DECISION
AND
FINDING OF NO SIGNIFICANT IMPACT

ENVIRONMENTAL ASSESSMENT: DOUBLE-CRESTED CORMORANT DAMAGE MANAGEMENT IN OHIO

The United States Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Wildlife Services (WS) program completed an Environmental Assessment (EA) on alternatives for reducing double-crested cormorant damage to aquaculture, property, natural resources, and human health (USDA 2020). The United States Department of the Interior, Fish and Wildlife Service (USFWS) and the Ohio Department of Natural Resources, Division of Wildlife (ODW) cooperated in the development of the EA. The EA documents the need for action and assesses potential impacts on the human environment of three alternatives to address that need.

PUBLIC COMMENTS

WS published the EA for review and comment from November 30, 2020 to January 15, 2021. WS published a Notice of Availability in the *Columbus Dispatch*, and sent it to interested parties through the APHIS Stakeholder Registry. WS also published the document on the program website. This Decision document will be made available to the public in the same manner. Appendix B includes WS' responses to public comments. WS maintains all correspondence on the EA at the WS State Office, 4469 Professional Parkway, Groveport, OH 43125.

ISSUES ASSOCIATED WITH DOUBLE-CRESTED CORMORANT DAMAGE MANAGEMENT ACTIVITIES

The EA analyzed a range of management alternatives in context of issues relevant to the scope of the analysis including:

- Issue 1 - Effects of Damage Management on the Double-crested Cormorant Population
- Issue 2 - Effects on the Populations of Nontarget Species, Including Threatened and Endangered Species
- Issue 3 - Effects of Damage Management Activities on Human Health and Safety
- Issue 4 - Humaneness and Animal Welfare Concerns
- Issue 5 - Effects of Damage Management Activities on the Aesthetic Values of Double-crested Cormorants

AFFECTED ENVIRONMENT

WS has observed cormorants at various Ohio locations throughout the year. WS would only provide assistance when requested by a landowner or manager, and WS would only provide direct operational assistance on properties where a Memorandum of Understanding (MOU), Cooperative Service Agreement (CSA), or other comparable document had been signed between WS and the cooperating entity.

Upon receiving a request for assistance, WS could conduct double-crested cormorant damage management on private, federal, state, tribal, and municipal lands in Ohio to reduce damage and threats associated with cormorants. Areas where damage or threats of damage could occur include, but would not be limited to aquaculture facilities, natural resource areas, park lands, and historic sites; property in or

adjacent to subdivisions, businesses, and industrial parks; and private and public property where cormorants cause damage to structures and landscaping, natural resources, property, and are a threat to human safety through the spread of disease. The areas could also include airports and military airbases where cormorants are a threat to human safety and to property; and areas where cormorants negatively affect wildlife, including threatened and endangered (T&E) species.

DESCRIPTION OF THE ALTERNATIVES

WS developed the following three alternatives to respond to the issues identified in Chapter 2 of the EA. Chapter 3 provides a detailed discussion of the effects of the alternatives on the issues (USDA 2020); below is a summary of the alternatives.

Alternative 1 - Continue with the Current Integrated Methods Approach to Managing Damage Caused by Double-crested Cormorants in Ohio (Proposed Action/No Action)

The proposed action/no action alternative would continue the current adaptive integrated approach utilizing nonlethal and lethal techniques, as deemed appropriate, using the WS Decision Model, to reduce damage and threats associated with double-crested cormorants. WS would continue to assist the cooperating agencies with meeting and maintaining double-crested cormorant management objectives on the three Lake Erie islands. WS could respond to requests for assistance by: 1) taking no action, if warranted, 2) providing technical assistance to property owners or managers on actions they could take to reduce damage or threats of damage, or 3) providing technical assistance and direct operational assistance to a property owner or manager experiencing damage or threats of damage.

The most effective approach to resolving any double-crested cormorant damage problem is to use an integrated wildlife damage management (IWDM) approach that may call for the use of several methods simultaneously or sequentially. IWDM may incorporate both nonlethal and lethal methods depending upon the circumstances of the specific damage problem. Nonlethal methods disperse or otherwise make an area where the damage is occurring unattractive or unavailable to the species causing the damage, thereby reducing the presence of those species in the area. WS would give priority to nonlethal methods when addressing requests for assistance (WS Directive 2.101). However, WS would not necessarily employ nonlethal methods to resolve every request for assistance if deemed inappropriate by WS' personnel using the WS Decision Model.

Lethal methods could involve removing individuals or active nests (nests with eggs or chicks present), thereby reducing the presence of cormorants in the area. WS often employs or recommends lethal methods to reinforce nonlethal methods and to remove cormorants that were identified as causing damage or posing a threat of damage. The number of birds or active nests removed from the population using lethal methods under the proposed action would be dependent on the number of requests for assistance received, the number of individual birds or active nests involved with the associated damage or threat, and the efficacy of methods employed.

Depredation Permits

Lethal take of double-crested cormorants can occur through the issuance of depredation permits by the USFWS. Currently, as part of the application process, the USFWS requires that permittees contact WS to obtain a recommendation (technical assistance) for how to address the wildlife damage problem. WS would evaluate the situation and then issue a recommendation that describes the damage, species involved, number of individual birds involved, previous actions taken to address the problem, and recommendations for how to address the problem. Recommendations could include nonlethal actions and when appropriate, the recommendation that USFWS issue a depredation permit for lethal actions. However, the USFWS requires that

permittees use available nonlethal actions where possible and practical and demonstrate that implementation of nonlethal methods was ineffective prior to issuing a permit for lethal actions. The USFWS also requires permittees continue long-term nonlethal actions to eliminate or reduce the need for permitted lethal removal. Upon a receipt of a depredation permit, the property owner or manager or an appropriate designated sub-permittee may then commence the authorized activities.

Alternative 2 – Implement an Integrated Methods Approach to Managing Double-crested Cormorant Damage in Ohio by Providing Technical Assistance and Nonlethal Direct Operational Assistance

WS could continue to provide those persons requesting assistance with managing damage and threats associated with double-crested cormorants with technical assistance as described in Alternative 1. Additionally, WS could provide direct operational assistance, but would only utilize nonlethal techniques. When the circumstances of a specific damage problem called for the use of lethal methods, WS could recommend those persons requesting assistance: 1) implement lethal methods on their own, 2) use the services of a private nuisance wildlife control agent, 3) use volunteer services of private individuals or organizations, or 4) use the services of local law enforcement or animal control authorities.

This alternative would place the immediate burden of lethal operational damage management work on the resource owner, other governmental agencies, private businesses and/or private individuals. Those persons experiencing damage or threats could take action using those methods legally available to resolve or prevent damage associated with double-crested cormorants as permitted by federal, state, and local laws and regulations or those persons could take no action.

Alternative 3 –Provide No Assistance with Managing Damage Caused by Double-crested Cormorants in Ohio

This alternative would preclude any activities by WS to alleviate damage or threats of damage associated with double-crested cormorants. WS would refer all requests for assistance associated with double-crested cormorants to the USFWS, to the ODW and/or to private entities. This alternative would not prevent other federal, state, local agencies, and/or private entities from conducting damage management activities. This alternative would place the burden of technical and operational damage management on the resource owner, other governmental agencies, private businesses and/or private individuals. Those persons experiencing damage or threats could take action using those methods legally available to resolve or prevent damage associated with cormorants as permitted by federal, state, and local laws and regulations or those persons could take no action.

CONSISTENCY

Based on the provisions and protective measures established in the EA, WS determined that activities conducted pursuant to the analyzed alternatives would have no effect on those species listed as threatened or endangered in the state by the USFWS, including their critical habitats. WS also reviewed the list of species designated as endangered or threatened by the ODW. Based on the review of listed species, WS determined that the proposed activities would not have any adverse effects on those species listed by the state. Actions are likely to benefit state-listed bird species that are negatively impacted by cormorant destruction of rookeries.

MONITORING

WS will annually review its effects on double-crested cormorants and other non-target species addressed in the EA to ensure those activities do not impact the viability of wildlife species. In addition, WS will annually review the EA to ensure that the analyses are sufficient.

REVIEW OF ALTERNATIVES

WS identified no significant cumulative environmental impacts from any of the three alternatives, including the proposed action. Under the proposed action, WS' lethal removal of cormorants would not have significant impacts on statewide cormorant populations when known sources of mortality were considered. WS identified no risk to public safety from providing services to requesting individuals under Alternative 1 since only trained and experienced personnel would conduct and/or recommend damage management activities. There would be a slight increased risk to public safety if persons rejected assistance and recommendations under Alternative 2 and conducted their own activities, or when no assistance was provided under Alternative 3. However, under all of the alternatives, those risks would not be to the point that the effects would be significant. The analysis in the EA indicates that an integrated approach to managing damage and threats caused by cormorants would not result in significant cumulative effects on the quality of the human environment.

DECISION AND FINDING OF NO SIGNIFICANT IMPACT

I have carefully reviewed the EA prepared for this proposal and the input from the public involvement process. I find the proposed action alternative (Alternative 1) to be environmentally acceptable, addressing the issues and needs while balancing the environmental concerns of management agencies, landowners, advocacy groups, and the public. The analysis in the EA adequately addresses the identified issues, which reasonably confirm that no significant impacts, individually or cumulatively, to the quality of the human environment are likely to occur from the proposed action, nor does the proposed action constitute a major federal action. Therefore, the analysis in the EA does not warrant the completion of an Environmental Impact Statement (EIS).

Based on the analyses in the EA, selecting Alternative 1 and applying the associated protective measures best addresses the need for action and the identified issues. Alternative 1 successfully addresses (1) cormorant damage management using a combination of the most effective methods and does not adversely impact the environment, property, human health and safety, target species, and/or non-target species, including T&E species; (2) it offers the greatest chance of maximizing effectiveness and benefits to resource owners and managers; (3) it presents the greatest chance of maximizing net benefits while minimizing adverse effects to public health and safety; and (4) it offers a balanced approach to the issue of humaneness when all facets of that issue are considered. Further analysis would be triggered if changes occur that broaden the scope of damage management activities that affect the natural or human environment or from the issuance of new environmental regulations. Therefore, it is my decision to implement the proposed action/no action alternative (Alternative 1) as described in the EA.

Based on the analyses provided in the EA, there are no indications that the proposed action (Alternative 1) would have a significant impact, individually or cumulatively, on the quality of the human environment. I agree with this conclusion and therefore, find that an EIS should not be prepared. This determination is based on the following factors:

1. Cormorant damage management, as conducted by WS in Ohio, is not regional or national in scope.

2. The proposed action would pose minimal risk to public health and safety. The methods available would not adversely affect human safety based on their use patterns and standard operating procedures.

3. There are no unique characteristics such as park lands, prime farm lands, wetlands, wild and scenic areas, or ecologically critical areas that would be significantly affected. WS' protective measures and adherence to applicable laws and regulations would further ensure that WS' activities do not harm the environment.

4. The effects on the quality of the human environment are not highly controversial. Although there may be some opposition to cormorant damage management, this action is not highly controversial in terms of size, nature, or effect.

5. Based on the analysis documented in the EA, the effects of the proposed damage management program on the human environment would not be significant. The possible effects of the proposed activities on the quality of the human environment are not highly uncertain and do not involve unique or unknown risks. This EA uses conservative population estimates and evaluates the upper limit of take to provide upper bounds on the impacts that might occur. Consultation and coordination with state and federal agencies with management responsibility for preserving sustainable populations of target and non-target species and ecosystems, in addition to project monitoring, helps ensure that program activities do not have significant unintended adverse impacts. The proposed activities are routinely employed to alleviate wildlife damage across APHIS-WS.

6. The proposed action would not establish a precedent for any future action with significant effects.

7. WS did not identify any significant cumulative effects through the assessment. The EA analyzed cumulative effects on target and non-target species populations and concluded that such impacts were not significant for this or other anticipated actions to be implemented or planned.

8. The proposed activities would not affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places, nor would they likely cause any loss or destruction of significant scientific, cultural, or historical resources.

9. WS has determined that the proposed program would not adversely affect any federally listed T&E species currently listed in the State. In addition, WS has determined that the proposed activities would not adversely affect state-listed T&E species.

10. The proposed action would comply with all applicable federal, state, and local laws.

The rationale for this decision is based on several considerations. This decision takes into account public comments, social/political and economic concerns, public health and safety, and the best available science. The foremost considerations are that: 1) cormorant damage management would only be conducted by WS at the request of landowners/managers, 2) management actions would be consistent with applicable laws, regulations, policies and orders, and 3) no significant effects to the environment were identified in the analysis. As a part of this Decision, WS would continue to provide effective and practical technical assistance and direct management techniques that reduce damage and threats of damage.

WILLIE HARRIS

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Willie D. Harris, Director-Eastern Region
USDA/APHIS/WS
Raleigh, North Carolina

Date

APPENDIX A
LITERATURE CITED

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APPENDIX B
RESPONSES TO COMMENTS

This Appendix contains substantive issues raised by the public during the comment period for the 2020 Ohio double-crested cormorant damage management EA and the WS response to each of the issues. Most comments received did not provide substantive information and only indicated general approval/disapproval for the proposed work. A substantive comment provides new information about the proposed action, an alternative, or the analysis; identifies an alternative and reasonable suggestion to solve the problem; points out a specific flaw in the analysis; suggests alternate methodologies and the reason(s) why they should be used; makes factual corrections or identifies a different source of credible research which, if used in the analysis, could result in different effects.

Substantive issues raised in the letters are numbered and are written in bold text. The WS response follows each comment and is written in standard text.

1. **The proposal here cites the damage DCCOs [cormorants] have on other water birds, including black-capped night herons, great blue herons, and various egrets; yet in my observation of the DCCO colony in Toronto, the presence of both heron species and great egrets living within or alongside the colony is commonplace. Documentation reveals that herons and egrets elect to nest nearby to feed from various aspects of the cormorant colony. A sweeping suggestion that these birds are threatened by cormorants does not apply to the site where my research is being undertaken, and therefore cannot be substantiated as a universal truth about the species.**

   The EA does not claim a "universal truth" about double-crested cormorants. In fact, WS limited the EA's scope to only sites within the state of Ohio. The EA describes the site-specific evaluation procedures on pages 8 and 22 (WS Decision Model). WS found sufficient evidence, supported by other government and research organizations, that cormorants do have negative impacts to plant and wildlife species through habitat destruction at sites within Ohio (see pages 3-4 in the EA).

2. **Mass action is unpredictable, difficult to monitor and manage, and does not take into consideration the possible impacts to the species. Since DCCOs [cormorants] are migratory birds, state or province-level actions do not adequately consider their shared impacts, and so without both regionally-specific analyses and cross-federal policy-building in play, the results of lethal management techniques could be potential disastrous to the species and others that intersect with it. It is imperative that further research be undertaken prior to initiating any management techniques that involve killing birds based on largely unsubstantiated claims.**

   The EA discusses the effects of cormorant damage management on biodiversity on page 53. That section also discusses the regional management oversight provided by the USFWS. Furthermore, the USFWS issued on December 29, 2020 a Record of Decision for the EIS: Management of Conflicts Associated with Double-Crested Cormorants Throughout the United States. The maximum allowable take will be 121,504 double-crested cormorants nationally per year under the selected alternative. The EIS also evaluated known North American subpopulations. The Interior subpopulation (includes Ohio) maximum allowable take level will be 78,632 double-crested cormorants. The analyzed take evaluated in this EA easily falls within the USFWS allowable take level (pages 30-35 of the EA).

3. **The Damage to Property action point had no quantitative substantiation within this EA.**

   Page 1 of the EA explains why some damage may be qualitative rather than quantitative: the threshold triggering a person to seek assistance with alleviating damage or threats of damage is often unique to the individual person requesting assistance, and many factors (e.g., economic, social,

aesthetics) can influence when people seek assistance. Many people define the term "damage" as economic losses to resources or threats to human safety; however, "damage" could also occur from a loss in the aesthetic value of property and other situations where the behavior of wildlife was no longer tolerable to an individual person. The threat of damage or loss of resources is often sufficient for people to initiate individual actions and the need for damage management could occur from specific threats to resources.

4. **Risks to Human health and safety lists aircraft strikes as a primary concern, yet literally no air strikes have occurred "… no reports of aircraft strikes involving double crested cormorants in Ohio from 1990 through 2018". If the main concern for human health and safety has not been an issue in 28 years, you are looking for excuses not reasoned, data driven necessity.**

   When assessing risks, managers must evaluate probability and consequences. Even though probability may be low, grave consequences may still necessitate preventative actions. Pages 4-5 of the EA accurately describe the low probability of cormorant/aircraft strikes, but research also identifies cormorants as the sixth most hazardous bird species to aircraft. Therefore, WS substantiated aviation safety as a suitable need for action.

5. **Water quality effects for specific bodies of water in Ohio with a Double-Crested Cormorant population have not been studied, as stated in this EA, so including that as a reason for action is irresponsible.**

   WS conducted an unbiased evaluation of cormorant impacts to the human environment. This included substantiating claims of legitimate cormorant damage, while also identifying gaps in credible research and investigations. The EA accurately explains the lack of research/evidence for cormorant effects on water quality (page 5 of the EA). This demonstrates WS adherence to unbiased, critical evaluations of the subject.

6. **If they [aquaculture facilities] are truly losing the sums stated in this EA then that should encourage them to prevent bird access to their ponds through barrier means. If that is not feasible in their budget, then they should accept the loss as "cost of business expense." They should not get to kill cormorants because it's the easy cheap way out of a situation they create.**

   The USFWS procedures require entities to use nonlethal measures before obtaining a permit to lethally remove migratory birds. The permittee must demonstrate that nonlethal measures were ineffective or unreasonable to prevent damage. The EA identified on page 6 that the aquaculture industry has a small profit margin so that even a small percentage reduction in the farm gate value due to predation results in an economic issue.

7. **The EA failed to show why WS involvement is desirable or necessary.**

   Pages 1-2 of the EA describe why WS involvement is requested or authorized.

8. **This proposal seems too focused on Lake Erie and the commercial hatcheries. The issues created by cormorants for other native species includes interior populations around impoundments and rivers.**

   Section 1.5 of the EA defines the scope to include any location within Ohio. WS provided the Lake Erie islands and certain commercial hatcheries as examples of the need for action. Those examples are not exhaustive, but rather representative of the types of issues reported to WS.

9. **A commenter suggested only conducting cormorant damage management under the following circumstances/provisions:**
    a. **Only locations where there are severe, local, and specific impacts of cormorants**
    b. **Only where the objective of culling can provide a measurable metric of success**
    c. **Only so far as the overall population is maintained as stable and healthy in its historic Ohio range**
    d. **Only if the program does not prove to only benefit sport and commercial fish interests and lakeside property owners, but also to benefit other wildlife including riverine habitat and impoundment locations**
    e. **Only if the program is monitored and the results publicly reported annually**

    WS utilizes its Decision Model (page 22 of the EA) to address concerns (a) and (b). The Standard Operating Procedures outlined for Issue 1 in section 2.4 of the EA address concern (c). Pages 3-4 describe cormorant damage to natural resources; therefore, WS management of that damage would benefit natural resources and address concern (d). WS states in this decision document that it conducts monitoring annually and reports lethal take to the USFWS which is a public record (see also page 24 of the EA); these efforts address concern (e).

10. **Failing to add specific rules around how these animals can be controlled and what the Agency will do to ensure the bare minimum impact is made is not clear. This allows people to employ whatever type of killing methods they desire to. There is no way to control or foresee that some of the other birds that you are seeking to preserve will also not be targeted. Additionally, leaving bird carcasses around where they are killed invites other disease that can also affect the population and environmental integrity of the place you are seeking to protect.**

    Sections 2.3 and 2.4 of the EA describe standard operating procedures that specifically address each of these concerns.

11. **[Commenter proposed] A scheme to sterilize the birds thus taking a more responsible plan than simply killing them. Relocation could be tried.**

    The EPA has not registered any known reproductive inhibitors for adult cormorants (Fagerstone et al. 2010, Yoder and Miller 2006). Current technology requires direct contact with animals for both the application of sterilization and contraception methods. The need to capture or make direct contact with a sufficiently large number of target animals with multiple treatments (in the case of contraceptives) to effectively implement this method makes it infeasible and impractical.

    Although there may be exceptions, translocation of animals is generally ineffective in reducing damage and would therefore be ineffective at meeting the need for action because birds are highly mobile and can easily return to damage sites from long distances, and translocation may result in damage problems at the new location (Fischer and Lindenmayer 2000, Seddon et al. 2012). Given the scope of the issue described in the need for action, it would be unrealistic to translocate the numbers of cormorants necessary to reduce damage. Additionally, translocated animals typically have high mortality rates because of the stress of capture, transport and release, aggression by animals of the same species already occupying the new location, disorientation, unsuitable habitat, difficulties finding resources (food, water, shelter) at the new location, attempts to return to the site of capture and increased susceptibility to predation or disease (Nielsen 1988, Craven et al. 1998, Fischer and Lindenmayer 2000, Seddon et al. 2012). Translocation of animals may also result in the transmission of diseases from one area to another (Nielsen 1988).

12. **Instead of targeting cormorants, which are not the only birds that eat fish, instruct hatcheries to use netting and other covers to protect their stock. As to fisherman, inventories of fish have fluctuated for decades.**

    WS listed examples of recommended lethal and nonlethal methods to resolve cormorant damage in Appendix B of the EA. This includes changes in cultural practices and structural barriers at aquaculture facilities.

    Additionally, several commenters stated that cormorants do not significantly affect open-water fisheries, and therefore, this issue should not be included in the Need for Action. The EA did not evaluate this issue; therefore, it is beyond the scope of this EA.

13. **Cormorant management is often done to protect shorebirds that often live alongside cormorant colonies, but researchers at the University of Minnesota found that the culls hurt some of those same species. The team analyzed population data from 1976 to 2010 and watched how the colonies fared when cormorants were killed. Black-crowned night herons nest in the undergrowth, often under cormorant nests, said Francie Cuthbert, a co-author of the study in the "Journal of Wildlife Management." Culling cormorants should save their habitat from an acidic demise and boost the heron population. Instead, those populations declined when the cormorants were killed.**

    This research found that closely nesting nontarget birds were frightened from their nests when biologists attempted to oil cormorant eggs. This resulted in herons either abandoning their nests or gulls raiding the nests while unprotected. The EA describes in section 2.2 the Integrated Wildlife Damage Management approach that enables biologists to evaluate methods or past research and adjust accordingly. In the specific case referenced by the commenter, biologists found that lethally removing cormorants with a noise-suppressed .22 caliber rifle was the most effective method that also minimized negative impacts to nontarget species.