle (*Haliaeetus leucocephalus*) [T]: Bald eagle populations are continuing to increase in Region 5, as they are throughout the country. Increasing population figures during the last decade suggest that waterfowl hunting has little effect on overall populations. Region 5 acknowledges that occasionally birds may be illegally shot by waterfowl hunters, but these instances of take are too few to impede recovery. Also, the species was proposed for delisting on July 6, 1999. The proposed action does not allow the use of lead shot for hunting resident Canada geese, therefore, lead poisoning of the bald eagle from eating waterfowl contaminated by lead shot is not an issue in this consultation. Preferred nesting habitats of resident Canada geese and this species do not overlap and management techniques authorized under the proposed action are not likely to occur in the birds habitat. Management techniques authorized under the proposed action can not occur within 750 feet of an active bald eagle nest and the Bald Eagle Nesting Guidelines must be followed. This will be included in the final rule and on the web-based program.

Plymouth redbelly turtle (*Pseudemys rubriventris bangsi*) [E]: The Plymouth redbelly turtle inhabits a small area in Massachusetts in deep, permanent ponds with nearby sandy areas for nesting; surrounding vegetation consists of pine barrens or mixed deciduous forest. The turtles habitat preference make it unlikely that management actions will effect this species.

Bog turtle (*Clemmys muhlenbergii*) [T]: Bog turtle[s nest in marshy habitat between May and June. They are only active from April to mid-October in most of the range. The proposed action is not likely to affect this species.

Karner blue butterfly (*Lycaeides melissa samuelis*) [E]: Karner blue butterfly habitat is characterized by wild lupine found in very dry openings of grass within pine/scrub oak barons, utility right-of-ways, and abandoned agricultural fields. Geese tend to favor short to medium grasses and the difference in preferred habitats used by these species diminishes the probability of incidental take.

Virginia sneezeweed (*Helenium virginicum*) [T]: Virginia sneezeweed is found in shallow seasonal wetlands within the Shenandoa Valley, Virginia. It is unlikely control efforts will take place where this species occurs.

Eastern prairie fringed orchid (*Platanthera leucophaea*) [T]: This species is found in mesic to wet tallgrass prairie and meadows as well as old fields and roadside ditches making it unlikely that it will be adversely affected by management of resident Canada geese. Geese tend to favor short to medium grasses and management efforts under the proposed action will not affect tall grass prairie.

Region 6 (Colorado, Kansas, Montana, North Dakota, Nebraska, South Dakota, Utah and Wyoming) - March 1 – August 30:

Least tern (*Sterna antillarum*) (Interior population) [E]: The silhouette, feeding habits, and flight patterns of the interior least tern make the likelihood of incidental take improbable. Least terns are more likely to be found on beaches and sandbars of large rivers and therefore the probability of indirect take is low.

Piping plover (*Charadrius melodus*) [T]: Piping plovers infrequently use areas where resident Canada geese would normally be found. This species nests on sandy beaches, sandflats, dredge islands and drained floodplains and these plovers are not similar in appearance and are not expected to be mistaken for resident Canada geese. A distinct dissimilarity in appearance of piping plovers to resident Canada geese lessen the possibility that piping plovers would be incidentally taken as a result of the proposed action.

Critical habitat for the Northern Great Plains piping plover has been designated in areas of Texas, Louisiana, Alabama and Florida for their wintering habitat along the gulf coast; and areas

of Minnesota, Montana, North Dakota, South Dakota, and Nebraska for breeding habitat. This action does not affect these areas and no destruction or adverse modification of critical habitat is anticipated.

Mexican spotted owl (*Strix occidentalis lucida*) [T]: The Mexican spotted owl's nocturnal habitats, its silhouette, size, color, and habitat preferences make it highly unlikely that it would be mistaken for a resident Canada goose or adversely affected by any of the management options.

Critical habitat for the Mexican spotted owl has been designated on 4.6 million acres of National Forest Service lands in Arizona, Colorado, New Mexico, and Utah. This action does not affect these areas and no destruction or adverse modification of critical habitat is anticipated.

Bald eagle (*Haliaeetus leucocephalus*) [T]: It is highly unlikely that these listed birds would be adversely affected by implementation of the proposed action. Hunters generally cannot mistake the bald eagle for any legally hunted species of birds covered by the proposed action. The proposed action does not allow the use of lead shot for hunting resident Canada geese, therefore, lead poisoning of the bald eagle from eating waterfowl contaminated by lead shot is not an issue in this consultation. Preferred nesting habitats of resident Canada geese and this species do not overlap and management techniques authorized under the proposed action are not likely to occur in the birds habitat. Management techniques authorized under the proposed action can not occur within 750 feet of an active bald eagle nest and the Bald Eagle Nesting Guidelines must be followed. This will be included in the final rule and on the web-based program.

Whooping crane (*Grus americana*) [E]: Whooping cranes feed and roost in wetlands and upland grain fields where they associate with ducks, geese, and sandhill cranes. The current breeding distribution of wild whooping cranes is restricted to a small area in the northern part of the Wood Buffalo National Park near Fort Smith, Northwest Territories. The population is migratory and winters in and around the Aransas National Wildlife Refuge in Texas. This population is listed as endangered. Critical habitat is designated for this wild population in specific areas (largely NWRs and State Management Areas that support whoopers during migration) within Kansas, Nebraska, Oklahoma, and Texas.

In the last 9 years, whooping cranes have been confirmed in hunt areas in the Dakotas, Nebraska, Kansas, Oklahoma, Colorado, Wyoming, and Texas. These birds were monitored and, in some instances, a small area was closed to hunting until they departed. None of these birds were injured or lost as a consequence of the hunting activities; however, two birds will. Films, posters, brochures, and other conservation education materials are provided to the public as part of the contingency plan and annual implementation of the sport hunting regulations. However, migration of cranes occurs after the managed take component of the proposed action closes and therefore, reduces the likelihood of adverse affects. Other goose control activities are not likely to adversely affect this species. It should be noted that on rare occasions (33 birds 1938-2002), whoopers have remained in the United States throughout the summer. However, the final rule implementing the proposed action will indicate that the Federal-State Contingency Plan for the

Whooping Crane will be followed and there will be close coordination between States and the Service.

Eskimo curlew (*Numenius borealis*) [Extinct?]: This species historically occurred in tallgrass and eastern mixed grass prairies during spring migration. Management practices of resident Canada geese will not affect this species.

Southwestern willow flycatcher (*Empidonax traillii extimus*) [E]: The southwestern willow flycatcher was listed as endangered in March 1995. The species is found in dense riparian associations of willow, cottonwood, button bush, and other deciduous trees and shrubs in California, Arizona, New Mexico, Nevada, Utah, Texas and Colorado. The riparian habitat preferred by these flycatchers is very different from the preferred habitat used by resident Canada geese, so management activities are not likely to adversely affect this species. The distinct dissimilarity of flycatchers to resident Canada geese lessen the possibility that individual flycatchers would be incidentally taken as a result of the proposed action.

Black-capped vireo (*Vireo atricapillus*) [E]: Preferred habitat is scattered trees and numerous dense clumps of shrubs interspersed with open areas. The habitat preferred by these vireos is very different from the preferred habitat used by resident Canada geese, so management activities are not likely to adversely affect this species. This small bird is unlikely to be mistaken for any of the birds covered by the proposed action.

California condor (*Gymnogyps californianus*) [XN]: Hunters cannot mistake the condor for resident Canada geese covered by the proposed action. The proposed action does not allow the use of lead shot for hunting geese; therefore, lead poisoning of the California condor from eating geese contaminated by lead shot is not of concern. The oak savanna grassland habitat preferred by these condors is very different from the preferred habitat used by resident Canada geese, so management activities are not likely to adversely affect this species.

Mead's milkweed (*Asclepias meadii*) [T]: Mead's milkweed is found in dry mesic prairie habitat. Geese tend to favor short to medium grasses and management efforts under the proposed action will not likely adversely affect this species.

Western prairie fringed orchid (*Platanthera praeclara*) [T]: This species is found in tallgrass prairie habitat making it unlikely that it will be adversely affected by management of resident Canada geese. Geese tend to favor short to medium grasses and management efforts under the proposed action will not affect tall grass prairie.

B. Explanation of actions to be implemented to reduce adverse effects:

Based on this evaluation, Regional Endangered Species Review of this Biological Evaluation, draft EIS, and Proposed Rule, and consultation with specific Endangered Species Specialist throughout the United States Fish and Wildlife Service Regional and Field Offices, the Service has made the following changes to avoid any likely to adversely effect determinations of the

proposed action. The following is a summary of the changes implemented in the Final EIS and Final Rule implementing the proposed action:

(1) A requirement to use non-toxic shot, thus lessening the likelihood of lead poisoning on non-target wildlife;

(2) Specific language in the final rule will include that activities authorized by the responsible agencies cannot cause adverse effects to endangered or threatened species and further that these agencies can not undertake any of the proposed actions if the activities adversely affect endangered or threatened species (68 FR 50496; Section (e)(2)). An annual report must be submitted summarizing activities by December 31 of each year to the Service Regional Migratory Bird Permit Office;

(3) A provision in the rule allows the Service to suspend the privilege of agencies to take action under the proposed action if the Endangered Species Act is violated in any way (68 FR 50496; Section (f));

(4) The following additional language will be added to the final rule, the final EIS, and a newly developed web site at: <http://www.migratorybirds.gov/goosenestpermit>, which specifically protects certain species from being adversely affected by management actions:

a) The final rule implementing the proposed action will indicate that the Federal-State Contingency Plan for the Whooping Crane will be followed and there will be close coordination between States and the Service;

b) The action may not occur within 300 meters of a whooping crane nest;

c) Regional (or National when finalized) Bald Eagle Nesting Management guidelines must be followed for all management techniques authorized under the action ;

d) The action may not occur in within 300 meters of Mississippi sandhill crane nests;

e) If control activities are proposed in or around occupied habitats (cattail or cattail bulrush marshes) the authorized state agency will contact the Arizona Ecological Services Office (for the Colorado River and Arizona sites) or the Carlsbad Fish and Wildlife Office (for Salton Sea sites) to discuss the proposed activity and ensure that implementation will not adversely affect clapper rails or their habitats.; and

f) In California, any control activities of resident Canada geese in areas used by light-footed clapper rail, California clapper rail, Yuma clapper rail, California least tern, southwestern willow flycatcher, least Bell's vireo, western snowy plover, California gnatcatcher, California red-legged frog, valley elderberry longhorn beetle and its critical habitat, vernal pool fairy shrimp, conservancy fairy shrimp, longhorn fairy shrimp, vernal pool tadpole shrimp, delta green ground beetle, California tiger salamander, San Diego fairy shrimp, Riverside fairy shrimp, Butte County meadowfoam, large-flowered wooly meadowfoam, Cook's lomatium, Contra Costa goldfields, Hoover's spurge, fleshy owl's clover, Colusa grass, hairy Orcutt grass, Solano grass, Greene's tuctoria, Sacramento Valley Orcutt grass, San Joaquin Valley Orcutt grass, slender Orcutt grass, California

Orcutt grass, spreading navarretia, San Jacinto Valley crowscale, and critical habitat for vernal pool species will be done in coordination with the appropriate local FWS field office and standard local operating procedures for avoiding adverse effects to this species or its critical habitat must be adhered to and implemented (Appendix 1). This information will be made available via the web site (<http://www.migratorybirds.gov/goosenestpermit>) and the procedures will be referred to in the final rule.

** Please refer to the Draft Environmental Impact Statement on resident Canada goose management for all literature cited.

VIII. Effect determination and response requested:

A. Listed species/designated critical habitat:

Determination

may affect, but it not likely to adversely affect species/adversely modify critical habitat (see below)

_____ Concurrence

Region 1:

Light-footed clapper rail	(<i>Rallus longirostris levipes</i>) [E]
California clapper rail	(<i>Rallus longirostris obsoletus</i>) [E]
Yuma clapper rail	(<i>Rallus longirostris yumanensis</i>) [E]
California least tern	(<i>Sterna antillarum</i>) [E]
Brown pelican	(<i>Pelicanus occidentalis</i>) (Pacific coast population) [E]
Southwestern willow flycatcher	(<i>Empidonax trailii extimus</i>) [E]
California condor	(<i>Gymnogyps californianus</i>) [E]
Least Bell's vireo	(<i>Vireo belli pusillus</i>) [E]
Western snowy plover	(<i>Charadrius alexandrinus nivosus</i>) [T]
Bald eagle	(<i>Haliaeetus leucocephalus</i>) [T]
California gnatcatcher	(<i>Polioptila californica</i>) [T]
Inyo California towhee	(<i>Pipilo crissalis eremophilus</i>) [T]
Marbled murrelet	(<i>Brachyramphus marmoratus</i>) [T]
Northern spotted owl	(<i>Strix occidentalis caurina</i>) [T]
San Clemente sage sparrow	(<i>Amphispiza belli</i>) []
Giant Garter Snake	(<i>Thamnophis gigas</i>) [T]
Fenders blue butterfly	(<i>Icaricia icarioides fenderi</i>) [E]
Bay checkerspot butterfly	(<i>Euphydryas editha bayensis</i>) [T]
Behren's silverspot butterfly	(<i>Speyeria zerene behrensii</i>) [E]
San Joaquin adobe sunburst	(<i>Pseudobahia peirsonii</i>) [T]
Willamette daisy	(<i>Erigeron decumbens var. decumbens</i>) [E]
vernal pool fairy shrimp	(<i>Branchinecta lynchi</i>) [T]
conservancy fairy shrimp	(<i>B. conservatio</i>) [E]

longhorn fairy shrimp	(<i>B. longiantenna</i>) [E]
vernal pool tadpole shrimp	(<i>Lepidurus packardii</i>) [E]
delta green ground beetle	(<i>Elaphrus viridus</i>) [T]
California tiger salamander	(<i>Ambystoma californiense</i>) [E, proposed threatened]
San Diego fairy shrimp	(<i>B. sandiegonensis</i>) [E]
Riverside fairy shrimp	(<i>Streptocephalus woottoni</i>) [E]
Butte County meadowfoam	(<i>Limnanthes floccosa</i> ssp. <i>californica</i>) [E]
large-flowered wooly meadowfoam	(<i>L. f.</i> ssp. <i>grandiflora</i>) [E]
Cook's lomatium	(<i>Lomatium cookii</i>) [E]
Contra Costa goldfields	(<i>Lasthenia conjugens</i>) [E]
Hoover's spurge	(<i>Chamaesyce hooveri</i>) [T]
fleshy owl's clover	(<i>Castilleja campestris</i> ssp. <i>succulenta</i>) [T]
Colusa grass	(<i>Neostapfia colusana</i>) [T]
hairy Orcutt grass	(<i>Orcuttua pilosa</i>) [E]
Solano grass	(<i>Tuctoria mucronata</i>) [E]
Greene's tuctoria	(<i>T. greene</i>) [E]
Sacramento Valley Orcutt grass	(<i>Orcuttua. viscida</i>) [E]
San Joaquin Valley Orcutt grass	(<i>Orcuttua. inaequali</i> ()) [T]
slender Orcutt grass	(<i>Orcuttua tenuis</i>) [T]
California Orcutt grass	(<i>Orcuttua californica</i>) [E]
spreading navarretia	(<i>Navarretia fossalis</i>) [T]
San Jacinto Valley crownscale	(<i>Atriplex coronata</i> var. <i>notatior</i>) [E]

Region 2

Attwater's greater prairie-chicken	(<i>Tympanuchus cupido attwateri</i>) [E]
Masked bobwhite	(<i>Colinus virginianus ridgewayi</i>) [E]
Red-cockaded woodpecker	(<i>Picoides borealis</i>) [E]
Cactus ferruginous pygmy-owl	(<i>Glaucidium brasilainum cactorum</i>) [E]
Yuma clapper rail	(<i>Rallus longirostris yumanensis</i>) [E]
Least tern	(<i>Sterna antillarum</i>) [E]
Northern aplomado falcon	(<i>Falco femoralis septentrionalis</i>) [E]
Brown pelican	(<i>Pelicanus occidentalis</i>) [E]
Whooping crane	(<i>Grus americana</i>) [E]
Southwestern willow flycatcher	(<i>Empidonax traillii extimus</i>) [E]
Black-capped vireo	(<i>Vireo atricapillus</i>) [E]
Golden-cheeked warbler	(<i>Dendroica chrysoparia</i>) [E]
California condor	(<i>Gymnogyps californianus</i>) [XN]
Mexican spotted owl	(<i>Strix occidentalis lucida</i>) [T]
Bald eagle	(<i>Haliaeetus leucocephalus</i>) [T]
Piping plover	(<i>Charadrius melodus</i>) [T]
Western prairie fringed orchid	(<i>Platanthera praeclara</i>) [T]
Eskimo curlew	(<i>Numenius borealis</i>) [Extinct?]

Region 3

Piping plover	(<i>Charadrius melodus</i>) [T]
Least tern	(<i>Sterna antillarum</i>) (Interior population) [E]
Bald eagle	(<i>Haliaeetus leucocephalus</i>) [T]

Hine's emerald dragonfly	(<i>Somatochlora hineana</i>) [E]
Karner blue butterfly	(<i>Lycaeides melissa samuelis</i>) [E]
Mead's milkweed	(<i>Asclepias meadii</i>) [T]
Virginia sneezeweed	(<i>Helenium virginicum</i>) [T]
Decurrent false aster	(<i>Boltonia decurrents</i>) [T]
Prairie bush-clover	(<i>Lespedeza leptostachya</i>) [T]
Leafy prairie-clover	(<i>Dalea foliosa</i>) [E]
Western prairie fringed orchid	(<i>Platanthera praeclara</i>) [T]
Eastern prairie fringed orchid	(<i>Platanthera leucophaea</i>) [T]
Indiana bat	(<i>Myotis sodalis</i>) [E]

Region 4

Ivory-billed woodpecker	(<i>Campephilus principalis</i>) [E]
Red-cockaded woodpecker	(<i>Picoides borealis</i>) [E]
Mississippi sandhill crane	(<i>Grus canadensis pulla</i>) [E]
Whooping crane	(<i>Grus americana</i>) [E]
Piping plover	(<i>Charadrius melodus</i>) [E]
Least tern	(<i>Sterna antillarum</i>) (Interior population) [E]
Everglade snail kite	(<i>Rostrhamus sociabilis plumbeus</i>) [E]
Wood stork	(<i>Mycteria americana</i>) [E]
Brown pelican	(<i>Pelicanus occidentalis</i>) [E]
Cape Sable sparrow	(<i>Ammodramus maritimus mirabilis</i>) [E]
Florida grasshopper sparrow	(<i>Ammodramus savaanarum floridanus</i>) [E]
Roseate tern	(<i>Sterna douglalli</i>) [T]
Bald eagle	(<i>Haliaeetus leucocephalus</i>) [T]
Audubon's crested caracara	(<i>Polyborus plancus audubonii</i>) [T]
Florida scrub jay	(<i>Aphelocoma coerulescens</i>) [T]
Bog turtle	(<i>Clemmys muhlenbergii</i>) [T]
Saint Francis' satyr butterfly	(<i>Neonympha mitchellii francisci</i>) []
Schweinitz's sunflower	(<i>Helianthus schweinitzii</i>) [4]
Eggert's sunflower	(<i>Helianthus eggertii</i>) [T]
Spring Creek bladderpod	(<i>Lesquerella perforata</i>) [E]
Eastern prairie fringed orchid	(<i>Platanthera leucophaea</i>) [T]

Region 5

Piping plover	(<i>Charadrius melodus</i>) [T]
Roseate tern	(<i>Sterna douglalli</i>) [E]
Bald eagle	(<i>Haliaeetus leucocephalus</i>) [T]
Plymouth redbelly turtle	(<i>Pseudemys rubriventris bangsi</i>) [E]
Bog turtle	(<i>Clemmys muhlenbergii</i>) [T]
Karner blue butterfly	(<i>Lycaeides melissa samuelis</i>) [E]
Virginia sneezeweed	(<i>Helenium virginicum</i>) [T]
Running buffalo clover	(<i>Trifolium stoloniferum</i>) [E]
Eastern prairie fringed orchid	(<i>Platanthera leucophaea</i>) [T]

Region 6

Least tern	(<i>Sterna antillarum</i>) (Interior population) [E]
Piping plover	(<i>Charadrius melodus</i>) [T]
Mexican spotted owl	(<i>Strix occidentalis lucida</i>) [T]
Bald eagle	(<i>Haliaeetus leucocephalus</i>) [T]
Whooping crane	(<i>Grus americana</i>) [E]
Southwestern willow flycatcher	(<i>Empidonax traillii extimus</i>) [E]
Black-capped vireo	(<i>Vireo atricapillus</i>) [E]
California condor	(<i>Gymnogyps californianus</i>) [XN]
Mead's milkweed	(<i>Asclepias meadii</i>) [T]
Western prairie fringed orchid	(<i>Platanthera praeclara</i>) [T]
Eskimo curlew	(<i>Numenius borealis</i>) [Extinct?]

may affect, and is likely to adversely affect species/adversely modify critical habitat (see below)

_____Concurrence

NONE

B. Proposed species/designated critical habitat:

Determination

no effect on proposed action/no adverse modifications of proposed critical habitat (see below)

_____Concurrence

NONE

is likely to jeopardize proposed species adversely modify proposed critical habitat _____ Concurrence

NONE

C. Candidate species:

Determination

no effect (see below)

_____Concurrence

Region 1

Western sage grouse (*Centrocercus urophasianus phaios*) [C]

Region 2

Lesser prairie-chicken (*Tympanuchus pallidicinctus*) [C]

is likely to jeopardize candidate species

_____ Concurrence

NONE

Appendix 1.

Standard Local Operating Procedures for Avoiding Adverse Effects to Listed Species or Critical Habitat During Management of Resident Canada Geese

Goal: Avoid adverse effects to listed species or critical habitat in conjunction with implementing the management program.

Scope of Application: Proposed goose management actions that would involve access to occupied habitat of the following species or to the following designated critical habitats: light-footed clapper rail, California clapper rail, Yuma clapper rail, California least tern, southwestern willow flycatcher, least Bell's vireo, western snowy plover, California gnatcatcher, California red-legged frog, valley elderberry longhorn beetle and its critical habitat, vernal pool fairy shrimp, conservancy fairy shrimp, longhorn fairy shrimp, vernal pool tadpole shrimp, delta green ground beetle, California tiger salamander, San Diego fairy shrimp, Riverside fairy shrimp, Butte County meadowfoam, large-flowered wooly meadowfoam, Cook's lomatium, Contra Costa goldfields, Hoover's spurge, fleshy owl's clover, Colusa grass, hairy Orcutt grass, Solano grass, Greene's tuctoria, Sacramento Valley Orcutt grass, San Joaquin Valley Orcutt grass, slender Orcutt grass, California Orcutt grass, spreading navarretia, San Jacinto Valley crownscale, and critical habitat for vernal pool species.

Please note that the vast majority of goose management actions are expected to occur outside of habitat for the above listed species. Of those few actions that do occur in these areas, most are likely to be the subject of procedures (1) and (2) below, which reflect a very brief level of coordination under these procedures.

Procedures

1. Where appropriate (as described above), a project proponent shall contact the appropriate FWS Ecological Services field office at the earliest possible date prior to the onset of the management activity.

The project proponent should provide the field office with the following information: location of the management activity; description of specific management activities that will be implemented, including any measures that may avoid adverse effects to listed species or critical habitat; and the timing and duration of the management activity.

The field office will, based on the information provided above, determine whether any potential conflict with listed species or critical habitat exists. This step may be conducted through electronic mail or telephone conversations documented by field office staff. If the field office determines that no potential exists for conflict between the management activity and listed species or critical habitat, that finding will be conveyed to the project proponent via electronic

mail. No further coordination is needed, and the management action can proceed. While a survey to document species presence is not required, the state management agency or agent may choose to do a survey to verify if a species is or is not present.

2. If the field office determines or the project proponent requests that a site visit be made, such a visit will be scheduled within one week of the request, unless the parties mutually agree to an extended time frame.

If, after the site visit, the field office determines that no potential exists for conflict between the management activity and listed species or critical habitat, that finding will be conveyed to the project proponent via electronic mail. No further coordination is needed, and the management action can proceed.

3. If the field office determines that the potential exists for conflict between the management activity and a listed species or critical habitat, the field office will discuss potential changes to the management activity with the project proponent. Any such changes must be within the spirit and intent of the 'minor change rule,' as described at 50 CFR 402.14(i)(2).

Such changes could include, but are not limited to:

- (a) changing the direction from which shooting will occur;
- (b) ensuring that all shooting occurs in lighting conditions that allow for complete and full identification of target and non-target species;
- (c) ensuring that a person familiar with the listed species accompanies management personnel in the field to avoid trampling individuals of the listed species or damage to sensitive habitat components;
- (d) shifting the timing of the management activity to another suitable period within the time frame allowed by the rule to avoid particularly sensitive periods in the life cycles of listed species; and
- (e) other measures that the field office staff and the person who wants to implement management activities mutually agree upon.

After mutual agreement on appropriate avoidance measures is reached, the parties will exchange, via electronic mail, documentation of the agreed-upon measures and acknowledgement of receipt of the documentation. Either party may initiate this exchange, based upon the specific circumstances of the situation. No further coordination is needed, and the management action can proceed.

4. If the parties cannot agree on measures that avoid adverse effects to listed species or critical habitat, the issue will be promptly elevated via a briefing paper concisely characterizing the action and the basis for each position to the field office supervisor and his/her counterpart with the responsible State management agency for resolution within two weeks of the date of elevation.