



**JURISDICTION AND VENUE**

5. The Court has subject matter jurisdiction because Conservation Law Foundation’s (“CLF”) action arises under the laws of the United States, namely the Clean Water Act. 33 U.S.C. § 1365(a)(1) (citizen suit provision); 28 U.S.C. § 1331 (federal question).

6. The Court has jurisdiction to declare the rights and other legal relations of the Parties with the force and effect of a final judgment or decree, to enjoin Defendant to abate its unlawful acts and remediate past violations of federal law, and to award further necessary or proper relief. 28 U.S.C. §§ 2201–02 (declaratory judgment); 33 U.S.C. § 1365(a) (injunctive relief and civil penalties); 33 U.S.C. § 1365(d) (litigation costs).

7. On November 14, 2024, CLF notified Cooke Aquaculture USA, Inc (“Cooke”) and its registered agent of its intent to file suit for violations of the Clean Water Act, in compliance with the statutory notice requirements of the Clean Water Act, 33 U.S.C. § 1365(b)(1)(A), and the corresponding regulations, 40 C.F.R. § 135.2.

8. A true and accurate copy of CLF’s Notice Letter (“Notice”) is appended as Exhibit 1. The Notice Letter is incorporated by reference herein.

9. Plaintiff sent copies of the Notice to the Administrator of the United States Environmental Protection Agency (“EPA”), the Regional Administrator of EPA Region 1, the Citizen Suit Coordinator, and the Maine Department of Environmental Protection (“Maine DEP”).

10. More than 60 days have elapsed since Plaintiff mailed its Notice, during which time neither EPA nor the State of Maine has commenced an action to redress the violations alleged in this Complaint. *See* 33 U.S.C. § 1365(b)(1)(B).

11. Each of the addressees in Paragraphs 7 and 9 received the Notice Letter. A copy of each return receipt is appended as Exhibit 2.

12. CLF has satisfied the Clean Water Act's notice requirement. *See* 33 U.S.C. § 1365(b)(1)(A) and 40 C.F.R. § 135.2.

13. The Clean Water Act violations identified in the Notice and alleged in this Complaint are of a continuing nature, ongoing, or reasonably likely to re-occur.

14. Venue is proper in the United States District Court for the District of Maine because the source of the violations is located within this judicial district. 33 U.S.C. § 1365(c)(1).

### **PARTIES**

#### **Plaintiff**

15. Plaintiff CLF is a nonprofit, member-supported, regional environmental advocacy organization dedicated to protecting New England's environment. CLF works on behalf of its members in New England to enforce environmental laws, including the Clean Water Act. CLF advocates to improve water quality across the New England region.

16. CLF has a long history of working to protect the health of Maine's water resources.

17. CLF has over 5,895 members, including over 490 members in Maine.

18. CLF's members use and enjoy the waters of Maine, including near Swan's Island and in Eastern Bay, Machias Bay, and Cobscook Bay for boating, swimming, fishing, and observing wildlife.

19. CLF's members are harmed by pollution to Swan's Island, Eastern Bay, Machias Bay, and Cobscook Bay from Defendant's facilities. CLF's members include lobstermen that rely on the clean waters of Maine for their livelihoods.

#### **Defendant**

20. Cooke owns and operates the 13 "Cage Sites" located near Swan's Island, near Beals Island in Eastern Bay, in Machias Bay, and in Cobscook Bay as follows: Black Island (also referred to as Black Island North), Black Island South, Harbor Scrag, Calf Island, Sand Cove,

Spectacle Island, Starboard Island, Cross Island, Cross Island North, Cutler West, South Bay, Deep Cove, and Broad Cove.

21. Cooke is responsible for complying with the Clean Water Act while operating each of its Cage Sites.
22. Cooke is incorporated under the laws of Maine.
23. Cooke is a person as defined by 33 U.S.C. § 1362(5).
24. Cooke owns and operates its aquaculture business in the bays of Maine.
25. Cooke has an office in Maine located at 133 Small's Point Road, Machiasport, ME 04655 and is registered to do business in the state of Maine.
26. In 2023, Cooke's Canadian parent company, Cooke Aquaculture, generated \$2.7 billion in annual revenue.
27. Cooke's parent company, Cooke Aquaculture, operates cage-aquaculture facilities in 14 countries including Canada, Chile, Honduras, Nicaragua, Spain, and Scotland.

### **STATUTORY AND REGULATORY BACKGROUND**

#### **The Clean Water Act and Its Associated Regulations**

28. The objective of the Clean Water Act is “to restore and maintain the chemical, physical and biological integrity of the Nation’s waters.” 33 U.S.C. § 1251(a).
29. The Clean Water Act prohibits the addition of any pollutant to navigable waters from any point source except as authorized by a National Pollutant Discharge Elimination System (“NPDES”) permit applicable to that point source. 33 U.S.C. §§ 1311(a) and 1342. In Maine, these are Maine Pollutant Discharge Elimination System (“MEPDES”) permits. *Infra* ¶¶ 78–79.
30. Under the Clean Water Act’s implementing regulations, the “discharge of a pollutant” is defined as “[a]ny addition of any ‘pollutant’ or combination of pollutants to ‘waters of the United States’ from any ‘point source.’” 40 C.F.R. § 122.2; *see also* 33 U.S.C. § 1362(12).

31. A “pollutant” is any “solid waste,” “sewage,” “chemical wastes, biological materials,” or “agricultural waste discharged into water.” 33 U.S.C. § 1362(6).

32. The Clean Water Act defines navigable waters as “the waters of the United States, including the territorial seas.” 33 U.S.C. § 1362(7).

33. Under the Clean Water Act implementing regulations, “waters of the United States” include “all waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce . . .” and tributaries to interstate waters. 40 C.F.R. §§ 122.2, 120.2(a)(1), 120.2(a)(3).

34. “Point source” is defined broadly to include “any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, [or] conduit . . . from which pollutants are or may be discharged.” 33 U.S.C. § 1362(14).

35. An “effluent limitation” is “any restriction established by a State or the [EPA] Administrator on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into navigable waters, the waters of the contiguous zone, or the ocean, including schedules of compliance.” *See* 33 U.S.C. § 1362(11).

36. A concentrated aquatic animal production facility is “a hatchery, fish farm, or other facility . . . [which] contains, grows, or holds . . . cold water fish species . . . in ponds, raceways, or other similar structures which discharges at least 30 days per year,” and which produces more than 20,000 pounds of aquatic animals per year and feeds more than 5,000 pounds of food during the calendar month of maximum feeding. 40 C.F.R. § 122.24; 40 C.F.R. Pt. 122, App. C.

37. A concentrated aquatic animal production facility is a point source subject to NPDES permit requirements. *Id.*

38. Concentrated aquatic animal production facilities that “produce 100,000 pounds or more per year of aquatic animals in a flow-through or recirculating system” that are “designed to

provide a continuous water flow to waters of the United States through chambers used to produce aquatic animals” are required to develop and maintain a Best Management Practices (“BMP”) plan. *See* 40 C.F.R. §§ 451.2, 451.3(d), and 451.10.

39. Each of Cooke’s Cage Sites is a concentrated aquatic animal production facility within the meanings of 40 C.F.R. § 122.24; 40 C.F.R. Part 122, Appendix C; and 40 C.F.R. Part 451.

40. The Clean Water Act authorizes citizen enforcement actions against any “person” who is alleged to be in violation of a permit condition, i.e., an “effluent standard or limitation . . . or an order issued by the [EPA] Administrator or a State with respect to such a standard or limitation.” 33 U.S.C. §§ 1365(a)(1), 1365(f).

41. Citizens may bring an enforcement action to seek remedies for unauthorized discharges to a water of the United States pursuant to 33 U.S.C § 1311 and for violations of a permit condition under 33 U.S.C. § 1365(f).

42. Each separate violation of the Clean Water Act subjects the violator to a penalty of up to the maximum amount allowed by statute and regulation. 33 U.S.C. §§ 1319(d), 1365(a); *see also* 40 C.F.R. §§ 19.1–19.4.

43. Currently, the maximum penalty pursuant to 33 U.S.C. §§ 1319(d), 1365(a) and 40 C.F.R. §§ 19.1–19.4 is \$64,618.

### **Maine’s Water Quality Standards**

44. Under the MPDES, General Permit – Net Pen Aquaculture (hereinafter “Permit”), Cooke is authorized to discharge certain pollutants “provided such discharges do not cause or contribute to a violation of an applicable water quality standard.” Permit at 10 (Section E); *see also* Permit at 11 (Section H) (“A facility covered under this General Permit may at no time cause non-compliance of numeric or narrative water quality standards outside the designated water column mixing zone.”).

45. Under the Permit, “[o]utside the designated mixing zone, discharges from [Cooke’s] facility must not cause or contribute to a violation of water quality standards.” Permit at 13 (Section J).

46. Maine water quality standards require that “[a]ll surface waters of the State shall be free of settled substances which alter the physical or chemical nature of the bottom material and of floating substances, except as naturally occur, which impair the characteristics and designated uses ascribed to their class.” 38 M.R.S. § 464(4)(B).

47. Class SB waters are the second-highest marine water classification in Maine and “must be of such a quality that they are suitable for the designated uses of recreation in and on the water, fishing, aquaculture, propagation and harvesting for shellfish, industrial process and cooling water supply, hydroelectric power generation, navigation and as habitat for fish and other estuarine marine life.” 38 M.R.S. § 465-B(2).

48. Maine water quality standards require that “[d]ischarges to Class SB waters may not cause adverse impact to estuarine and marine life in that the receiving waters must be of sufficient quality to support all estuarine and marine species indigenous to the receiving water without detrimental changes in the resident biological community.” 38 M.R.S. § 465-B(2)(C).

49. “‘Without detrimental changes in the resident biological community’ means no significant loss of species or excessive dominance by any species or group of species attributable to human activity.” 38 M.R.S. § 466(12).

### **FACTUAL BACKGROUND**

50. Cooke grows salmon in cages (also known as net pens) which are floating, suspended enclosures made of plastic netting and anchored to the ocean floor.

51. Cooke leases from Maine’s Department of Marine Resources (“Maine DMR”) areas of

Maine’s coastal waters that are five to 45 acres in size in which to build and operate its cages.

52. Cooke holds 24 “Aquaculture Leases for Open Ocean Net-Pen Culture” of various finfish, including Atlantic Salmon, from Maine DMR.

53. Within each lease area, Cooke operates between six and 30 cages.

54. Cooke’s Maine cages each have a circumference of 100 meters (roughly the height of the Statue of Liberty) and can contain tens of thousands of fish at one time.

55. Each of Cooke’s cages consists of a large net suspended from a net collar or plastic tube filled with Styrofoam and anchored to the seafloor.

56. Cooke’s nets are made of either nylon, polypropylene, or polyethylene.

57. Each of Cooke’s cages are equipped with plastic handrails, bird stands, predator nets, jump nets, and/or overhead bird nets.

58. Cooke’s operations include cages, plastic barges, delousing boats, ropes, buoys, docks and floating walkways, as depicted in the photo below:

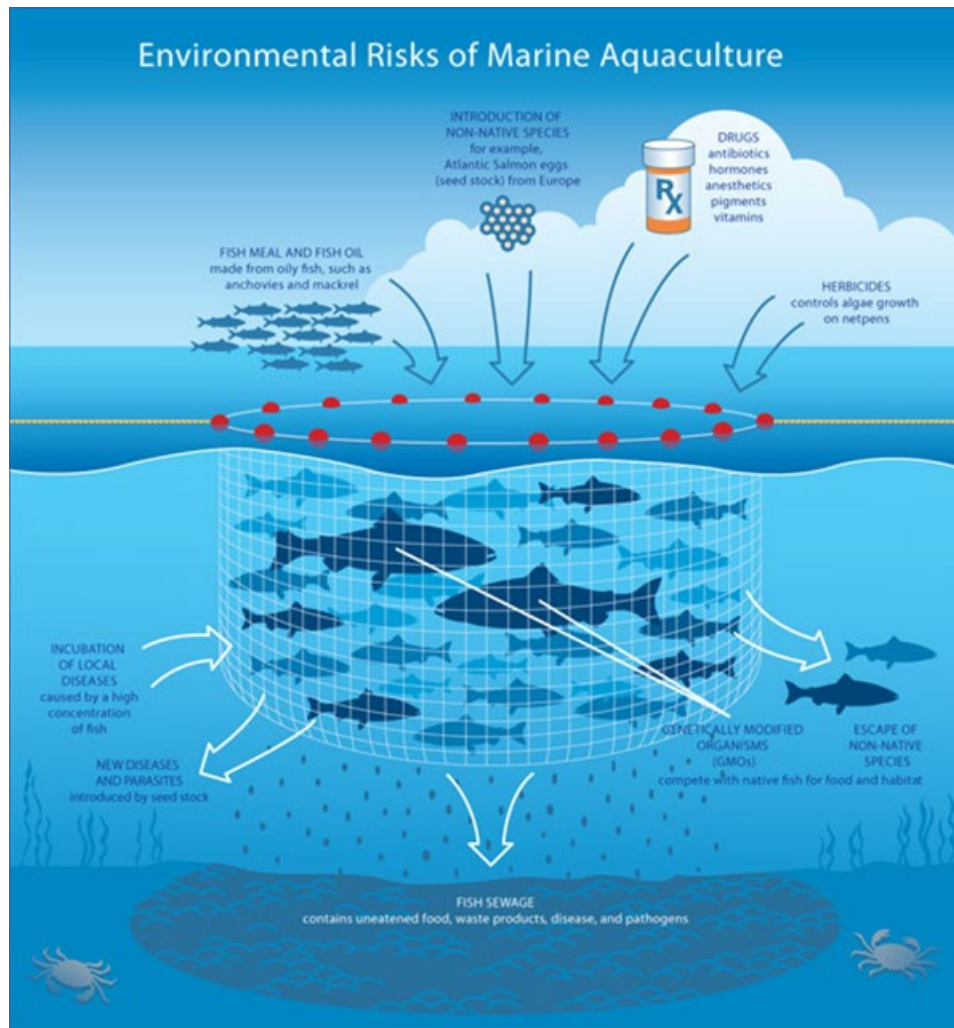


59. After growing for at least one year and reaching the “smolt” stage at Cooke’s hatcheries, juvenile salmon are placed in Cooke’s cages where they eat, defecate, and grow to their final harvest weight of 10–15 pounds.

60. Uneaten feed, fish feces, dead fish (whole or in pieces), and diseases fall through the cages’



nets to the bottom of the ocean floor and into the water column. These discharges are illustrated below:<sup>1</sup>



61. Cooke uses plastic feeding tubes to release fish feed and medication into the cages.
62. Between November 2019 and May 2023, Cooke's Cage Sites experienced an average mortality rate of at least 15%.
63. Upon information and belief, Cooke's Cage Sites have continued to experience a mortality

<sup>1</sup> Renée Cho, *Making Fish Farming More Sustainable*, State of the Planet, News from the Columbia Climate School (Apr. 13, 2016) (graphic by Dr. George Pararas Carayannis).

rate of at least 15% since June 2023.

64. Cooke has 13 active Cage Sites where it produced salmon at least once in the last five years.

65. The following table enumerates the site ID and location, as well as the maximum cage number, biomass, and feed limits set by Maine DEP its orders approving coverage under the Permit for Cooke's 13 active Cage Sites:

<b>Par. No.</b>	<b>Cage Site</b>	<b>Location</b>	<b>Max Number of Cages</b>	<b>Max Biomass (kg)</b>	<b>Max Pounds of Feed a Month</b>
66.	Black Island (Lease ID: SWAN BI) <sup>2</sup>	Eastern Blue Hill Bay, Frenchboro, ME 04635	12	3,148,200 kg	1,542,750 lbs.
67.	Black Island South (Lease ID: SWAN BIS)	Eastern Blue Hill Bay, Frenchboro, ME 04635	20	5,247,00 kg	2,468,400 lbs.
68.	Harbor Scrag (Lease ID: SWAN HS)	Harbor Island Gut, Swan's Island, ME 04685	16	3,052,800 kg	1,481,000 lbs.
69.	Calf Island (Lease ID: EASTW CALF)	Eastern Bay, Jonesport, ME 04649	18	4,750,000 kg	2,200,000 lbs.
70.	Sand Cove (Lease ID: EASTW SC)	Eastern Bay, Beals, ME 04611.	8	3,816,000 kg	462,825 lbs.
71.	Spectacle Island (Lease ID: EASTW SI)	Eastern Bay, Beals, ME 04611	8	3,816,000 kg	617,000 lbs.
72.	Starboard Island (Lease ID: MACH II)	Machias Bay, Cutler, ME 04626	21	5,509,350 kg	2,519,820 lbs.
73.	Cross Island (Lease ID: MACH CI2)	Machias Bay, Cutler ME 04626	30	5,724,000 kg	2,314,125 lbs.
74.	Cross Island North (Lease ID: MACH CIN)	Machias Bay, Cutler, ME 04626	25	4,579,200 kg	2,221,560 lbs.

<sup>2</sup> Cooke also refers to the Black Island Cage Site as Black Island North (SWAN BIN).

75.	Cutler West (Lease ID: MACH CW2)	Machias Bay, Cutler, ME 04626	20	2,862,000 kg	1,542,750
76.	South Bay (Lease ID: COB SB)	Cobscook Bay, Lubec, ME 04652	20	3,816,000 kg	1,851,300 lbs.
77.	Deep Cove (Lease ID: COB DC)	Cobscook Bay, Eastport, ME 04631	15	3,052,800 kg	1,481,040 lbs.
78.	Broad Cove (Lease ID: COB BC)	Cobscook Bay, Eastport, ME 04631	20	3,816,000 kg	1,851,300 lbs.

### **Cooke's General Permit**

79. On January 12, 2001, EPA delegated to Maine the authority to administer the NPDES program. 56 F.R. § 12791 (2001).

80. Cooke's discharges to surface water from its Cage Sites are regulated under the MEPDES General Permit for Net Pen Aquaculture No. MEG130000, issued by the Maine DEP.

81. The Permit, appended as Exhibit 3, became effective on April 10, 2014.

82. The Permit expired on April 10, 2019, but has been administratively continued and is in effect as of the date of this Complaint.

#### *Authorized Discharges Under the Permit*

83. The Permit defines a "Net Pen System" as a "stationary, suspended or floating system of nets, screens, or cages in open waters of the State and located within the boundaries of a lease granted by the Department of Marine Resources." Permit at 6 (Section B.6).

84. The Permit defines a "Net Pen Aquaculture Facility" as a Net Pen System within the boundaries of a single lease granted by Maine DMR for the purpose of rearing finfish. Permit at 6 (Section B.7).

85. The Permit authorizes Cooke to discharge certain pollutants from Net Pen Systems (the collection of cages at a Cage Site) that make up the Net Pen Aquaculture Facilities (referred to within this Complaint as Cage Sites).

86. The Permit does not authorize Cooke to discharge from any point sources other than the Net Pen Systems, including from barges, boats, or docks.

87. Cooke is authorized to discharge

1) only in accordance with the permittee's Notice of Intent; 2) only in accordance with the terms and conditions of this General Permit; and 3) other pollutants incidental to the normal and proper operation of the facility, including but not limited to, fish excrement, fish scales, fish carcasses unable to be retrieved, and the leaching of treatment compounds used on nets to limit marine growth, *provided such discharges do not cause or contribute to a violation of an applicable water quality standard or condition of this General Permit*. Discharges of pollutants from any other point source are not authorized under this General Permit, and must be reported in accordance with Standard Condition B(5).

Permit at 10 (Section E) (emphasis added).

*Best Practicable Treatment Standards Under the Permit*

88. The Permit requires Cooke to

employ efficient feeding strategies that limit feed input to the minimum amount reasonably necessary to achieve production goals and sustain targeted rates of aquatic animal growth. These strategies must minimize the accumulation of uneaten food beneath the pen through the use of real-time feed monitoring, including devices such as video cameras, digital scanning sonar, and upweller systems; monitoring of sediment quality beneath the pens; monitoring of benthic community quality beneath the pens; capture of waste feed and feces; or other good husbandry practices approved by the Department.

Permit at 13 (Section K.1).

89. Under the Permit, Cooke "must collect, return to shore, and properly dispose of all feed bags, packaging materials, waste rope, netting and other solid waste." Permit at 13 (Section K.2).

90. Under the Permit, Cooke "must minimize any discharge associated with the transport or harvesting of aquatic animals including blood, viscera, aquatic animal carcasses, or transport water containing blood." Permit at 13 (Section K.3).

91. Under the Permit, Cooke "must remove and dispose of aquatic animal mortalities properly on a regular basis to prevent discharge to waters of the State." Permit at 13 (Section K.4).

92. Under the Permit, Cooke “must inspect the net pen facility on a routine basis in order to identify and promptly repair any damage and conduct regular maintenance of the net pen facility in order to ensure that it is properly functioning.” Permit at 14 (Section K.6).

*Monitoring, Reporting, and Sampling Requirements Under the Permit*

93. Under the Permit, Cooke “must maintain and report monthly, using a method and on a form approved by [Maine DEP], the following information:” a) the number of net pens in use, including type, size (diameter and depth) and volume; b) the number of months each net pen has been stocked; c) the average weight of and total number of fish in each net pen; and d) the total amount of feed added to each net pen (the “Feed and Fish Report”). The Feed and Fish Report is due the last day of the following calendar month. Permit at 14 (Section K.7).

94. Under the Permit, Cooke must submit “standing inventory at the facility, including all transfers in and out, losses associated with disease, predation or escapes as reported to the Department of Marine Resources at the pen level of detail on a *monthly basis*” (the “Standing Inventory Report”). Permit at 20 (Section O.6) (emphasis in original).

95. Under the Permit, Cooke “must report, using a method and on a form approved by the Department, the discharge of any drug or other disease control chemicals *on a monthly basis* concurrent with the monthly feed and fish monitoring report required by this General Permit” (the “Drug Treatment Report”). Permit at 17 (Section N.5) (emphasis in original).

96. Under the Permit, the Drug Treatment Report must include the following: a) the number of days of application; b) the drug or disease control chemical used; c) the concentration of drug or disease control chemical administered and total quantity used; d) the approximate number of fish as well as pens treated; e) the method of application; and f) the condition treated. *Id.*

97. Under the Permit, “[m]onitoring for sulfide at 35 meters must be conducted at a minimum frequency of once per growing cycle during the period of July 1 – November 15

during the year of maximum biomass for the facility” (the “Sulfide Report”). Permit at 12 (Section I.1).

98. Under the Permit, “monitoring for sulfide at 5 meters must be conducted at a minimum frequency of once per growing cycle during the period of July 1 – November 15 during the year of maximum biomass for the facility.” Permit at 12 (Section I.3).

99. If the mean of all sulfide samples across the Cage Site is greater than or equal to 3,000 micromoles ( $\mu\text{M}$ ), Cooke must conduct monitoring for benthic infauna to enable reporting of the Shannon-Wiener Relative Diversity Index ( $J$ ) and percent *Capitella capitata* (pollution-tolerant worm species). Permit at 12 (Section I.2).

100. Sulfide sampling must be conducted at 35 meters during the period between August 1 and November 15 to coincide with maximum biomass for the facility. *Id.*

101. Under the Permit, Cooke’s sediment and benthic monitoring and sulfide monitoring must be conducted in accordance with Appendix A of the Permit and at the sampling locations identified in Appendices B or C. Permit at 23, 25–26 (Appendices A, B, and C).

102. Under the Permit, Cooke must collect a minimum of three field replicates from locations A, B, C, and D (35 meters from the edge of the net pen system in line with the prevailing current) and from locations AA, BB, CC, and DD (5 meters from edge of the net pens in line with the prevailing current). Permit at 25–26 (Appendices B and C).

103. Under the Permit, Cooke’s “sediment collection, handling, preservation, storage, and analysis must be conducted in accordance with USEPA approved methods, where available or as otherwise approved in writing by the Department.” Permit at 23 (Appendix A).

104. Cooke has reported that it has used EPA-approved sulfide sampling method SM 4500-S<sup>2</sup>-F(2000) from the 21st edition of Standard Methods at least since November 2019. *See* Ex. 4 (Net Pen Aquaculture Modification) at 16.

105. On September 24, 2021, Maine DEP approved Cooke's request to utilize modifications to sulfide sampling method SM 4500-S<sup>2</sup>-F(2000) contained in a document entitled *Maine DEP Marine Sediment Sampling Protocols, Cooke Aquaculture, Effective Starting 2021* for the sampling and analysis for sulfides as required by Special Condition I of the Permit for all 13 Cage Sites.

106. Maine DEP's 2021 approval of Cooke's sulfide sampling method and *Maine DEP Marine Sediment Sampling Protocols, Cooke Aquaculture, Effective Starting 2021* are appended as Exhibit 4.

107. Sulfide sampling method SM 4500-S<sup>2</sup>-F(2000), also known as the iodometric method, requires 200 mL of sample. Ex. 4 at 15 ("Pipet 200 mL sample into flask").

108. The approved modifications to SM 4500-S<sup>2</sup>-F(2000) enumerated within *Maine DEP Marine Sediment Sampling Protocols, Cooke Aquaculture, Effective Starting 2021* do not include modifications to the required 200 mL sample volume. Ex. 4 at 24–36.

*Narrative Limitations Under the Permit*

109. Cooke's Permit establishes two mixing zones, the water column mixing zone and the sediment mixing zone, collectively, the "Mixing Zones."

110. The water column mixing zone is defined as "the area within and extending 30 meters beyond the perimeter of a net pen in all directions on the surface, and down to the sea floor water column interface." Permit at 11 (Section H.1).

111. The sediment mixing zone is defined as "the sea floor directly below a net pen and extending on the sea floor 30 meters beyond the perimeter of each net pen in all directions." Permit at 11 (Section H.2).

112. Outside the Mixing Zones, Cooke “must not discharge pollutants that cause a visible oil sheen, foam, or floating solids at any time that would impair the use designated by the classification of the receiving waters.” Permit at 13 (Section J.1).

113. Outside the Mixing Zones, Cooke “must not discharge pollutants that contain materials in concentrations or combinations that are hazardous or toxic to aquatic life, or that would impair the existing or designated uses of the receiving waters.” Permit at 13 (Section J.2).

114. Outside the Mixing Zones, Cooke “must not discharge pollutants that cause visible discoloration or turbidity in the receiving waters that cause those waters to be unsuitable for the designated uses and characteristics ascribed to their class.” Permit at 13 (Section J.3).

115. Outside the Mixing Zones, Cooke “must not discharge pollutants that lowers [*sic*] the quality of any classified body of water below such classification, or lowers the existing quality of any body of water if the existing quality is higher than the classification.” Permit at 13 (Section J.4).

116. Outside the Mixing Zones, Cooke’s discharges cannot “cause or contribute to conditions that are hazardous or toxic to aquatic life, or that would impair the uses designated by the classification of the receiving waters.” Permit at 11 (Section H).

117. Inside the Mixing Zones, Cooke’s discharges cannot “cause or contribute to conditions that are lethal to passing organisms indigenous to the receiving water.” *Id.*

*Numeric Limits Under the Permit*

118. Cooke cannot stock fish at its Cage Sites until it “demonstrates to the Department’s satisfaction that the sulfide levels within the mixing zone are equal to or less than 4000  $\mu\text{M}$  based on the mean of all samples at the 5 meters. . . . Sample results obtained after completion of a grow cycle may be used provided results are submitted not less than 14 days prior to the proposed restocking.” Permit at 10 (Section F.2).



119. When discharging into Class SB waters Cooke is prohibited from creating the following conditions:

- a. Sulfide levels greater than 3000  $\mu\text{M}$  based on the mean of all samples across site;
- b. Shannon-Weiner Relative Diversity Index where J (measure of species abundance and diversity) is less than or equal to 0.5 based on the mean of all samples across site; and
- c. Greater than or equal to 25% total abundance composed of *Capitella capitata* (pollution-tolerant worm species) based on the mean of all samples across site.

See Permit at 12 (Section I).

### **Cooke's Discharges of Harmful Pollutants**

#### *Fish Food, Fish Feces, and Dead Fish*

120. Cooke discharges pollutants into Maine's waters through the cages' sides and bottoms.
121. Cooke discharges uneaten feed pellets through the cages into the ocean.
122. Cooke does not conduct real-time feed monitoring using video cameras, digital scanning sonar, and/or upweller systems every time it feeds at each of the Cage Sites.
123. Cooke does not employ efficient feeding strategies to limit feed input to the minimum required.
124. Cooke does not feed from buckets during smolt acclimatization period.
125. Cooke does not split up daily feed volumes across multiple feedings per day.
126. Cooke does not employ fish feed broadcasting technologies, including blowers and fish feed spinners, to effectively distribute the food.
127. Cooke does not accurately monitor sediment quality or benthic community quality

beneath the pens.

128. Cooke does not capture waste feed and feces from the Cage Sites.

129. Cooke discharges fish feces through the cages and into the ocean.

130. During day-to-day operations and during large die-off events, Cooke discharges dead fish (in pieces and whole) through the cage netting and into the ocean.

131. In August 2021, over 100,000 fish died at Cooke's Black Island Cage Site because of lethal low levels of dissolved oxygen (the "2021 Black Island Die Off").

132. In summer 2024, a large die-off occurred at Cooke's Cage Sites in Eastern Bay because of an algae bloom (the "2024 Eastern Bay Die Off").

133. Following the 2021 Black Island Die Off, Cooke discharged dead fish and pieces of dead fish from the cages.

134. Following the 2024 Eastern Bay Die Off, Cooke discharged dead fish and pieces of dead fish from the cages.

135. Following the 2024 Eastern Bay Die Off, lobstermen observed floating fish organs in the water near the affected cages and outside the Mixing Zones.

136. Upon information and belief, Cooke repeatedly discharges dead fish and fish pieces.

#### *Disease and Parasites*

137. The salmon in Cooke's cages experience regular outbreaks of disease, including infectious salmon anemia ("ISA"), salmon rickettsial syndrome ("SRS"), enteric red mouth ("ERM"), and bacterial kidney disease ("BKD").

138. In 2021, Cooke's Broad Cove Cage Site experienced an SRS outbreak.

139. In April 2022, Cooke's Broad Cove Cage Site experienced an ERM outbreak.

140. Upon information and belief, in 2022, Cooke's Deep Cove Cage Site experienced ERM

outbreak.

141. In 2022, one of Cooke's Machias Bay Cage Sites experienced an outbreak of BKD.

142. In 2022, one of Cooke's Machias Bay Cage Sites experienced an outbreak of ISA.

143. Cooke discharges viruses and disease from its fish through the cages' netting.

144. Divers employed by Cooke discharge disease when they do not properly disinfect themselves before diving again after diving near cages experiencing outbreaks.

145. In 2019, 17 wild Atlantic salmon from the Penobscot River tested positive for ISA.

146. Upon information and belief, the ISA that infected the Penobscot River wild salmon in 2019 originated from a Cooke Cage Site.

147. Sea lice are parasitic crustaceans that attach to finfish, particularly salmon, and consume their mucus, blood, and skin.

148. Caged salmon experience sea lice outbreaks at higher rates than wild salmon.

149. Upon information and belief, Cooke's salmon experience outbreaks of sea lice at the Cage Sites.

150. During outbreaks, Cooke discharges sea lice through the cage netting into the ocean.

151. Cooke discharges sea lice and disease when infested salmon escape the cages.

152. Cooke discharges sea lice from its boats (including delousing and harvesting boats), including when Cooke fails to clean its boats after spending time in sea lice-infested waters.

*Blood, Warm Water, and Undisclosed Chemicals*

153. To treat outbreaks of sea lice, Cooke transfers salmon from the cages to its delousing boat and sprays them with high pressure warm water to mechanically remove the lice.

154. Upon information and belief, Cooke sprays the salmon with undisclosed chemicals, possibly hydrogen peroxide, on the delousing boat.

155. Upon information and belief, when Cooke transfers salmon to the delousing boat, it also

transfers any wild fish, including lumpfish and mackerel, trapped inside the cages.

156. Upon information and belief, Cooke's delousing operations kill any wild fish transferred to the delousing boat from the cages.

157. Upon information and belief, Cooke discharges warm water, undisclosed chemicals, and blood from its delousing boats to all four bays described in paragraphs 180–89.

158. Cooke cleans its nets by spraying them with water on docks on shore.

159. Net cleaning wastewater is discharged from docks to the ocean.

160. Upon information and belief, Cooke uses undisclosed chemicals to clean its nets, including net cleaning conducted on shore.

161. Cooke conducts disease testing for ISA and BKD on dead fish removed from the cages. Cooke cuts into the dead fish on boats or barges to remove the kidneys and slice them for sampling and testing. The dead fish are further dissected and examined for general health.

162. Upon information and belief, Cooke discharges blood from boats or barges into the ocean during disease testing.

163. Upon information and belief, after the 2024 Eastern Bay Die Off in Eastern Bay, Cooke sprayed its cages in Eastern Bay with undisclosed chemicals.

#### *Escaped Fish*

164. During day-to-day operations, Cooke's cages and the nets that comprise them become damaged and develop holes.

165. Following attacks by predators, including seals, Cooke's cages become damaged and develop holes.

166. Cooke discharges escaped salmon through holes in its nets.

167. Cooke reported holes in its nets at the Cutler West Cage Site on October 14, 2020 and

November 9, 2020.

168. Cooke reported holes in its nets at the Calf Island Cage Site in 2020.

169. Upon information and belief, Cooke discharged escaped fish in 2020 through holes in its nets at Cutler West and Calf Island.

170. In 2021, four escaped salmon from Cooke's Black Island South Cage Site were caught in the Brookfield Power Dam weir near Penobscot Bay.

171. Cooke discharges escaped salmon while administering sea lice and/or drug treatments, during the delousing process, and while conducting disease testing.

172. Cooke discharges escaped salmon when cages are damaged by seals and other predators.

173. On August 7, 2023, Cooke discharged 24,600 salmon from the Cross Island Cage Site and 25,600 salmon from the Cross Island North Cage Site.

174. Cooke represented that the August 7, 2023 escape events detailed in Paragraph 173 was the result of damage to the cage structures following a seal attack.

175. Cooke experienced seal attacks at the Cross Island Cage Site on September 15, 2020 and September 22, 2020.

176. Cooke experienced a seal attack at the Starboard Island Cage Site on July 27, 2020.

177. Upon information and belief, Cooke lowered its jump net at the Cross Island Cage Site on September 15, 2020 and September 22, 2020 and at the Starboard Island Cage Site on July 27, 2020 to release seals.

178. Upon information and belief, Cooke discharges escaped salmon when seals and other wildlife are caught in the cages and Cooke lowers the jump net (one of the nets covering the cages) to release them.

#### *Trash*

179. Cooke discharges trash, including pieces of the cage structure, Styrofoam, pieces of rope,

plastic feeding equipment, buoys, polyvinyl chloride (“PVC”) pipe, and plastic bags from the cages.

### **Cooke’s Receiving Waters**

180. Cooke discharges pollution into four bays along the coast of Maine: the waters near Swan’s Island; Eastern Bay; Machias Bay; and Cobscook Bay (“The Maine Waters”).

181. The Maine Waters are Class SB waterbodies.

182. The Maine Waters are within the territorial seas and are navigable waters as defined by the Clean Water Act.

183. The Maine Waters have designated uses that include aquatic life, fish consumption, and secondary contact recreation.

184. The Maine Waters and their neighboring islands and coastlines are popular destinations for fishing, boating, hiking, observing wildlife, and other aesthetic and recreational uses.

185. The waters around Swan’s Island are south of Mount Desert Island and Acadia National Park and contain Gotts Island, Harbor Island, Scrag Island, Long Island, and Black Island.

186. Eastern Bay is near Jonesport and borders Beals Island and Head Harbor Island.

187. Eastern Bay borders the Nature Conservancy’s Great Wass Island Preserve.

188. Machias Bay is near Machiasport and Cutler and borders Cross Island National Wildlife Refuge, Davis Beach, and Jasper Beach.

189. Cobscook Bay is west of North Lubec and Eastport near the Canadian border and is next to Shackford Head State Park.

### **COOKE’S HARMS TO THE ENVIRONMENT AND CLF’S MEMBERS**

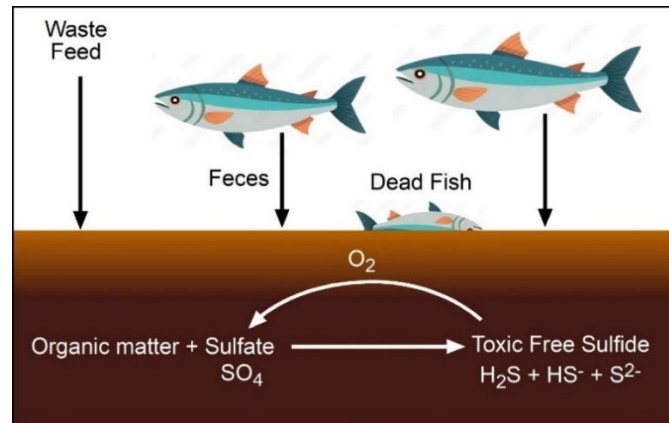
#### **Cooke’s Discharges of Fish Food, Fish Feces, and Dead Fish Cause Toxic Conditions.**

190. Cooke’s discharges of fish fecal matter, uneaten fish food, and dead fish accumulate into piles of organic sediment on the seafloor and extend from under the cages to outside the 30-

meter Mixing Zones.

191. The piles of organic sediment around Cooke's cages decompose and deplete seafloor oxygen levels, release ammonia, and cause the production and accumulation of toxic free sulfides.

192. The process by which organic matter produces toxic free sulfides is illustrated below:<sup>3</sup>



193. Sediment with sulfide levels at or above 500 micromoles ( $\mu\text{M}$ ) are characterized by poor ecological quality due to the development of no-oxygen and acidic conditions. The biological community in and around high-sulfide sediment deviates substantially from those normally associated with the water body, with at least a 50% reduction in biodiversity and total number of species.

194. Many marine animals that reside in the seabed, including species of worms, shellfish, and other sediment-dwelling invertebrates, cannot survive in sediment with sulfide levels at or above 500  $\mu\text{M}$ .

195. Bottom-feeding fish, including flounder, cod, and haddock, feed on invertebrate species that are highly sensitive to the reduced oxygen and elevated sulfide levels found in the organic

<sup>3</sup> Adapted from B. Hargrave et al., *Towards a classification of organic enrichment in marine sediments based on biogeochemical indicators*, 56 Marine Pollution Bulletin 810 (2008).

sediment around Cooke's Cage Sites.

196. Sulfide levels at or above 500  $\mu\text{M}$  harm the invertebrates living in the sediment and the larger fish and crustaceans that feed on them.

197. Cooke regularly reports levels of sulfide at or above 500  $\mu\text{M}$  in the sediment around the Black Island, Black Island South, Calf Island, Sand Cove, Spectacle Island, Cross Island North, Cross Island, and Cutler West Cage Sites.

198. Cooke reported sulfide measurements at or above 500  $\mu\text{M}$  at the following Cage Sites on the following dates:

Par. No.	Cage Site	Year	5-Meter Sulfide Maximum	35-Meter Sulfide Maximum
199.	Black Island	2020	1,800 $\mu\text{M}$	730 $\mu\text{M}$
200.	Black Island	2023	800 $\mu\text{M}$	2,700 $\mu\text{M}$
201.	Black Island South	2020	640 $\mu\text{M}$	680 $\mu\text{M}$
202.	Calf Island	2020	570 $\mu\text{M}$	
203.	Calf Island	2021	540 $\mu\text{M}$	820 $\mu\text{M}$
204.	Calf Island	2023	2,700 $\mu\text{M}$	2,800 $\mu\text{M}$
205.	Sand Cove	2020	910 $\mu\text{M}$	
206.	Sand Cove	2023	4,800 $\mu\text{M}$	4,300 $\mu\text{M}$
207.	Spectacle Island	2020	880 $\mu\text{M}$	960 $\mu\text{M}$
208.	Spectacle Island	2021	2,300 $\mu\text{M}$	560 $\mu\text{M}$
209.	Spectacle Island	2023	2,900 $\mu\text{M}$	4,400 $\mu\text{M}$
210.	Cross Island North	2021	3,600 $\mu\text{M}$	1,538 $\mu\text{M}$
211.	Cross Island	2021	2,800 $\mu\text{M}$	2,200 $\mu\text{M}$
212.	Cutler West	2021	1,100 $\mu\text{M}$	

213. Cooke reported a mean of 3,252  $\mu\text{M}$  across all sulfide samples taken at the Sand Cove Cage Site in 2023.

214. Upon information and belief, if Cooke had conducted its sulfide sampling in accordance with the methodological and location requirements in the Permit, its reported sulfide measurements would have been significantly higher than the reported values above. *See infra* ¶¶



232–39.

215. Upon information and belief, if Cooke had conducted its sulfide sampling in accordance with the methodological and location requirements in the Permit, certain of its reported average sulfide measurements would have exceeded 3,000  $\mu\text{M}$  and triggered requirements for sediment and benthic monitoring. *See id.*

216. Upon information and belief, if Cooke had conducted its sulfide sampling in accordance with the methodological and location requirements in the Permit, certain of its reported average five-meter sulfide measurements would have exceeded 4,000  $\mu\text{M}$  and triggered prohibitions on restocking. *See id.*

217. Qualitative observations of the sediment are evidence of the poor ecological quality, high sulfur levels, and no-oxygen conditions that result from excessive organic loading. Indicators of an impacted conditions include smell (i.e., the smell of sulfur), black or grey sediment color, the absence of marine life (no biota), the presence of *Beggiatoa* (sulfur-dependent bacteria), soft sediment texture, and the absence of a redox layer. Healthy sediment has no smell, has a light brown color, is hosts an abundance of marine life, has no *Beggiatoa*, and has a redox layer separating light-colored oxygen-rich surface sediment from deeper, black, low-oxygen sediment.

218. Cooke reported sediment characteristics indicative of poor ecological quality, high sulfur levels, and no-oxygen conditions at the following Cage Sites on the following dates:

<b>Par. No.</b>	<b>Cage Site</b>	<b>Year</b>	<b>Qualitative Sediment Sample Observations</b>
219.	Black Island	2020	Transect 1 at 5m, 3, 4: Soft texture. Transect 1, 3 4: No biota, no redox layer across entire transect. Transect 1, 3, 4: Moderate odor at 5 m. Transect 3, 4: Mild odor at 35m.
220.	Black Island	2023	Transects 1-4: No redox layer across entire transect. Transects 3-4: Soft texture, <i>Beggiatoa</i> . Transect 2: Slight odor at 35m. Transect 3: Slight to strong odor across entire transect. Transect 4: Little to no odor at 5m, medium to strong odor at 35m.
221.	Black	2020	Transect 1, 2 at 5m, 3, 4: Soft texture, no biota, no redox layer.

	Island South		
222.	Black Island South	2023	Transect 1, 2, 3, 4: No redox layer across entire transect. Transect 1: Mild odor at 35m.
223.	Calf Island	2020	Transects 1-4: No redox layer across entire transect, soft texture. Transects 1-2: No biota. Transects 3-4: No biota reported. Transect 3: Mild odor at 5m.
224.	Calf Island	2021	Transects 1-4: No biota or opportunistic-type polychaete complexes, no redox layer across entire transect, soft texture. Transects 1-2: Mild odor across entire transect.
225.	Calf Island	2023	Transects 1-4: No redox layer across entire transect. Transect 1: Moderate to strong odor across entire transect. Transect 2: Slight to moderate odor across entire transect. Transect 3-4: Slight to strong odor across entire transect. Transects 1 at 5m, 2 at 35m, 3 at 5m: Rare <i>Beggiatoa</i> . Transects 1-3: No macroorganisms.
226.	Sand Cove	2020	Transects 1-4: No redox layer across entire transect. Transects 1-2: Soft texture. Transect 2: No biota at 5m, no biota reported at 35m. Transect 3-4: No biota reported.
227.	Sand Cove	2023	Transects 1-4: No redox layer across entire transect. Transect 1: Slight odor across entire transect. Transect 2: Slight to moderate odor across entire transect. Transect 3: Moderate odor across entire transect. Transects 1-2: Rare <i>Beggiatoa</i> .
228.	Spectacle Island	2020	Transect 1-4: No biota reported. Transects 2-4: No redox layer across entire transect. Transect 2-4: Mild odor across entire transect, soft texture.
229.	Spectacle Island	2021	Transects 1-4: No biota or opportunistic-type polychaete complexes, no redox layer across entire transect, soft texture. Transect 2: Mild odor (5 m).
230.	Spectacle Island	2023	Transects 1-2: No redox layer across entire transect. Transect 2: Moderate odor across entire transect.

231. Photos of Cooke's sediment samples submitted to Maine DEP in its Sulfide Reports and appended as Exhibit 5 show a black or dark grey color and a soft texture indicative of poor ecological quality, high sulfur levels, and no-oxygen conditions at the Black Island, Black Island South, Calf Island, Sand Cove, and Spectacle Island Cage Sites from 2020–2023.

232. Upon information and belief, Cooke's sediment monitoring in 2024 continued its pattern

and practice of toxic sulfide levels and characteristics of poor ecological quality, high sulfur levels, and no-oxygen conditions at the Black Island, Black Island South, Calf Island, Sand Cove, and/or Spectacle Island Cage Sites.

**Cooke's Discharges of Fish Food, Fish Feces, and Dead Fish Fail to Meet the Permit's Sediment and Benthic Numeric Limitations and Monitoring Requirements and Result in Inadequate Oversight and Toxic Seafloor Conditions.**

233. Cooke has failed to conduct its sulfide monitoring, reporting, and analysis in accordance with the requirements of its Permit and the EPA-approved sampling method SM 4500-S<sup>2</sup>-F(2000), including but not limited to, by failing to follow required sampling procedures, failing to properly label samples, failing to submit complete Sulfide Reports, and failing to collect the minimum number of field replicates.

234. Cooke has failed to conduct sulfide monitoring at the locations required by the Permit on at least 127 occasions since November 2019.

235. Cooke has taken inaccurate sulfide monitoring measurements from as far as 60 m from the Permit required location. A full table outlining the date, Cage Site, and sulfide monitoring location distance discrepancies is appended as Exhibit 6.<sup>4</sup>

236. Upon information and belief, Cooke failed to conduct sulfide monitoring at the required locations in 2022 at Cage Sites including the Broad Cove, Deep Cove, South Bay, and Harbor

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<sup>4</sup> Using the GPS coordinates for sampling provided in Cooke's Sulfide Reports and Google Earth satellite imagery, CLF measured the distance from the cage edge to the sampling locations. The following Google Earth satellite images were used for the following measurements: For 2019 and 2020 measurements for the Broad Cove, Calf Island, Cross Island North, Deep Cove, South Bay, Spectacle Island, and Starboard Island Cage Sites, CLF relied on a satellite image dated 9/28/2019; and for the Black Island, Black Island South, Harbor Scrag, and Sand Cove Cage Site measurements, CLF relied on a satellite image dated 8/24/2019. For 2023 measurements for the Sand Cove and Spectacle Island Cage Sites, CLF relied on a satellite image dated 4/21/2024; for the Black Island and Black Island South Cage Sites, CLF relied on a satellite image dated 5/2/2024; and for the Calf Island Cage Site, CLF relied on a satellite image dated 6/10/2024.

Scrag Cage Sites.

237. Upon information and belief, Cooke failed to conduct sulfide monitoring at the required locations in 2024.

238. On at least 486 occasions since November 2019, Cooke has failed to use 200 mL pore water samples for its sulfide analysis as required by the EPA-approved sampling method SM 4500-S<sup>2</sup>-F(2000).

239. A full table listing the dates, Cage Sites, and instances of sulfide analysis conducted using incorrect sample volumes is appended as Exhibit 7. As illustrated by Exhibit 7, Cooke routinely conducts its sulfide analyses using as little as 13 mL of pore water.

240. Upon information and belief, Cooke continued its pattern of failing to use 200 mL of pore water in its sulfide analysis in the 2023 Black Island and 2024 Sulfide Reports.

241. Cooke failed to conduct the sediment and benthic monitoring for its Sand Cove Cage Site, following a 2023 site-average sulfide measurement above 3,000 µM. Permit at 12.

242. Upon information and belief, had Cooke conducted required benthic infauna monitoring at the Sand Cove Site in March 2024, the Shannon-Wiener Relative Diversity Index would have had a J value less than or equal to 0.5.

243. Upon information and belief, had Cooke conducted required benthic infauna monitoring at the Sand Cove Site in March 2024, there would have been greater than or equal to 25% total abundance composed of *Capitella capitata*.

**Cooke's Discharges of Fish Food, Fish Feces, and Dead Fish Contribute to Nutrient Pollution and Low Dissolved Oxygen Levels.**

244. Cooke's discharges of organic, nitrogen-laden waste from its cages deplete the dissolved oxygen in the water—at times causing low-oxygen conditions lethal to passing marine life.

245. Upon information and belief, during the 2021 Black Island Die Off, any passing

organisms sensitive to low oxygen levels (including wild fish) would have died alongside the aquaculture fish.

246. Excess nitrogen causes algae blooms.

247. During the 2024 Eastern Bay Die Off, any passing organisms sensitive to low-oxygen conditions and algae (including wild fish) would have died alongside the aquaculture fish.

**Cooke’s Discharges of Disease, Parasites, and Warm Water Threaten Wild Endangered Native Atlantic Salmon.**

248. The Gulf of Maine Distinct Population Segment (“DPS”) of Atlantic Salmon was listed as endangered in 2000. 65 FR 69459. In 2009, the DPS was expanded to include parts of all watersheds from the Androscoggin River northward along the Maine coast to the Dennys River.

249. Maine’s population of returning wild Atlantic Salmon is estimated to be as low as 1,200—less than 1% of the hundreds of thousands of salmon that once returned to most major rivers in the northeastern United States.

250. Upon information and belief, sea lice discharged from Cooke’s Cage Sites are infesting and killing wild Atlantic Salmon.

251. Sea lice reproduce by releasing hundreds of fertilized eggs directly into the water.

252. Sea lice larvae can travel tens of kilometers, readily moving from Cooke’s Cage Sites to endangered wild Atlantic Salmon habitat.

253. Once the sea lice mature, they latch onto a host salmon.

254. The presence of Cage Sites can result in an increase in the rate of sea lice infestation in wild salmon up to 40 miles away.

255. Juvenile wild salmon close to aquaculture cages, like Cooke’s, are 73 times more likely

to suffer lethal sea lice infestation than juveniles further from aquaculture cages.

256. As few as two sea lice can kill a juvenile salmon.<sup>5</sup>

257. Cooke discharges diseases, including infectious salmon anemia, salmon rickettsial syndrome, enteric red mouth, and bacterial kidney disease from its cages.

258. ISA is a highly contagious viral disease.

259. SRS, ERM, and BKD are highly contagious bacterial diseases.

260. ISA, SRS, ERM, and BKD are spread through water and contact with infected fish.

261. ISA, SRS, ERM, and BKD are lethal to and threaten the health of wild Atlantic Salmon.

262. Cooke's discharges of viruses and disease increase the likelihood of infection of wild Atlantic Salmon.

263. Warm water harms the ocean's health and biochemistry, threatening marine ecosystems.

**Cooke's Discharges of Escaped Salmon Threaten Wild Endangered Native Atlantic Salmon.**

264. After only one generation in cages, caged fish become genetically distinct from wild salmon. Caged salmon, which have never had to survive in the wild, are poor performers with undesirable traits like aggression. When caged salmon breed with wild salmon, their undesirable traits are passed on, and the genetic fitness of the wild salmon population is diminished.

265. Escaped aquaculture salmon interbreed with wild Atlantic Salmon, threatening the genetic integrity and fitness of the wild fish.

266. Interbreeding with aquaculture fish genetically alters wild salmon, decreasing their ability to adapt to their environment and potentially causing population decline.

267. Hybrid wild and aquaculture fish are more aggressive than wild salmon, cause stress in

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<sup>5</sup> *Breaching the Limits: How the Scottish Salmon Farming Industry is Failing to Contain Sea Lice Parasites on Open-Net Farms*, WILDFISH (March 2023).

salmon environments, and can decrease wild salmon fish productivity by more than 30%.<sup>6</sup>

**Cooke’s Discharges of Trash and Debris Harm Marine Ecosystems and Impair Recreation.**

268. Cooke’s discharges of trash, including plastic trash, from all of the Cage Sites pose a hazard to navigation, impair recreation, and harm aquatic life.

269. Floating ropes and large pieces of debris discharged from Cooke’s cages interfere with motorboat propellers, requiring boaters to navigate around and/or remove the debris, or risk damage to their boat.

270. Debris discharged from Cooke’s cages become entangled with lobster traps.

271. Plastic debris discharged from Cooke’s cages can kill fish, seabirds, and marine mammals through ingestion, starvation, suffocation, infection, drowning, and entanglement.

272. Plastic trash discharged from Cooke’s cages breaks down into microplastics, which bioaccumulate in the bodies of marine organisms—and the people who eat them.

273. Plastic trash and debris discharged from Cooke’s cages wash up onto nearby beaches.

**Cooke’s Failure to Comply with Monitoring and Reporting Requirements Impedes Proper Oversight and Results in Harm to the Marine Ecosystems and Associated Impairment of Designated Uses.**

274. Cooke has submitted inaccurate and/or late Drug Treatment Reports, including on the following dates for the following Cage Sites:

<b>Par. No.</b>	<b>Cage Site</b>	<b>Drug Treatment Report Month</b>	<b>Report Due Date</b>	<b>Date Submitted</b>
275.	Black Island	November	12/31/2019	3/12/2020
276.	Black Island	January	2/29/2020	3/12/2020
277.	Black Island South	November	12/31/2019	3/12/2020
278.	Black Island South	January	2/29/2020	3/12/2020
279.	Harbor Scrag	November	12/31/2019	1/3/2020
280.	Harbor Scrag	November	12/31/2019	3/12/2020
281.	Harbor Scrag	December	1/31/2020	3/12/2020

<sup>6</sup> Rosamond Naylor, et.al., *Fugitive Salmon: Assessing the Risks of Escaped Fish from Net-Pen Aquaculture*, 55 *BioScience* 427, 430 (2005).

282.	Harbor Scrag	January	2/29/2020	3/12/2020
283.	Calf Island	November	12/31/2019	3/12/2020
284.	Calf Island	December	1/31/2020	3/12/2020
285.	Calf Island	January	2/29/2020	3/12/2020
286.	Sand Cove	November	12/31/2019	3/12/2020
287.	Sand Cove	December	1/31/2020	3/12/2020
288.	Sand Cove	January	2/29/2020	3/12/2020
289.	Spectacle Island	November	12/31/2019	3/12/2020
290.	Spectacle Island	December	1/31/2020	3/12/2020
291.	Spectacle Island	January	2/29/2020	3/12/2020
292.	Starboard Island	May	6/30/2021	7/6/2021
293.	South Bay	November	12/31/2019	3/12/2020
294.	South Bay	December	1/31/2020	3/12/2020
295.	South Bay	January	2/29/2020	3/12/2020
296.	South Bay	June	7/31/2022	After 7/31/2022
297.	Deep Cove	November	12/31/2019	3/12/2020
298.	Broad Cove	November	12/31/2019	3/12/2020
299.	Broad Cove	December	1/31/2020	3/12/2020
300.	Broad Cove	January	2/29/2020	3/12/2020

301. Cooke has submitted inaccurate and/or late monthly Feed and Fish Reports at least four times since 2020, including on the following dates for the following Cage Sites:

<b>Par. No.</b>	<b>Cage Site</b>	<b>Report</b>	<b>Report Due Date</b>	<b>Date Submitted</b>
302.	Black Island	April Feed and Fish Report	5/30/2020	6/10/2020
303.	Black Island South	April Feed and Fish Report	5/30/2020	6/10/2020
304.	Deep Cove	Feb. Feed and Fish Report	3/31/2022	After 4/7/2022
305.	Harbor Scrag	Dec. Feed and Fish Report	1/31/2023	2/8/2023

306. Upon information and belief, and as the preceding paragraphs show, Cooke has a pattern and practice of misrepresenting information, including its number of mortalities and number of fish, at each of its Cage Sites on its Feed and Fish Reports and Standing Inventory Reports.

**Cooke's Conduct Harms CLF Members.**

307. The adverse impacts of Cooke's discharges affect CLF members' enjoyment of Maine's



marine waters.

308. CLF members are concerned about the impact of Cooke's discharges on their livelihood and recreation, their health, their communities, and Maine's marine ecosystem.

309. CLF's members have lived, worked, and recreated on and near Swan's Island, Machias Bay, Eastern Bay, and Cobscook Bay for decades.

310. CLF members are concerned about the health of wild endangered Atlantic Salmon populations and want the species to recover so that they can enjoy observing them and, eventually, fishing for them.

311. CLF members include lobstermen who have traps near Cooke's Cage Sites. The lobstermen's traps have been covered in foul-smelling black sludge made up of waste from Cooke's discharges of fish feces, uneaten pellets, and uncollected dead fish parts.

312. CLF members have had to move their lobster traps farther from Cooke's Cage Sites and/or stop fishing inshore entirely because areas even hundreds of yards away are "dead zones" for lobsters.

313. CLF members who sail near Cooke's Cage Sites are concerned about Cooke's pollution harming the marine environment and reducing their enjoyment in observing wildlife.

314. CLF members have taken whale watching tours in Cobscook Bay, but will no longer take whale watching tours there because Cooke's pollution so reduced their enjoyment.

315. CLF members remove Cooke's debris like ropes, netting, and feed bags from the water to prevent entanglement with boat engines.

316. CLF members observe, find, pick up, and/or dispose of Cooke's trash like aquaculture nets, pieces of plastic tubing, feed bags and ropes in the water and washed ashore, reducing their enjoyment of Maine's beaches, their own homes, and the water.

317. A CLF member has organized efforts to collect and pay for the proper disposal of

Cooke's trash in a dumpster instead of in Maine's waters.

318. CLF members have observed dead fish parts like organs in Eastern Bay, reducing their aesthetic enjoyment of Eastern Bay.

319. CLF members who have observed Cooke spraying its cages with a chemical-smelling spray are concerned about its impact on the water.

320. CLF members have observed Cooke discharging brown, foul-smelling water from delousing boats, triggering concern for the discharge's impact to the marine ecosystem.

321. CLF's members include individuals who have been and continue to be directly and adversely affected by the degradation of water quality and impairment of designated uses in Swan's Island, Eastern Bay, Machias Bay, and Cobscook Bay.

322. CLF's members are harmed by discharges of pollutants to Swan's Island, Eastern Bay, Machias Bay, and Cobscook Bay from Cooke's Cage Sites.

### **CLAIMS FOR RELIEF**

323. In light of Cooke's history of violations and absent court-ordered relief, Cooke will continue to violate the Clean Water Act and Maine Water Quality Standards.

324. Cooke's violations of federal law articulated in the counts below have harmed, are harming, and will continue to harm Plaintiff.

325. Upon information and belief, additional information from Cooke and other sources not yet publicly available will reveal additional violations and information about the violations described.

326. The counts below include all violations of the permit terms cited below and above and unauthorized discharges of the types described above and below that occurred in the relevant time period that Cooke has or should have knowledge of.

327. Each day of discharge and/or failure to remediate pollution (i) in violation of the permit

terms enumerated below and/or (ii) unauthorized by a MEPDES permit, from each Cage Site since November 2019 is a separate and distinct violation of the Clean Water Act, 33 U.S.C. §§ 1311(a) and 1328, and applicable regulations.

328. CLF incorporates all the allegations in the above paragraphs into each count below as though fully set forth therein.

**COUNT I: UNLAWFUL DISCHARGES VIOLATING NARRATIVE EFFLUENT LIMITATIONS**

329. Cooke has violated and is violating Permit Section J.1 (prohibition on floating solids discharged that impair the designed uses of the water) by discharging floating solids such as plastic feed bags, rope, PVC pipe, and other plastic waste into the Maine Waters, *supra* ¶¶ 180, 268–273, 315–317, inhibiting fishing, recreation, and aquatic life. *See* Permit at 13.

330. Each day since November 14, 2019 on which Cooke has discharged floating solids or failed to remedy water quality impairments caused by the discharge of floating solids, Cooke has violated and is violating Permit Section J.1 at all of the Cage Sites.

331. Cooke has violated and is violating Permit Section H (prohibition on causing or contributing to conditions that are hazardous or toxic to aquatic life) by discharging disease, sea lice, escaped fish, warm water, blood, and undisclosed chemicals. *See* Permit at 11.

332. Cooke has violated and is violating Permit Section J.2 (prohibition on discharge of pollutants in concentrations or combinations that are hazardous or toxic to aquatic life) by discharging disease, sea lice, escaped fish, warm water, blood, and undisclosed chemicals. *See* Permit at 13.

333. Each day since November 14, 2019 on which there has been an outbreak of disease or sea lice, or on which Cooke has discharged escaped fish, warm water, blood, and/or undisclosed chemicals, Cooke has violated and is violating Permit Sections H and J.2 at the relevant Cage

Sites.

334. Cooke has violated and is violating Permit Section H by discharging fish feces, uneaten food pellets, and/or dead fish parts that result in sediment sulfide toxicity at or above 500  $\mu\text{M}$ , poor ecological quality, and no-oxygen conditions outside the 30-meter mixing zone. *See* Permit at 11.

335. Cooke has violated and is violating Permit Section J.2 by discharging fish feces, uneaten food pellets, and/or dead fish parts that result in sediment sulfide toxicity at or above 500  $\mu\text{M}$ , poor ecological quality, and no-oxygen conditions outside the 30-meter mixing zone. *See* Permit at 13.

336. Each day since November 14, 2019 on which Cooke's discharges have caused toxic sediment (sulfide levels at or above 500  $\mu\text{M}$ ), poor ecological quality, and no-oxygen conditions outside the 30-meter mixing zone, Cooke has violated and is violating Permit Sections H and J.2 at the relevant Cage Sites.

337. Cooke's discharges cause toxic sediment (where sulfide levels are at or above 500  $\mu\text{M}$ ), poor ecological quality, and no-oxygen conditions outside the 30-meter mixing zone every day during the months of maximum biomass at the Black Island, Calf Island, Spectacle Island, Cross Island, and Sand Cove Cage Sites.

338. Cooke has violated and is violating Permit Section H (prohibition on causing or contributing to conditions that are lethal to passing organisms indigenous to the receiving water) by discharging pollutants including excess feed, fish feces, and dead fish parts which cause levels of sulfide and low dissolved oxygen directly beneath the pens to be toxic to aquatic life. *See* Permit at 11.

339. Each day since November 14, 2019 on which Cooke's discharges have caused or contributed to lethal conditions inside the cages, Cooke has violated and is violating Permit

Sections H at the relevant Cage Sites.

**COUNT II: DISCHARGES IN VIOLATION OF MAINE WATER QUALITY STANDARDS**

340. Cooke has violated and is violating Permit Sections E, H, and J (prohibition on violating Maine State Water Quality Standards) by discharging fish feces, feed pellets, dead fish, disease, parasites, escaped fish, and trash which cause sulfide toxicity and nutrient pollution, threaten endangered Atlantic Salmon, and impair uses of the Maine Waters like fishing and recreating, *see supra* ¶¶ 120–179, in violation of Maine state water quality standards.

341. Each day since November 14, 2019 on which Cooke has operated its Cage Sites, Cooke has violated and is violating Permit Sections E, H, and J at those Cage Sites in operation.

**COUNT III: DISCHARGES IN VIOLATION OF SEDIMENT AND BENTHIC LIMITATIONS AND MONITORING REQUIREMENTS**

342. Cooke has violated and is violating Permit Section I (sediment and benthic monitoring requirements and limitations) by (1) reporting a mean of all sulfide samples across the Sand Cove Cage Site of 3,252  $\mu\text{M}$  (exceeding the limit of 3,000  $\mu\text{M}$ ) in 2023; (2) failing to conduct required sediment and benthic monitoring following the 2023 sulfide exceedance at the Sand Cove Cage Site, *supra* ¶¶ 213, 241, or at the Black Island, Calf Island, Spectacle Island, Cross Island, and Sand Cove following sulfide sampling that would have exceeded the limit had it been properly conducted, *supra* ¶¶ 214–15; (3) restocking at the Black Island, Calf Island, Spectacle Island, Cross Island, and Sand Cove following sulfide sampling that would have exceeded the 4,000  $\mu\text{M}$  limit had it been properly conducted, *supra* ¶ 216; and (4) exceeding the sulfide and benthic limitations for Class SB waters in Permit Section I, *supra* ¶¶ 242-43.

343. Each day since March 1, 2024, Cooke has violated and is violating the sediment and benthic monitoring requirements in Permit Section I by failing to conduct required sediment and

benthic monitoring at the Sand Cove Cage Site.

344. Each day since May 1, 2022, Cooke has violated and is violating the sulfide limitation in Permit Section I at the Sand Cove Cage Site.

345. Cooke has violated and is violating Permit Section I and Appendices A–C (sediment monitoring requirements) by failing to conduct sulfide monitoring at the required locations, including on the dates and at the Cage Sites listed in Exhibit 6. *See* Permit at 12, 23–26.

346. Cooke has violated and is violating Permit Section I and Appendices A–C (sediment monitoring requirements) by failing to conduct sulfide monitoring in accordance with the methodological requirements of the Permit. *See id.*

347. Cooke has violated and is violating Permit Appendix A by failing to use 200 mL samples for its sulfide analysis as required by EPA-approved sampling method SM 4500-S<sup>2</sup>-F(2000) on the dates and at the Cage Sites listed in Exhibit 7. *See* Permit at 23.

348. Each day since November 14, 2019 on which Cooke operated its Cage Sites while failing to comply with the sediment and benthic monitoring requirements, including sulfide monitoring requirements, Cooke has violated and is violating Permit Sections I and Appendices A–C at those Cage Sites in operation.

**COUNT IV: DISCHARGES OF POLLUTANTS NOT AUTHORIZED BY THE PERMIT**

349. Cooke has violated and is violating Permit Section E (limitation on authorized discharges to pollutants incidental to the normal and proper operation of the facility) by discharging the following unauthorized pollutants: sea lice; diseases; plastic feed bags; netting and ropes; plastic or PVC tubes; plastic platform barges; and escaped fish. *See supra* ¶¶ 120–136, 164–179; Permit at 10.

350. Cooke violated Permit Section E by discharging escaped fish at least three times from

2019–2020. *Id.*

351. Cooke has violated and is violating the Clean Water Act directly, *see* 33 U.S.C. 1311(a), by discharging pollutants, including sea lice, diseases and pathogens; trash, including pieces of the cage structure, Styrofoam, pieces of rope, plastic feeding equipment, buoys, PVC pipe, and plastic bags; and escaped fish without a permit.

352. Each day since November 14, 2019 on which Cooke has discharged unauthorized pollutants, including during each sea lice and disease outbreak at the Cage Sites and during each escape event, Cooke has violated and is violating Permit Sections E and the Clean Water Act directly at those Cage Sites in operation.

**COUNT V: DISCHARGES FROM POINT SOURCES NOT AUTHORIZED BY THE PERMIT**

353. Cooke has violated and is violating Permit Section E (prohibition on discharge of pollutants from points sources other than cages) by discharging warm water, blood, sea lice, disease, and undisclosed chemicals from delousing boats and barges near the 13 active Cage Sites. *See supra* ¶¶ 137–152; Permit at 10.

354. Cooke has violated and is violating the Clean Water Act directly, *see* 33 U.S.C. 1311(a), by discharging pollutants, including warm water, blood, sea lice, disease, and undisclosed chemicals, from barges, docks, and delousing boats without a permit.

355. Each day since November 14, 2019 on which Cooke has discharged pollutants from unauthorized point sources, including each time Cooke conducted mechanical delousing operations, each time Cooke cleaned its nets on docks or barges, and each time Cooke discharged blood while testing fish for disease, Cooke has violated and is violating Permit Section E and the Clean Water Act directly at those Cage Sites in operation.

356. Cooke has violated and is violating Permit Section E (requirement to report unauthorized

discharges) by not reporting its unauthorized discharges listed in Paragraph 353, in accordance with Standard Condition B(5) of *Bypasses, of Marine Pollutant Discharge Elimination System Permit Standard Conditions Applicable to All Permits*, attached and incorporated into Cooke's Permit. *See* Permit at 10.

357. Each day since each unauthorized discharge that Cooke has failed to report constitutes a day of violation.

**COUNT VI: FAILURE TO MEET PERMIT'S BEST PRACTICABLE TREATMENT STANDARDS**

358. Cooke has violated and is violating Permit Section K.1 (requirement to employ efficient feeding strategies to limit accumulation of uneaten food) by failing to employ recommended efficient feed management strategies at all of its Cage Sites. *See supra* ¶¶ 120–126; Permit at 13.

359. Each day since November 14, 2019 on which Cooke has discharged uneaten fish food while failing to employ efficient feeding strategies at its Cage Sites, Cooke has violated and is violating Permit Section K.1 at those Cage Sites in operation.

360. Cooke has violated and is violating Permit Section K.2 (requirement to properly dispose of solid waste) by failing to collect, return to shore, and properly dispose of all feed bags, packaging materials, waste rope, netting, parts of feeding tubes, plastic barge pieces, and other solid waste. *See id.*

361. Each day since November 14, 2019 on which Cooke has discharged solid waste and failed to collect, return to shore, and properly dispose of it, Cooke has violated and is violating Permit Section K.2 at those Cage Sites in operation.

362. Cooke has violated and is violating Permit Section K.3 (requirement to minimize any discharge associated with the transport of harvesting of aquatic animals including blood) by



discharging blood during disease testing on docks. *See id.*

363. Each day since November 14, 2019 on which Cooke has discharged blood and failed to remove dead fish and fish pieces, Cooke has violated and is violating Permit Section K.3 at those Cage Sites in operation.

364. Cooke has violated and is violating Permit Section K.4 (requirement to remove and dispose of aquatic animal mortalities properly on a regular basis) by failing to remove dead fish and fish pieces on a regular basis. *See id.*

365. Each day since November 14, 2019 on which Cooke has discharged blood and failed to remove dead fish and fish pieces, Cooke has violated and is violating Permit Section K.4 at those Cage Sites in operation.

#### **COUNT VII: VIOLATIONS OF MONITORING AND REPORTING REQUIREMENTS**

366. Cooke has violated and is violating Permit Section N.5 (requirement to timely and accurately submit monthly Drug Treatment Reports) by submitting inaccurate and/or late Drug Treatment Reports, including on the dates and at the Cage Sites listed at *supra* paragraphs 274–300. *See* Permit at 17.

367. Cooke has violated and is violating Permit Section K.7 (requirement to timely and accurately submit monthly Feed and Fish Reports) by submitting inaccurate and/or late monthly Feed and Fish Reports, including on the dates and at the Cage Sites listed at *supra* paragraphs 301–305. *See* Permit at 14.

368. Each day between when each Feed and Fish Reports and Drug Treatment Reports were due and when an accurate version was submitted constitutes a day of violation of Permit Sections K.7 and N.5. *See* Permit at 14, 17.

369. Cooke has violated and is violating Permit Section O.6 (requirement to timely and accurately submit monthly Standing Inventory Reports) by submitting inaccurate and/or late

monthly Standing Inventory Reports. *See supra* ¶ 306; Permit at 19.

**RELIEF REQUESTED**

Plaintiff respectfully requests that this Court grant the following relief:

- a. Declare, pursuant to 28 U.S.C. § 2201, that Defendant has violated and is violating the Permit, the Clean Water Act, 33 U.S.C § 1311(a), and applicable regulations, as alleged in this Complaint;
- b. Enjoin Defendant from continuing the practices described in Paragraphs 190–306 which led to the violations alleged in Counts I–VII;
- c. Appoint a special master to oversee Defendant’s compliance with the Clean Water Act, its Permit, and any relief this Court orders;
- d. Impose civil penalties on Defendant as provided under the Clean Water Act, 33 U.S.C. §§ 1365(a) and 1319(d), and its implementing regulations of 40 C.F.R. § 19.4;
- e. Award Plaintiff’s costs of litigation, including reasonable attorney and expert witness fees, as provided under the Clean Water Act, 33 U.S.C. § 1365(d); and
- f. Grant such other relief as this Court may deem appropriate.

Dated: January 14, 2024

/s/ Heather Govern  
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ATTORNEYS FOR PLAINTIFF

**CERTIFICATE OF SERVICE**

I hereby certify that on January 14, 2025, the foregoing document was filed through the United States District Court of Maine electronic mail address [MaineECFIntake@med.uscourts.gov](mailto:MaineECFIntake@med.uscourts.gov), by which means a copy of the filing will be sent electronically to all parties registered when uploaded to the ECF system.

/s/ Sean Mahoney  
Sean Mahoney