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May 12, 2021

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RE: Notice of Intent to Sue: Violations of the Endangered Species Act Related to the Ongoing Operations of Hydropower Projects on the Kennebec River Without Incidental Take Authorization for the GOM DPS of Atlantic salmon

This letter serves as official notice by the Conservation Law Foundation, Maine Rivers, and the Natural Resources Council of Maine (the "Conservation Groups"), of our intent to sue Brookfield Renewable Partners L.P. ("Brookfield"), and any or all of its relevant subsidiaries or affiliates, ¹ for violations of the Endangered Species Act ("ESA") (16 U.S.C. § 1531, et seq.) resulting from acts or omissions related to the ongoing operations of four hydropower projects on the Kennebec River, State of Maine. These four hydropower projects are:

- the Lockwood Project, located at river mile 63, the first dam/hydroproject on the main stem of the Kennebec River, spanning the river at the US Route 201 Bridge in the cities of Waterville and Winslow, along the site originally known as Ticonic Falls;²
- the Hydro-Kennebec Project, located at river mile 64 on the Kennebec River in the cities of Waterville and Winslow, and in the town of Benton, the second dam/hydroproject on the main stem of the Kennebec River:³
- the Shawmut Project, located at river mile 70, the third dam/hydroproject on the main stem of the Kennebec River;⁴ and
- the Weston Project, located at river mile 83 in the town of Skowhegan, the fourth dam/hydroproject on the main stem of the Kennebec River.⁵

Each hydropower project is operating without authorization for the "take" of listed species as required by the ESA. 16 U.S.C. § 1538(a)(1)(B) (prohibiting any person from committing the "take" of listed species "within the United States or the territorial sea of the United States"); 16 U.S.C. § 1532(19) ("The term 'take' means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or

¹ These include, but are not limited to: The Merimil Limited Partnership as licensee of the Lockwood Project (FERC No. 2574), which is owned 50% by Brookfield Merimil Partners LLC and 50% by Kennebec Hydro Resources Inc.; Hydro-Kennebec LLC as licensee of the Hydro-Kennebec Project (FERC No. 2611); Brookfield White Pine Hydro LLC as licensee of the Shawmut Project (FERC No. 2322) and Weston Project (FERC No. 2325); Brookfield Power US Asset Management LLC, which manages the licensees' operations; Brookfield Power US Holding America Co., which has alleged in public filings that it "holds an equity interest in, and through its subsidiaries operates and manages" each of the four projects in issue; and Brookfield Renewable Partners LP, a Bermuda limited partnership, the stock of which is publicly traded on the New York Stock Exchange and the Toronto Stock Exchange, which is an indirect parent of each of the above entities, owning more than 10% on a fully exchanged basis.

² Biological Opinion of the U.S. Department of Commerce, National Oceanic and Atmospheric Administration's National Marine Fisheries Service ("NMFS") "Endangered Species Act Section 7 Formal Consultation for the Lockwood (2574), Shawmut (2322), Weston (2325), Brunswick (2284), and Lewiston Falls (2302) Projects," NOAA Fisheries Greater Atlantic Region Reference No. NER-2013-9613, at section 2.1.1 (July 19, 2013) (hereafter "2013 Interim BiOp").

³ Biological Opinion of the U.S. Department of Commerce, National Oceanic and Atmospheric Administration's National Marine Fisheries Service ("NMFS") "Endangered Species Act Section 7 Formal Consultation for the Hydro-Kennebec Project (FERC No. 2611) (September 17, 2012); "NOAA Fisheries Greater Atlantic Region Reference No. NER-2012-01860 (September 17, 2012) at section 2.1 (hereafter "2012 Interim BiOp").

⁴ 2013 Interim BiOp. at section 2.2.1; and see Brookfield Renewable, 2020 Diadromous Fish Passage Report for the Lower Kennebec River Watershed (Feb. 19, 2021) at section 2.2.3 (for "river mile 70" reference).

⁵ 2013 Interim BiOp. at section 2.3.1; and see Brookfield Renewable, 2020 Diadromous Fish Passage Report for the Lower Kennebec River Watershed (Feb. 19, 2021) at section 2.2.3 (for "river mile 83.5" reference).

collect, or to attempt to engage in any such conduct."). The listed species is the Gulf of Maine Distinct Population Segment ("GOM DPS") of Atlantic salmon.⁶

Interim, time-limited take authorizations, including terms and conditions set forth in the incidental take statements of the respective interim biological opinions of July 19, 2013 and September 17, 2012, had been a previous result of the consultation under section 7 of the ESA (16 U.S.C. § 1536(a)(2) and (b)) with the Federal Energy Regulatory Commission, concerning the effects of proposed approval of applications to amend the licenses for the construction of new upstream fishways at each of the projects, as well as the incorporation of an Interim Species Protection Plan (ISPP) for GOM DPS of Atlantic salmon at each of the projects, which would also govern downstream passage.⁷

However, that take authorization resulting from the 2012 and 2013 section 7 consultations, covering both upstream and downstream fish passage, expired on December 31, 2019, for all four projects.⁸

Since the expiration of take authorizations at all four projects on December 31, 2019, Brookfield has continued to operate all four projects, and those operations of each project have violated section 9 of the ESA (16 U.S.C. § 1538) by causing the unauthorized "take" of individual GOM DPS of Atlantic Salmon attempting to migrate upstream at the Lockwood Project, and by causing the unauthorized "take" of individual GOM DPS of Atlantic Salmon attempting to migrate downstream at the Weston Project and all of the remaining three projects downstream from Weston. The ongoing incidental take of one or more individuals of the listed species of Atlantic salmon – take that is "incidental to, and not the purpose of, the carrying out of an otherwise lawful activity" – violates the ESA without take authorization. 16 U.S.C. §§ 1538-1539. Brookfield has not restored any lapse in take authorization or obtained incidental take permits under sections 1539 or 1536(b)(4), and therefore currently operates in direct violation of sections 9 and 10 of the ESA. *Id*.

Thus, by this letter the Conservation Groups put Brookfield, its relevant subsidiaries and individuals, on official notice that we believe that the ongoing activities and operations of the four hydropower projects in issue are resulting in the unlawful take of threatened and endangered species, the GOM DPS of Atlantic salmon, in violation of the ESA. 16 U.S.C. § 1538. This letter is provided pursuant to the 60-day notice requirement of the citizen suit provision of the ESA, to the extent such notice is deemed necessary by a court. *See* 16 U.S.C. § 1540(g).

⁶ 74 Fed. Reg. 29344 (June 19, 2009).

⁷ 2013 Interim BiOp. at sections 1 & 10; 2012 Interim BiOp at sections 1.0 and 10.0.

⁸ 2013 Interim BiOp. at sections 10.1, p.149-150; 2012 Interim BiOp at section 10.1 & 2017 Biological Opinion for the Proposed Extension of Time for the Interim Species Protection Plan of the Hydro-Kennebec Project (P-2611), at section 10 & 12 ("Because this Opinion only considers the effects of continued operation of the project pursuant to the proposed amended license, the accompanying ITS [incidental take statement] only exempts take until the end of 2019. After that time, this Opinion will no longer be valid."); NOAA Fisheries Greater Atlantic Region Reference No. NER-2012-01860 (May 27, 2017).

I. Legal and Factual Background

A. The Endangered Species Act

The ESA was enacted, in part, to provide a "means whereby the ecosystems upon which endangered species and threatened species depend may be conserved ... [and] a program for the conservation of such endangered species and threatened species." 16 U.S.C. § 1531(b).

Section 9 of the ESA specifically prohibits the "take" of an endangered species, 16 U.S.C. § 1538(a)(1)(B), a term broadly defined to include harassing, harming, pursuing, wounding or killing such species. 16 U.S.C. § 1532(19). The term "harm" means "an intentional or negligent 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 ESA's legislative history supports "the broadest possible" reading of "take." Babbitt v. Sweet Home Chapter of Communities for a Great Oregon, 515 U.S. 687, 704-05 (1995), "Take" includes direct as well as indirect harm and need not be purposeful. Id. at 704; see also Nat'l Wildlife Fed'n v. Burlington No. R.R., 23 F.3d 1508, 1512 (9th Cir. 1994). Consistent with these provisions and precedent, hydropower operations that are being carried out by Brookfield, and its subsidiaries and individuals, can be the legal cause of a prohibited taking under Section 9 of the ESA. Persons who are knowingly carrying out these activities are liable for take and subject to civil and criminal penalties, including imprisonment. Bennett v. Spear, 520 U.S. 154, 170 (1997) ("any person' who knowingly 'takes' an endangered or threatened species is subject to substantial civil and criminal penalties, including imprisonment.") (citing 16 U.S.C. §§ 1540(a), (b) (authorizing civil fines of up to \$25,000 per violation and criminal penalties of up to \$50,000 and imprisonment for one year)); Babbitt v. Sweet Home Chapter, Communities for Great Oregon, 515 U.S. 687 (1995) (upholding interpretation of the term "take" to include significant habitat degradation).

Section 10 of the ESA provides an exception to the take prohibition, allowing the take of a listed species where the National Marine Fisheries Service ("NMFS"), which receives delegated authority from the Secretary of the Department of Commerce, issues a permit authorizing the take. 16 U.S.C. § 1539. If the "taking is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity," such as take associated with construction, development, or operation of an industrial site, the person intending to cause the take must first apply to NMFS for an incidental take permit. *Id.* § 1539(a)(1)(B). To receive a permit, the applicant must submit a habitat conservation plan to NMFS that specifies the "impact which will likely result from such taking" and provides "steps the applicant will take to minimize and mitigate such impacts," "to the maximum extent practicable," to ensure the project will not "appreciably reduce the likelihood of the survival and recovery of the species in the wild." *Id.* § 1539(a)(2)(A)(i)–(iv), (B). In addition, an applicant must satisfy NMFS that there is adequate funding available to implement the proposed minimization and

⁹ "Person" is defined in the ESA to include "an individual, corporation, partnership, trust, association, or any other private entity; or any officer, employee, agent, department, or instrumentality of the Federal Government, of any State, municipality, or political subdivision of a State, or of any foreign government; any State, municipality, or political subdivision of a State; or any other entity subject to the jurisdiction of the United States." 16 U.S.C. § 1532(13).

¹⁰ National Marine Fisheries Service ("NMFS") is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce. NMFS is the federal wildlife agency with the mandate for ensuring survival and recovery of this endangered species under the ESA. 16 U.S.C. §§ 1532(15) & 1533(a)(2); 50 C.F.R. § 402.01(b).; 74 Fed. Reg. 29,344, 29,358 (June 19, 2009).

mitigation measures, alternatives to the planned activities that would minimize or avoid take and why they are not being utilized, *id.* § 1539(a)(1)(B)(2)(iii), and any other assurances deemed necessary to minimize and avoid take of salmon, *id.* § 1539(a)(1)(B)(2)(iv). Once an applicant receives an incidental take permit, the applicant is protected from take liability so long as it complies with the minimization and mitigation measures set forth in the habitat conservation plan.

The ESA authorizes private enforcement of unpermitted take in violation of the take prohibition through a broad citizen-suit provision. "[A]ny person may commence a civil suit on his own behalf to enjoin any person . . . who is alleged to be in violation of any provision of [the ESA]" Id. § 1540(g). Citizens may seek to enjoin both present activities that result in take as well as future activities that are reasonably likely to result in take. National Wildlife Fed'n v. Burlington Northern Railroad, 23 F.3d 1508, 1511 (9th Cir. 1994). The ESA's citizen suit provision also provides for the award of costs of litigation, including reasonable attorney and expert witness fees. 16 U.S.C. § 1540(g)(4).

B. GOM DPS of Atlantic salmon

Atlantic salmon are anadromous fish, spending most of their adult life in the ocean but returning to freshwater to spawn. Atlantic salmon have a complex life history that includes spawning and rearing in rivers and extensive feeding migrations on the high seas. During their life cycle, Atlantic salmon go through several distinct phases that are identified by specific changes in behavior, physiology, morphology, and habitat requirements. 12

Adult Atlantic salmon return to the rivers from the sea and migrate to their natal stream to spawn; a small percentage (1-2%) of returning adults in Maine will stray to a new river. Adults ascend the rivers within the GOM DPS beginning in the spring. The ascent of adult salmon continues into the fall. Although spawning does not occur until late fall, the majority of Atlantic salmon in Maine enter freshwater between May and mid-July.¹³

Atlantic salmon are repeat seasonal spawners. In the fall, female Atlantic salmon select sites for spawning in rivers, and a single female may create several redds (nests) before depositing all of her eggs. After spawning, Atlantic salmon may either return to the sea immediately or remain in freshwater until the following spring before returning to the sea (Fay et al. 2006).¹⁴

Embryos develop in redds, hatching in late March or April. Newly hatched salmon, referred to as larval fry, alevin, or sac fry, remain in the redd for approximately six weeks after hatching and are nourished by their yolk sac. Survival from the egg to fry stage in Maine is estimated to range from 15 to 35%. When the fry reach approximately 4 cm in length, the young salmon – termed "parr" – remain in the river for 2 to 3 years before undergoing "smoltification," the process in which parr go through physiological changes in order to transition from a freshwater environment to a saltwater marine environment. In Maine, the vast majority of naturally reared parr (90% or more) remain in

¹¹ 2013 Interim BiOp at 34.

¹² 2013 Interim BiOp at 35.

¹³ 2013 Interim BiOp at 35-36.

¹⁴ 2013 Interim BiOp at 36 (citing in part Fay, C., et al. 2006. Status review for anadromous Atlantic salmon (Salmo salar) in the United States. Report to the National Marine Fisheries Service and U.S. Fish and Wildlife Service. 294 pages.)

freshwater for two years with the balance remaining for either one or three years. Most smolts enter the sea during May to begin their first ocean migration. During this migration, smolts must contend with changes in salinity, water temperature, pH, dissolved oxygen, pollution levels, and various predator assemblages. The transition of smolts into seawater is usually gradual as they pass through a zone of fresh and saltwater mixing that typically occurs in a river's estuary.¹⁵

The spring migration of post-smolts out of the coastal environment is generally rapid, within several tidal cycles, and follows a direct route.

The Kennebec was once the most productive river in Maine, ¹⁶ with Atlantic salmon runs in the hundreds of thousands. ¹⁷ Today, Atlantic salmon in the United States are on the edge of extinction, ¹⁸ including Atlantic salmon in the Kennebec River. Atlantic salmon's continued existence in the United States depends on further restoration of the Kennebec more than any other river.

In 2000, the Gulf of Maine Distinct Population Segment ("GOM DPS") of Atlantic salmon was first listed as an endangered species under the ESA. 65 Fed. Reg. 69459 (November 17, 2000) (determining "that the Gulf of Maine DPS is in danger of extinction throughout its range"). In 2009, that listing was expanded to include Atlantic salmon on the Kennebec, Penobscot, and Androscoggin Rivers. 74 Fed. Reg. 29344 (June 19, 2009). In June of 2009, designation of critical habitat for the GOM DPS of Atlantic salmon became final. 50 C.F.R. § 226.217; 74 Fed. Reg. 29300 (June 19, 2009).

The lower Kennebec River watershed is completely within designated critical habitat for the migrating GOM DPS of Atlantic salmon.¹⁹ And "[t]he vast majority of salmon habitat (nearly 90%) in the Kennebec River watershed is located above the Lockwood Project."²⁰

The combination of the four hydropower projects of Lockwood, Hydro-Kennebec, Shawmut, and Weston on the Kennebec River totally blocks Atlantic salmon access to the critical spawning and rearing habitat in the Sandy River area, located upstream from the four dams.²¹ These hydroelectric dams on the Kennebec "have eliminated or degraded vast, but to date unquantified, reaches of

¹⁵ Interim BiOp at 37.

¹⁶ 2020. Maine Department of Marine Resources. Response to the Ready for Environmental Analysis (REA) Preliminary Terms and Conditions, and Preliminary Fishway Prescriptions for the Shawmut Project (P-2322-069). August 28. P.1.

¹⁷ 2006. Saunders et al. Maine's Diadromous Fish Community: Past, Present, and Implications for Atlantic Salmon Recovery. Fisheries 31(11):537-547. Table 2 (cited in ESA Atlantic salmon listing, 74 Fed. Reg. 29344, 29374-75); Fay et al., 2006. Status review for anadromous Atlantic salmon (Salmo salar) in the United States. Report to the National Marine Fisheries Service and U.S.. Fish and Wildlife Service. P. 23. In the Kennebec alone, historic evidence puts the Atlantic salmon run at well over 216,000 fish, based on an 1867 Maine Agriculture report of a fish harvest on the Kennebec. Maine Agriculture, 1867 Report of Commissioners Nathan Foster and Charles Atkins at p. 114 (Jan. 16, 1868).

¹⁸ 2013 Interim BiOp at 3.1.1 P.34-35; 65 Fed. Reg. 69459 (November 17, 2000); 74 Fed. Reg. 29344 (June 19, 2009).

¹⁹ 2013 Interim BiOp at 10, 34.

²⁰ 2013 Interim BiOp at 46.

²¹ 2013 Interim BiOp at 34, 46, 65, 113.

suitable rearing habitat in the Kennebec . . . watershed[]."²² While there are additional dams upstream of Weston, resolving the obstruction of the Lockwood, Hydro Kennebec, Shawmut, and Weston dams is uniquely vital to the survival and recovery of Atlantic salmon because, just above Weston, the Sandy River enters the Kennebec River main stem.²³ The Sandy, with 37,105 critical habitat units, is one of best habitats in the Kennebec watershed – both in terms of quality and size – for the spawning and rearing of Atlantic salmon, and indeed among the best in Maine (and hence the United States).²⁴ *Id.* Atlantic salmon access to the Sandy is critical to survival and recovery of this endangered species. *Id.* Without access to the Sandy's spawning and rearing habitat, survival and recovery goals for the GOM DPS of Atlantic salmon will never be met. *Id.*

In 2019, only 56 salmon returned to be trapped at the Lockwood dam in Waterville (the first dam on the Kennebec in the series of four). In the 2020 migration season, only 51 salmon were captured at the Lockwood fishlift.

C. Take of Atlantic salmon from the Operations of the Four Hydropower Projects

i. Upstream migration "take"

There is no denying that upstream migration "take" occurs at the Lockwood Project, and that "take" would occur at the remaining three upstream dams in the four-dam gauntlet which Atlantic salmon (and other coevolved fish species) would face on their upstream migration, even assuming passage at Lockwood. The Lockwood Project is the first dam that American shad, river herring, and Atlantic salmon hit on their journey from the ocean to spawn in freshwater. The fish lift at this dam has never worked well since its installation in 2006, and Brookfield has failed to improve it. In a recent filing to the Federal Energy Regulatory Commission (FERC), the Maine Department of Marine Resources (MDMR) stated:

Fish passage failures at the Lockwood Project provide a cautionary tale as unexpectedly poor performance has left hundreds of returning endangered Atlantic salmon to die or spawn in subpar habitats below the project and likely tens or

²² 2013 Interim BiOp at 46.

²³ 2013 Interim BiOp at 46, 60-61, 113.

²⁴ The critical habitat for the GOM DPS of Atlantic salmon is divided into "salmon habitat recovery units" or SHRU's. 2013 Interim BiOp at 59. Then, areas designated as critical habitat under the ESA within each SHRU are termed "habitat units," with one unit representing 100 square meters of spawning or rearing habitat. *Id.* The Sandy River therefore consists of over 3.71 million square meters of critical habitat.

²⁵ 2020. DMR. MDMR Response to the Ready for Environmental Analysis (REA) Preliminary Terms and Conditions, and Preliminary Fishway Prescriptions for the Shawmut Project (P-2322-069). August 28, 2020. P.3. The salmon are trapped pursuant to a program operated by the Maine Department of Marine Resources ("MDMR"), where the small numbers of fish enter a fish lift at Lockwood, and passed into holding tanks; MDMR staff capture these fish and transport them to various release locations upstream, beyond this four-dam gauntlet posed by Brookfield's hydropower operations.

²⁶ Brookfield Renewable, Diadromous Fish Passage Report for the Lower Kennebec River Watershed during the 2020 Migration Season, at section 2.2.1.3 (Table 2-5). February 19, 2021. P. 20.

hundreds of thousands of American shad and other species to be blocked from historic habitats annually.²⁷

Similarly, NMFS stated in a 2018 letter to Brookfield that: "1) The Lockwood facility demonstrates poor upstream passage efficiency for Atlantic salmon; 2) Atlantic salmon are highly attracted to the 'bypass' reach of the Lockwood facility; and 3) the Lockwood facility imposes a significant delay upon the upstream migration of Atlantic salmon. Although the study did not address the facility's upstream passage effect on other species, it is reasonable to assume that other diadromous species experience similar effects." ²⁸

Brookfield's plans for fish passage facilities at the other dams, especially upstream passage, after expiration of take authorizations in December of 2019, have not fared well. In July 2020, the Federal Energy Regulatory Commission ("FERC") rejected Brookfield's proposed Biological Assessment (BA) and Final Species Protection Plan (SPP) and ordered Brookfield to resubmit a final plan before reinitiating the formal consultation under section 7 of the ESA – the reinitiated formal consultation which the expired interim 2012 and 2013 Biological Opinions had anticipated and required.²⁹ Brookfield has yet to file a revised Biological Assessment or Final Species Protection Plan in response to the FERC rejection in July of 2020, despite the lapse of incidental take coverage at each project.³⁰

In early 2020, Brookfield applied for a new license for its Shawmut Project, the third dam up from Waterville. Both state and federal agencies reacted strongly to the application and recommended removing the dam. MDMR stated in its comments on the Shawmut relicensing:

The Shawmut project represents less than 0.1% of the production of electricity in the State of Maine yet, if relicensed with underperforming fishways, would hasten the extinction of an iconic Maine species, Atlantic salmon, and could result in millions of sea-run fish not reaching historic habitats over the term of the license...MDMR believes the Shawmut project is particularly suited for decommissioning and removal.³¹

²⁷ 2020. MDMR. MDMR Response to the Ready for Environmental Analysis (REA) Preliminary Terms and Conditions, and Preliminary Fishway Prescriptions for the Shawmut Project (P-2322-069). August 28, 2020. P.3; FERC Accession No. 20200828-5199 at 3.

²⁸ Letter from Dan Kircheis (Acting ESA Fish Recovery Coordinator, NMFS Greater Atlantic Regional Fisheries Office) to Secretary Bose, FERC re NOAA Fisheries comments on the draft 2017 KHDG report (March 27, 2018) at 1 [FERC Accession No. 20180329-5166].

²⁹ 2020. FERC. Rejection of Species Protection Plan. July 13; FERC Accession No. 20200713-3022 & 3023.

³⁰ As recently as April 8, 2021, FERC administration convened a procedural conference call with Brookfield and NMFS representatives and attorneys, to discuss the lapse in take coverage and the absence of a final plan and Biological Assessment sufficient to allow reinitiated formal consultation. Although Brookfield stated it would consider proceeding with a Biological Assessment for three of the dams (Lockwood, Hydro-Kennebec, and Weston), to date it has neither done so nor confirmed that a complete final plan for comprehensive formal consultation on those three of four dams is what it intends to prepare.

³¹ 2020. MDMR. MDMR Response to the Ready for Environmental Analysis (REA) Preliminary Terms and Conditions, and Preliminary Fishway Prescriptions for the Shawmut Project (P-2322-069). August 28, 2020. P.2. (italics emphasis added); FERC Accession No. 20200828-5199 at 2.

The National Marine Fisheries Service (NMFS) has also called for Shawmut's removal:

The Kennebec River watershed once produced large runs of Atlantic salmon, American shad, blueback herring and alewife, as well as other sea-run fish including shortnose and Atlantic sturgeon (MSPO, 1993). Diadromous fish once contributed to substantial commercial, recreational, and subsistence harvests (MSPO, 1993) that were economically important to coastal communities. Anadromous fish production within the Kennebec River experienced dramatic declines throughout the past 150 years. Multiple plans since the 1980s, including the Kennebec River Resource Management Plan (1993), KHDG Settlement Accord (1998) and Atlantic salmon recovery plan (2019), highlight the importance of fish passage and habitat restoration as critical to supporting a restored anadromous fishery. Significant spawning, rearing, and migratory habitat exists above the Shawmut Project. Existing dams prevent access to those historical habitats. Atlantic salmon were virtually extirpated from their historical range within the Kennebec River watershed. Accordingly, a decision to decommission and remove the Shawmut Project and thereby remove a significant barrier to recovering an endangered species, and support the restoration of several anadromous fish, would fulfill the Commission's mandate under the FPA to ensure the best comprehensive use of a waterway. 32

ii. Downstream migration "take"

"Take" that occurs with downstream outmigration is also undeniable. NMFS has concluded that "[a] significant proportion of Atlantic salmon smolts and kelts are injured or killed while passing dams during their downstream migration." ³³ ³⁴

Brookfield's own salmon smolt studies conducted in 2012-2015 confirm these findings. Maine Rivers and the Natural Resources Council of Maine hired a fish passage expert³⁵ to conduct an analysis of these studies. This analysis³⁶ of fish that arrived at the Weston Project and were detected at the lowest telemetry station below the Lockwood project showed a combined four-year, overall survival of 56.3%. Yearly survival varied from 30 to 70 percent (Table 1). This means that more than 40% of outmigrating smolts die trying to return to the ocean due to Brookfield's dams and the impoundments they create.

³² 2020. NMFS. Comments, Recommendations, Preliminary terms and Conditions, and Preliminary Fishway Prescriptions for the Shawmut Hydroelectric Project (FERC No. 2322). August 28. Pp. 43-44 (italics emphasis added).

³³ 2013 Interim BiOp at 141.

³⁴ Kelts are post-spawn adults, which need to migrate back downstream to the ocean for eventual repeat spawning.

³⁵ Don Pugh, a fish passage expert who has more than 20 years of fish passage experience and formerly worked on both up- and downstream passage at the S.O. Conte Anadromous Fish Research Laboratory.

³⁶ 2020. Kennebec Coalition. KENNEBEC COALITION'S MOTION TO INTERVENE, WITH PROTESTS AND COMMENTS OPPOSING THE ISSUANCE OF A NEW LICENSE FOR THE SHAWMUT PROJECT NUMBER 2322-069, WITH RECOMMENDATION FOR ORDER OF PLAN FOR DECOMMISSIONING AND REMOVAL. PP. 35-43; FERC Accession No. 20200831-5332 at 35-43.

Table 1. Number of smolt arriving at the Weston project, number detected at the lowermost telemetry station below the Lockwood project and the percent survival for each of four years and the combined survival.

| Year | Arrive Weston | Detected Lowest Station | % |
|------|------------------|-------------------------------|------|
| 2012 | 115 | 34 | 29.6 |
| 2013 | 100 | 70 | 70.0 |
| 2014 | 99 | 69 | 69.7 |
| 2015 | 98 | 59 | 60.2 |
| All | 412 | 232 | 56.3 |

Thus, "[i]n addition to direct mortality sustained by Atlantic salmon at hydroelectric projects, Atlantic salmon in the Kennebec [River] will also sustain delayed mortality as a result of repeated passage events at multiple hydroelectric projects."³⁷

iii. Other "take" occurrences

The known passage failures at the Lockwood dam to pass effectively American shad, and other co-evolved species, has a direct correlation to Atlantic salmon increased mortality in the critical habitat area. The depletion of "cover" species, which reduce predation on Atlantic salmon, is an adverse modification of critical habitat, and the projects' successive failures to pass these other species increases the percentage of takes during both in- and out-migrations.³⁸

Furthermore, the existing operations of the hydroprojects result in four impoundments – impounded waters created by the damming of the river at the four projects. In the aggregate, these impoundments cover a substantial percentage (85%) of the river from the Lockwood Project upstream to the upper end of the Weston Project impoundment. It has long been recognized that these areas of the riverine environment are deleterious to the recovery of cold water fish species. For example, in the 2013 interim Biological Opinion regarding the Lockwood, Shawmut, and Weston Projects on the Kennebec River, NMFS concluded:

Dams have eliminated or degraded vast, but to date un-quantified, reaches of suitable rearing habitat in the Kennebec . . . watershed. The Kennebec River consists of 254,558 historic habitat units, with 44,402 units considered to be occupied

³⁷ 2013 Interim BiOp at 49.

³⁸ NRC (National Research Council). 2004. Atlantic Salmon in Maine. National Academy Press. Washington D.C. 304 pp. In this review on the status of survival for Atlantic salmon in Maine (cited in the 2013 Interim BiOp at 175), the National Research Council of the National Academy of Sciences ("NRC") concluded that the greatest impediment to self-sustaining Atlantic salmon populations in Maine is obstructed fish passage and degraded habitat caused by dams. *Id.*

Impoundments created by these dams limit access to habitat, alter water quality through increased temperatures and lowered dissolved oxygen levels. Furthermore, because hydroelectric dams are typically constructed in reaches with moderate to high underlying gradients, significant areas of free-flowing habitat have been converted to impounded habitats in the Kennebec . . . River watersheds. Coincidently, these moderate to high gradient reaches, if free-flowing, would likely constitute the highest value as Atlantic salmon spawning nursery, and adult resting habitat within the context of all potential salmon habitat within these reaches.³⁹

Outmigrating smolts and kelts may be delayed or hindered by the lack of free-flowing habitat, and alterations in water quality (temperature, lowered dissolved oxygen levels, etc.) hinder their outmigration to a degree that "creates the likelihood of injury . . . by annoying [them] to such an extent as to significantly disrupt normal behavioral patterns . . ." 50 C.F.R. § 17.3; 16 U.S.C. § 1532(19). In short, dams are a man-made degradation of the natural riverine environment. See American Rivers and Alabama Rivers Alliance v. Federal Energy Regulatory Commission, 895 F.3d 32, 46-50 (D.C. Cir. 2018) (environmental degradation from impoundments cannot be ignored in the environmental analysis required by the National Environmental Policy Act, 42 U.S.C. §§ 4321, et seq.). The existence and operations of the Brookfield projects and dams in issue are entirely within the designated critical habitat of the GOM DPS of Atlantic salmon, and adversely impact that critical habitat, resulting in unauthorized "takes" by "significantly disrupt[ing] normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering." 50 C.F.R. § 17.3; 16 U.S.C. §§ 1538(a).

III. Conclusion

As stated above, Brookfield, and its relevant subsidiaries, affiliates and individuals referenced herein, are violating the ESA as a result of their actions and inactions related to the operations of the Lockwood, Hydro-Kennebec, Shawmut, and Weston hydropower projects on the main stem of the Kennebec River. These operations, acts or omissions, constitute ongoing violations of Section 9 of the ESA, without incidental take permission authorized by NMFS.

If Brookfield, and its relevant subsidiaries, affiliates and individuals referenced herein, do not act to suspend operations of the hydroprojects, or obtain an incidental take permit that mitigates impacts to the maximum extent practicable, Brookfield and these subsidiaries, affiliates, and individuals are in violation of the ESA. 16 U.S.C. §§ 1538, 1539. Without correction of the violations described in this letter, the Conservation Groups will pursue litigation against Brookfield and these subsidiaries, affiliates, and individuals, in United States District Court in 60 days from your receipt of this notice. By such action, and pursuant to the authority of 16 U.S.C. § 1540(g), which includes the authority "to enjoin any person . . . who is alleged to be in violation of any provision of [the ESA] " Id. § 1540(g), the Conservation Groups will seek to enjoin relevant operations of the projects, and may seek to enjoin both present activities that result in take as well as future activities that are reasonably likely to result in take. National Wildlife Fed'n v. Burlington Northern Railroad, 23 F.3d 1508, 1511 (9th Cir. 1994). In addition to injunctive and declaratory relief, the Conservation Groups will also seek an award of costs of litigation, including reasonable attorney and expert witness fees. 16 U.S.C. § 1540(g)(4).

³⁹ 2013 Interim BiOp at 46.

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If you or your counsel have any questions, wish to discuss this matter, or feel this notice is in error, please contact us at 207-774-7000, or email at rpierce@nhdlaw.com.

DATED: May 12, 2021

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