



National Headquarters

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May 13, 2020

Aurelia Skipwith
Director
U.S. Fish and Wildlife Service
1849 C Street NW
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Via email and certified mail

**RE: Notice of Intent to Sue to Remedy Violations of Federal Law in Cape Romain
National Wildlife Refuge**

Dear Ms. Skipwith,

On behalf of Defenders of Wildlife (“Defenders”) and our more than 1.8 million members and supporters nationwide, including approximately 17,500 in South Carolina, we are writing to notify the U.S. Fish and Wildlife Service (“the Service”) that it is in violation of the Endangered Species Act (“ESA”), the Migratory Bird Treaty Act (“MBTA”), the National Wildlife Refuge System Administration Act of 1966, as amended by the National Wildlife Refuge System Improvement Act of 1997 (“Refuge Act”), and the National Environmental Policy Act (“NEPA”) regarding horseshoe crab harvesting in Cape Romain National Wildlife Refuge (“Cape Romain”).

Specifically, by authorizing and otherwise facilitating the harvest of horseshoe crabs in Cape Romain the Service has violated several federal laws by:

- (1) failing to meet its substantive and procedural ESA section 7(a)(2) obligations regarding impacts on ESA-listed species and critical habitat, 16 U.S.C. § 1536(a)(2);
- (2) causing unlawful incidental take of the threatened red knot in violation of the ESA, *see id.* § 1538(a)(1)(B);
- (3) causing unlawful incidental take of migratory bird chicks and migratory bird eggs in violation of the MBTA, *see id.* § 703(a);
- (4) flouting the Refuge Act’s mandate that no use of a refuge can be authorized until the Service determines whether the use is compatible with the specific purposes for which the refuge was established, *see id.* § 668dd(d)(3)(A)(i);
- (5) authorizing or otherwise facilitating commercial activity in the refuge without a Special Use Permit, *see* 50 C.F.R. § 27.97;

(6) undermining the specific purposes for which Cape Romain was established, *see* 16 U.S.C. § 668dd(a)(3)(A); and

(7) failing to engage in any NEPA analyses of horseshoe crab harvesting and its impacts to the refuge, *see* 42 U.S.C. § 4332(B).

The Service also is in violation of section 7(a)(2) of the ESA because it has failed to reinitiate consultation on the Cape Romain Comprehensive Conservation Plan (“Comprehensive Conservation Plan” or “CCP”) to analyze the effects of the Service’s management activities, including its authorization of horseshoe crab harvesting, on recently-listed species and critical habitat.

With respect to the Service’s ESA violations articulated herein, this letter also provides notice in accordance with the citizen suit provision of the act pursuant to section 11(g). *See* 16 U.S.C. § 1540(g). Unless the Service remedies its violations of the ESA, the MBTA, the Refuge Act, and NEPA, Defenders of Wildlife intends to challenge the Service’s unlawful conduct in federal district court.

LEGAL FRAMEWORK

I. Endangered Species Act, 16 U.S.C. §§ 1531–1544

“In response to growing concern over the extinction of many animal and plant species, Congress enacted the Endangered Species Act of 1973.” *Gibbs v. Babbitt*, 214 F.3d 483, 487 (4th Cir. 2000) (internal citations omitted). The purposes of the ESA are “to provide a program for the conservation of . . . endangered species and threatened species” and “to provide a means whereby the ecosystems upon which [such] . . . species depend may be conserved.” 16 U.S.C. § 1531(b). “Conservation” and “conserve” mean “to use and the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to [the ESA] are no longer necessary”—i.e., to recover such species from an imperiled status. *Id.* § 1532(3). Thus, “[t]he plain intent of Congress in enacting this statute was to halt and reverse the trend toward species extinction, whatever the cost.” *Tenn. Valley Auth. v. Hill*, 437 U.S. 153, 184 (1978). To accomplish this objective, “[t]he language, history, and structure of the [ESA] indicates beyond doubt that Congress intended endangered species to be afforded the highest of priorities.” *Id.* at 174. Thus, the ESA is “a powerful and substantially unequivocal statute.” *Loggerhead Turtle v. Cty. Council of Volusia Cty., Fla.*, 148 F.3d 1231, 1246 (11th Cir. 1998) (citing *Strahan v. Linnon*, 967 F. Supp. 581, 618 (D. Mass. 1997)).

“Congress enacted the [ESA] . . . to protect and conserve endangered and threatened species and their habitats.” *Sierra Club v. U.S. Dep’t of the Interior*, 899 F.3d 260, 268 (4th Cir. 2018) (internal quotation omitted). A fundamental step toward doing so is for the Service or the National Marine Fisheries Service (“NMFS”), depending on their regulatory jurisdiction, to determine whether a species should receive protection under the ESA by adding it to the threatened or the endangered species lists. 16 U.S.C. § 1533(a)(1). The agencies must make this

decision “solely on the basis of the best scientific and commercial data available.” *Id.* §1533(b)(1)(A). Moreover, when a species is listed, the Service or NMFS must, “to the maximum extent prudent and determinable,” “designate any habitat of such species which is then considered to be critical habitat.” *Id.* § 1533(a)(3)(A), (a)(3)(A)(i).

Section 7 of the ESA imposes on each federal agency (the “action agency”) procedural and substantive obligations to promote the conservation of species. *Id.* § 1536(a). Whenever a federal agency plans to authorize, fund, or carry out an action, it must, “in consultation with [the Service or NMFS],” insure that the action “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.” *Id.* § 1536(a)(2). As a preliminary matter, consultation is readily triggered. 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. Further, consultation is required whenever an action “may affect” listed species or critical habitat. 50 C.F.R. § 402.14(a); *see also Sierra Club v. U.S. Dep’t of the Interior*, 899 F.3d at 269. However, the “may affect” threshold is “relatively low.” *Karuk Tribe of Cal. v. U.S. Forest Serv.*, 681 F.3d 1006, 1027 (9th Cir. 2012) (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). Finally, an “action area” means “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(d).

Congress established the section 7 consultation process explicitly “to ensure compliance with [the ESA’s] substantive provisions.” *Thomas v. Peterson*, 753 F.2d 754, 763 (9th Cir. 1985). Indeed, by enacting this provision, “Congress made a ‘conscious decision . . . to give endangered species priority over the “primary missions” of federal agencies.’” *Sierra Club v. U.S. Dep’t of the Interior*, 899 F.3d at 268 (quoting *Tenn. Valley Auth.*, 437 U.S. at 185). Thus, “[i]f a project is allowed to proceed without substantial compliance with those procedural requirements, there can be no assurance that a violation of the ESA’s substantive provisions will not result.” *Peterson*, 753 F.2d at 764. An agency therefore cannot act until it complies with its section 7 obligations. *Pac. Rivers Council v. Thomas*, 30 F.3d 1050, 1056–57 (9th Cir. 1994). Finally, because the agency has an ongoing obligation to comply with the procedural and substantive mandates of section 7, it is legally obligated to reinstate consultation under several circumstances, one of which is “[i]f a new species is listed or critical habitat designated that may be affected by the identified action.” 50 C.F.R. § 402.16(a)(4).

Section 9(a)(1) of the ESA has been referred to as “[t]he cornerstone of the statute.” *Gibbs*, 214 F.3d at 487. This section prohibits the taking of any endangered species of fish or wildlife, 16 U.S.C. § 1538(a)(1)(B), and the ESA allows the Service or NMFS to extend this same prohibition to the taking of threatened species, *id.* § 1533(4)(d) (“Whenever any species is listed as a threatened species . . . the Secretary shall issue such regulations as he deems necessary and advisable to provide for the conservation of such species.”). “Take” is defined broadly and encompasses “harassment,” *id.* § 1532(19), which is “an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to

significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering,” 50 C.F.R. § 17.3. The take prohibition applies to “any . . . entity subject to the jurisdiction of the United States,” including—but not limited to—individuals, private entities, and departments or instrumentalities of the Federal Government. 16 U.S.C. § 1532(13). Moreover, a regulatory agency can be liable for a take by individuals engaging in activities authorized by a regulatory agency. *See, e.g., Strahan v. Coxe*, 127 F.3d 155, 158 (1st Cir. 1997) (finding the State of Massachusetts, as the licensing and permitting agency, liable for take of endangered right whale by commercial fishing operation).

Both Congress and the federal courts have called for a broad interpretation of the ESA’s take provision. The legislature, in fact, intended the term “take” to be “defined . . . in the broadest possible manner to include every conceivable way in which a person can ‘take’ or attempt to ‘take’ any fish or wildlife.” S. Rep. No. 93-307, p. 7 (1973). The Supreme Court in *Babbitt v. Sweet Home Chapter of Communities for a Great Oregon* acknowledged that “[t]he Committee Reports accompanying the bills that became the ESA . . . make clear that Congress intended ‘take’ to apply broadly.” 515 U.S. 687, 704 (1995).

II. The Migratory Bird Treaty Act, 16 U.S.C. §§ 703–712

In 1918, Congress enacted the MBTA to implement a treaty for “the protection of migratory birds” between Great Britain (on behalf of Canada) and the United States. *Act of July 3, 1918, ch. 128*, 40 Stat. 755. The objective of the treaty was to create a “uniform system of protection” to “insur[e] the preservation of such migratory birds” because “a lack of adequate protection” for many migratory birds traveling through the United States left them vulnerable to extinction. Convention for the Protection of Migratory Birds, 39 Stat. 1702 (Aug. 16, 1916). Over the years, Congress broadened the scope of the MBTA to implement similar treaties with Mexico in 1936, Japan in 1972, and the former Soviet Union in 1976. Convention between the United States of America and Mexico for the Protection of Migratory Birds and Game Mammals, 50 Stat. 1311 (Feb. 7, 1936) (Mexico Convention); Convention for the Protection of Migratory Birds and Birds in Danger of Extinction, and Their Environment, art. VI, 25 U.S.T. 3329 (Mar. 4, 1972) (Japan Convention); Convention Concerning the Conservation of Migratory Birds and Their Environment, art. IV, 29 U.S.T. 4647 (Nov. 19, 1976) (Russia Convention). The MBTA was a breakthrough in U.S. conservation law. Once on the path to extinction, the MBTA helped restore countless populations of birds, such as sandhill cranes, snowy egrets, and wood ducks. Nat’l Audubon Soc’y, *The Migratory Bird Treaty Act, Explained*, (Jan. 26, 2018), <https://www.audubon.org/news/the-migratory-bird-treaty-act-explained>. In fact, the Supreme Court has described the purpose of the MBTA as a “national interest of very nearly the first magnitude.” *Missouri v. Holland*, 252 U.S. 416, 435 (1920).

As a “conservation statute[] designed to prevent the destruction of certain species of birds,” *Andrus v. Allard*, 444 U.S. 51, 52 (1979), the MBTA protects more than 1,000 species of birds found in the United States, *see* 50 C.F.R. § 10.13. Under this law:

[u]nless and except as permitted by regulations . . . it shall be unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, [or] kill . . . any

migratory bird [or] any part, nest, or egg of any such bird . . . included in the terms of the conventions

16 U.S.C. § 703(a). This provision applies to “any person, association, partnership, or corporation who shall violate any provisions of [the Act].” *Id.* § 707(a). A federal agency is included within the scope of the term “person” in the MBTA. *See Humane Soc’y of the United States v. Glickman*, 217 F.3d 882, 884 (D.C. Cir. 2000) (finding that the U.S. Department of Agriculture can be liable for violating the MBTA). The MBTA authorizes the Service to promulgate regulations permitting the take or killing of migratory birds or any part, nest, or egg thereof. 16 U.S.C. § 704(a); *see also* 50 C.F.R. §§ 21.1–21.61 (regulations governing MBTA permitting).

The MBTA applies to both targeted and incidental takes. Its provisions, therefore, apply regardless of intent, “establish[ing] strict liability for individuals responsible for the death of protected birds.” *Fund for Animals v. Norton*, 365 F. Supp. 2d 394, 408 (S.D.N.Y. 2005), *aff’d* 538 F.3d 124 (2d Cir. 2008); *see also United States v. Apollo Energies, Inc.*, 611 F.3d 679, 685 (10th Cir. 2010) (“As a matter of statutory construction, the ‘take’ provision of the [MBTA] does not contain a scienter requirement.”). Ultimately, “[i]n view of the broad wording of the act, and the evident purpose behind the treaty and the act, . . . it was not the intention of Congress to require any guilty knowledge or intent to complete the commission of the offense.” *United States v. Schultze*, 28 F. Supp. 234, 236 (W.D. Ky. 1939).

III. Refuge Act, 16 U.S.C. §§ 668dd–668ee

The National Wildlife Refuge System is managed pursuant to the National Wildlife Refuge System Administration Act of 1966, Pub. L. No. 89-669, 80 Stat. 926 (1966), as amended by the National Wildlife Refuge System Improvement Act of 1997, Pub. L. No. 105-57, 111 Stat. 1252 (1997) (“Refuge Act”). The primary Mission of the National Wildlife Refuge System is:

to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.

16 U.S.C. § 668dd(a)(2). To achieve the mission of the System, the Refuge Act sets forth one of the strongest legislative mandates for ecosystem protection on public lands and waters, directing the Service to “ensure that the biological integrity, diversity, and environmental health of the System are maintained for the benefit of present and future generations of Americans.” *Id.* § 668dd(a)(4)(B). This directive “provides for the consideration and protection of the broad spectrum of fish, wildlife, and habitat resources found on refuges and associated ecosystems.” U.S. Dep’t of the Interior & U.S. Fish & Wildlife Serv., Southeast Region, *Comprehensive Conservation Plan: Cape Romain National Wildlife Refuge: Charleston County, South Carolina*, at 4 (July 2010) (“CCP”) (Ex. A). Furthermore, “each refuge shall be managed to fulfill the mission of the System, as well as the specific purposes for which that refuge was established.” 16 U.S.C. § 668dd(a)(3)(A). The Refuge Act also authorizes the Service to issue regulations to carry

out the act. *Id.* § 668dd(b)(5). These regulations “apply to areas of land and water held by the United States in fee title and to property interests in such land and water in less than fee For areas held in less than fee, the regulations . . . apply only to the extent that the property interest held by the United States may be affected.” 50 C.F.R. § 25.11(a); *see also Livingston v. United States*, No. CIV. A. 2:15-CV-00564-DCN, 2016 WL 1274013, at *4 (D.S.C. Mar. 31, 2016), *on reconsideration*, No. CIV. A. 2:15-CV-00564-DCN, 2016 WL 7383918 (D.S.C. Dec. 21, 2016).

To ensure that refuges carry out the System’s mission and their respective purposes, the law creates a presumption against public use and access of the refuge. 50 C.F.R. § 25.21(a) (Except for refuges in Alaska, “all areas included in the [System] are closed to public access until and unless we open the area for a use . . . in accordance with the [Refuge Act]. . . .”); *see also United States v. Sams*, 45 F. Supp. 3d 524, 525 (E.D.N.C. 2014) (the Refuge Act “closes national wildlife refuges in all states except Alaska to all uses until opened.”). Under subsection (d) of the Refuge Act, the Service may “permit the use of . . . any areas within the System . . . whenever [it] determines that such uses are compatible with the purposes for which these areas are established.” 16 U.S.C. § 668dd(d)(1)(B). However, the Service cannot “permit a new use . . . or expand, renew, or extend an existing use” without first determining whether that use is compatible. *Id.* § 668dd(d)(3)(A)(i). For a use to be “compatible” it must be “a wildlife-dependent recreational use or any other use of a refuge that, in the sound professional judgment of the [Service], will not materially interfere with or detract from the fulfillment of the mission of the System or the purposes of the refuge.” *Id.* § 668ee(1).

To decide whether a use would be compatible, the Service must make a compatibility determination in writing. 50 C.F.R. § 25.12(a). This determination involves a multi-factored analysis. Examples of requisite considerations during the analysis include the impacts of the use on the refuge’s purpose, whether the use is a priority public use, and where, when, and how a use would be conducted. *Id.* § 26.41(a)(6)(i)–(iv), (a)(8). If it is possible for a use to achieve compatibility with modifications, then the Service would use these factors to tailor stipulations necessary to ensure of compatibility. *Id.* § 26.41(a)(11). Stipulations are a critical component of the compatibility determination process. They allow for expanded uses and enjoyment of refuges while simultaneously ensuring that the integrity of the refuge and its purposes are maintained. The Service must complete a compatibility determination before any use may move forward. *See, e.g., Del. Audubon Soc’y, Inc. v. Sec’y of U.S. Dep’t of Interior*, 612 F. Supp. 2d 442, 450 (D. Del. 2009) (when discussing the use of a refuge for farming, the court asserted that the Refuge Act “requires that a written compatibility determination be completed *before* [the use] is permitted on a national wildlife refuge.” (emphasis in original)).

Compatibility determinations are often made when the Service drafts “comprehensive conservation plans” which are developed for each refuge and generally serve as refuges’ overriding management plans. *See* 16 U.S.C. § 668dd(e)(1)(B). A comprehensive conservation plan is a “document that describes the desired future conditions of a refuge or planning unit and provides long-range guidance and management direction to achieve the purposes of the refuge.” 50 C.F.R. § 25.12. It is intended to “maintain[] and, where appropriate, restore[] the ecological integrity of each refuge and the Refuge System.” *Id.*

The Refuge Act regulations also specify many uses or actions that are prohibited unless an individual is granted authorization by the Service, or are otherwise entirely prohibited. For example, no one may conduct commercial activities on a refuge unless they are issued a permit by the Service, often referred to as a “special use permit,” after a finding of compatibility. *Id.* §§ 27.91, 27.97. Permits for economic use of a refuge “will contain such terms and conditions that we determine to be necessary for the proper administration of the resources.” *Id.* § 29.1. Moreover, “[d]isturbing, injuring, spearing, poisoning, destroying, [or] collecting . . . any plant or animal on any national wildlife refuge is prohibited except by special permit unless otherwise permitted.” *Id.* § 27.51(a). The regulations also delineate circumstances when behavior is entirely prohibited, such as “operat[ing] a boat in a reckless or negligent manner, or in a manner so as to endanger or be likely to endanger any . . . wildlife.” *Id.* § 27.32(b)(2).

IV. National Environmental Policy Act, 42 U.S.C. §§ 4321–4335

The National Environmental Policy Act (“NEPA”) is a procedural statute intended to ensure that “unquantified environmental amenities and values may be given appropriate consideration in [federal] decision-making.” 42 U.S.C. § 4332(B). The statute is invoked during the planning stages for a federal agency action. Pursuant to NEPA, a federal agency must take a “hard look” at the environmental impacts of its proposed action. *Nat’l Audubon Soc’y v. Dep’t of the Navy*, 422 F.3d 174, 184 (4th Cir. 2005). NEPA is not designed to simply provide the government with information about the effects of plans.

The scrutiny with which an action is considered depends on the significance of its impact on the environment. Under NEPA, an agency must prepare a detailed statement, referred to as an Environmental Impact Statement (“EIS”), if it plans to undergo a “major Federal action[] significantly affecting the quality of the human environment.” 42 U.S.C. § 4332(C). NEPA regulations provide for ten “intensity” factors that an agency should weigh to determine whether an action is significant, such as whether the action is near an “ecologically critical area[]” and whether the action may adversely affect an ESA-listed species or its critical habitat. 40 C.F.R. § 1508.27(b), (b)(3), (b)(9). If it is unclear whether an action will be “significant,” then an agency may prepare an Environmental Assessment (“EA”), which is a “concise public document” that provides “sufficient evidence and analysis for determining whether to prepare an environmental impact statement.” 40 C.F.R. § 1508.9(a), (a)(1). If, pursuant to the EA, the action would not have a significant impact on the environment, then the agency may make a “finding of no significant impact” instead of preparing an EIS. *Id.* § 1508.9(a)(1); *see also id.* § 1508.13 (defining “finding of no significant impact”).

An EIS, on the other hand, must contain a more in-depth exploration of a project. This statement must include, among other information, an analysis of the proposed action’s environmental impact, any unavoidable adverse environmental effects, and direct, indirect, and cumulative impacts of the action. 42 U.S.C. § 4332(C)(i)-(ii); 40 C.F.R. § 1508.25(c)(1)-(3). Importantly, every EIS must also “rigorously explore and objectively evaluate all reasonable alternatives” to that action. 40 C.F.R. § 1502.14(a). The analysis of alternatives to the proposed action is “the heart of the environmental impact statement.” *Ctr. for Biological Diversity v. U.S. Dep’t of the Interior*, 623 F.3d 633, 642 (9th Cir. 2010) (internal citations omitted). After an agency drafts an EIS, “NEPA requires [it] to disseminate widely its findings on the

environmental impacts of its actions,” *Nat’l Audubon Soc’y v. Dep’t of Navy*, 422 F.3d at 184, and invite public comments on the draft, 40 C.F.R. § 1503.1. After the public comment period has closed, the agency must consider and respond to comments submitted by the public. *Id.* § 1503.4(a). After making any changes based on its consideration of the feedback it receives, the agency may then complete the process by publishing a final draft of the EIS. *Id.* § 1502.9(b). Thus, NEPA is critical to both “ensure that government agencies act on full information and that interested groups have access to such information.” *Sierra Club v. U.S. Forest Serv.*, 46 F.3d 835, 837 n. 2 (8th Cir. 1995).

FACTUAL BACKGROUND

I. Overview of Cape Romain National Wildlife Refuge

Cape Romain is a 66,267-acre refuge in South Carolina composed primarily of bays and estuarine emergent wetlands, with barrier islands that run along the Atlantic Ocean. Ex. A, CCP at 12, 57. The federal government established Cape Romain in 1932 pursuant to the Migratory Bird Conservation Act, which allows for the designation of refuges “for use as . . . inviolate sanctuar[ies], or for any other management purpose, for migratory birds.” *Id.* at 12 (quoting 16 U.S.C. § 715d). According to the Cape Romain Comprehensive Conservation Plan, “[t]he refuge’s original objectives were to conserve in public ownership habitat for waterfowl, shorebirds, and resident species.” *Id.* This management plan further asserts that “[i]n recent years, objectives have expanded to include: managing endangered species, protecting the 29,000 acre Class 1 Wilderness Area, and preserving the Bulls Island and Cape Island forests and associated diverse plant communities.” *Id.* The Service owns the land in Cape Romain that is uncovered by water at low tide in fee title. S.C. Code § 3-3-210. It also has jurisdiction over the refuge’s waters and waterbottoms up to low tide pursuant to a 99-year lease executed with South Carolina in 1991. *Lease: State of South Carolina Budget and Control Board to the United States Fish and Wildlife Service* (Feb. 21, 1991) (Ex. B).

II. Wildlife Present in the Refuge

A. Birds that Occupy Cape Romain

Cape Romain is broadly recognized as providing irreplaceable nesting, foraging, and sheltering habitat to birds. The refuge is one of only four sites on the Atlantic Coast of the United States and Canada that has been classified a Western Hemisphere Shorebird Reserve Network Site of International or Hemispheric Importance. CCP at 14, 47. To qualify for International Importance, sites must host at least 10% of the bio-geographic population for a shorebird species or at least 100,000 shorebirds annually. *Id.* at 47. Due to the refuge’s importance for colonial beach nesting birds and nesting shorebirds, the American Bird Conservancy lists Cape Romain as one of 500 Important Bird Areas. *Id.* at 24. In fact, the refuge hosts more shorebirds during spring migration than any other area except for Delaware Bay. *Id.* at 47.

As of 2010, more than 277 species of migratory and resident birds have been documented in the refuge. *Id.* at 31. According to the Service, Cape Romain’s beaches, sand bars, and dunes provide shorebirds and seabirds with nesting habitat and migratory birds with roosting and

foraging habitat. *Id.* at 54. Many migratory bird species have been known to nest throughout Cape Romain, including Wilson’s plovers, black-necked stilts, brown pelicans, royal terns, least terns, sandwich terns, Forster’s terns, common terns, black skimmers, seaside sparrows, least bitterns, clapper rails, and American oystercatchers.¹ *Id.* at 24–25 (discussion of nesting birds at the refuge); 50 C.F.R. § 10.13 (list of birds protected under the MBTA). Although some of the aforementioned species also use the refuge in the winter and fall seasons, all of them have been recorded using the refuge during the spring, the summer, or both two seasons. U.S. Fish & Wildlife Serv., *Cape Romain National Wildlife Refuge Bird List* (July 2011) (“Cape Romain Bird List”) (Ex. C). Other migratory birds that use the refuge include marbled godwits, ESA-listed *rufa* red knots, long-billed curlews, saltmarsh sparrows, and Nelson’s sparrows. Ex. A, CCP at 24–25. These species, too, have been identified in the refuge in the spring, the summer, or both seasons. Ex. C, Cape Romain Bird List.

Two areas in Cape Romain that are particularly critical for migratory birds are the islands of White Banks and Marsh Island. As noted by refuge management, Cape Romain “is extremely important for 22 species of shorebirds including the red knot and nesting seabirds, especially Marsh Island.” Letter from Sarah Dawsey, Refuge Manager, Cape Romain Nat’l Wildlife Refuge, U.S. Fish & Wildlife Serv. to Joel Munn (Nov. 12, 2015) (“2015 Refuge Manager Letter”) (Ex. D).² Marsh Island is a horseshoe-shaped beach with interior marsh located inside of Bulls Bay. According to refuge management, seabird nesting on the island is of a “sensitive and important nature.” Memorandum from Sarah Dawsey, Refuge Manager, Cape Romain Nat’l Wildlife Refuge, U.S. Fish & Wildlife Serv. on trespassing onto Marsh Island and White Banks at 1 (undated) (“Trespass Memorandum”) (Ex. E). For instance, Marsh Island is the “[o]nly site on [the] South Carolina coast that has supported Eastern Brown Pelican nesting every year since 1969 when records were first kept by state biologists.” *Id.* at attachment 1, p. 1. Over a 30-year period, 42.5% of royal tern nests and 31.9% of sandwich tern nests in South Carolina were located on Marsh Island. *Id.* The Trespass Memorandum, a Service document that was obtained by Defenders through a Freedom of Information Act request, delineates several key species of migratory birds that are known to nest on the island, all of which are MBTA-protected species that use the island during the spring, the summer, or during both seasons. *Id.* (list of certain nesting birds on Marsh Island); 50 C.F.R. § 10.13 (list of birds protected under the MBTA); Ex. C, Cape Romain Bird List (denoting seasonal refuge use). The memorandum categorizes these nesting birds’ priority level, along with whether the future of their existence is imperiled:

¹ In fact, almost 20% of the estimated number American oystercatchers on the U.S. Atlantic and Gulf Coasts use Cape Romain. *Id.* at 24 (internal citation omitted).

² Note that Defenders made one alteration to this record by redacting the address of Mr. Munn.

Marsh Island Species

- 1) Eastern Brown Pelican – high priority; S1: critically imperiled, S2: imperiled – due to factors (habitat loss, environmental contaminants, etc) which may result in steep population decline.
- 2) Royal Tern – high priority; need more information about this species, but nesting data indicates a declining trend.
- 3) Sandwich Tern – highest priority; need more information about this species, but nesting data indicate a declining trend.
- 4) Reddish Egret – highest priority; conservation status not yet assessed.
- 5) Forster’s Tern – high priority; need more information about this species, but nesting data indicate a declining trend.
- 6) American Oystercatcher – highest priority; State Concern species;
- 7) Great Egret – high priority
- 8) Snowy Egret – moderate priority
- 9) Tricolored Heron – high priority
- 10) Black-crowned Night Heron – highest priority
- 11) Glossy Ibis – moderate priority
- 12) Black Skimmer – highest priority; State Concern species
- 13) Gull-billed Tern – highest priority; State Concern species
- 14) Marbled Godwit – highest priority
- 15) Wilson’s Plover – highest priority; State Threatened

Source: *Ex. E, Trespass Memorandum at attachment 1, p. 1.*

Marsh Island is also a haven for migratory birds to carry out behavioral patterns other than nesting. For instance, the largest assemblage of Marbled Godwits in the State of South Carolina use Marsh Island for roosting and foraging. *Id.* at attachment 1, p. 2. Moreover, for 1,400 American oystercatchers and 13,000 other shorebirds birds that roost on the Atlantic Intracoastal Waterway during the day, Marsh Island is likely one of the only two sites used for nocturnal roosting. *Id.* (citing Felicia Sanders et al., *American Oystercatcher Winter Roosting and Foraging Ecology at Cape Romain, South Carolina*, WADER STUDY GROUP BULLETIN, 128, 132 (2013); Sarah L. Dodd & Mark D. Spinks, *Shorebird Assemblages of the Cape Romain Region, South Carolina*, 65 THE CHAT 45 (2001)). The Trespass Memorandum further asserts that “[b]ecause of the concentration of waterbirds at [Marsh Island and Bird Shoal], the conservation value . . . is high and human disturbance should be minimized, especially at night.” *Id.* (quoting Felicia Sanders et al., *American Oystercatcher Winter Roosting and Foraging Ecology at Cape Romain, South Carolina*, WADER STUDY GROUP BULLETIN, 128, 132 (2013)).

Photographs of Birds Occupying Marsh Island



Source: U.S. Fish and Wildlife Service Freedom of Information Act Response

Shorebirds at Cape Romain rely on invertebrate prey populations, most notably horseshoe crab eggs, for sustenance. Ex. A, CCP at 54. According to the Service, “[t]he eggs produced by [horseshoe crabs] provide excellent, high-quality food resources for migrating shorebirds including red knot, short-billed dowitcher, marbled godwit, ruddy turnstone, sanderlings, and dunlin.” *Id.* This food source is critical for migratory shorebirds that use Cape Romain because “for some shorebirds, South Carolina is the last stop to gain weight or energy for their journey to the Arctic.” South Carolina Dep’t. of Nat. Res., *Shorebird Research Underscores Importance of South Carolina Beaches*, DNR NEWS (June 7, 2018), http://scwaterlaw.sc.gov/news/2018/jun/jun7_shorebirds.html. Likely because of this, a study conducted at Cape Romain from 2015–2016 found that foraging shorebird distribution at the refuge was spatially correlated to horseshoe crab egg abundance. Fumika Takahashi, *Shorebird Utilization of Horseshoe Crab (Limulus Polyphemus) Eggs at Cape Romain National Wildlife Refuge, South Carolina*, CLEMSON UNIVERSITY TIGERPRINTS, ALL THESES, 2577 at 23 (2016) (“Takahashi 2016”). Of the refuge’s islands surveyed for this study, researchers observed that in 2015, survey plots at Bulls Island and Little Bulls Island had the highest densities of both shorebirds and horseshoe crab eggs. *Id.* at 18 (discussing horseshoe crab egg densities), 23 (discussing shorebird densities). Similarly, in 2016 researchers observed that plots at Marsh Island had the highest density of both shorebirds and horseshoe crab eggs. *Id.* at 18 (discussing

horseshoe crab egg densities), 23 (discussing shorebird densities). Moreover, this study determined that, of the shorebird fecal samples tested during the project, 95% tested positive for horseshoe crab eggs. *Id.* at ii.

Furthermore, the density of spawning horseshoe crabs impacts whether foraging shorebirds are able to access their eggs. *Id.* at 27. Horseshoe crabs lay their eggs 10–20 cm underground, making them generally out of reach to shorebirds. *Id.* For the eggs to become accessible, there must be repeated spawning by multiple crabs in the same area, causing eggs to be distributed onto or just below the earth’s surface. *Id.* Thus, areas of the refuge that support higher densities of horseshoe crabs attract more birds because the eggs are likelier to be within the birds’ reach.

Human disturbance is one of the most significant threats to bird species nationally, and can harm birds’ ability to roost, forage, and breed. In fact, according to the Cape Romain Refuge Manager, “[h]uman disturbance is one of the number one cause for shorebird declines, period.” *Livingston v. United States*, No. CIV. A. 2:15-CV-00564-DCN, Mem. In Support of the Mot. by the U.S. for Summ. J. on Cause of Action Number Three; FRCP 56 at 26, ECF No. 82-1 (“*Livingston Br.*”) (Ex. F). Disturbances can cause birds to decrease their usage of feeding and sheltering sites or abandon them altogether. *See, e.g.*, Charles Pfister et al., *The Impact of Human Disturbance on Shorebirds at a Migration Staging Area* 60 *BIOLOGICAL CONSERVATION* 115, 116 (1992) (internal citations omitted). Moreover, disturbances at roosting sites can impact birds’ breeding habits by causing “increased flushing from nests and decreased chick survival.” Nicholas J. Wallover et al., *Monthly Abundance and Seasonal Spatial Distribution of Shorebirds in Cape Romain National Wildlife Refuge, South Carolina*, 79 *THE CHAT* 61, 66 (2015) (internal citations omitted). Flushing from nests can expose chicks and eggs to predation and overheating. Ex. A, CCP at 48.

Refuge staff at Cape Romain are well aware that birds’ essential behavioral patterns can be harmed by human presence on islands and by nearby boats. According to the Cape Romain Refuge Manager, walking through sensitive nesting areas of the refuge’s islands “by far, is most damaging: To walk through a colony or step on eggs or keep birds off their nests.” Ex. F, *Livingston Br.* at 19. Also, according to the Comprehensive Conservation Plan, “boats . . . are very disruptive to bird populations.” Ex. A, CCP at 59. “Nesting shorebirds and seabirds place eggs on sand islands and shell rakes along the salt marsh. Boaters often unknowingly scare birds off their nests from boat wakes overwashing shell rakes and eggs and chicks overheat or can be vulnerable to predation.” *Id.* at 48; *see also* Sarah L. Dodd & Mark D. Spinks, *Shorebird Assemblages of the Cape Romain Region, South Carolina*, 65 *THE CHAT* 45, 50 (2001) (shorebirds using oyster banks near Cape Romain often flushed when boats’ wakes crested over banks). In fact, simply occupying the water in a boat next to islands is enough to disturb birds. Even “kayakers can pose . . . a threat, as well, just by being too close to a nesting colony and staying there.” Ex. F, *Livingston Br.* at 20. The Cape Romain Refuge Manager explained that:

If you were at high tide and you get close enough to that nesting colony that is jam packed with birds, it gets them up. When they get up, seagulls opportunistically come in and they eat the eggs. If somebody is there long enough, just hanging out in the water, disturbing these birds, can you imagine . . . [with] the temperatures

we're having, what happens to those eggs? They fry in a very short amount of time and those colonies fail.

Id. at 12–13. As summarized by the Comprehensive Conservation Plan, “[u]nregulated public use of refuge waters means lower survival and reproductive success to all vulnerable species.” Ex. A, CCP at 48.

B. ESA-Listed Species in Cape Romain

1. Rufa Red Knot

Rufa red knots (*Calidris canutus rufa*) (“red knots”) are also found in Cape Romain. *Id.* at 23. The Service added this species to the threatened species list in 2014. Endangered and Threatened Wildlife and Plants; Threatened Species Status for the Rufa Red Knot, 79 Fed. Reg. 73,706 (Dec. 11, 2014). The Service extended the section 9 take prohibition to the threatened red knot upon this listing. *Id.* at 73,743. An observer that surveyed birds in Cape Romain between November 2007 and October 2010, Mary-Catherine Martin, determined that red knots were the ninth most common species in the refuge, and that May and August were the two months that had the highest populations of the species. Nicholas J. Wallover et al., *Monthly Abundance and Seasonal Spatial Distribution of Shorebirds in Cape Romain National Wildlife Refuge, South Carolina*, 79 THE CHAT 61, 63–64 (2015). During this survey period, in the spring, Marsh Island had the highest density of red knots. *Id.* at 64. Red knots can be found in other parts of the refuge as well, including on Bulls Island, Little Bulls Island, and Lighthouse Island. Takahashi 2016 at appendix B, pp. 82–84. Additional data also indicates that Cape Romain’s remote islands may serve as important summering grounds for juvenile knots. Janet Thibault, *Assessing Status and Use of Red Knots in South Carolina: Project Report, October 2011–October 2013* 15 (2013). As is the case with countless other migratory birds, red knots are sensitive to human disturbance. U.S. Fish & Wildlife Serv., *Rufa Red Knot Ecology and Abundance: SUPPLEMENT TO: Endangered and Threatened Wildlife and Plants; Proposed Threatened Status for the Rufa Red Knot (Calidris canutus rufa)*.

Red knots use Cape Romain during their south and north bound migrations. Nicholas J. Wallover et al., *Monthly Abundance and Seasonal Spatial Distribution of Shorebirds in Cape Romain National Wildlife Refuge, South Carolina*, 79 THE CHAT 61, 66 (2015). The red knot migrates between its breeding grounds in the Canadian arctic to its wintering locations, which include areas in the Southeastern United States, the Gulf of Mexico, and South America. 79 Fed. Reg. at 73,706. Most red knots stop about halfway through the northbound portion of their migration to refuel. While refueling, the red knot must build up enough fat for the second leg of its journey in the form of nearly 400,000 horseshoe crab eggs per bird. Deborah Cramer, *Inside the Biomedical Revolution to Save Horseshoe Crabs and the Shorebirds that Need Them* NAT’L AUDUBON SOC’Y (2018), <https://www.audubon.org/magazine/summer-2018/inside-biomedical-revolution-save-horseshoe-crabs>. Easily digestible horseshoe crab eggs are a favored food source because they provide the highest energy accumulation rates in red knots worldwide. David S. Mizrahi & Kimberly A. Peters, *Relationships Between Sandpipers and Horseshoe Crab in Delaware Bay: A Synthesis*, 65, 70 (2009) (internal citation omitted). Because breeding season performance, recruitment and population dynamics are correlated to body condition, the birds

that fail to acquire such reserves are less likely to survive and reproduce. Niles S. Duijns et al., *Body Condition Explains Migratory Performance of a Long-Distance Migrant* 284 *BIOLOGICAL SCIENCES* (2017). In fact, according to the Service, an increase in the harvest of horseshoe crabs was the primary factor in the red knot population decline that occurred in the 2000s because the escalation of harvesting decreased the amount of food available to the species. Northeast Region, U.S. Fish & Wildlife Serv., *Rufa Red Knot (Calidris canutus rufa)* 2 (2013), https://fws.gov/northeast/red-knot/pdf/Redknot_BWfactsheet092013.pdf. It is therefore no wonder that a recent study conducted in Cape Romain observed that red knots “were significantly correlated to horseshoe crab egg abundance.” Takahashi 2016 at 24. This study concluded that “[i]f an objective of Cape Romain . . . is to increase favorable foraging habitat for migratory red knots, then Little Bulls Island, Bulls Island, and Marsh Island may present opportunities to do so based on density of horseshoe crab eggs.” *Id.* at 27.

2. The Piping Plover

Piping plovers (*Charadrius melodus*) are shorebirds that use habitat at Cape Romain for foraging, loafing, and roosting. *Id.* at 43. The Service first added piping plovers to the endangered and threatened species lists in 1986, and the species remains on the threatened species list to this date. Endangered and Threatened Wildlife and Plants; Determination of Endangered and Threatened Status for the Piping Plover, 50 Fed. Reg. 50,726 (Dec. 11, 1985). When the piping plover was listed, the Service extended the ESA’s section 9 take prohibition to the species. *Id.* at 50,733. In 2001, the Service designated critical habitat for wintering populations of piping plovers partially in Cape Romain, which includes the beaches of Lighthouse Island, the middle and north portions of Raccoon Key, and the southern end of Bulls Island. Endangered and Threatened Wildlife and Plants; Final Determination of Critical Habitat for Wintering Piping Plovers, 66 Fed. Reg. 36,038, 36,069 (July 10, 2001); *see also* Ex. A, CCP at 43. Although the species’ critical habitat in Cape Romain was identified as wintering habitat, piping plovers are occasionally identified in the refuge during the spring and fall, as well. Ex. C, Cape Romain Bird List.

Earlier this year, the Service asserted that recovery measures for the piping plover should be reprioritized in response to increasing threats to survival caused by human recreational disturbances. U.S. Fish & Wildlife Serv., *Piping Plover (Charadrius melodus): 5-Year Review: Summary and Evaluation* 17 (Mar. 2020), https://ecos.fws.gov/docs/five_year_review/doc6378.pdf. Piping plovers spend more time alert and less time foraging in areas that are disturbed, which can lead to reduced time spent feeding and increased stress levels, resulting in lower body mass. *Id.* at 16 (internal citation omitted). Moreover, piping plovers have significant site fidelity that makes the species more likely to die from disturbances than to leave. *Id.* at 12. “Even remote, boat only access sites have been subject to disturbance” from recreational activities, reducing the amount of habitat available to the piping plover. *Id.* at 17. The Service’s 5-Year Review therefore concluded that the negative impacts from disturbances can be reduced by limiting interactions between humans and piping plovers, such as by designating areas prohibiting public access in important habitats that have higher levels of disturbance. *Id.* at 16.

3. Northwest Atlantic Ocean Distinct Population Segment of the Loggerhead Sea Turtle

The Northwest Atlantic Ocean distinct population segment (“DPS”) of the loggerhead sea turtle (*Caretta caretta*) nests at Cape Romain. Ex. A, CCP at 23.³ In fact, the Service has referred to Cape Island in Cape Romain as being “the most significant loggerhead nesting beach north of Cape Canaveral.” *Id.* The species typically nests in the refuge between the months of May and August. *Id.* The Service and NMFS first designated the loggerhead sea turtle as being threatened throughout its range in 1978. Listing and Protecting Loggerhead Sea Turtles as “Threatened Species” and Populations of Green and Olive Ridley Sea Turtles as Threatened Species or “Endangered Species,” 43 Fed. Reg. 32,800 (July 28, 1978). With minor exceptions, the take prohibition of section 9 of the ESA was extended to the threatened loggerhead turtle. *Id.* at 32,806. In 2011, the agencies revised the loggerhead turtle’s designation by asserting that the species is comprised of nine endangered or threatened DPSs, classifying the Northwest Atlantic Ocean DPS as threatened. Endangered and Threatened Species; Determination of Nine Distinct Population Segments of Loggerhead Sea Turtles as Endangered or Threatened, 76 Fed. Reg. 58,868 (Sept. 22, 2011). Finally, in 2014, the Service and NMFS designated critical habitat for the Northwest Atlantic Ocean loggerhead DPS, which, among other areas, includes three islands in Cape Romain: Cape Island, Lighthouse Island, and Racoon Key. Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Northwest Atlantic Ocean Distinct Population Segment of the Loggerhead Sea Turtle, 79 Fed. Reg. 39,756, 39,788 (July 10, 2014). The loggerhead sea turtle’s diet at Cape Romain is in part comprised of horseshoe crabs.

4. Carolina Distinct Population Segment of the Atlantic Sturgeon

The Carolina DPS of the Atlantic Sturgeon (*Acipenser oxyrinchus oxyrinchus*) is also present in Cape Romain. Ex. A, CCP at 166;⁴ *see also* Letter from Sarah Dawsey, Refuge Manager, Cape Romain Nat’l Wildlife Refuge, U.S. Fish & Wildlife Serv., to Joel Munn at 1 (May 12, 2014) (“2014 Refuge Manager Letter”) (Ex. G).⁵ NMFS listed the Carolina DPS of the Atlantic sturgeon as endangered in 2012. Endangered and Threatened Wildlife and Plants; Final Listing Determinations for Two Distinct Population Segments of Atlantic Sturgeon (*Acipenser oxyrinchus oxyrinchus*) in the Southeast, 77 Fed. Reg. 5,914 (Feb. 6, 2012). The population of this DPS likely declined by more than 97% from its historical abundance. Atlantic Sturgeon Status Review Team for the Nat’l Marine Fisheries Serv., *Status Review of Atlantic Sturgeon* (*Acipenser oxyrinchus oxyrinchus*) 113 (revised July 27, 2007), <https://repository.library.noaa.gov/view/noaa/16197>. NMFS listed this species in light of threats

³ Note that the CCP refers to this species as the northern subpopulation of the southeastern loggerhead sea turtle, because the 2010 CCP predated the loggerhead sea turtle’s 2011 reclassification into nine DPSs. *See* Ex. A, CCP at 23.

⁴ Note that the CCP does not name the DPS of Atlantic sturgeons present in Cape Romain, because the 2010 CCP predated NMFS’s 2012 classification of the Carolina DPS of the species.

⁵ Note that this letter states that Cape Romain supports the Atlantic sturgeon, without specifying which DPS. However, the Carolina DPS of this species is what occurs in the area. Further note that the letter was erroneously dated May 12, 2012 instead of May 12, 2014.

from habitat alteration, limited spawning and development habitat, inadequate regulatory mechanisms, and bycatch. 77 Fed. Reg. 5,917.

III. Temporary Island Closures

In 2003 the Service enacted a regulation “to protect nesting birds” by prohibiting any member of the public from accessing the islands of Marsh Island, White Banks, and Sandy Point in Cape Romain from February 15 through September 15 on an annual basis. 50 C.F.R. § 26.34(mm)(1)(v). These closures apply to all areas on these islands above the low mean water mark, *id.*, and apply to both anchoring boats and foot traffic, Letter from Sarah Dawsey, Refuge Manager, Cape Romain Nat’l Wildlife Refuge, U.S. Fish & Wildlife Serv., to Joel Munn (Apr. 19, 2016) (Ex. H) (“2016 Refuge Manager Letter”).⁶ As noted in the Comprehensive Conservation Plan, “[p]roviding undisturbed nesting, roosting, and foraging habitat is the most important role for the management of shorebirds within Cape Romain.” Ex. A, CCP at 48; *see also id.* at 47, 49 (the refuge’s “objective” for migrating and wintering populations of shorebirds and for sea birds is to “[p]rovide undisturbed nesting, roosting, and foraging habitat.”).

Map of Marsh Island and White Banks



Source: Ex. E, *Trespass Memorandum at 1*

Refuge staff at Cape Romain have regularly expressed that these island closures are an important component of achieving the refuge’s purpose. The Refuge Manager explained in a

⁶ Note that Defenders made one alteration to this record by redacting the address of Mr. Munn.

2016 letter to a commercial horseshoe crab harvester that “[t]o fulfill the Refuge purpose we are required to protect sensitive migratory bird nesting areas. To that end we close Marsh Island, White Banks, and Sandy Point to public entry.” Ex. H, 2016 Refuge Manager Letter. She remarked in a different communication with the same harvester that the intent of the closure regulation is “to minimize disturbance of these extremely important bird nesting islands.” Ex. G, 2014 Refuge Manager Letter at 1. The Refuge Manager also noted within an internal analysis that the annual closures of Marsh Island and White Banks are “[d]ue to the importance of nesting, roosting and foraging seabirds and shorebirds.” Ex. E, Trespass Memorandum at 2.

IV. Horseshoe Crab Harvesting at Cape Romain

Since at least 2012, a commercial horseshoe crab harvester, Mr. Joel Munn, and his crew have been harvesting at Cape Romain in a manner that puts the refuge at risk. *See id.* (Refuge Manager stating she first learned of the harvest in 2012).

Horseshoe Crabs Along Marsh Island



Source: U.S. Fish & Wildlife Service Freedom of Information Act Response.

The harvesting occurs on a yearly basis when the horseshoe crabs spawn during the high tides in the month of May in the intertidal zone, Ex. A, CCP at 23, and typically lasts until June. Harvesters collect horseshoe crabs by walking along the island, picking up crabs, and placing them in their boats. Ex. E, Trespass Memorandum at 2. One day of harvesting can yield thousands of crabs. For instance, harvesters collected more than 6,000 crabs on Bulls Island and a smaller nearby island over a span of only two days. Email from Ryan Wagner, Federal Wildlife Officer, South Carolina Lowcountry Complex, U.S. Fish & Wildlife Serv., to Sarah Dawsey, Refuge Manager, Cape Romain Nat’l Wildlife Refuge, U.S. Fish & Wildlife Serv. (May 19, 2014, 01:29 EST); Email from Ryan Wagner, Federal Wildlife Officer, South Carolina Lowcountry Complex, U.S. Fish & Wildlife Serv., to Sarah Dawsey, Refuge Manager, Cape

Romain Nat'l Wildlife Refuge, U.S. Fish & Wildlife Serv. (May 20, 2014, 03:25 EST) (collectively, Ex. D). Although the Service has not provided data from every year, in 2014 more than 25,000 crabs were harvested in Cape Romain. Email from Ryan Wagner, Federal Wildlife Officer, South Carolina Lowcountry Complex, U.S. Fish & Wildlife Serv., to Sarah Dawsey, Refuge Manager, Cape Romain Nat'l Wildlife Refuge, U.S. Fish & Wildlife Serv. (June 17, 2014, 15:34 EST) (Ex. J) (“HSC season is basically wrapped up, 25,000 crabs harvested. not [sic] sure if that is a highlight, but its [sic] happening.”). The South Carolina Department of Natural Resources (“SCDNR”) is responsible for issuing horseshoe crab harvesting permits in the State of South Carolina, and the kind of commercial harvesting permits that the agency issues to Mr. Munn authorize him to conduct activities in legally accessible areas along the Atlantic Coast. *See, e.g.,* South Carolina Dep’t of Nat. Res., *Horseshoe Crab Hand Harvest Permit HH19* (Apr. 3, 2019) (Ex. K).

In 2014 and at least one subsequent year, the Service issued Mr. Munn Special Use Permits for after-hours use of Garris Landing, a boat launch in Cape Romain. *See* U.S. Dep’t of the Interior & U.S. Fish & Wildlife Serv., *National Wildlife Refuge System Commercial Activities Special Use Application and Permit* (May 15, 2014) (stating that the permitted commercial activity is “Access [sic] to Garris Landing During Closed Hours”) (Ex. L);⁷ Ex. E, Trespass Memorandum at 4 (stating that since communicating with harvesters in 2014, the Service “worked with the harvesters for two seasons, issuing a [Special Use Permit] for use of the... landing after hours”). The Special Use Permit was granted so that Mr. Munn may have “easier access to [the Bulls Bay] harvest area.” *Id.*⁸ Moreover, the Service has also notified Mr. Munn that he has access to nearly the entire refuge to conduct his activities. In 2016, the agency communicated to him that, with the exception of White Banks and Marsh Island, “the remainder of the refuge, more than 66,000 acres of land and waters, are open year-round for you to access.” Ex. H, 2016 Refuge Manger Letter.

The Service has never made a compatibility determination for horseshoe crab harvesting, nor has it issued Mr. Munn a Special Use Permit to engage in the commercial harvest, itself. The Service’s decision not to require a Special Use Permit for commercial horseshoe crab harvesting runs counter to refuge law. Raye Nilius, the former Project Leader for the Lowcountry Refuges Complex, explained under oath in a 2016 deposition that Special Use Permits are reasonably necessary to protect the refuge in part because Cape Romain:

provides . . . habitat for . . . species, for example, the loggerhead sea turtles that nest on Cape Island and those on islands on the north end of the refuge, because the birds that nest on Marsh Island and the other islands are so rare and so important, it’s important for the refuge manager and refuge management to protect those species and protect those habitats.

⁷ Note that Defenders made one alteration to this record by redacting the phone number of Mr. Munn.

⁸ Note that Marsh Island and White Banks both occur in Bulls Bay. Bulls Bay is bounded on the southwest by Bulls Island, which is piping plover critical habitat, and on the northeast by Raccoon Key, which is piping plover and loggerhead sea turtle critical habitat.

Ex. F, *Livingston Br.* at 32. He further elaborated that issuing Special Use Permits to regulate commercial kayak tours is reasonably necessary to protect the refuge because “[t]hose kinds of activities have the potential for disturbing the wildlife that uses the refuge. The special use permit would include conditions to ensure that that doesn’t happen. It’s our responsibility to protect” birds, ESA-listed species, and habitat in Cape Romain. *Id.* at 33. According to the Refuge Manager, Special Use Permits are necessary because “if you have unregulated commercial activity within the Refuge, then we can’t protect [birds and endangered] species.” *Id.* at 25. She went on to assert that “it’s very important to have everybody regulated, to know what they’re doing, make sure that they are environmentally sensitive and want to take care of our precious resource.” *Id.* at 27. Thus, contrary to the Service’s position on commercial horseshoe crab harvesting, leadership at Cape Romain has in the past stressed the importance of regulating commercial activities to protect wildlife and habitat in the refuge.

The harvest of horseshoe crabs in Cape Romain also puts the refuge at risk because it violates both system-wide and refuge-specific regulations. First, Mr. Munn repeatedly trespasses onto Marsh Island and White Banks to harvest horseshoe crabs during the two islands’ closure periods; trespasses which the Service is well aware of. *See, e.g.*, Ex. G, 2014 Refuge Manager Letter; Ex. D, 2015 Refuge Manager Letter; Ex. H, 2016 Refuge Manager Letter. In fact, “Marsh Island has been the main area utilized to harvest” horseshoe crabs. Ex. E, Trespass Memorandum at 2. Below are two photographs that Defenders obtained through a Freedom of Information Act request that show Mr. Munn and his crew harvesting horseshoe crabs above high tide on Marsh Island during the island’s temporary closure period:



Source: U.S. Fish and Wildlife Service Freedom of Information Act Response

Harvesting crabs in these restricted areas also violates permits issued by SCDNR. SCDNR's horseshoe crab hand harvest permit states that "[t]his permit does not . . . allow trespass or harvest in restricted areas designated by other entities of the State or Federal government." Ex. K, South Carolina Dep't of Nat. Res., *Horseshoe Crab Hand Harvest Permit HH19* (Apr. 3, 2019). The Director of SCDNR's Office of Fisheries Management explained that this provision was to "make[] it explicitly clear that nothing in the permit authorizes fishermen to access or harvest in any areas within the state that they are not allowed to be in per other existing state laws, federal laws or private property rights." Email from Mel Bell, Director, Office of Fisheries Management, Marine Res. Div, South Carolina Dep't of Nat. Res., to Sarah Dawsey, Refuge Manager, Cape Romain Nat'l Wildlife Refuge, U.S. Fish & Wildlife Serv. (Feb. 26, 2014, 13:41 EST) (Ex. M). Both the Service and SCDNR agree "that any harvest on [Marsh Island and White Banks] would not be in compliance with refuge specific regulations." Ex. E, Trespass Memorandum at 3. Finally, it is SCDNR's position that the Service is responsible for preventing harvesters from accessing Marsh Island and White Banks, rather than SCDNR.

Mr. Munn also violates System-wide Refuge Act regulations when he harvests horseshoe crabs. By pulling boats ashore on Marsh Island, as can be seen in the above photographs, Mr. Munn and his crew are in violation of the Refuge System-wide regulation prohibiting individuals from operating boats in a reckless or negligent manner, or in a manner that is likely to endanger wildlife. *See* 50 C.F.R. § 27.32(b)(2). Moreover, by harvesting horseshoe crabs, Mr. Munn disturbs wildlife, such as nesting birds on Marsh Island. The Refuge Act regulations prohibit the public from disturbing animals unless the Service provides individuals with authorization to do so. *Id.* § 27.51(a).

The Service is aware of Mr. Munn's repeated trespassing onto Marsh Island and White Banks to harvest horseshoe crabs. In 2014 refuge leadership notified Mr. Munn that it is illegal to harvest on those islands. Ex. G, 2014 Refuge Manager Letter. The Refuge Manager contacted Mr. Munn again in 2016, reiterating that it is illegal to access Marsh Island and White Banks. Ex. H, 2016 Refuge Manager Letter. Moreover, in 2018 an SCDNR employee informed Service leadership at Cape Romain that she identified three fishermen walking both below and above the high tide line on Marsh Island. Ex. M, Email from Felicia Sanders, South Carolina Dep't of Nat. Res., to Sarah Dawsey, Refuge Manager, Cape Romain Nat'l Wildlife Refuge, U.S. Fish & Wildlife Serv. & Durwin Carter, Project Leader, South Carolina Lowcountry Nat'l Wildlife Refuge Complex, U.S. Fish & Wildlife Serv. (Aug. 15, 2018, 15:54 EST).

V. Section 7 Consultation on the Cape Romain Comprehensive Conservation Plan

Finally, although the Service engaged in section 7 consultation when it developed the Comprehensive Conservation Plan in 2010, *see* Ex. A, CCP at 148-154, it is our understanding that the Service has not reinitiated consultation on the Comprehensive Conservation Plan since that time. The species that were the subject of consultation during the development of the 2010 Comprehensive Conservation Plan are the loggerhead sea turtle, the West Indian manatee, the wood stork, the piping plover, the red wolf, and the seabeach amaranth. *Id.* at 149. The consultation also took the designated critical habitat for the piping plover into consideration. *Id.* Since the Comprehensive Conservation Plan was finalized in 2010, there have been several

developments regarding ESA-listed species and their critical habitat at the refuge. First, NMFS listed the Carolina DPS of the Atlantic sturgeon as endangered in 2012. Second, the Service added the red knot to the threatened species list in 2014. Finally, the Service and NMFS designated the Northwest Atlantic Ocean DPS of the loggerhead sea turtle as threatened in 2011 and designated Cape Island, Lighthouse Island, and Raccoon Key as critical habitat for this DPS in 2014.

VIOLATIONS

The Service is in violation of several federal laws by (1) granting the Garris Landing Special Use Permits to Mr. Munn, which gave him “easier access to th[e] harvest area,” and (2) authorizing Mr. Munn to access “more than 66,000 acres of land and waters” in Cape Romain. Although neither of these actions explicitly gave Mr. Munn permission to trespass onto Marsh Island and White Banks, they were taken knowing that he repeatedly violates these access prohibitions. Thus, the Service’s actions, which allow and otherwise enable horseshoe crab harvesting in Cape Romain, violate the ESA, the MBTA, the Refuge Act, and NEPA.

I. Violations of the Endangered Species Act

A. Failure to Comply with Section 7 When Authorizing the Harvest

First, the Service is in violation of section 7(a)(2) of the ESA for failing to meet its consultative and substantive obligations to ensure that its actions allowing and otherwise facilitating horseshoe crab harvesting on Cape Romain are not likely to jeopardize the continued existence of listed species or adversely modify critical habitat. The Service (1) granted the Garris Landing Special Use Permits to Mr. Munn, which gave him “easier access to th[e] harvest area,” and (2) authorized Mr. Munn to access “more than 66,000 acres of land and waters” in Cape Romain for horseshoe crab harvesting. It is incontrovertible that horseshoe crab harvesting in Cape Romain may affect or otherwise adversely affects listed species and critical habitat. Horseshoe crab harvesting significantly decreases the amount of available horseshoe crabs and their eggs, which serve as food for loggerhead sea turtles and red knots, respectively. Additionally, loggerheads nest on the refuge between May and August, which overlaps with horseshoe crab harvesting season, and in areas where Mr. Munn is authorized to harvest, including Cape Island and Lighthouse Island. Piping plovers on Cape Romain may also be affected as the species is susceptible to disturbances, which can reduce its time spent feeding, increase stress levels, and result in lower body mass. Harvesting horseshoe crabs may also affect piping plover and loggerhead sea turtle critical habitat on Cape Romain, including Lighthouse Island, Raccoon Key, and Bulls Island. Crab harvesting activities include crews pulling boats ashore, and walking along the beaches to collect horseshoe crabs. These activities degrade the quality of the beaches by crushing food and prey along the shores or leaving behind debris, making the habitat less hospitable.

Notwithstanding substantial evidence indicating that horseshoe crab harvesting in Cape Romain may affect several ESA-listed species and their critical habitats, the Service has failed to complete ESA section 7 consultation addressing these effects. In the absence of a lawful

consultation, the Service also is in violation of its duty to ensure its actions are not likely to cause jeopardy or adversely modify critical habitat.

B. Unlawful Take of *Rufa* Red Knots

The Service is in violation of section 9 of the ESA for causing the unlawful take of *rufa* red knots by allowing and otherwise facilitating horseshoe crab harvesting, which has created a likelihood of injury to the species by significantly disrupting its ability to feed on horseshoe crab eggs. Section 9(a)(1) of the ESA prohibits the unpermitted take of any endangered species of fish or wildlife, 16 U.S.C. § 1538(a)(1)(B), and the Service extended this take prohibition to the red knot, which is listed as threatened, 79 Fed. Reg. 73,743. Pursuant to the ESA, take can encompass harassment, 16 U.S.C. § 1532(19), which includes creating “the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include . . . feeding,” 50 C.F.R. § 17.3(c).

The Service (1) granted the Garris Landing Special Use Permits to Mr. Munn, which gave him “easier access to th[e] harvest area,” and (2) authorized Mr. Munn to access “more than 66,000 acres of land and waters” in Cape Romain for horseshoe crab harvesting. Horseshoe crab harvesting at Cape Romain disrupts red knots’ feeding patterns. Red knots depend on horseshoe crab eggs as a food source because eating them allows the birds to quickly build up enough fat to carry them through the second leg of their arduous migration. Given that red knots can be sensitive to human disturbance, horseshoe crab harvesting activities can drive red knots away from locations that the birds would otherwise use for foraging. Furthermore, tens of thousands of spawning horseshoe crabs can be harvested in a single season, causing a significant decline in the amount of food available to red knots.

C. Failure to Reinitiate and Complete Consultation on the Comprehensive Conservation Plan

The Service has furthermore failed to reinitiate section 7(a)(2) consultation on its Comprehensive Conservation Plan to address its management actions, including authorizing horseshoe crab harvesting, on recently-listed species and their critical habitat. An action agency that has previously completed section 7 consultation must reinitiate consultation under four circumstances, one of which is “[i]f a new species is listed or critical habitat designated that may be affected by the identified action.” 50 C.F.R. § 402.16(a)(4).

The Service developed the Comprehensive Conservation Plan in 2010, which it uses to guide its management activities. In 2014, the agency listed the *rufa* red knot as threatened. Thus, the Service must reinitiate consultation on the 2010 Comprehensive Conservation Plan to assess the effects of its management activities on red knots, which are being harassed as a result of the agency’s authorizations related to horseshoe crab harvesting. Moreover, in 2011, the Service and NMFS revised the loggerhead sea turtle’s classification by asserting that the species is comprised of nine endangered or threatened DPSs, classifying the Northwest Atlantic Ocean DPS as threatened. The agencies subsequently designated Cape Island, Lighthouse Island, and Raccoon Key as critical habitat for this DPS in 2014. The Service must also reinitiate consultation on the Comprehensive Conservation Plan to analyze its management actions’ effects on loggerhead sea

turtles and their critical habitat present in the action area, which are being adversely affected by horseshoe crab harvesting. Finally, the Service must consult with NMFS on the Comprehensive Conservation Plan regarding the effects that the plan would have on the endangered Carolina DPS of the Atlantic sturgeon, which was classified in 2012. Management actions delineated in the Comprehensive Conservation Plan also may affect this DPS, including authorizing horseshoe crab harvesting, which increases the amount of boating in the refuge. Therefore, to comply with the agency's substantive and procedural obligations pursuant to section 7(a)(2) of the ESA, the Service must immediately reinstate consultation on the Comprehensive Conservation Plan.

II. Violation of the Migratory Bird Treaty Act

By allowing and otherwise facilitating horseshoe crab harvesting on Cape Romain the Service also is liable for unlawful take of migratory bird chicks and migratory bird eggs in violation of the Migratory Bird Treaty Act. Pursuant to the MBTA, it is unlawful for a person to, among other activities, cause an unpermitted take of any migratory bird or any egg of a migratory bird, 16 U.S.C. § 703(a), even if that take is incidental to other activities.

The Service (1) granted the Garris Landing Special Use Permits to Mr. Munn, which gave him "easier access to th[e] harvest area," and (2) authorized Mr. Munn to access "more than 66,000 acres of land and waters" in Cape Romain for horseshoe crab harvesting. Horseshoe crab harvesting on the Refuge causes take of migratory bird chicks and migratory bird eggs by flushing birds off of their nests, exposing them to predation and overheating. Nesting migratory birds can be highly sensitive to human disturbances, including walking through bird colonies and entering islands occupied by birds to harvest crabs. When disturbed, birds can often flush off of their nests. The islands of Cape Romain are home to countless nesting birds protected under the MBTA, including willets, laughing gulls, Eastern brown pelicans, royal terns, sandwich terns, reddish egrets, and American oystercatchers, which all nest on Marsh Island, Bulls Island, or both.

III. Violations of the Refuge Act

The Service also is in violation of several provisions of the Refuge Act and its regulations. First, the Service has failed to make a compatibility determination regarding use of Cape Romain for horseshoe crab harvesting and related activities. *See* 16 U.S.C. § 668dd(d)(3)(A)(i). Second, the Service has allowed and otherwise facilitated horseshoe crab harvesting, a commercial activity, without first granting a Special Use Permit. *See* 50 C.F.R. § 27.97. Finally, by allowing and otherwise facilitating unfettered access to the refuge to harvest horseshoe crabs, the Service violated the Refuge Act's mandate that all refuges be managed to fulfill the specific purposes for which the refuge was established. *See* 16 U.S.C. § 668dd(a)(3)(A).

A. Failure to Conduct a Compatibility Determination

Under the Refuge Act and its regulations, "all areas included in the [System] are closed to public access until and unless [the Service] opens the area for a use . . . in accordance with the [Refuge Act]." 50 C.F.R. § 25.21(a); *see also* 16 U.S.C. § 668dd(c). In order for the Service to

open refuge areas to any use, the agency must first ensure that the use at issue is “compatible with the purposes for which these areas were established.” 16 U.S.C. § 668dd(d)(1)(B). The Refuge Act “requires that a written compatibility determination be completed *before* [a use] is permitted on a national wildlife refuge.” *Del. Audubon Soc’y, Inc.*, 612 F. Supp. 2d at 450 (emphasis in original). The Service (1) granted the Garris Landing Special Use Permits to Mr. Munn, which gave him “easier access to th[e] harvest area,” and (2) authorized Mr. Munn to access “more than 66,000 acres of land and waters” in Cape Romain. However, the Service has failed to make a compatibility determination regarding horseshoe crab harvesting in Cape Romain.

B. Failure to Issue a Special Use Permit for Commercial Activity

Refuge Act regulations prohibit members of the public on any refuge from “conducting a commercial enterprise . . . except as may be authorized by special permit. 50 C.F.R. § 27.97. The Service (1) granted the Garris Landing Special Use Permits to Mr. Munn, which gave him “easier access to th[e] harvest area,” and (2) authorized Mr. Munn to access “more than 66,000 acres of land and waters” in Cape Romain for horseshoe crab harvesting. The Service has violated Refuge Act regulations by allowing and otherwise facilitating commercial horseshoe harvesting in Cape Romain without a Special Use Permit.

C. Undermining the Purposes of Cape Romain

Finally, by allowing and otherwise facilitating the harvesting of horseshoe crabs in Cape Romain, the Service has subverted the Refuge’s overriding purposes. The Refuge Act mandates that “each refuge shall be managed to fulfill the mission of the System, as well as the specific purposes for which that refuge was established.” 16 U.S.C. § 668dd(a)(3)(A). The Service (1) granted the Garris Landing Special Use Permits to Mr. Munn, which gave him “easier access to th[e] harvest area,” and (2) authorized Mr. Munn to access “more than 66,000 acres of land and waters” in Cape Romain for horseshoe crab harvesting. The federal government established Cape Romain under the Migratory Bird Conservation Act “for use as an inviolate sanctuary, or for any other management purpose, for migratory birds.” Ex. A, CCP at 12 (quoting 16 U.S.C. § 715d). In its Comprehensive Conservation Plan, the Service emphasized the refuge’s significance to bird species, highlighting its unique qualities including:

- (1) its designation as a Western Hemisphere Shorebird Reserve Network Site of International Importance, *id.* at 47;
- (2) its listing as one of 500 Important Bird Areas by the American Bird Conservancy, *id.* at 24;
- (3) hosting more shorebirds during spring migration than any other area except for Delaware Bay, *id.* at 47; and
- (4) observers identifying more than 277 species of migratory and resident birds within its confines, *id.* at 31.

Moreover, the Refuge Manager has emphasized that Cape Romain is “extremely important for 22 species of shorebirds . . . and nesting seabirds, especially Marsh Island.” Ex. D, 2015 Refuge Manager Letter. This island provides nesting habitat to bird species that the Refuge Manager has designated as being of high or highest priority, including eastern brown pelicans, royal terns, sandwich terns, reddish egrets, Forster’s terns, American oystercatchers, great egrets, tricolored herons, black-crowned night herons, black skimmers, gull-billed terns, marbled godwits, and Wilson’s plovers. Ex. E, Trespass Memorandum at attachment 1, p. 1.

Cape Romain staff have stressed repeatedly that minimizing disturbances is essential to bird conservation. According to the Refuge Manager, “[h]uman disturbance is one of the number one cause for shorebird declines, period.” Ex. F, *Livingston Br.* at 26. Disturbances caused by walking on islands occupied by birds, or even by boating next to these islands, can interfere with birds’ ability to breed, shelter and feed. Moreover, the Refuge Manager has emphasized the incompatibility of the refuge’s purposes and unfettered commercial activity, noting that “if you have unregulated commercial activity within the Refuge, then we can’t protect” migratory birds, among other species. *Id.* at 25. It is no surprise then that the Comprehensive Conservation Plan’s objectives for both shorebirds and sea birds is to “[p]rovide *undisturbed* nesting, roosting, and foraging habitat.” Ex. A, CCP at 47, 49 (emphasis added).

By allowing and otherwise facilitating the harvesting of horseshoe crabs in Cape Romain, the Service is undermining the refuge’s purposes of serving as a sanctuary to birds and listed species. *See* 16 U.S.C. § 668dd(a)(3)(A).

IV. Violation of NEPA

Finally, the Service is in violation of the National Environmental Policy Act for failing to complete any NEPA analysis prior to allowing and otherwise facilitating use of the Refuge for horseshoe crab harvesting. As discussed above, horseshoe crab harvesting significantly impacts the Refuge and the myriad wildlife species that exist there. NEPA requires preparation of an Environmental Impact Statement (“EIS”) for a “major Federal action[] significantly affecting the quality of the human environment.” 42 U.S.C. § 4332(C). The Service (1) granted the Garris Landing Special Use Permits to Mr. Munn, which gave him “easier access to th[e] harvest area,” and (2) authorized Mr. Munn to access “more than 66,000 acres of land and waters” in Cape Romain for horseshoe crab harvesting. These actions, which allow and otherwise facilitate horseshoe crab harvesting in Cape Romain, satisfy at least two of NEPA’s ten intensity factors triggering preparation of an EIS. 40 C.F.R. § 1508.27(b). First, horseshoe crab harvesting in Cape Romain occurs in an ecologically critical area. *Id.* at § 1508.27(b)(3). Cape Romain is a designated unit of the National Wildlife Refuge System. The refuge provides irreplaceable nesting, foraging, and sheltering habitat to hundreds of species of birds and has received multiple designations reserved for areas that provide crucial sanctuaries to birds. Second, the Service’s actions may adversely affect ESA-listed species and critical habitat. *Id.* at § 1508.27(b)(9). By significantly decreasing the amount of available horseshoe crabs and crab eggs, harvesting at Cape Romain causes a take of threatened red knots and decreases a source of food for threatened loggerhead sea turtles. Moreover, horseshoe crab harvesting adversely affects critical habitat for both the threatened piping plover and the Northwest Atlantic Ocean DPS of the loggerhead sea turtle.

CONCLUSION

As set forth in this letter, by authorizing and otherwise facilitating commercial horseshoe crab harvesting in Cape Romain, the Service is in violation of the ESA, the MBTA, the Refuge Act, and NEPA. To remedy these legal violations the Service must immediately suspend horseshoe crab harvesting in Cape Romain until the above-referenced legal violations are remedied. We are available to discuss this matter but if the crab harvest is not immediately suspended we intend to pursue legal action.

Sincerely,

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On behalf of Defenders of Wildlife

Enclosures: -Appendix of Attachments; and
-Attachments

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APPENDIX

- Exhibit A – U.S. Dep’t of the Interior & U.S. Fish & Wildlife Serv., Southeast Region, *Comprehensive Conservation Plan: Cape Romain National Wildlife Refuge: Charleston County, South Carolina* (July 2010)
- Exhibit B – *Lease: State of South Carolina Budget and Control Board to the United States Fish and Wildlife Service* (Feb. 21, 1991)
- Exhibit C – U.S. Fish & Wildlife Serv., *Cape Romain National Wildlife Refuge Bird List* (July 2011)
- Exhibit D – Letter from Sarah Dawsey, Refuge Manager, Cape Romain Nat’l Wildlife Refuge, U.S. Fish & Wildlife Serv. to Joel Munn (Nov. 12, 2015)
- Exhibit E – Memorandum from Sarah Dawsey, Refuge Manager, Cape Romain Nat’l Wildlife Refuge, U.S. Fish & Wildlife Serv. on trespassing onto Marsh Island and White Banks
- Exhibit F – *Livingston v. United States*, No. CIV. A. 2:15-CV-00564-DCN, Mem. In Support of the Mot. by the U.S. for Summ. J. on Cause of Action Number Three; FRCP 56, ECF No. 82-1
- Exhibit G – Letter from Sarah Dawsey, Refuge Manager, Cape Romain Nat’l Wildlife Refuge, U.S. Fish & Wildlife Serv., to Joel Munn (May 12, 2014)
- Exhibit H – Letter from Sarah Dawsey, Refuge Manager, Cape Romain Nat’l Wildlife Refuge, U.S. Fish & Wildlife Serv., to Joel Munn (Apr. 19, 2016)
- Exhibit I – Email from Ryan Wagner, Federal Wildlife Officer, South Carolina Lowcountry Complex, U.S. Fish & Wildlife Serv., to Sarah Dawsey, Refuge Manager, Cape Romain Nat’l Wildlife Refuge, U.S. Fish & Wildlife Serv. (May 19, 2014, 01:29 EST); Email from Ryan Wagner, Federal Wildlife Officer, South Carolina Lowcountry Complex, U.S. Fish & Wildlife Serv., to Sarah Dawsey, Refuge Manager, Cape Romain Nat’l Wildlife Refuge, U.S. Fish & Wildlife Serv. (May 20, 2014, 03:25 EST)
- Exhibit J – Email from Ryan Wagner, Federal Wildlife Officer, South Carolina Lowcountry Complex, U.S. Fish & Wildlife Serv., to Sarah Dawsey, Refuge Manager, Cape Romain Nat’l Wildlife Refuge, U.S. Fish & Wildlife Serv. (June 17, 2014, 15:34 EST)

- Exhibit K – South Carolina Dep’t of Nat. Res., *Horseshoe Crab Hand Harvest Permit HH19* (Apr. 3, 2019)
- Exhibit L – U.S. Dep’t of the Interior & U.S. Fish & Wildlife Serv., *National Wildlife Refuge System Commercial Activities Special Use Application and Permit* (May 15, 2014)
- Exhibit M – Email from Mel Bell, Director, Office of Fisheries Management, Marine Res. Div, South Carolina Dep’t of Nat. Res., to Sarah Dawsey, Refuge Manager, Cape Romain Nat’l Wildlife Refuge, U.S. Fish & Wildlife Serv. (Feb. 26, 2014, 13:41 EST); Email from Felicia Sanders, South Carolina Dep’t of Nat. Res., to Sarah Dawsey, Refuge Manager, Cape Romain Nat’l Wildlife Refuge, U.S. Fish & Wildlife Serv. & Durwin Carter, Project Leader, South Carolina Lowcountry Nat’l Wildlife Refuge Complex, U.S. Fish & Wildlife Serv. (Aug. 15, 2018, 15:54 EST)