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Via email and certified mail; attachments via certified mail only

RE: Notice of Intent to Sue to Remedy Violations of the Endangered Species Act Related to Operation of the Bonnet Carré Spillway in St. Charles Parish, Louisiana

Dear Lieutenant General Semonite, Major General Toy, and Secretaries McCarthy, Bernhardt, and Ross:

We are writing to provide notice in accordance with the citizen suit provision of the Endangered Species Act ("ESA"), 16 U.S.C. § 1540(g), that Defenders of Wildlife and Healthy Gulf intend to sue the U.S. Army Corps of Engineers ("Corps") and the Mississippi River Commission ("MRC") for procedural and substantive violations of ESA section 7(a)(2), 16 U.S.C. § 1536(a)(2), in connection with the federal operation of the Bonnet Carré Spillway ("Spillway") on the lower Mississippi River in St. Charles Parish, Louisiana. Operation of the Spillway encompasses, at a minimum, the specific decisions to open the Spillway, including the five most recent decisions to open the Spillway in May 2011, January 2016, March 2018, February 2019, and May 2019, carrying out those decisions, and the issuance of any guidance documents regarding the management of the Spillway.

Specifically, the Corps and MRC have failed to complete lawful ESA section 7(a)(2) consultations on the effects of operating the Spillway on ten species protected by the ESA and

associated critical habitat that may be affected by these operations. The Corps and MRC have failed to complete any ESA section 7(a)(2) consultation on five sea turtle species (loggerhead sea turtle (*Caretta caretta*), leatherback sea turtle (*Dermochelys coriacea*), green sea turtle (*Chelonia mydas*), Kemp's ridley sea turtle (*Lepidochelys kempii*), and hawksbill sea turtle (*Eretmochelys imbricata*)), piping plover (*Charadrius melodus*), red knot (*Calidris canutus rufa*), Gulf subspecies of Atlantic sturgeon (*Acipenser oxyrinchus desotoi*) ("Gulf sturgeon"), and West Indian manatee (*Trichechus manatus*), and have failed to complete any ESA section 7(a)(2) consultation on designated critical habitat for the loggerhead sea turtle, Gulf sturgeon, and piping plover. To the extent the Corps has issued "no effect" findings for these species and critical habitat, the findings violate the ESA and are arbitrary and capricious. Further, the timing of these findings as well as the consultations the Corps has initiated for the endangered pallid sturgeon (*Scaphirhynchus albus*)—consultations that are not all complete—are unlawful because the Corps and MRC have arbitrarily relied on the timing provisions in the ESA regulations governing "emergency circumstances." Due to the agencies' failure to comply with their procedural section 7(a)(2) violations, the Corps and MRC have also unlawfully failed to ensure that federal operation of the Spillway is not likely to jeopardize listed species or destroy or adversely modify designated critical habitat as required by ESA section 7(a)(2).

Pursuant to section 11(g) of the ESA, 16 U.S.C. § 1540(g), this letter provides you notice that, unless the Corps and MRC remedy the procedural and substantive violations of the ESA identified herein, Defenders of Wildlife and Healthy Gulf intend to challenge the Corps' and MRC's unlawful conduct in federal district court.

I. LEGAL FRAMEWORK

The ESA is "the most comprehensive legislation for the preservation of endangered species ever enacted by any nation." Tenn. Valley Auth. v. Hill, 437 U.S. 153, 180 (1978). It was enacted "to provide a program for the conservation of . . . endangered species and threatened species" and "to provide a means by which the ecosystems upon which endangered species and threatened species depend may be conserved." 16 U.S.C. § 1531(b).

The Ninth Circuit has described section 7(a)(2) as the "heart of the ESA." Karuk Tribe of Cal. v. U.S. Forest Serv., 681 F.3d 1006, 1019 (9th Cir. 2012) (quoting W. Watersheds Project v. Kraayenbrink, 632 F.3d 472, 495 (9th Cir. 2011)). Section 7(a)(2) mandates that all federal agencies (including the Corps and MRC) "insure that any action authorized, funded, or carried out by [the agency] . . . is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of [critical] habitat of such species . . . ." 16 U.S.C. § 1536(a)(2). See also 50 C.F.R. § 402.02 (defining "jeopardize the continued existence of" and "destruction or adverse modification").

To carry out this substantive mandate, all federal agencies are required to consult with the appropriate federal wildlife agency—the U.S. Fish and Wildlife Service ("FWS") and/or the National Marine Fisheries Service ("NMFS")—on any agency "action" that "may affect" listed species or designated critical habitat. 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.14(a). See Medina Cty. Envtl. Action Ass'n v. Surface Transp. Bd., 602 F.3d 687, 693 (5th Cir. 2010); W. Watersheds, 632 F.3d at 495.

An agency "action" is defined broadly, and includes "all activities or programs of any kind authorized, funded, or carried out, in whole or in part, by Federal agencies." 50 C.F.R. § 402.02. The action must also involve "discretionary Federal involvement or control." Id. § 402.03. The "may affect" threshold, in turn, is "relatively low." Karuk Tribe, 681 F.3d at 1027 (quoting Cal. ex rel. Lockyer v. U.S. Dep't of Agric., 575 F.3d 999, 1018 (9th Cir. 2009)). "Any possible effect, whether beneficial, benign, adverse or of an undetermined character" triggers the consultation requirement. Id. (quoting Lockyer, 575 F.3d at 1018–19; Endangered Species Act of 1973 Final Rule, 51 Fed. Reg. 19,926, 19,949 (June 3, 1986)) (emphasis omitted). "An agency may avoid the consultation requirement only if its action will have 'no effect' on a listed species or critical habitat." Karuk Tribe, 681 F.3d at 1027 (citing Sw. Ctr. for Biological Diversity v. U.S. Forest Serv., 100 F.3d 1443, 1447–48 (9th Cir. 1996)). The action agency must consider listed species and critical habitat within the entire "action area," which is defined to include "all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action." 50 C.F.R. § 402.02. "Effects of the action" include impacts that "may occur later in time" or "outside the immediate area involved in the action." Id.

To begin the consultation process, the federal agency must contact the appropriate wildlife agency to determine if listed species or critical habitat "may be present" in the area affected by the proposed action. 16 U.S.C. § 1536(c)(1); Medina Cty., 602 F.3d at 693; Forest Guardians v. Johanns, 450 F.3d 455, 457 (9th Cir. 2006). If so, the action agency must prepare a biological assessment. Medina Cty., 450 F.3d at 694; Forest Guardians, 450 F.3d at 457. If the action agency determines in the biological assessment that the proposed action is "not likely to adversely affect any listed species or critical habitat," 50 C.F.R. § 402.14(b)(1), and FWS or NMFS (as appropriate) issues a written concurrence with that finding, formal consultation is not required and the consultation process is complete. Id. §§ 402.12(j), (k). Alternatively, if FWS or NMFS determines during informal consultation that the proposed action is "likely to adversely affect" any listed species or critical habitat, formal consultation is required. See id. § 402.13(c); see also id. § 402.12(a). At the end of the formal consultation process, FWS or NMFS issues a biological opinion in which the agency assesses whether the proposed action is likely to jeopardize the continued existence of a listed species or destroy or adversely modify any designated critical habitat. Id. § 402.14(h). If so, the wildlife agency identifies "reasonable and prudent alternatives" that avoid this violation. 16 U.S.C. § 1536(b)(3)(A); 50 C.F.R. §§ 402.02, 402.14(g), (h).

Although "emergency" consultations are not mentioned in the statute, ESA regulations also set out procedures for consultation in "emergency circumstances." 50 C.F.R. § 402.05. These regulations explain that "expedited consultation" may be used "[w]here emergency circumstances mandate the need to consult in an expedited manner" such as in "situations involving acts of God, disasters, casualties, national defense or security emergencies, etc." Id. § 402.05(a). In such emergency circumstances, expedited consultation "may be conducted informally through alternative procedures" so long as those procedures are "consistent with the requirements of section 7(a)–(d) of the [ESA]." Id. Once the emergency is "under control," the agency must initiate formal consultation "as soon as practicable." Id. § 402.05(b).

II. FACTUAL BACKGROUND

A. The Bonnet Carré Spillway

The Bonnet Carré Spillway is a flood control mechanism on the lower Mississippi River situated northwest of New Orleans, Louisiana. The 5.7-mile Spillway diverts water from the Mississippi River to avoid potentially causing flooding in New Orleans. The diverted water flows into Lakes Pontchartrain and Borgne and then into the Mississippi Sound, before finally reaching the Gulf of Mexico. The Spillway was authorized by the Flood Control Act of 1928, 33 U.S.C. §§ 702a–702m, as one part of the Mississippi River and Tributaries Project, a comprehensive plan for flood control that involved the construction of new levees, floodwalls, spillways, channel stabilization and other projects.

The Bonnet Carré Spillway is operated in conjunction with two other flood control structures on the lower Mississippi River: the Old River Control Structure and the Morganza Floodway. The Corps operates these structures together to minimize flood damage in the lower reaches of the river and to prevent the Mississippi River from exceeding water levels of 1,250,000 cubic feet per second at New Orleans. U.S. Army Corps of Eng'rs New Orleans Dist., Spillway Operation Information https://www.mvn.usace.army.mil/Missions/Mississippi-River-Flood-Control/Bonnet-Carre-Spillway-Overview/Spillway-Operation-Information/ (last visited Jan. 21, 2020). The Bonnet Carré Spillway can divert up to 250,000 cubic feet per second of floodwater into Lake Pontchartrain. Id. (discussing Spillway design flow capacity). The Spillway control structure itself contains 7,000 wooden timbers within 350 bays. U.S. Army Corps of Eng'rs New Orleans Dist., Bonnet Carre' Spillway Overview https://www.mvn.usace.army.mil/Missions/Mississippi-River-Flood-Control/Bonnet-Carre-Spillway-Overview/ (last visited Jan. 21, 2020). To open the Spillway, two cranes move along the structure to lift out individual timbers. U.S. Army Corps of Eng'rs New Orleans Dist., Spillway Operation Information https://www.mvn.usace.army.mil/Missions/Mississippi-River-Flood-Control/Bonnet-Carre-Spillway-Overview/Spillway-Operation-Information/ (last visited Jan. 21, 2020). The Corps may choose to remove some or all of the timbers, thereby controlling the volume and duration of the diverted flow. Id. To close the Spillway, the Corps begins a closing sequence where it gradually reinserts the timbers; this sequence is also variable in duration. Id.

The Corps and MRC jointly operate the Spillway. Id. The MRC is responsible for determining when the Spillway will be opened. Id. The Corps, in turn, is responsible for the day-to-day operation of the Spillway and for advising the MRC regarding when to open the Spillway. Id. Thus, the Corps determines when it is necessary to open the Spillway and then obtains the authority to do so from the President of the MRC. Id. The decisions to open the Spillway are set out in documents signed and issued by the President of the MRC. See, e.g., Memorandum Recommending Operation of the Bonnet Carré Spillway from Major General Richard Kaiser, Mississippi River Commission President to U.S. Army Corps of Engineers New Orleans District Commander (Feb. 25, 2019). The Corps has taken responsibility for ESA compliance. See, e.g., U.S. Army Corps of Eng'rs New Orleans Dist., Biological Assessment for Bonnet Carré Spillway 2011 and 2016 Emergency Operations at 3, 4 (Nov. 18, 2017) [hereinafter "2017 Biological Assessment"].

The agencies' operation of the Spillway is guided by a series of documents issued by the Corps, including a "Water Control Manual" most recently revised in 1999. According to the manual, its purpose is "to aid the water control decision-making process." U.S. Army Corps of Eng'rs, Miss. Valley Div., Water Control Manual at 1-02 (Sept. 1999). During this decision-making process, the Corps retains discretion to identify and implement operational changes that may, among other things, mitigate impacts on threatened and endangered species. For example, the Corps retains discretion over the timing and duration of the flows through the Spillway. Id. Similarly, the Corps retains the ability to operate each of the three flood control structures together in a way that meets the objectives of the structures while also minimizing harmful impacts to species in Lakes Pontchartrain and Borgne and in the Mississippi Sound. Id. The Corps has stated in its public materials that it makes Bonnet Carré operational decisions after consideration of environmental, hydrologic, structural, navigational, and other factors. U.S. Army Corps of Eng'rs New Orleans Dist., Bonnet Carré Spillway at 11 https://www.mvn.usace.army.mil/Portals/56/docs/PAO/Brochures/BCspillwaybooklet.pdf (last visited Jan. 21, 2020). The Corps has also stated that it implements certain measures to mitigate impacts to fish and wildlife, as well as to mitigate impacts to recreational uses, public health and welfare, and other resources. U.S. Army Corps of Eng'rs, Miss. Valley Div., Water Control Manual at B-2 (Sept. 1999).

For the first seven and a half decades of its existence, the Corps and MRC opened the Spillway on average approximately once per decade U.S. Army Corps of Eng'rs New Orleans Dist., Spillway Operation Information https://www.mvn.usace.army.mil/Missions/Mississippi-River-Flood-Control/Bonnet-Carre-Spillway-Overview/Spillway-Operation-Information/ (last visited Jan. 21, 2020). In the last nine years, the agencies have opened the Spillway five times—double the number of times it was opened in the previous thirty years. Id. Specifically, the Corps and MRC's most recent openings have occurred during the following times:

- May 9, 2011 to June 20, 2011 (43 days);
- January 10, 2016 to February 1, 2016 (22 days);
- March 8, 2018 to March 30, 2018 (23 days);
- February 27, 2019 to April 11, 2019 (44 days); and
- May 10, 2019 to July 27, 2019 (79 days).

Id.

Although the Corps has not posted the total discharge from 2011, the water discharged during the later openings ranged from more than 2.4 million cubic feet in 2016 to more than 9.4 million cubic feet during the second opening in 2019. Id. In 2019 alone, more than 15.5 million cubic feet of freshwater was discharged into Lake Pontchartrain, Lake Borgne, and the Mississippi Sound during the two openings. Id.

The 2018 and 2019 openings mark the first time the agencies opened the Spillway in consecutive years, and the first time the agencies opened it twice in one calendar year. Id. As climate change causes more extreme storms and varied weather, and increases the number and intensity of floods in the lower Mississippi River valley region, it is likely that the federal agencies will continue to open the Spillway more frequently and for increasingly longer duration.

B. The Agencies' Operation of the Spillway and Impacts to Threatened and Endangered Species and Their Critical Habitat

When the Corps and MRC open the Bonnet Carré Spillway, a massive amount of cold, polluted river water is discharged into brackish Lakes Pontchartrain and Borgne and the saline Mississippi Sound. See U.S. Geological Survey, Dennis Demcheck, et al., Selected Water-Quality Data for the Lower Mississippi River, Bonnet Carre Spillway, and Lake Pontchartrain Area, Louisiana, April through June 1994 and 1974-84 at 9, 22 (1996) [appended as "Attachment A"]; Sibel Bargu, et al., Effects of freshwater input on nutrient loading, phytoplankton biomass, and cyanotoxin production in an oligohaline estuarine lake 661 HYDROBIOLOGIA 377, 381 (2011) ["Attachment B"]; J.R. White, et al., Mississippi River Flood of 2008: Observations of a Large Freshwater Diversion on Physical, Chemical, and Biological Characteristics of a Shallow Estuarine Lake 43 ENVTL. SCI. & TECH. 5599, 5601–03 (Nov. 2009) ["Attachment C"]. This freshwater discharge causes the salinity levels in these waterbodies to crash. Attachment C at 5600–02; Eric Roy and John White, Nitrate Flux into the Sediments of a Shallow Oligohaline Estuary during Large Flood Pulses of Mississippi River Water 41 J. ENVTL. QUALITY 1549, 1555 (Nov. 2011); ["Attachment D"]; U.S. Army Corps of Eng'rs, William McAnnaly and R.C. Burger, Salinity Changes in Pontchartrain Basin Estuary Resulting from Bonnet Carré Freshwater Diversion: Numerical Model Investigation at 40–41 (Feb. 1997) ["Attachment E"]; Michael Waldon and C. Frederick Bryan, Symposium: Recent Research in Coastal Louisiana – Annual Salinity and Nutrient Budget of Lake Pontchartrain and Impact of the Proposed Bonnet Carré Diversion 79, 83 (1999) ["Attachment F"]. See also generally U.S. Geological Survey, USGS Water Data for the Nation https://waterdata.usgs.gov/nwis (last visited Jan. 27, 2020); Lake Pontchartrain Basin Found., Recreational Water Monitoring Data for 2001 to 2019 – Salinity (last updated Sept. 3, 2019) ["Attachment G"]. Changes to salinity levels can kill or severely affect a myriad of species dependent on these waters' particular salinity regimes. See Attachment D at 1549; Attachment C at 5599, 5603.

In addition, the river water is laden with pollutants, primarily from pesticide and agricultural runoff. Attachment A at 9; Attachment C at 5601–03. This polluted water sets off a chain reaction of impacts: the nutrient load from the pollutants leads to eutrophication which triggers an extreme algal overgrowth (also called a harmful algal bloom) when diverted into the warm estuary, which in turn results in a lack of oxygen in the aquatic environment, or hypoxia. See Attachment A at 9; Attachment D at 1549. See also generally J.M. O'Neil, et al., The rise of harmful cyanobacteria blooms: The potential roles of eutrophication and climate change 14 HARMFUL ALGAE 313 (2012) ["Attachment H"]. Fish and wildlife dependent on oxygenated water can suffocate in hypoxic zones if they are unable to avoid them. Id. at 323. The river water also carries a large sediment load, which creates a visible sediment plume in the Mississippi Sound and affects species that depend on clear water. See Nat'l Aeronautics and Space Admin., Earth Observations taken by the Expedition 17 Crew (April 28, 2008) available at https://images.nasa. gov/details-iss017e005763 ["Attachment L"] ("Lake Pontchartrain and the Bonnet Carre Spillway, Louisiana, are featured in this image photographed by an Expedition 17 crewmember on the International Space Station."); Nat'l Aeronautics and Space Admin. Earth Observatory, Coloring Lake Pontchartrain https://earthobservatory.nasa. gov/images/91977/coloring-lake-pontchartrain (Mar. 3, 2018) (NASA satellite images showing sediment plume and algal bloom after 2018 Bonnet Carré Spillway opening). See also

Attachment A at 9–10, 26–27; Mead Allison, et al., Mississippi River channel response to the Bonnet Carré Spillway opening in the 2011 flood and its implications for the design and operation of river diversions 477 J. OF HYDROLOGY 104, 104–108 (2013) ["Attachment I"]; Scott Mize and Dennis Demcheck, Water quality and phytoplankton communities in Lake Pontchartrain during and after the Bonnet Carré Spillway opening, April to October 2008, in Louisiana, USA GEO-MARINE LETTERS at 8 (Dec. 2009) ["Attachment J"]; see generally Jeffrey Fabre, Sediment flux & fate for a large-scale diversion: the 2011 Mississippi River Flood, the Bonnet Carré Spillway, and the implications for coastal restoration in south Louisiana La. State Univ. Master's Thesis (May 2012) ["Attachment K"]. Moreover, the influx of river water decreases water temperatures in the two lakes and the Mississippi Sound. See Attachment A at 1, 22; Attachment B at 385, 387; Attachment C at 5601; Attachment J at 5.

There are eleven species protected under the ESA within the area affected by this discharge: five species of sea turtle, Gulf sturgeon, piping plover, red knot, West Indian manatee, pallid sturgeon, and shovelnose sturgeon.[1] FWS has jurisdiction over the pallid sturgeon, shovelnose sturgeon, manatee, and the two bird species, and NMFS and FWS share jurisdiction for the sea turtles and the Gulf sturgeon. Loggerhead sea turtles, Gulf sturgeon, and piping plover also have designated critical habitat located in the area potentially affected by the Spillway. Moreover, each of these species and their critical habitat are susceptible to being affected by the ecological changes the Spillway causes.

Nonetheless, with the exception of the pallid and shovelnose sturgeon, the Corps and MRC have never assessed the impact of operating the Bonnet Carré Spillway on these listed species or on any designated critical habitat as part of an ESA section 7(a)(2) consultation.

Sea turtles

There are five different species of sea turtle listed under the ESA that feed, nest and/or migrate through the area potentially affected by the operation of the Spillway: loggerhead, Kemp's ridley, green, hawksbill, and leatherback. See Roldán A. Valverde and Kym Rouse Holzwart, HABITATS AND BIOTA OF THE GULF OF MEXICO: BEFORE THE DEEPWATER HORIZON OIL SPILL – CH. 11 SEA TURTLES OF THE GULF OF MEXICO 1189, 1189 (C.H. Ward ed. 2017). ["Attachment M"]; U.S. Fish & Wildlife Serv., IPaC: Information for Planning and Consultation https://ecos.fws.gov/ipac/ (last visited Jan. 21, 2020).

Kemp's ridley, hawksbill, and leatherback sea turtles were initially listed in 1970. See 35 Fed. Reg, 18,319, 18,322 (Dec. 1, 1970). The green sea turtle was first listed under the ESA in 1978, 43 Fed. Reg. 32,800 (July 28, 1978), but in 2016 its listing was revised to reflect eleven distinct population segments ("DPSs") including the threatened North Atlantic DPS whose range

[1] Shovelnose sturgeon are protected under the "similarity of appearance" provision of the ESA. Threatened Status for Shovelnose Sturgeon Under the Similarity of Appearance Provisions of the Endangered Species Act, 75 Fed. Reg. 53,598 (Sept. 1, 2010). In its listing decision, FWS stated that the protections for shovelnose sturgeon do not extend to section 7(a)(2) and federal agencies are not required to complete section 7(a)(2) consultations regarding the species. Id. at 53,604. The MRC and Corps actions related to shovelnose sturgeon are not challenged here.

includes the Mississippi Sound. See 81 Fed. Reg 20,057 (May 6, 2016). Loggerhead sea turtles were first protected under the ESA in 1978 but in 2011 the listing was revised to reflect nine DPSs, including the threatened Northwest Atlantic Ocean DPS which also includes the Mississippi Sound. 76 Fed. Reg. 58,867 (Sept. 22, 2011). The Mississippi Sound and the estuaries of Lakes Borgne and Pontchartrain provide year-round habitat for juvenile loggerheads and for all life stages of the Kemp's ridley sea turtles. See Attachment M at 1197–99; Andrew Coleman, et al., Population Ecology and Rehabilitation of Incidentally Captured Kemp's Ridley Sea Turtles (Lepidochelys Kempii) in the Mississippi Sound, USA 11 HERPETOLOGICAL CONSERVATION AND BIOLOGY 253, 253 (April 2016) ["Attachment N"]; Donna Shaver and Cynthia Rubio, Post-nesting movement of wild and head-started Kemp's ridley sea turtles Lepidochelys kempii in the Gulf of Mexico 4 ENDANGERED SPECIES RESEARCH 43, 47–49, 51 (Jan. 2008) ["Attachment O"]. Indeed, the Corps has acknowledged that loggerheads nest, hatch, and feed in aquatic and terrestrial habitats in proximity to the Spillway, and that Kemp's ridley sea turtles "are generally found in shallow nearshore and inshore areas" along the Louisiana coast, including "and especially in salt marsh habitats, from May through October." 2017 Biological Assessment at 3, 4. Scientists have also observed juvenile green turtles foraging and migrating through inshore and nearshore waters of the Mississippi Sound, throughout the year. Attachment M at 1189, 1198, 1241, 1253. Hatchling and juvenile hawksbill sea turtles have been observed during summer and fall in and around the Mississippi Sound, before prevailing currents carry them into the western Gulf. Id. at 1189, 1165, 1276. Meanwhile, leatherback sea turtles have also been seen migrating through the eastern Gulf, with stopovers in the Mississippi Sound, during the spring and fall. Id. at 1189, 1198, 1255, 1262. Growing evidence indicates that nearshore areas along Alabama, Mississippi, and Louisiana may represent a significant year-round foraging ground for leatherback sea turtles. Id. at 1263.

In addition, FWS and NMFS have designated critical habitat for four of the five sea turtle species. Critical habitat was designated for leatherback sea turtles in 1979, 44 Fed. Reg. 17,710 (Mar. 23, 1979), and for hawksbill and green sea turtles jointly in 1998, 63 Fed. Reg. 46,701 (Sept. 2, 1998). Some critical habitat for the loggerhead—on certain beaches in eastern Mississippi and in the waters off the coast of Louisiana—is within the area potentially affected by operation of the Spillway operation. See Critical Habitat for the Northwest Atlantic Ocean Loggerhead Sea Turtle Distinct Population Segment, 79 Fed. Reg. 39,856, 39,86–92 (July 10, 2014) (NMFS designation of marine critical habitat); Designation of Critical Habitat for the Northwest Atlantic Ocean Distinct Population Segment of the Loggerhead Sea Turtle, 79 Fed. Reg. 39,756, 39,800–01 (July 10, 2014) (FWS designation of terrestrial critical habitat).

The Spillway openings may affect these five sea turtle species in several ways. For example, as described above, the polluted freshwater plume discharged by the Spillway can cause algal blooms and hypoxic zones. These eutrophic zones can kill sea grass, which is both a source of food and habitat for sea turtles. See Attachment M at 1217, 1274, 1290, 1314; Attachment H at 324; Michelle Waycott, et al., Accelerating loss of seagrasses across the globe threatens coastal ecosystems 106 PROCEEDINGS OF THE NAT'L ACADEMY OF SCI. 12377, 12379 (July 2009) ["Attachment P"]; P.G. Cardoso, et al., Dynamic changes in seagrass assemblages under eutrophication and implications for recovery 302 J. OF EXPERIMENTAL MARINE BIOLOGY AND ECOLOGY 233, 233–34 (2004) ["Attachment Q"]; Holly Greening and Anthony Janicki, *Toward Reversal of Eutrophic Conditions in a Subtropical Estuary: Water Quality and Seagrass*

Response to Nitrogen Loading Reductions in Tampa Bay, Florida, USA 38 ENVTL. MGMT. 163, 163 (May 2006) ["Attachment R"]. See also generally Peter Ralph, et al., SEAGRASSES: BIOLOGY, ECOLOGY AND CONSERVATION – CH. 24 HUMAN IMPACTS ON SEAGRASSES: EUTROPHICATION, SEDIMENTATION AND CONTAMINATION 567-593 (A.W.D. Larkum et al., eds. 2007) ["Attachment S"]. When the sea grass habitat is damaged or destroyed, sea turtles are forced to forage elsewhere in less ecologically suitable locations and habitats. Attachment M at 1290–91. Additionally, developing science shows that eutrophication is also correlated with increased exposure to certain tumor-forming viruses in these sea turtles. See Karen Arthur, et al., The exposure of green turtles (Chelonia mydas) to tumour promoting compounds produced by the cyanobacterium Lyngbya majuscula and their potential role in the aetiology of fibropapillomatosis 7 HARMFUL ALGAE 114, 121 (2008) ["Attachment T"]; A. Alonso Aguirre and Peter L. Lutz, Marine Turtles as Sentinels of Ecosystem Health: Is Fibropapillomatosis an Indicator? 1 ECOHEALTH 275, 279 (2004) ["Attachment U"]; Kyle Van Houtan, et al., Land Use, Macroalgae, and a Tumor-Forming Disease in Marine Turtles 5 PLOS ONE at 4 (Sept. 2010) ["Attachment V"]; K. Jones, et al., A review of fibropapillomatosis in green turtles (Chelonia mydas) at 2, 16, 18–20 THE VETERINARY J. (2015) ["Attachment W"]. These impacts, along with other potential impacts, must be evaluated in an ESA section 7(a)(2) consultation.

Gulf sturgeon

The Gulf sturgeon was listed as threatened in 1991 in large part because of historical overfishing. Threatened Status for the Gulf Sturgeon, 56 Fed. Reg. 49,653, 49,653–54 (Sept. 30, 1991). Gulf sturgeon live in coastal rivers from Louisiana to Florida during the warmer months and spend winter months in estuaries, bays, and in the Mississippi Sound. See Designation of Critical Habitat for the Gulf Sturgeon, 68 Fed. Reg. 13,370, 13,370 (Mar. 19, 2003). Adult sturgeon typically migrate upriver to spawn from March to May. Id. at 13,372. Young-of-year sturgeon (aged zero to one year) typically spend both summer and winter months in riverine freshwater habitats, with juveniles moving closer to brackish or saline estuaries as they mature. Id. at 13,371. FWS and NMFS have designated critical habitat for Gulf sturgeon in Lake Borgne and the eastern half of Lake Pontchartrain and parts of the Mississippi Sound. Id. at 13,394–95; see also 2017 Biological Assessment at 5.

As with the sea turtle species, the Spillway openings may affect the Gulf sturgeon in several ways. As one example, any increase in algal blooms in the Mississippi Sound from the nutrient-rich floodwaters may kill adult and subadult Gulf sturgeon due to the lack of oxygen. See K.J. Sulak, et al., Status of scientific knowledge, recovery progress, and future research directions for the Gulf Sturgeon, Acipenser oxyrinchus desotoi 32 J. APPLIED ICHTHYOLOGY 87, 113, 133 (2016) ["Attachment X"]. Gulf sturgeon are known to have "limited behavioral and physiological capacity to respond to hypoxia (insufficient oxygen levels)," 68 Fed. Reg. at 13,372, and so are particularly susceptible to suffocation when algal blooms occur. As another example, inflows of fresh floodwater from Spillway operation may adversely affect the Gulf sturgeon's critical habitat by reducing salinity levels in what is otherwise a saline environment. Id. at 133–34. Fast-moving Spillway discharges may sweep young-of-year Gulf sturgeon into the Mississippi Sound where they are unable to withstand higher salinity levels. See id. at 112; see also 2017 Biological Assessment at 4 (noting that operation of the Spillway causes "freshwater and sediment inflow"). While adult Gulf sturgeon are adapted to withstand salinity levels in the

Mississippi Sound, young-of-year Gulf sturgeon cannot withstand heightened salinity levels for more than a few days and can die if salinity levels do not normalize. Attachment X at 112, 116–117. These impacts, and any other potential impacts, must be evaluated in an ESA section 7(a)(2) consultation.

Piping plover and red knot

Piping plover and red knot are migratory coastal shorebirds, both listed in large part due to threats of habitat disturbance and destruction. See Determination of Endangered and Threatened Status for the Piping Plover, 50 Fed. Reg. 50,726, 50,726 (Dec. 11, 1985); Threatened Species Status for the Rufa Red Knot, 79 Fed. Reg. 73,706, 73,706 (Dec. 11, 2014). The red knot makes one of the longest migrations known in the animal kingdom, traveling up to 19,000 miles annually from its breeding grounds in the Canadian arctic to several wintering locations, including the Southeastern United States, the Northeastern Gulf of Mexico, northern Brazil, and Tierra del Fuego at the southern tip of South America. 79 Fed. Reg. at 73,706. Piping plover typically migrate annually from breeding grounds on the northern Great Plains, in the Great Lakes, and along the Atlantic coast from Newfoundland to North Carolina, to wintering grounds on the Atlantic and Gulf of Mexico coasts from North Carolina southward and in the Bahamas and West Indies. 50 Fed. Reg. at 50,726.

Both red knot and piping plover migrate annually to various shared wintering locations which feature intertidal beaches and mud flats, including the coastal intertidal and estuarine wetland environment surrounding the Spillway. See 2017 Biological Assessment at 3, 5 (acknowledging that the piping plover and red knot are present "within the project area"). FWS has designated critical habitat for wintering populations of piping plover in Louisiana's Breton Islands and Chandeleur Island chain just outside the Mississippi Sound in the Gulf of Mexico as well as in Mississippi along the shoreline of the Mississippi Sound—areas which may potentially be affected by operation of the Spillway. Final Determination of Critical Habitat for Wintering Piping Plovers, 66 Fed. Reg. 36,038, 36,073–74 (July 10, 2001).

The Corps and MRC's Spillway operations may affect red knot and piping plover, for example, by reducing the survival rates of their prey species, which include marine worms, crustaceans, and mollusks typically captured on top of or just beneath the surface of moist or wet sand and mud by adversely affecting water quality. 66 Fed. Reg. at 36,038 (activities which may destroy or adversely modify wintering piping plover critical habitat include those which "[s]ignificantly and detrimentally alter[] water quality, that may lead to decreased diversity or productivity of prey organisms"). Water discharged through the Spillway carrying numerous pollutants, including agricultural pesticides, degrades the water quality of recipient water bodies and may adversely impact prey species that live there.

As another example, operation of the Spillway disrupts typical sedimentation transport regimes and alters sediment deposition in piping plover critical habitat. See generally Attachment I; Federico Falcini, et al., Linking the historic 2011 Mississippi River flood to coastal wetland sedimentation 5 NATURE GEOSCIENCE 803 (Nov. 2012) ["Attachment Y"]; John Day, et al., Ecological response of forested wetlands with and without Large-Scale Mississippi River input: Implications for management 46 ECOLOGICAL ENGINEERING 57 (2012)

["Attachment Z"]. Sediment transport and deposition are essential to maintaining quality habitat for these coastal shorebirds. See 66 Fed. Reg. at 36,065 ("The integrity of the habitat components depends upon daily tidal events and regular sediment transport processes, as well as episodic, high-magnitude storm events."); id. at 36,079 (activities may destroy or adversely modify [piping plover] critical habitat by," inter alia, "[s]ignificantly and detrimentally altering inputs of sediment and nutrients necessary for the maintenance of geomorphic and biologic processes . . . [; and] altering the topography of a site . . .").

Operation of the Spillway also may temporarily flood intertidal coastal sand and mud flats where these species forage for prey while wintering. See Attachment C at 5599; 66 Fed. Reg. 36,066. Impacts to prey species in piping plover and red knot wintering locations may further adversely impact both species by disrupting replenishment of fat reserves necessary for completing long-range migrations and maintaining adequate body temperatures in cooler winter conditions. See Olivia DeLee, et al., A Remote Sensing Analysis of Coastal Habitat Composition for a Threatened Shorebird, the Piping Plover (Charadrius melodius) 24 J. OF COASTAL RESEARCH 719, 719 (May 2008) ["Attachment AA"] ("Most migrating shorebirds require coastal and estuarine habitat in the nonbreeding season and their overwinter survival is contingent upon the composition and quality of these winter sites."); see also 66 Fed. Reg. at 36,043.

The Corps has also acknowledged that the Spillway openings affect the two ESA-listed birds and the piping plover's critical habitat. In the 2017 Biological Assessment, the Corps listed "slightly reduced salinities and increased turbidity in portions of the Lake Pontchartrain basin" as impacts on piping plover and red knot habitat. Id. at 3. These impacts, along with other potential impacts, must be evaluated in an ESA section 7(a)(2) consultation.

West Indian manatee

The West Indian manatee first received federal protection in 1967 and was most recently reclassified from endangered to threatened in 2017. 82 Fed. Reg. 16,668 (April 5, 2017). It can be found in Lake Pontchartrain and Lake Borgne during the summer months. Indeed, in July of 2005, scientists observed between 200 to 300 manatees within Lake Pontchartrain. Fertl, D., et al., Manatee Occurrence in the Northern Gulf of Mexico, West of Florida 17 J. OF GULF AND CARIBBEAN RESEARCH 69, 69 (Jan. 2005) ["Attachment BB"]. FWS has previously notified the Corps that West Indian manatees are known to "enter Lake[] Pontchartrain and . . . associated coastal waters and streams during the summer months (i.e., June through September). Manatee occurrences appear to be increasing, and they have regularly been reported in . . . canals within the adjacent coastal marshes of Louisiana. They have also been occasionally observed elsewhere along the Louisiana Gulf coast." Letter from James Boggs, Acting Field Supervisor, Louisiana Field Office, U.S. Fish and Wildlife Service to Colonel Jeffrey Bedey, Hurricane Protection Office, U.S. Army Corps of Engineers (Dec. 6, 2007) ["Attachment CC"]

Changes to the water temperature in Lakes Pontchartrain and Borgne from the Spillway's diversion of cold water may affect manatees, which rely on warm-water stopover locations such as these estuaries during annual migrations. Attachment BB at 76; see also 82 Fed. Reg. at 16,698 ("As a subtropical species, manatees have little tolerance for cold . . . ."). Additionally, manatees graze on and inhabit sea grasses, and degradation of these sea grass habitats from algal

blooms triggered by nutrient-rich Spillway discharges could negatively impact manatee foraging and feeding. Attachment BB at 75]; see also 82 Fed. Reg. 16,691 (identifying loss of sea grass as a "threat" to manatee recovery, and explaining that "[h]uman activities that result in the loss of seagrass include dredging, fishing, anchoring, eutrophication, siltation, and coastal development.").

Pallid sturgeon

The pallid sturgeon was listed as endangered in 1990 because of threats including habitat modification, commercial harvest, and apparent lack of natural reproduction. 55 Fed. Reg. 36,641 36,641 (Sept. 6, 1990). As the Corps has acknowledged, pallid sturgeon are adversely affected by the Corps and MRC's operation of the Spillway when individuals are swept through the Spillway structure and into the floodway itself where many die due to entrainment. See 2017 Biological Assessment at 32–36; see also U.S. Fish and Wildlife Serv., *Lower Mississippi River Strategic Habitat Conservation Plan* at 16-17 (Aug. 29, 2012) ["Attachment DD"].

The Corps has coordinated with FWS to implement "conservation recommendations" for pallid sturgeon, including to "[r]ecover pallid sturgeon entrained through the Bonnet Carré Spillway and return them to the river." See, e.g., Letter from Ed Lambert, Chief, Environmental Compliance Branch, U.S. Army Corps of Engineers New Orleans District to Brad Rieck, Field Supervisor, Louisiana Ecological Services Office, U.S. Fish and Wildlife Service (Feb. 22, 2019); Letter from Ed Lambert, Chief, Environmental Compliance Branch, U.S. Army Corps of Engineers New Orleans District to Brad Rieck, Field Supervisor, Louisiana Ecological Services Office, U.S. Fish and Wildlife Service (May 7, 2019). The Corps recovered 20 pallid sturgeon after the 2011 Spillway opening, and recovered none after the 2016 Spillway opening. Id. The Corps and FWS have also undertaken mortality counts of the number of individuals swept through the Spillway structure into the floodway. See 2017 Biological Assessment at 32–36; see also U.S. Fish & Wildlife Serv., Biological Opinion for the Bonnet Carré Spillway 2011 and 2016 Emergency Operations at 20–26 (June 18, 2018) [hereinafter "2018 Biological Opinion"].

C. The Corps' Actions in Connection with ESA Section 7(a)(2) for the Five Most Recent Spillway Openings

For each of the last five openings, the Corps has acknowledged its obligation to comply with ESA section 7(a)(2) but has fallen far short of ESA requirements. The Corps has never initiated or completed a consultation for the five sea turtle species, Gulf sturgeon, piping plover, red knot, West Indian manatee, or the critical habitat for loggerhead sea turtles, Gulf sturgeon, or piping plover. The Corps' failure to initiate or complete consultation on these species and critical habitat is unlawful and cannot be reconciled with the available scientific evidence.

To the extent the Corps has attempted to comply with the ESA, the agency limited its consultations to the pallid sturgeon, and even then the agency unlawfully relied on ESA regulations allowing expedited consultation for "emergencies," 50 C.F.R. § 402.05. As noted above, these regulations allow for informal consultation prior to an "emergency" event so long as the alternative procedures comply with ESA sections 7(a)–(d). Id. § 402.05(a). As soon as

practicable after the emergency is "under control," the regulations require the Corps to initiate formal consultation. Id. § 402.05(b). The Corps has failed to meet this standard.

1. 2011 and 2016 Spillway Openings

Shortly before the 2011 and 2016 openings, the Corps contacted FWS to initiate informal consultation regarding the anticipated openings. 2017 Biological Assessment at 7–8.[2] In both cases, the Corps requested informal consultation on the pallid and shovelnose sturgeon only. Id. at 7. FWS responded to each consultation request with conservation recommendations regarding those species. Id.

On November 18, 2017—more than six years after the 2011 Spillway opening—the Corps submitted a Biological Assessment to the FWS and NMFS to initiate formal consultation on the impacts of the 2011 and 2016 openings. 2017 Biological Assessment at 3. The Corps justified the after-the-fact submission of the Biological Assessment by characterizing the Spillway openings as an "emergency response action" and relying on the emergency regulations at 50 C.F.R. § 402.05. Id. at 29. The Corps did not provide any justification for its lengthy delay.

The Corps acknowledged that there were eleven ESA-protected species in the "project area." 2017 Biological Assessment at 3.[3] Nonetheless, the Biological Assessment only assessed the impacts of the 2011 and 2016 Spillway openings on pallid and shovelnose sturgeon. Id. at 21–31. For the remaining listed species, the Corps concluded that the two openings had "no effect." Id. at 3–4. For Gulf sturgeon and piping plover critical habitat, the Corps concluded that "no impacts occurred" during these openings but provided no explanation for that finding. Id. at 5. The reasons for these determinations vary for each species, but each violate the ESA and are arbitrary and capricious.

For example, for the five sea turtle species, the rationale for the Corps' "no effect" conclusion is not specified—but it appears to be based on assumption that no sea turtle species would have been present in the area affected by the two openings. Id. at 3–4. As described above, this assumption is inconsistent with available evidence. See, e.g., Attachment M at 1189. Further, the Corps did not reconcile this assumption with, among other things, the agency's acknowledgment that at least one of the species (loggerheads) are "generally found" along the Louisiana coast from May through October—in the area of likely impact and in the exact time frame that the Spillway was opened in 2011. 2017 Biological Assessment at 4. Nor did the Corps address the loggerhead critical habitat in the area.

For the Gulf sturgeon, the Corps based its "no effect" conclusion on an assertion that the "freshwater and sediment inflow" caused by the 2011 and 2016 openings "mimics historical flood events." Id. The Corps provided no further explanation or support for this statement, and it does not justify a "no effect finding." Moreover, the ESA does not provide an exception for agency actions that may resemble natural activities. Indeed, as noted above, under the "may

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[2] These contacts apparently occurred on April 27, 2011 (12 days prior to the 2011 opening) and on December 30, 2015 (11 days prior to the 2016 opening), respectively. Id.

[3] The Corps did not define "project area."

affect" standard, "'[a]ny possible effect, whether beneficial, benign, adverse or of an undetermined character,' triggers the requirement" to complete a consultation. Karuk Tribe, 681 F.3d at 1027 (quoting 51 Fed. Reg. at 19,949).

The Corps' conclusion that there was "no effect" on red knot and piping plover was based on the agency's assertion that the impacts to their habitat in the Lake Pontchartrain basin were "temporary." 2017 Biological Assessment at 3. But there is no exception in the ESA or its implementing regulations for "temporary" impacts. Rather, the fact that there are *any* potential impacts demonstrates that the low "may affect" standard is met here as well. Karuk Tribe, 681 F.3d at 1027.

Finally, although the connection is not made explicitly, it appears that the Corps based its "no effect" finding for the West Indian manatee on the fact that the manatee is a "summer visitor" to Lakes Pontchartrain and Borgne. 2017 Biological Assessment at 3. At a minimum, this conclusion is unfounded with respect to the 2011 opening, which occurred during the summer.

In response to the Corps' Biological Assessment, FWS issued a Biological Opinion in June of 2018. In the Biological Opinion, FWS, although not required to comment, agreed with the Corps' conclusion that the 2011 and 2016 openings had "no effect" on these nine species or Gulf sturgeon critical habitat. 2018 Biological Opinion at v. FWS did not address designated critical habitat for piping plover or loggerhead sea turtles.

2. 2018 and 2019 Spillway Openings

For the three openings in 2018 and 2019, the Corps again relied on the provisions in the regulations for emergency circumstances, 50 C.F.R. § 402.05. This time, however, the Corps failed to acknowledge eight of the ten listed species that are potentially affected by the openings, and failed to acknowledge any critical habitat in the area in its correspondence with FWS (and apparently failed to correspond with NMFS altogether).[4] In addition, even if the Corps' reliance on the "emergency" regulations was appropriate, the Corps has not initiated formal after-the-fact consultation to address the impacts of the 2018 or 2019 Spillway openings on any listed species or critical habitat, as required by 50 C.F.R. § 402.05(b).

Specifically, a few days to a few weeks prior to each decision to open the Spillway, the Corps submitted a letter to FWS notifying the agency that the Corps was likely to open the Spillway soon and that it was relying on the consultation provisions provided at 50 C.F.R. §

[4] See generally Letter from Ed Lambert, Chief, Envtl. Compliance Branch, U.S. Army Corps of Eng'rs New Orleans Dist. to Joe Ransom, Field Office Supervisor, La. Ecological Servs. Office, U.S. Fish and Wildlife Serv. (Mar. 2, 2018); Letter from Ed Lambert, Chief, Envtl. Compliance Branch, U.S. Army Corps of Eng'rs New Orleans Dist. to Brad Rieck, Field Supervisor, La. Ecological Servs. Office, U.S. Fish and Wildlife Serv. (Feb. 22, 2019); Letter from Ed Lambert, Chief, Envtl. Compliance Branch, U.S. Army Corps of Eng'rs New Orleans Dist. to Brad Rieck, Field Supervisor, La. Ecological Servs. Office, U.S. Fish and Wildlife Serv. (May 7, 2019).

402.05 to comply with ESA section 7(a)(2). See supra n.4. In those letters, the Corps acknowledged the potential presence or effects on only one listed species other than pallid and shovelnose sturgeon: West Indian manatee. Id. The Corps again concluded there would be "no effect" on the manatee due to its presence only during the summer months—even for the second opening in 2019, which occurred during the summer months. Id. The Corps did not mention the five sea turtle species, Gulf sturgeon, red knot, piping plover, or designated critical habitat for the loggerhead sea turtle, Gulf sturgeon, or piping plover in any of those letters.[5] Each time, FWS responded by agreeing that the manatee was not likely to be present. See supra n.5. FWS also repeatedly noted that the Gulf sturgeon and its critical habitat are found in the Lake Pontchartrain and Lake Borgne basins, and directed the Corps to contact NMFS for information on the species and its critical habitat. Id. To our knowledge, the Corps has not contacted NMFS in connection with its ESA obligations for the 2018 and 2019 openings.

III. LEGAL VIOLATIONS

The Corps and MRC have not completed lawful ESA section 7(a)(2) consultations for their operation of the Spillway. With the exception of the pallid and shovelnose sturgeon, the Corps has not initiated or completed *any* consultation on threatened and endangered species and critical habitat found within the action area. With respect to pallid and shovelnose sturgeon, the Corps completed a consultation for the 2011 and 2016 openings but only years after-the-fact in violation of section 7(a)(2), and to our knowledge has not initiated or completed an after-the-fact consultation on the 2018 or 2019 openings.

The Corps and MRC must initiate and complete lawful section 7(a)(2) consultations on operation of the Spillway. The operation of the Spillway—encompassing, at a minimum, the specific decisions to open the Spillway (including the five most recent decisions), carrying out those decisions, and issuing any guidance regarding the management of the Spillway—constitutes agency "action" or "action[s]" within the meaning of ESA section 7(a)(2) which "may affect" ten threatened and endangered species and designated critical habitat for the loggerhead sea turtle, Gulf sturgeon, and piping plover. First, operation of the Spillway (including the individual activities named above) constitutes "activities or programs . . . authorized funded, or carried out, in whole or in part, by [a] Federal agenc[y]." 50 C.F.R. § 402.02. The Corps and MRC also maintain "some discretion to influence or change" the manner in which the Spillway is operated "for the benefit of a protected species." Karuk Tribe, 681 F.3d at 1021; 50 C.F.R. § 402.03. See also Nat'l Ass'n of Home Builders v. Defenders of Wildlife, 551 U.S. 644, 666 (2007). Notably, the fact that the Corps has at least initiated consultation (albeit inadequately) on each of the five individual Spillway openings highlights the fact that the Corps views these five openings as discretionary agency actions. Second, as described above, the

[5] See generally Letter from Joe Ransom, Field Office Supervisor, La. Ecological Servs. Office, U.S. Fish and Wildlife Serv. to Col. Michael Clancy, Dist. Commander for U.S. Army Corps of Eng'rs New Orleans Dist. (Mar. 2, 2018); Letter from Joe Ransom, Field Supervisor, La. Ecological Servs. Office, U.S. Fish and Wildlife Serv. to Col. Michael Clancy, Dist. Commander for U.S. Army Corps of Eng'rs New Orleans Dist. (Feb. 26, 2019); Letter from Joe Ransom, Field Supervisor, La. Ecological Servs. Office, U.S. Fish and Wildlife Serv. to Col. Michael Clancy, Dist. Commander for U.S. Army Corps of Eng'rs New Orleans Dist. (May 8, 2019).

presence of these species, as well as available scientific evidence—and in many cases the Corps' own statements—demonstrate that the impacts of Spillway operation easily meet the low "may affect" threshold. As such, the Corps' failure to complete lawful consultation on operation of the Spillway violates the ESA.

Further, to the extent the Corps articulated justifications for failing to complete required consultations on individual species, these rationales violate the ESA and are arbitrary and capricious. In addition, the timing of these findings also violates the ESA. The Corps arbitrarily relied on the provisions in the consultation regulations designed for "emergencies," 50 C.F.R. § 402.05, to make the "no effect" findings as well as to initiate consultation on the pallid sturgeon and shovelnose sturgeon. But these provisions cannot be properly invoked for predictable events like Spillway openings, which have occurred five times in the last nine years. Rather, as one court has held, "under the ESA framework, emergency consultation is intended to be the exception, not the rule. The emergency exception is meant for unexpected exigencies." See Forest Serv. Emps. for Envtl. Ethics v. U.S. Forest Serv. ("FSEEE"), 397 F. Supp. 2d 1241, 1257 (D. Mont. 2005). Thus, there is no basis for the Corps to continue to rely on consultation procedures designed for emergencies. See Wash. Toxics Coal. v. U.S. Dept. of Interior, et al., 457 F. Supp. 2d 1158, 1195 (W.D. Wash. 2006) (finding agency's invocation of emergency procedures for repeat emergency pesticide registrations was arbitrary and unlawful because the repeated registrations did not qualify as "emergencies"); FSEEE, 397 F. Supp. 2d at 1256–57 (holding that undertaking emergency ESA section 7(a)(2) consultation post-emergency did not excuse the Forest Service's failure to consult prior to dropping fire retardants over waterways because the agency knew such waterway drops would occur and that the drops may harm listed species).[6]

Thus, to comply with ESA section 7(a)(2), the Corps must initiate and complete a consultation on operation of the Spillway *before* the need to next open the Spillway arises. Such a consultation would consider the likely impacts to listed species well before the Mississippi River reaches flood stages. Such a consultation would also consider and identify modifications in the manner the Corps and MRC operate the Spillway and other flood-control mechanisms necessary to ensure that the agencies do not jeopardize any listed species that may be affected by the openings nor destroy or adversely modify designated critical habitat in the affected area.

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[6] Notably, even if the Corps' reliance on the regulatory provisions for emergencies is appropriate, the Corps' implementation of the procedures is unlawful and arbitrary. Pursuant to the regulations governing "emergencies," after the expedited consultation and "as soon as practicable after the emergency is under control" the action agency must initiate formal consultation on all listed species and critical habitat in the action area. 50 C.F.R § 402.05(b). Subsequently, "[t]he Service will evaluate such information and issue a biological opinion including the information and recommendations given during the emergency consultation." Id. As described above, for the 2011 and 2016 openings, the Corps and MRC initiated consultation on the pallid and shovelnose sturgeon and issued its unlawful "no effect" findings in 2017—more than six years after the 2011 opening and long after the "emergencies" were "under control." To our knowledge, the Corps and MRC have yet to initiate formal consultation on the 2018 or 2019 openings, as required by 50 C.F.R. § 402.05.

These failures are not just procedural; because the effects of the operation of the Spillway and individual openings have never been properly assessed by the Corps and MRC, nor by FWS or NMFS, the impacts to listed species and designated critical habitat—which in some cases are likely significant—have gone unaddressed and unmitigated. Thus, by failing to complete lawful consultations on operation of the Spillway, the Corps and MRC have failed to ensure that their actions will not jeopardize any threatened or endangered species, and have failed to ensure that their actions will not destroy or adversely modify any critical habitat. The agencies' failure to complete lawful section 7(a)(2) consultations regarding the effects of Spillway operation thus violates both their procedural and substantive obligations under section 7(a)(2) of the ESA. 16 U.S.C. § 1536(a)(2).

IV. CONCLUSION AND REMEDY

As set forth in this letter, the Corps and MRC have unlawfully failed to initiate and complete lawful ESA section 7(a)(2) consultations on operation of the Spillway for the above-named threatened and endangered species and critical habitat. Specifically, the Corps and MRC have failed to initiate or complete any consultations on five species of sea turtle, Gulf sturgeon, West Indian manatee, piping plover, or red knot, and have failed to initiate or complete any consultations on critical habitat for the loggerhead sea turtle, Gulf sturgeon, or piping plover. To the extent the Corps has issued "no effect" findings for these species, those findings violate the ESA and are arbitrary. The Corps and MRC have also unlawfully relied on the regulations governing "emergencies" to issue those "no effect" findings and to initiate consultation on the pallid and shovelnose sturgeon for each of the last five individual Spillway openings. To the extent reliance on these regulations is appropriate, the Corps and MRC have failed to comply with them.

In short, the Corps and MRC have failed to ensure that operation of the Spillway is not jeopardizing listed species or destroying or adversely modifying designated critical habitat. 16 U.S.C. § 1536(a)(2). An appropriate remedy would be for the agencies to complete section 7(a)(2) consultation for all listed species and designated critical habitat which may be affected by their operation of the Spillway. If the agencies are unwilling to take appropriate action to comply with the ESA requirements discussed in this letter, we plan to seek redress through litigation.

Please feel free to contact the undersigned counsel if you have any questions, believe any of the information presented above is inaccurate or incomplete, or would like to discuss this matter further.

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Enclosures: - Appendix of Attachments; and
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APPENDIX

Attachment A – U.S. Geological Survey, Dennis Demcheck, et al., Selected Water-Quality Data for the Lower Mississippi River, Bonnet Carre Spillway, and Lake Pontchartrain Area, Louisiana, April through June 1994 and 1974-84 (1996).

Attachment B – Sibel Bargu, et al., Effects of freshwater input on nutrient loading, phytoplankton biomass, and cyanotoxin production in an oligohaline estuarine lake 661 HYDROBIOLOGIA 377 (2011).

Attachment C – J.R. White, et al., Mississippi River Flood of 2008: Observations of a Large Freshwater Diversion on Physical, Chemical, and Biological Characteristics of a Shallow Estuarine Lake 43 ENVTL. SCI. & TECH. 5599 (Nov. 2009).

Attachment D – Eric Roy and John White, Nitrate Flux into the Sediments of a Shallow Oligohaline Estuary during Large Flood Pulses of Mississippi River Water 41 J. ENVTL. QUALITY 1549 (Nov. 2011).

Attachment E – U.S. Army Corps of Eng'rs, William McAnnaly and R.C. Burger, Salinity Changes in Pontchartrain Basin Estuary Resulting from Bonnet Carré Freshwater Diversion: Numerical Model Investigation (Feb. 1997).

Attachment F – Michael Waldon and C. Frederick Bryan, Symposium: Recent Research in Coastal Louisiana – Annual Salinity and Nutrient Budget of Lake Pontchartrain and Impact of the Proposed Bonnet Carré Diversion 79, 83 (1999).

Attachment G – Lake Pontchartrain Basin Found., Recreational Water Monitoring Data for 2001 to 2019 – Salinity (last updated Sept. 3, 2019).

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Attachment I – Mead Allison, et al., Mississippi River channel response to the Bonnet Carré Spillway opening in the 2011 flood and its implications for the design and operation of river diversions 477 J. OF HYDROLOGY 104 (2013).

Attachment J – Scott Mize and Dennis Demcheck, Water quality and phytoplankton communities in Lake Pontchartrain during and after the Bonnet Carré Spillway opening, April to October 2008, in Louisiana, USA GEO-MARINE LETTERS (Dec. 2009).

Attachment K – Jeffrey Fabre, Sediment flux & fate for a large-scale diversion: the 2011 Mississippi River Flood, the Bonnet Carré Spillway, and the implications for coastal restoration in south Louisiana La. State Univ. Master's Thesis (May 2012).

Attachment L – Nat'l Aeronautics and Space Admin., Earth Observations taken by the Expedition 17 Crew (April 28, 2008) available at https://images.nasa.gov/details-iss017e005763.

Attachment M – Roldán A. Valverde and Kym Rouse Holzwart, HABITATS AND BIOTA OF THE GULF OF MEXICO: BEFORE THE DEEPWATER HORIZON OIL SPILL – CH. 11 SEA TURTLES OF THE GULF OF MEXICO 1189 (C.H. Ward ed. 2017).

Attachment N – Andrew Coleman, et al., Population Ecology and Rehabilitation of Incidentally Captured Kemp's Ridley Sea Turtles (Lepidochelys Kempii) in the Mississippi Sound, USA 11 HERPETOLOGICAL CONSERVATION AND BIOLOGY 253 (April 2016).

Attachment O – Donna Shaver and Cynthia Rubio, Post-nesting movement of wild and head-started Kemp's ridley sea turtles Lepidochelys kempii in the Gulf of Mexico 4 ENDANGERED SPECIES RESEARCH 43 (Jan. 2008).

Attachment P – Michelle Waycott, et al., Accelerating loss of seagrasses across the globe threatens coastal ecosystems 106 PROCEEDINGS OF THE NAT'L ACADEMY OF SCI. 12377 (July 2009).

Attachment Q – P.G. Cardoso, et al., Dynamic changes in seagrass assemblages under eutrophication and implications for recovery 302 J. OF EXPERIMENTAL MARINE BIOLOGY AND ECOLOGY 233 (2004).

Attachment R – Holly Greening and Anthony Janicki, Toward Reversal of Eutrophic Conditions in a Subtropical Estuary: Water Quality and Seagrass Response to Nitrogen Loading Reductions in Tampa Bay, Florida, USA 38 ENVTL. MGMT. 163 (May 2006).

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Attachment U – A. Alonso Aguirre and Peter L. Lutz, Marine Turtles as Sentinels of Ecosystem Health: Is Fibropapillomatosis an Indicator? 1 ECOHEALTH 275 (2004).

Attachment V – Kyle Van Houtan, et al., Land Use, Macroalgae, and a Tumor-Forming Disease in Marine Turtles 5 PLOS ONE e12900 (Sept. 2010).

Attachment W – K. Jones, et al., A review of fibropapillomatosis in green turtles (Chelonia mydas) THE VETERINARY J. (2015).

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Attachment Z – John Day, et al., Ecological response of forested wetlands with and without Large-Scale Mississippi River input: Implications for management 46 ECOLOGICAL ENGINEERING 57 (2012).

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Attachment BB – Fertl, D., et al., Manatee Occurrence in the Northern Gulf of Mexico, West of Florida 17 J. OF GULF AND CARIBBEAN RESEARCH 69 (Jan. 2005).

Attachment CC – Letter from James Boggs, Acting Field Supervisor, La. Field Office, U.S. Fish and Wildlife Serv. to Colonel Jeffrey Bedey, Hurricane Prot. Office, U.S. Army Corps of Eng'rs (Dec. 6, 2007).

Attachment DD – U.S. Fish and Wildlife Serv., Lower Mississippi River Strategic Habitat Conservation Plan (Aug. 29, 2012).