

Committee on Natural Resources

Rob Bishop, Chairman

Hearing Memorandum

June 7, 2018

To: Members of the House Committee on Natural Resources

From: Majority Committee Staff – Melissa Beaumont
Subcommittee on Oversight & Investigations (x5-7107)

Hearing: Full Committee field hearing titled, “*Examining Effects of Mismanagement of the Cormorant in the Great Lakes Region.*”
June 11, 2018 at 2:00 p.m. EST in Granum Theatre, Alpena Community College, 665 Johnson Street, Alpena, Michigan 49707

The House Committee on Natural Resources will hold a field hearing titled “*Examining Effects of Mismanagement of the Cormorant in the Great Lakes Region*” on Monday, June 11, 2018, at 2:00 p.m. EST in Alpena, Michigan.

Policy Overview

- Double-crested cormorants are migratory birds abundant across the United States. Since its recovery after the 1970s, this species’ population has expanded substantially, placing the bird in direct conflict with aquaculture, sustenance, sport fishing, and even endangered species in certain parts of the country.
- To provide relief from the impact of the cormorant, the U.S. Fish and Wildlife Service (FWS) issued two environmental assessments and two subsequent depredation orders authorizing both lethal and non-lethal control methods in 1998 and 2003. These orders were designed to provide increased flexibility to aquaculturists and State fish and game agencies struggling to manage the species. In May 2016, however, pursuant to a lawsuit, the U.S. District Court for the District of Columbia remanded the FWS’s 2014 Environmental Assessment and vacated the two depredation orders for cormorants.
- Currently, only case by case permitting for take of cormorants in support of aquaculture have been restored, most of which are in the southern Gulf region. However, some of the largest populations of cormorants are in the Great Lakes region where the cormorant’s impact on fisheries and recreational fishing has been devastating to the many local economies in the region that rely on these fish species.
- This hearing will examine the impact of the double-crested cormorant in the Great Lakes region, including its effect on free swimming and recreational fish and the local economies that rely on these species, and evaluate solutions to ensure effective cormorant management.

Witnesses Invited (in alphabetical order)

Randall M. Claramunt
Coordinator
Michigan Department of Natural Resources – Fisheries, Lake Huron Basin
Alanson, MI

Tom Cooper
Chief, Midwest Region, Migratory Bird Program
U.S. Fish and Wildlife Service
Washington, DC

Daniel Eichinger
Executive Director
Michigan United Conservation Clubs
Lansing, MI

Mark Engle
Manager
Les Cheneaux Landing Resort
Cedarville, MI

Background

Double-crested cormorants are large, matte-black migratory fishing birds that are abundant across the entire United States and North America. There are five geographically distinct breeding populations located across the country. The largest population resides in the Mississippi flyway, which includes the Great Lakes region.¹ During breeding season, cormorants inhabit lakes, ponds, slow-moving rivers, lagoons, estuaries, and open coastline. Outside of breeding season, their habitat includes a variety of areas such as marine islands or coastal bays.² Cormorants are excellent divers and are naturally adapted to foraging for fish under water, which has historically placed the bird in direct conflict with aquaculture, sustenance, sport fishing, and even endangered species in certain parts of the country. According to FWS, “Double-crested cormorant populations can decrease fish populations in open waters and in aquaculture facilities.”³

Like many other migratory birds, the double-crested cormorant is protected by the

¹ *Legislative Hearing on H.R.2591, H.R.4429, H.R. 4609, H.R.4647, H.R. 4851, Before the H. Comm. on Natural Resources, Subcomm. on Federal Lands, 115th Cong., 115-37, (2018)* (statement of Randall Claramunt, Michigan Dep’t of Natural Resources), available at https://naturalresources.house.gov/uploadedfiles/testimony_claramunt.pdf, at 2.

² SULLIVAN ET. AL., CORNELL UNIVERSITY: THE DOUBLE-CRESTED CORMORANT, ISSUES AND MANAGEMENT, CORNELL UNIVERSITY COOPERATIVE EXTENSION 8-14, (2006), available at <http://wildlifecontrol.info/wp-content/uploads/2016/04/Cormorant-Issues.pdf>.

³ Migratory Bird Permits; Revision of Expiration Dates for Double-Crested Cormorant Depredation Orders, Fish and Wildlife Service, 74 Fed. Reg. 64, 15394-15398 (proposed Apr. 6, 2009) available at <https://www.gpo.gov/fdsys/pkg/FR-2009-04-06/pdf/E9-7650.pdf>.

Migratory Bird Treaty Act of 1918 (MBTA, 16 U.S.C. 703-712), which prohibits any take (the killing, capture, selling, trading, or transport, etc.) of any protected species without prior authorization by FWS. Since the bird's addition to the MBTA in 1973, cormorant populations have grown significantly across the species' range, concurrently increasing the conflict and controversy over management of the species.

Impact of the Cormorant

By 2000, in just the first thirty years after the addition of the cormorant to the MBTA, the bird's population grew from 200 nesting pairs to over 115,000 in the Great Lakes area alone.⁴ In recent years, populations continue to grow, with numbers in the Great Lakes and other regions reaching into the millions.⁵ In Michigan, the cormorant population grew to nearly 90,000 birds in 2007⁶ and the overall population in central and eastern United States and Canada is estimated to be between 731,880 and 752,516.⁷ This enormous population growth causes many detrimental effects for the States that host these large populations of cormorants. Fisheries, aquaculture, wildlife habitat, and endangered species in these areas often see the greatest negative impact.

Fisheries: The boom in population of the cormorant has created controversy regarding its impact on fisheries quality and quantity nationwide. In Michigan, recreational and commercial fishing is an economically significant industry valued between \$4 billion and \$7 billion annually.⁸ Studies show that cormorant predation can significantly impact local economies relying on recreational fishing and related tourism. Over a 20-year period, millions of dollars and hundreds of jobs have been lost in these areas due to a decline in the fisheries population.⁹ Economically viable fish populations suffer from the cormorant's predation.¹⁰ Studies conducted in Michigan show that cormorants have the potential to influence sport fishing populations, causing significant declines in fisheries.¹¹ Declines in these sport fisheries in turn raise serious concerns for the local economies dependent on recreational fisheries for economic stability.

⁴ JIMMY D. TAYLOR II & BRIAN S. DORR, DOUBLE-CRESTED CORMORANT IMPACTS TO COMMERCIAL AND NATURAL RESOURCES, NAT'L WILDLIFE RESEARCH CENTER STAFF PUBLICATIONS, U.S. DEP'T OF AG. 43 (2003), *available at* https://digitalcommons.unl.edu/cgi/viewcontent.cgi?referer=http://wildlife.org/the-rise-of-double-crested-cormorants-too-much-of-a-good-thing/&httpsredir=1&article=1273&context=icwdm_usdanwrc.

⁵ B.S. DORR, J.J. HATCH, & D.V. WESELOH, , DOUBLE-CRESTED CORMORANT: DEMOGRAPHY AND POPULATIONS, CORNELL LAB OF ORNITHOLOGY (2014), <https://birdsna.org/Species-Account/bna/species/doccor/demography>. (last visited June 5, 2018).

⁶ U.S. DEP'T OF AG., U.S. DEP'T OF THE INTERIOR: FINAL ENVIRONMENTAL ASSESSMENT: DOUBLE-CRESTED CORMORANT DAMAGE MANAGEMENT IN MICHIGAN, (2011), *available at* <https://www.fws.gov/midwest/MidwestBird/documents/FINAL%20Michigan%20DCCO%20EA%206-14-11.pdf>.

⁷ U.S. FISH & WILDLIFE SERVICE: ENVIRONMENTAL ASSESSMENT FOR ISSUING DEPREDATION PERMITS FOR DOUBLE-CRESTED CORMORANT MANAGEMENT, (2017), *available at* <https://www.fws.gov/migratorybirds/pdf/management/double-crested-cormorants/CormorantEA.pdf>.

⁸ MICHIGAN SEA GRANT, *Fisheries*, <http://www.miseagrant.umich.edu/explore/fisheries/>, (last visited June 5, 2018).

⁹ TRAVIS L. DEVULT, KATY N. KIRKPATRICK, STEPHANIE SHWIFF, ET. AL., MODELING THE ECONOMIC IMPACTS OF DOUBLE-CRESTED CORMORANT DAMAGE TO A RECREATIONAL FISHERY, THE BERRYMAN INSTITUTE HUMAN-WILDLIFE INTERACTIONS 36-47 (2015), *available at* <http://www.berrymaninstitute.org/files/ShwiffEtAlSpring2015HWI.pdf>.

¹⁰ *Id.*

¹¹ BRIAN DORR, SHAUNA L. HANISH, PETER H. BUTCHKO, ET AL., MANAGEMENT OF DOUBLE-CRESTED CORMORANTS TO IMPROVE SPORT FISHERIES IN MICHIGAN: THREE CASE STUDIES, THE BERRYMAN INSTITUTE HUMAN-WILDLIFE

Studies, including those conducted by the Michigan Department of Natural Resources, have illustrated the link between cormorant management efforts and the recovery of fishery populations in Michigan.¹² For instance, one study analyzed over 20 years of fishery data in Lake Ontario and found cormorant predation was associated with a decrease of small mouth bass, which contributed to a major decline in the bass fishery in both quality and abundance.¹³ In another example, the New York Department of Environmental Conservation found declines in populations of smallmouth bass, yellow perch, and other warm-water fisheries in the eastern basin of Lake Ontario in the 1990s. These declines were associated with a boom in the cormorant population.¹⁴ However, recent State management efforts of the cormorant were found to be effective in reducing the impact of cormorants on the effected species.¹⁵

Aquaculture: Like fisheries, the aquaculture industry can be significantly impacted by cormorant predation. Economic losses have ranged from \$5 million to \$25 million in the Mississippi catfish aquaculture industry alone.¹⁶ Fish farmers are particularly vulnerable because of the cormorant's predatory tactics, which allows them to "work as a group to herd fish into an easily catchable mass."¹⁷ For these farmers, non-lethal methods, such as air-cannons and boots-on-the-ground harassment, quickly prove ineffective in deterring cormorants.¹⁸ In the Southeast region, aquaculture farms have struggled to combat cormorant predation, allowing the population to increase drastically. For these reasons, FWS allows aquaculture farmers to obtain permission to protect their farms from the cormorant through lethal take.¹⁹

INTERACTIONS 155-168 (2012), available at

<https://digitalcommons.usu.edu/cgi/viewcontent.cgi?article=1170&context=hwi>; see also Iyob Tsehaye, Michael L. Jones, Brian J. Irwin, et. al., *A Predictive Model To Inform Adaptive Management of Double-Crested Cormorants and Fisheries in Michigan*, 28 NATURAL RESOURCE MODELING 348-376 (Aug, 2015), available at <https://onlinelibrary.wiley.com/doi/pdf/10.1111/nrm.12071>.

¹² Dorr, *supra*, note 11; see also: David F. Fielder, *Response of Yellow Perch in Les Cheneaux Islands, Lake Huron to Declining Numbers of Double-Crested Cormorants Stemming from Control Activities*, 36 JOURNAL OF GREAT LAKES RESEARCH 207-214 (June, 2010), available at <http://www.bioone.org/doi/abs/10.1016/j.jglr.2009.12.015?journalCode=jglr>.

¹³ B.F. LANTRY, T.H. ECKERT, & C.P. SCHNEIDER, THE RELATIONSHIP BETWEEN THE ABUNDANCE OF SMALLMOUTH BASS AND DOUBLE-CRESTED CORMORANTS IN THE EASTERN BASIN OF LAKE ONTARIO, NY DEP'T OF ENVIRONMENTAL CONSERVATION (Feb. 1, 1999), available at <http://cescos.fau.edu/gawliklab/papers/LantryBFetal2002.pdf>.

¹⁴ NY DEP'T OF ENVIRONMENTAL CONSERVATION, 2015 ANNUAL REPORT: BUREAU OF FISHERIES LAKE ONTARIO UNIT AND ST. LAWRENCE RIVER UNIT TO THE GREAT LAKES FISHERY COMMISSION'S LAKE ONTARIO COMMITTEE, (Mar., 2016), available at https://www.dec.ny.gov/docs/fish_marine_pdf/lorpt15.pdf, at 126.

¹⁵ *Id.*

¹⁶ Sullivan, *supra* note 2.

¹⁷ David Bennett, *As cormorants begin to descend, Southern aquaculture in a bind*, DELTA FARM PRESS, Dec. 13, 2016, available at <http://www.deltafarmpress.com/aquaculture/cormorants-begin-descend-southern-aquaculture-bind>.

¹⁸ *Id.*

¹⁹ U.S. FISH & WILDLIFE SERVICE, REPORTS AND PUBLICATIONS: DOUBLE-CRESTED CORMORANTS, <https://www.fws.gov/birds/management/managed-species/double-crested-cormorants.php>, (last visited June 5, 2018).

Habitat Degradation & Other Bird Species: Double-crested cormorants have a significant impact on the areas in which they breed and roost. Large numbers of cormorants degrade vegetation, resulting in destruction of habitat for other native bird species.²⁰ Their acidic guano alters soil chemistry, irreversibly damaging trees and ground vegetation.²¹ This change in habitat affects other colonial water-birds, as well as a variety of other species that compete with the cormorant for nesting habitat, such as black-crowned night herons or common terns, a species of special concern.²² The cormorant's acidic guano can destroy nest sites leading to a decline of other bird populations.²³ Destruction of tree populations and altered soil chemistry also have the potential to lead to increased pest invasion and have long-lasting negative impacts on the biodiversity and stability of local ecosystems.²⁴ In its 2011 environmental assessment (EA) evaluating cormorant management practices, FWS found that reducing cormorant populations would be beneficial to other species and vegetation currently negatively impacted by the cormorant.²⁵



Figure 1: Cormorant vegetation destruction in the James River²⁶

Endangered Species: While cormorants are known to negatively affect other bird species through competition and habitat destruction, they have significant impacts on endangered species, creating a conflict for federal land managers who must navigate protections for both MBTA-protected migratory birds and fish species covered by the Endangered Species Act of 1973 (ESA, 16 U.S.C. 1531 et seq.). This conflict is exemplified in the Columbia River watershed, where cormorants prey upon millions of ESA-listed salmon smolts. According to the Army Corps of Engineers (Corps), predation on juvenile salmonids as they migrate to the Pacific Ocean is a limiting factor in the species' recovery under ESA.²⁷ NOAA estimates that cormorants eat an average of 12 million juvenile salmonids annually, many of which are ESA-listed.²⁸

Cormorant Management Efforts

²⁰ Sullivan, *supra* note 2 at 15-16.

²¹ *Id.*

²² *Id.*

²³ U.S. Fish & Wildlife Service, *supra* note 7 at 11.

²⁴ Piotr Klimaszuk & Piotr Rzymiski, *The complexity of ecological impacts induced by great cormorants*, 771 HYDROBIOLOGIA 13-30 (May 2016), available at <https://link.springer.com/article/10.1007/s10750-015-2618-1>.

²⁵ U.S. Fish & Wildlife Service *supra* note 7 at 41.

²⁶ Bryan Watts, , *Chesapeake Bay Cormorants Continue Steep Ascent*, THE CENTER FOR CONSERVATION BIOLOGY (DEC. 3, 2013), <http://www.ccbirds.org/2013/12/03/chesapeake-bay-cormorants-continue-steep-ascent/>, (last visited June 5, 2018).

²⁷ DONALD LYONS, DANIEL D. ROBY, ALLEN F. EVANS, ET. AL. , DRAFT REPORT: BENEFITS TO COLUMBIA RIVER ANADROMOUS SALMONIDS FROM POTENTIAL REDUCTIONS IN AVIAN PREDATION ON THE COLUMBIA RIVER, U.S. ARMY CORPS OF ENGINEERS (Dec. 2011), available at http://www.pcouncil.org/wp-content/uploads/E3a_ATT2_CORMORANT_DRAFT_BEN_ANAL_2011_SEPT2013BB.pdf

²⁸ Laura Berg, *Cormorant Killing Season Comes to Seasonal End, Litigation Set for March*, NORTHWEST FISHLETTER #351 (Nov. 2, 2015), available at <http://www.newsdata.com/fishletter/351/4story.html>.

While cormorants are protected as a migratory bird under the MBTA, FWS allows for individuals, private organizations, and other federal and State agencies to control and manage cormorants through a depredation permit or depredation order.²⁹ Management of cormorants can include non-lethal methods, such as harassment techniques, habitat modification, or fisheries management.³⁰ Lethal methods usually involve egg or nest destruction and shooting.³¹ Depredation *permits* are provided on a case-by-case basis for the lethal control of problem birds, while depredation *orders* establish conditions under which specified entities or individuals can take a covered species without obtaining an individual depredation permit.³² Both processes require compliance with the National Environmental Policy Act, including public comment, and are subject to judicial review.

In response to the increased concern from the aquaculture industry, natural resources professionals, recreational fishermen, and others, FWS issued an Aquatic Depredation Order (AQDO) in 1998 that allowed for State management of cormorants to protect the aquaculture industry in 13 southern States.³³ In 2003, it expanded upon this order and established a Public Resource Depredation Order (PRDO) for State level management to benefit free-swimming fishes in 24 northern States.³⁴ Both depredation orders were then subsequently extended in 2009 and 2014.³⁵

In May 2016, pursuant to a lawsuit brought by Public Employees for Environmental Responsibility (PEER) against the FWS, the U.S. District Court for the District of Columbia remanded FWS' 2014 EA and vacated the two depredation orders for double-crested cormorants.³⁶ The court concluded that FWS did not take a "hard look" at the effects of the depredation orders on cormorant populations and other affected resources, and failed to consider a reasonable range of alternatives required under NEPA.³⁷

In November 2017, FWS released a supplementary EA with a finding of no significant impact, allowing for the issuance of individual permits for annual take, including lethal removal, of up to 51,571 cormorants in 37 central and eastern States and the District of Columbia.³⁸ The scope of the EA allows for permits to be issued to protect against aquaculture facilities, human

²⁹ U.S. FISH & WILDLIFE SERVICE, DOUBLE-CRESTED CORMORANTS, <https://www.fws.gov/southeast/faq/double-crested-cormorants/>, (last visited June 5, 2018).

³⁰ Sullivan, *supra* note 2, at 20.

³¹ Sullivan, *supra* note 2, at 23.

³² U.S. Fish & Wildlife Service, *supra* note 29.

³³ U.S. FISH & WILDLIFE SERVICE, DOUBLE-CRESTED CORMORANT MANAGEMENT: CURRENT STATUS, <https://www.fws.gov/midwest/news/documents/Cormorants.pdf>, (last visited June 5, 2018).

³⁴ *H. Comm. on Natural Resources, Subcomm. on Federal Lands*, *supra* note 1, at 5.

³⁵ Fish and Wildlife Service *supra*, note 3; *See also*: Migratory Bird Permits; Revision of Expiration Dates for Double-Crested Cormorant Depredation Orders, 79 Fed. Reg. 102, (30474) (May 28, 2014), *available at* <https://www.fws.gov/policy/library/2014/2014-12318.pdf>.

³⁶ *Public Employees for Environmental Responsibility, et al. v. U.S. Fish and Wildlife Service*, No. 14-1807 (D.D.C. 2016).

³⁷ *Id.*

³⁸ U.S. FISH AND WILDLIFE SERVICE, ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT FOR THE ISSUANCE OF DEPREDAION PERMITS FOR DOUBLE-CRESTED CORMORANTS, 82 Fed. Reg. 219, 52936 (Nov. 15, 2017), *available at* <https://www.federalregister.gov/documents/2017/11/15/2017-24702/environmental-assessment-and-finding-of-no-significant-impact-for-the-issuance-of-depredation>.

and health and safety, threatened and endangered species, and alleviate damage to property.³⁹ Despite the reissuance of permits, cormorant populations remain abundant and the reissued EA does not allow for permits to protect free swimming or recreational fish against cormorants, leaving individuals and State management agencies in the Great Lakes Region in a state of uncertainty on how to effectively manage the species.

Solutions for Effective Cormorant Management in the Great Lakes Region

The Department of the Interior (DOI) has publicly expressed support for reinstating methods to lethally control problem cormorants and is currently working with State fish and wildlife agencies, tribes, and stakeholders to review science and data concerning the impacts of cormorants on free swimming and recreational fish.⁴⁰ This process is expected to take about a year and will include “identifying the monitoring needs necessary to address the issue and gathering better scientific information that could be used in the NEPA review and decision making process.”⁴¹ During this process, DOI will need to decide the scope of the NEPA review, including what the extent of the geographical area covered by NEPA review should be and whether it should cover areas beyond the Great Lakes Region.

In the meantime, DOI has stated its support of legislation currently before Congress that would temporarily authorize the lethal taking of problem cormorants while simultaneously ensuring the long-term health of cormorant populations.⁴² These bills include H.R. 4429, the Cormorant Control Act, introduced by Rep. Jack Bergman (R-MI), which directs FWS to reissue the two depredation orders vacated by the 2016 District Court ruling, providing for continued management of cormorants by State fish and game agencies, as well as private aquaculture organizations.⁴³ The legislation also shields the reissuance from further judicial review, ensuring that FWS would not have to spend additional taxpayer dollars defending the orders in court.⁴⁴

Other proposed legislative solutions that provide the Great Lakes Region the ability to effectively manage problem cormorants include S. 2663, the ACRE Act, introduced by Senator John Barrasso (R-WY). This bill would codify the two depredation orders in sections 21.47 and 21.48 of Title 50 in the Code of Federal Regulations that allow for take of cormorants to protect aquaculture facilities and to protect public resources, including fish, wildlife, plants, and their habitats from adverse impacts caused by cormorants. This bill contains a sunset provision terminating the authority provided to FWS in the bill on the effective date of a regulation promulgated by FWS to control depredation of cormorant populations.⁴⁵

³⁹ *Id.*

⁴⁰ *H. Comm. on Natural Resources, Subcomm. on Federal Lands, supra* note 1, at 115-37.

⁴¹ Statement for the Record by U.S. Department of the Interior, prepared for the House Natural Committee on Natural Resources Subcommittee on Federal Lands Hearing on H.R. 4429 – Cormorants Control Act H.R. 2591 - Modernizing Pittman-Robertson for Tomorrow’s Needs Act of 2017 (Feb. 15, 2018) (available at <https://www.doi.gov/ocl/hr-4429-and-hr-2591>).

⁴² *Id.*

⁴³ *Legislative Hearing on H.R.2591, H.R.4429, H.R. 4609, H.R.4647, H.R. 4851, Before the H. Comm. on Natural Resources, Subcomm. on Federal Lands, 115th Cong., 115-37, (2018) (Legislative Hearing Memo on H.R. 4429), available at https://naturalresources.house.gov/uploadedfiles/memo_h.r._4429_02.15.18.pdf.*

⁴⁴ *Id.*

⁴⁵ S. 2663, 115th Cong., (2018).