Committee on Natural Resources
Rob Bishop Chairman
Markup Memorandum

July 9, 2018

To: All Natural Resources Committee Members

From: Majority Committee Staff
Subcommittee on Water, Power and Oceans – Bill Ball (x58331)
Subcommittee on Federal Lands – Chris Esparza (x67736)

Mark-Up: **H.R. 6302 (Rep. Jack Bergman, R-MI),** To enact as law certain regulations relating to the taking of double-crested cormorants
Wednesday, July 11, 2018, 10:15am, 1324 Longworth HOB

H.R. 6302, to enact as law certain regulations relating to the taking of double-crested cormorants

Summary of the Bill

H.R. 6302 temporarily reinstates depredation orders that were struck down by the District Court for the District of Columbia in 2016 related to double-crested cormorants until the U.S. Fish and Wildlife Service (FWS) reissues regulations to control destructive double-crested cormorant populations.

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, subsistence and recreational fishing, and endangered species in certain parts of the country.

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

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[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.

Migratory Bird Treaty Act of 1918 (MBTA, 16 U.S.C. 703 et seq.), which prohibits any take (the killing, capture, selling, trading, or transport, etc.) of any protected species without prior authorization by FWS.

Impact of the Cormorant

In Michigan, the cormorant population grew to nearly 90,000 birds in 2007[3] and the overall population in central and eastern United States and Canada is estimated to be between 731,880 and 752,516.[4] This enormous population growth causes many detrimental effects for 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: In Michigan, recreational and commercial fishing is an economically significant industry valued between $4 billion and $7 billion annually.[5] According to FWS, "Double-crested cormorant populations can decrease fish populations in open waters and in aquaculture facilities."[6] 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.[7] Studies conducted in Michigan show that cormorants have the potential to influence sport fishing populations, causing significant declines in fisheries.[8] Declines in these sport fisheries in turn raise serious concerns for the local economies dependent on recreational fisheries for economic stability.

Studies, including those conducted by the Michigan Department of Natural Resources, have illustrated the link between cormorant management efforts and the recovery of fishery

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[3] 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.

[4] 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.

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

[6] 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.

[7] TRAVIS L. DEVAULT, 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.

[8] 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 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.

populations in Michigan.[9] For instance, one study analyzed over 20 years of fishery data in Lake Ontario and found cormorant predation was associated with a decrease of smallmouth bass populations, which contributed to a major decline in the bass fishery in both quality and abundance.[10] 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, which correlated with a boom in the cormorant population.[11]

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.[12] 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."[13] For these farmers, non-lethal methods, such as air-cannons and boots-on-the-ground harassment, have not proven effective in deterring cormorants.[14] In the Southeast region, aquaculture farms have struggled to combat cormorant predation, allowing the population to increase drastically. Because of ineffective non-lethal methods and a ballooning population in the region, FWS allows aquaculture farmers to obtain permission to protect their farms from the cormorant through lethal take.[15]

Habitat Degradation and 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.[16] Their acidic guano alters soil chemistry, irreversibly damaging trees and ground vegetation.[17] [18] 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.[19] Furthermore, destruction of tree populations and altered

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[9] 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.

[10] 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.

[11] 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.

[12] Sullivan,), *supra* note 2.

[13] 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.

[14] *Id.*

[15] 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).

[16] Sullivan, *supra* note 2 at 15-16.

[17] *Id.*

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

[19] *Id.*

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.[20] In its 2011 environmental assessment evaluating cormorant management practices, FWS found that reducing cormorant populations would be beneficial to other species and vegetation currently negatively impacted by the cormorant.[21]

Endangered Species: Federal protections for predatory birds under the MBTA have also been found to inhibit recovery of Endangered Species Act (ESA, 16 U.S.C. 1531 et seq.) protected fish species. Cormorants prey upon millions of ESA-listed salmon smolts in the Columbia River watershed. According to the Army Corps of Engineers, predation on juvenile salmonids as they make their migration to the Pacific Ocean by these birds is a limiting factor in the species' recovery under the ESA.[22] The National Oceanic and Atmospheric Administration estimates that cormorants eat an average of **12 million juvenile salmonids** annually, many of which are ESA-listed.[23] The Corps attempts to control this predation through population reduction efforts through special federal permits issued by FWS.[24] In 2015, the Corps applied for a permit to lethally take well over half of the breeding pairs of cormorants that reside on East Sand Island.[25] Third party litigants have threatened to stop these efforts as well.[26]

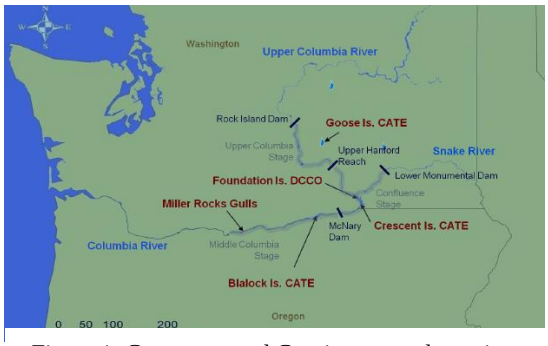

Figure 1: Cormorant and Caspian tern colony cites along the Columbia River.
Source: U.S. Army Corps of Engineers

Cormorant Management Efforts

While cormorants are protected as migratory birds 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.[27] Management of cormorants can include non-lethal methods, such as harassment techniques, habitat modification, or fisheries management.[28] Lethal methods usually involve egg or nest destruction and shooting.[29] Depredation *permits* are provided on a case-by-case basis for the lethal control of problem birds,

[20] Piotr Klimaszyk & Piotr Rzymski, 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.
[21] U.S. Fish & Wildlife Service *supra* note 7 at 41.
[22] U.S. Army Corps of Engineers: *Benefits to Columbia River Anadromous Salmonids from Potential Reductions in Avian Predation on the Columbia River*, Donald Lyons et all, September 7, 2011.
[23] Northwest Fishletter #351, November 2, 2015.
[24] Final EIS: Double-chested Cormorant Management Plan to Reduce Predation of Juvenile Salmonids in the Columbia River Estuary. U. S. Army Corps of Engineers, February 6, 2015.
[25] Final EIS: Double-chested Cormorant Management Plan to Reduce Predation of Juvenile Salmonids in the Columbia River Estuary. U. S. Army Corps of Engineers, February 6, 2015.
[26] Northwest Fishletter #344, April 3, 2015.
[27] U.S. FISH & WILDLIFE SERVICE, DOUBLE-CRESTED CORMORANTS, https://www.fws.gov/southeast/faq/double-crested-cormorants/, (last visited June 5, 2018).
[28] Sullivan, s*upra* note 2, at 20.
[29] Sullivan, s*upra* note 2, at 23.

while depredation *orders* establish conditions under which specific entities or individuals can take a covered species without obtaining an individual depredation permit.[30] Both processes require compliance with the National Environmental Policy Act (NEPA, 42 U.S.C. 4321 et seq.), 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 in 1998 that allowed for State management of cormorants to protect the aquaculture industry in 13 southern States.[31] In 2003, FWS expanded this order and established a Public Resource Depredation Order (PRDO) for State-level management to benefit free-swimming fishes in 24 northern States.[32] Both depredation orders were subsequently extended in 2009 and 2014.[33]

In May 2016, pursuant to a lawsuit brought by Public Employees for Environmental Responsibility against FWS, the U.S. District Court for the District of Columbia remanded FWS' 2014 NEPA environmental review and vacated the two depredation orders for double-crested cormorants.[34] 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.[35]

In November 2017, FWS released a supplementary environmental assessment (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.[36] The scope of the EA allows for permits to be issued to protect aquaculture facilities, human and health and safety, threatened and endangered species, and alleviate damage to property.[37] 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 with few options to effectively manage the species.

Solutions for Effective Cormorant Management in the Great Lakes Region

In June 2018, in response to cormorants' negative impacts on species and habitat and bureaucratic hurdles to proper cormorant management, the Natural Resources Committee held a

[30] U.S. Fish and Wildlife Service, *supra* note 29.
[31] 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).
[32] *H. Comm. on Natural Resources, Subcomm. on Federal Lands*, *supra* note 1, at 5.
[33] 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.
[34] *Public Employees for Environmental Responsibility, et al. v. U.S. Fish and Wildlife Service*, No. 14-1807 (D.D.C. 2016).
[35] *Id.*
[36] U.S. FISH AND WILDLIFE SERVICE, ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT FOR THE ISSUANCE OF DEPREDATION 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.
[37] *Id.*

field hearing in Alpena, Michigan, to examine the impacts that cormorants have on wild fish populations and commercial and recreational fishing. Witnesses representing the State of Michigan, local business and a local conservationist testified on the FWS's failure to incorporate a large body of non-federal data into its environmental reviews and the general challenges that uncontrolled cormorant populations create for the local ecosystem and communities. Mr. Randall Claramunt, testifying on behalf of the Michigan Department of Natural Resources, cited the success of cormorant management in the Les Cheneaux Islands towards rebuilding the yellow perch fishery. Studies show that the collapse of the yellow perch fishery related to cormorant predation cost two local communities $5.3 million annually.[38]

Mr. Claramunt stated that, in the Les Cheneaux region, "[w]ithin nine years, cormorant abundance was reduced and sustained at agreed upon target levels in balance with the ecosystem…Game fish populations began to rebound and the local economy began to recover less than ten years after the PRDO."[39] At this hearing, Mr. Tom Cooper from FWS reiterated the Department of the Interior's support for "reinstating methods to lethally control problem birds" and emphasis on collaboration with local stakeholders.[40] Although Mr. Claramunt expressed optimism over recent commitments by FWS, he stated "[i]t is unclear as to the intent to not include the vast amount of information from non-federal governments as to the impacts of uncontrolled cormorant populations on fish populations and the communities that they support."[41]

As a result of this hearing, Congressman Bergman introduced H.R. 6302. The bill temporarily reinstates 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.[42] H.R. 6302 reflects language in S. 2663, the *ACRE Act*, sponsored by Sen. John Barrasso (R-WY).[43] This legislation would temporarily reimplement the original PRDO until FWS reissues regulations to control depredation of double-crested cormorant populations.

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[38] Ridgeway, M. S., and D. G. Fielder. 2013, Double-Crested Cormorants in the Laurentian Great Lakes: Issues and Ecosystems. Pages 733-764 In Great Lakes Fisheries Policy and Management, second edition, W. W. Taylor, A. J. Lynch and N. J. Leonard. editors. Michigan State University Press, East Lansing.

[39] *Legislative Hearing on "Examining the Effects of Mismanagement of the Cormorant in the Great Lakes Region", Before the H. Comm. on Natural Resources*, 115th Cong., 2, (2018) (Statement of Mr. Randall Claramunt, at 6), *available at* https://naturalresources.house.gov/uploadedfiles/6.11_testimony_claramunt.pdf.

[40] *Legislative Hearing on "Examining the Effects of Mismanagement of the Cormorant in the Great Lakes Region", Before the H. Comm. on Natural Resources*, 115th Cong., 2, (2018) (Statement of Mr. Tom Cooper, at 2), *available at* https://naturalresources.house.gov/uploadedfiles/6.11_testimony_cooper.pdf.

[41] *Legislative Hearing on "Examining the Effects of Mismanagement of the Cormorant in the Great Lakes Region", Before the H. Comm. on Natural Resources*, 115th Cong., 2, (2018) (Statement of Mr. Randall Claramunt, at 8), *available at* https://naturalresources.house.gov/uploadedfiles/6.11_testimony_claramunt.pdf.

[42] *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.

[43] *ACRE Act*, S. 2663, Sec. 9, 115th Cong., (2018), *available at* https://www.congress.gov/115/bills/s2663/BILLS-115s2663is.pdf.

Major Provisions/Analysis of H.R. 6302

Section 1 temporarily reimplements the depredation order struck down by federal court in 2016 related to double-crested cormorants until FWS promulgates new regulations to control depredation of double-crested cormorants.

Cost

The Congressional Budget Office has not completed a cost estimate of H.R. 6302.

Administration Position

At a June 2018 full Committee field hearing, the Department of the Interior testified in support of a similar bill, H.R. 4429, and in support of the principles of H.R. 6032, stating that until current evaluations of cormorant impacts on wild fish populations and a potential NEPA review are complete, "the Department supports legislation authorizing the take of problem birds through a temporary, short-term reinstatement of the depredation orders found at CFR 21.47 and 21.48, while ensuring that the long-term health of cormorant populations will be properly considered through a complete scientific review and rulemaking."[44]

Anticipated Amendments

None.

Effect on Current Law (Ramseyer)

None.

[44] *Legislative Hearing on "Examining the Effects of Mismanagement of the Cormorant in the Great Lakes Region", Before the H. Comm. on Natural Resources*, 115th Cong., 2, (2018) (Statement of Mr. Tom Cooper, at 2), *available at* https://naturalresources.house.gov/uploadedfiles/6.11_testimony_cooper.pdf.