**United States Department of Agriculture**
**Animal And Plant Health Inspection Service**
**Wildlife Services**

# Double-Crested Cormorant Management in the United States
# Record of Decision

This Record of Decision (ROD) has been developed by the U.S. Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Wildlife Services (WS), in compliance with the agency decision-making requirements of the National Environmental Policy Act (NEPA) of 1969, as amended. The ROD is intended to: (a) state APHIS/WS' decision, present the rationale for its selection, and describe its implementation; (b) identify the alternatives considered in reaching the decision, including the alternative considered environmentally preferable, and (c) state whether all means to avoid or minimize environmental harm from implementation of the selected alternative have been adopted (40 CFR 1505.2).

APHIS/WS responds to requests for assistance from individuals, organizations, and agencies experiencing damage caused by wildlife. APHIS/WS is the Federal program authorized by law to reduce damage caused by wildlife (Act of March 2, 1931, as amended (46 Stat. 1486; 7 U.S.C. 426-426c), and the Rural Development, Agriculture, and Related Agencies Appropriations Act of 1988, Public Law 100-102, Dec. 27, 1987. Stat. 1329-1331 (7 U.S.C. 426c), and the Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriations Act of 2001, Public Law 106-387, October 28, 2000. Stat. 1549 (Sec 767).

This ROD documents APHIS/WS decision for the selection of an alternative(s) for managing resource damages and conflicts associated with the double-crested cormorant (DCCO). Alternatives have been fully described and evaluated in the August 2003 FEIS on DCCO management in the United States.

## ENVIRONMENTAL IMPACT STATEMENT

Increases in DCCO populations over the past 25 years, combined with other environmental and social factors, have led to greater occurrences of both real and perceived conflicts with human and natural resources. Scientific evidence from studies conducted by APHIS/WS and others demonstrates that DCCO's have increased substantially in number to the point that they are considered by most wildlife managers to be highly abundant and adequately documents serious depredation at aquaculture facilities. In recent years, reports of damage to aquaculture and hobby fisheries; natural resources, including wild fisheries; property; and human health and safety have increased, as well as other related concerns.

In 1999, in response to urgings from the public and State and Federal agencies, the U.S. Fish and Wildlife Service (FWS) decided to prepare a programmatic environmental impact statement (EIS), in cooperation with APHIS/WS, in order to develop a national management strategy for DCCO's. In November 2001, the FWS completed a Draft Environmental Impact Statement (DEIS) on DCCO management in the United States. In August 2003, the notice of availability for a Final Environmental Impact Statement (FEIS) was published (68 FR 47603). APHIS/WS was a cooperating agency in the development of the DEIS and FEIS. In accordance with the Council on Environmental Quality's (CEQ) regulations (40 CFR 1506.3), a cooperating agency may adopt an EIS without re-circulating the EIS of a lead agency when, after an independent review of the EIS,

the cooperating agency concludes that its comments and suggestions have been satisfied. APHIS/WS has reviewed the EIS and has determined that these conditions have been met, and therefore, adopts the EIS to support APHIS/WS' program decisions for its involvement in the management of DCCO damage.

## PUBLIC INVOLVEMENT

In compliance with the requirements of section 102(2) (C) of the National Environmental Policy Act of 1969 (42 U.S.C. 4332(C)) and the CEQ regulations for implementing NEPA (40 CFR 1500-1508), public involvement occurred throughout the development of the DEIS and FEIS. From 1999 to 2003, 22 public meetings were held over the course of more than 10 months of total public comment. The DEIS was published in December 2001, followed by a 100-day public comment period. In August 2003, a notice of availability for the FEIS was published in the Federal Register. Copies of the FEIS may be obtained by writing to the Division of Migratory Bird Management, U.S. Fish and Wildlife Service, 4401 North Fairfax Drive, MBSP-4107, Arlington, Virginia 22203 or by downloading it from the FWS website at http://migratorybirds.fws.gov/issues/cormorant/cormorant.html.

## ISSUES

Through public scoping and agency discussions, key issues were identified. Key issues can be placed into two general categories: (1) impacts caused by DCCO's (including impacts to other birds, fish, vegetation, aquaculture, Federally listed species, water quality, hatcheries, recreational fishing economies, and commercial fishing); and (2) impacts caused by control actions (including impacts to DCCO populations, other birds, Federally listed species, and existence and aesthetic values). In the EIS environmental analysis, these issues made up the environmental categories for which effects of the different alternatives were considered. The alternatives were also considered in terms of their ability to fulfill the purpose of the proposed action: to reduce resource conflicts associated with DCCO's in the contiguous United States, to enhance the flexibility of natural resource agencies in dealing with DCCO-related resource conflicts, and to ensure the long-term conservation of DCCO populations.

## ALTERNATIVES

Six alternatives were examined in the EIS: (A) No Action, (B) Non-lethal Management, (C) Increased Local Damage Control, (D) Public Resource Depredation Order, (E) Regional Population Reduction, and (F) Regulated Hunting.

The APHIS/WS preferred alternative is a combination of Alternative D (Public Resource Depredation Order) and Alternative E (Regional Population Reduction). The preferred alternative identified by the FWS in the FEIS is Alternative D (Public Resource Depredation Order). The FWS preferred alternative establishes a public resource depredation order in 50 CFR 21.48 and amends 50 CFR 21.47, the aquaculture depredation order that was originally created in 1998. APHIS/WS is authorized to take action under the authority granted by these two depredation orders. APHIS/WS implementation of Alternative E is contingent upon receiving the appropriate FWS authority to carry out regional population reduction actions and acquiring the necessary scientific information to determine if a population, goal-oriented approach is warranted.

Alternative A (No Action)

Alternative A is essentially the no action (no change or status quo) alternative. Under this alternative, existing wildlife management policies and practices would continue with no additional regulatory methods or strategies being authorized. The main features of this alternative are the issuance of depredation permits to address DCCO conflicts; an aquaculture depredation order that allows commercial, freshwater aquaculture producers in 13 States to shoot DCCO's without a permit; unregulated non-lethal harassment of DCCO's; and FWS Director's Order No. 27 which prevents most public fish hatcheries from conducting lethal take of DCCO's.

Alternative B (Non-Lethal Management)

Alternative B would not allow the lethal take of DCCO's or their eggs. Only non-lethal harassment methods and physical exclusion devices would be used to prevent or control DCCO damages.

Alternative C (Increased Local Damage Control)

Alternative C would expand the current DCCO depredation policy to address a broader range of resource conflicts than under the No Action alternative. This alternative would allow for increased take of DCCO's through a revision of FWS cormorant damage management practices, but agencies and individuals would still have to obtain a depredation permit. It would also revise the aquaculture depredation order to allow winter roost control. Non-lethal techniques would remain part of the management program.

Alternative D (Public Resource Depredation Order)

Alternative D creates a public resource depredation order to authorize State fish and wildlife agencies, federally recognized Tribes, and APHIS/WS to take DCCO's found committing or about to commit and to prevent depredations on the public resources of fish (including hatchery stock at Federal, State, and Tribal facilities), wildlife, plants, and their habitats. This authority applies to all lands and freshwaters (with appropriate landowner permission) in 24 States (Alabama, Arkansas, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, Missouri, New York, North Carolina, Ohio, Oklahoma, South Carolina, Tennessee, Texas, Vermont, West Virginia, and Wisconsin). This alternative also revises the aquaculture depredation order by specifying that it is applicable to commercial freshwater facilities and State and Federal fish hatcheries, and by authorizing APHIS/WS employees to take DCCO's at roost sites in the vicinity of aquaculture facilities during the months of October, November, December, January, February, March, and April. Depredation permits would continue to be used to address conflicts outside the authority of the depredation orders. Non-lethal techniques would remain part of the management program.

Alternative E (Regional Population Reduction)

Alternative E would entail the development of regional DCCO population objectives designed to reduce damages associated with DCCO's. Population objectives would be developed on an interdisciplinary, interagency basis and would be based on the best available data, while giving consideration to other values. Control would be carried out at nesting, roosting, wintering, and all other sites in order to achieve those objectives as rapidly as possible without adversely affecting other protected migratory birds or threatened and endangered species. This alternative would allow for increased take of DCCO's, through the issuance of special statewide permits and

depredation permits issued by the FWS. It would also revise the aquaculture depredation order to allow winter roost control. Non-lethal techniques would remain part of the management program.

Alternative F (Regulated Hunting)

Under Alternative F, frameworks to develop seasons and bag limits for hunting DCCO's would be established jointly by Federal and State wildlife agencies. These seasons would coincide with those for waterfowl hunting. In addition, this alternative would allow for the issuance of depredation permits and the aquaculture depredation order that allows commercial, freshwater aquaculture producers in 13 States to shoot DCCO's without a permit. Non-lethal techniques would remain part of the management program.

**DECISION**

APHIS/WS' decision is to implement a combination of Alternatives D and E. This decision is based on a thorough review of the alternatives and their environmental consequences. Contingent upon adequate funding, and receipt of further authority from FWS for implementing certain components of Alternative E, APHIS/WS will implement a program-wide DCCO damage management program that responds to requests for assistance throughout the U.S, including management actions and research.

Management Actions

An Integrated Wildlife Damage Management (IWDM) approach will be implemented to reduce damage and conflicts to the aquaculture industry and other affected resources, including natural resources, property, and public health and safety. Damage management will be conducted on public and private property when the resource owner (property owner) or manager requests APHIS/WS assistance. An IWDM strategy will be recommended and used, encompassing the use of practical and effective methods of preventing or reducing damage, while minimizing harmful effects of damage management measures on humans, target and non-target species, and the environment. Under this action, WS could provide technical assistance and direct operational damage management, including non-lethal and lethal management methods. In determining the damage management strategy, preference will be given to practical and effective non-lethal methods. However, non-lethal methods may not always be applied as a first response to each damage problem. The most appropriate response could often be a combination of non-lethal and lethal methods, or could include instances where application of lethal methods alone would be the most appropriate strategy. Management actions would be conducted pursuant to applicable laws and regulations authorizing take of DCCO's and their nest and eggs.

APHIS/WS supports a management strategy that includes national, regional, and local DCCO population goals and objectives in order to reduce damage and negative impacts to aquaculture and hobby fisheries; natural resources, including wild fisheries; property; and human health and safety. This management approach should be developed jointly by Federal and State agencies, including the FWS, and would be based on the best available scientific data and other supporting biological information. APHIS/WS believes this type of coordinated management approach would provide an avenue for professional wildlife biologists and resource managers to manage DCCO populations in a socially acceptable and biologically controlled manner.

Research

APHIS/WS National Wildlife Research Center (NWRC) functions as the research arm of APHIS/WS by providing scientific information on wildlife, its habitat, and its relationship with the human and natural environments. This information is used to develop methods for wildlife damage management that are effective and environmentally responsible. NWRC scientists work closely with wildlife managers, researchers, field specialists, and others to develop and evaluate wildlife damage management techniques. NWRC is involved in a variety of DCCO research projects and will continue to be involved in collecting information needed to manage DCCO damage and conflicts.

Currently the information needed to establish DCCO population goals and objectives is lacking. APHIS/WS recognizes this vital need and intends to participate, in cooperation with other governmental agencies and non-governmental organizations, in the collection of scientific information to determine if a population, goal-oriented approach is warranted. If in the future this type of management program is deemed appropriate, a science-based management plan will be developed along with a subsequent review and supplement to the EIS as needed.

Mitigation Measures

To reduce the risk of significant impacts to migratory bird populations and other wildlife species, APHIS/WS will abide by the following mitigation measures identified in section 4.3.7 of the FEIS:

1) Management actions will be conducted in such a manner that minimizes impacts and disturbances to non-target species. Specific recommendations for minimizing impacts when working in mixed species waterbird colonies identified in section 4.3.7 of the FEIS will be considered by APHIS/WS managers at the site-specific level and implemented, as appropriate; APHIS/WS will use non-toxic shot when using shotguns to kill DCCO's; and APHIS/WS will implement the Conservation Measures identified in Section 4.2.5 of the FEIS to avoid adverse impacts to federally listed T&E species.

2) APHIS/WS impacts on DCCO populations will be monitored using available population estimates, trend data, and other sources of scientific information including but not limited to those sources listed in section 4.3.7 of the FEIS.

3) APHIS/WS will assist in monitoring impacts on DCCO populations and other wildlife species. APHIS/WS will provide the number of cormorants killed and the number of nests in which eggs have been destroyed during APHIS/WS activities to the FWS; and as specified in section 4.3.7 of the FEIS, APHIS/WS will provide a report to the FWS detailing APHIS/WS activities conducted under the public resource depredation order, as appropriate.

Environmental Consequences of Action

APHIS/WS action is analyzed in the FEIS. The environmental analysis indicates that this action will not threaten the long-term existence of regional and continental DCCO populations; will help reduce depredation of aquaculture and hatchery stock; will help reduce localized fishery, bird, and vegetation impacts; is likely to help reduce localized water quality impacts; could benefit recreational fishing economies or commercial fishing; will help reduce property damages; and will have variable effects on existence and aesthetic values, depending on perspective. APHIS/WS actions may cause localized disturbances to other birds but these can be minimized

by taking preventive measures, leading to the action having beneficial effects overall. Furthermore, based upon FWS conservation measures outlined in the FEIS, it is anticipated that APHIS/WS actions will not adversely affect any federally listed threatened or endangered species or critical habitat.

**RATIONALE FOR DECISION**

The agency's preferred alternative is the alternative which the agency believes would fulfill its statutory mission and responsibilities, giving consideration to economic, environmental, technical, and other factors. The preferred alternative has been selected for implementation based on consideration of a number of environmental, regulatory, and social factors. Based on our analysis, the preferred alternative would be more effective than the current program; offers the opportunity to determine whether a population goal oriented approach is a more effective and biologically sound strategy for managing cormorant damage and conflicts; is environmentally sound, cost effective, and flexible enough to meet different management needs around the country; and does not threaten the long-term existence of DCCO populations or populations of any other natural resource.

A combination of Alternatives D and E was selected because it allows greater responsiveness in addressing resource damages than the No Action Alternative; it provides WS with the flexibility to determine if a population goal oriented approach is warranted for future consideration; provides a net benefit to those individuals or agencies requesting APHIS/WS assistance; will help reduce depredation of aquaculture and hatchery stock, as well as help reduce damages and conflicts to natural resources, property and public health and safety; and will not threaten the long-term existence of regional or continental DCCO populations, or adversely impact other wildlife populations, including T&E species. As such, APHIS/WS has concluded that the combination of these two alternatives represents the environmentally preferred alternative. Because APHIS/WS will implement the mitigation and conservation measures identified in the FEIS, all means to avoid or minimize environmental harm from implementation of the selected combination of alternatives have been adopted.

The No Action Alternative (A) was not selected because by itself it does not adequately address resource damages caused by DCCO's. The Non-lethal Management Alternative (B) was not selected because it severely limits the scope of allowable control techniques and would not adequately address resource damages caused by DCCO's. The Increased Local Damage Control Alternative (C) was not selected because it does not provide the flexibility needed to adequately address resource damages caused by DCCO's. The Public Resource Depredation Order Alternative (D) was not selected by itself since it does not provide the best flexibility for determining optimal strategies for managing overabundant cormorant populations and this alternative alone will not adequately reduce cormorant damage to the aquaculture industry. The Regulated Hunting Alternative (F) was not selected because hunting is not a socially feasible means of reducing DCCO damages.

William H. Clay

**William H. Clay**
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November 18, 2003

**Date**