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Public Comments Processing
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To Whom It May Concern:

The Arkansas Game and Fish Commission (AGFC) is pleased to provide these comments on the U.S. Fish and Wildlife Service's (Service) Proposed Rule [Docket No. FWS-HQ-MB-2019-0103; FF09M29000-201-FXMB1232090000] RIN 1018-BE67 concerning Management of Conflicts Associated With Double-Crested Cormorants (*Phalacrocorax auritus*) Throughout the United States.

The AGFC strongly supports the proposal to establish a new permit for State wildlife agencies for authorizing certain management and control activities that are normally prohibited, and are intended to relieve or prevent impacts from double-crested cormorants (DCCO's) on wild and stocked fisheries, state-owned fish hatcheries, human health and safety, property, and threatened and endangered species (as listed under the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.)). States should have the delegated authority to determine whether, when, where, and for what purposes to control cormorants within limits set by the Service. The AGFC is a strong proponent of the North American Model of Wildlife Management, where states are the primary managers of wildlife resources, with the understanding that migratory wildlife must be managed under a system of cooperative federalism that includes federal oversight. However, when it comes to putting management on the ground in our state, we believe that our agency is best positioned to oversee permitting of take of DCCO's from public waterbodies as well as non-commercial private waters. We also believe that this management action is desperately needed to ensure sound conservation and management of our public trust resources, for reasons given in subsequent paragraphs of this letter.

However, AGFC would prefer a proposed rule that includes an Aquaculture Depredation Order (AQDO) consistent with Alternative C in the draft EIS. Re-issuance of an Aquaculture Depredation Order provides both administrative relief and efficient control of DCCO impacts at commercial aquaculture facilities while gathering the necessary information to monitor impacts on DCCO populations. Indeed, Table 15 (p. 78-9) of the draft EIS shows that the effects of both a state/tribal Permit and AQDO will have similar Environmental Consequences to Alternative A. In fact, DCCO numbers increased during the period when the previous AQDO was in effect (2003-2016). The individual permits currently available to commercial facilities significantly constrain farm-level control as well as management prescriptions that could be provided by the U.S. Department of Agriculture Wildlife Services under an AQDO.

Additionally, as written, neither the proposed rule nor any of the proposed alternatives in the draft EIS are clear on the authority of states and tribes to provide relief for depredation on fisheries resources on non-commercial private waters. The Service should adequately address this issue in the proposed rule. If private waters are not intended to be included, the rationale should be completely explained.

Background and Justification

Population Growth

Data from a variety of peer reviewed published sources (Weseloh et al. 2002; Wires and Cuthbert 2006; Adkins et al. 2014; Dorr et al. 2014; Wires 2014; Dorr and Fielder 2017) indicate that DCCO populations in North America increased during the tenure of the AQDO (1998 to 2016) and the Public Resource Depredation Order (2003 to 2016) as seen in the population trend graph publicly reported via the American Breeding Bird Survey (Figure 1). Sauer et al. (2013) estimated an increase of 93% for the period 1966-2011. Wires (2014) commented “Well over a million cormorants are estimated to reside annually in North America, and a take of 40,000 to 50,000 birds yearly likely represents less than 5 percent of the population. Clearly, the cormorant is currently not in any danger of becoming extinct.” Overall population expansion has resulted in recolonization to historic locations (Ayers et al. 2019), re-establishment of breeding populations in Indiana, Ohio, Iowa, Arkansas, Illinois, Minnesota, Mississippi and Missouri (Wires and Cuthbert 2006), range expansion of birds from northwestern Mexico to Southern California (Adkins et al. 2014) and changing migration and wintering patterns of this growing population as a result of commercial aquaculture and artificial reservoir construction in the Southeastern United States (Wires and Cuthbert 2006; King et al. 2010; King et al. 2012). As summarized by Ayers et al. 2019, “These patterns suggest enormous potential for double-crested cormorants to repopulate, recolonize, and establish new colonies in North America.”

Fish Predation

*The DCCO is a large water bird that feeds mainly on fish, and can consume as much as a pound of fish per bird per day. Chiaramonte et al. (2019) found that avian predation (including DCCO's) on stocked trout at 15 Idaho waterbodies was higher than angler exploitation. Further, they found that predation on stocked fish by DCCO's at each waterbody increased proportionally to DCCO abundance, and that angler catch rate declined with increasing avian predation rate. Although not quantified as in the previously referenced study, we see similar predatory activity at many stocked and un-stocked fisheries in Arkansas. Dorr et al. (2014) found that DCCO's can consume fish up to 430 mm in length. Unpublished data from AGFC's analyses of DCCO stomachs have found Largemouth Bass (*Micropterus salmoides*) up to 315 mm, and Gizzard Shad (*Dorosoma cepedianum*) > 350 mm.*

Vacation of Public Resource Depredation Order Eliminates Management Options

The expansion of DCCO's into historical and novel locations and the establishment of breeding colonies in historical and novel locations results in year-round reservoir fish predation. As mentioned previously, DCCO predation on non-habituated stocked fish can be substantial. DCCO preferred roost sites in man-made reservoirs are also often the preferred habitat of popular sportfish species such as Largemouth Bass and crappie. This brings these species into close proximity, which likely increases predation on sportfish populations, particularly in reservoirs with significant amounts of flooded timber. Large numbers of DCCO's in roost trees is a deterrent to anglers wishing to fish those areas due to the noise and the frequent

defecation of the roosting birds. This can lead to dissatisfaction of anglers that results in them either choosing a different fishing location or choosing to stop purchasing a fishing license if all local alternatives have the same situation. The portions of Arkansas that are most heavily colonized by DCCO's, which are the Mississippi Alluvial Valley and the Gulf Coastal Plain, include most of the counties in our state that have the highest poverty rates. The same places that are impacted by DCCO predation often provide important subsistence fisheries to these impoverished communities. Since the vacation of the Public Resource Depredation Order, AGFC has been unable to respond to requests by these communities to provide relief.

Again, the AGFC strongly supports the Service's decision to implement a State permitting system for the take of DCCO's. We are tremendously appreciative of the Service's efforts to complete a thorough EIS that ensures that limited take of DCCO's where necessary will have no significant impacts on their population. We also wish to express our appreciation for the Service's efforts to obtain robust input on this issue via scoping meetings and webinars. The AGFC, consistent with our mission, is committed to working with the Service to execute a system of permitting and monitoring that will ensure effective conservation of both fish and bird populations in our state. Having said that, our preferred option, which we believe would lead to the best conservation and administrative outcomes remains "Alternative C" which would include a combination of the re-establishment of the AQDO along with a state-run permitting system for management and take of DCCO's on public waters to relieve or prevent impacts of these birds on ecologically and economically important public trust resources in Arkansas. We also request that the Service clearly address in the final rule how DCCO management is to be conducted for non-commercial private waters; which we suggest would be most effectively managed as part of the state permitting system.

Thank you for the opportunity to comment on this critical issue of conservation and economic importance for the state of Arkansas. We look forward to improvements in how we cooperatively manage DCCO populations for their long-term sustainability, as well as the sustainability of wild sportfish populations and the commercial aquaculture industry.

Sincerely,



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Figure 1. Estimated double-crested cormorant population size by year from the American Breeding Bird Survey. N is number of birds in millions.

