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For a thriving New England

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August 2, 2018

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VIA CERTIFIED MAIL, RETURN RECEIPT REQUESTED

RE: Notice of Violations and Intent to File Suit under the Clean Water Act

To Whom It May Concern:

Conservation Law Foundation ("CLF") hereby gives notice of its intent to file suit pursuant to Section 505 of the Federal Water Pollution Control Act ("Clean Water Act," "CWA," or "Act"), 33 U.S.C. § 1365(a), against the New Hampshire Fish & Game Department ("Department") and

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the above-named director and commissioners in their official capacities with the Department, for past and ongoing violations of the Clean Water Act caused by the Department's Powder Mill State Fish Hatchery ("Hatchery" or "Facility"). CLF intends to initiate such action in the United States District Court for the District of New Hampshire seeking appropriate equitable relief, civil penalties, and other relief no earlier than 60 days from the postmark date of this letter, which serves as notice pursuant to 40 CFR Part 135.

The subject of this action is the Hatchery's past and ongoing violations of its National Pollutant Discharge Elimination System ("NPDES") permit – NPDES Permit NH0000710 (the "Permit") – in violation of the Clean Water Act[1] and applicable regulations,[2] as well as the State's Certification requirement pertaining to pH discharges. The Facility has discharged and continues to discharge wastewater into waters of the United States in a manner that violates the terms of the Facility's Permit in at least the following ways: (1) by violating the Permit's effluent limitation prohibiting discharges that violate state water quality standards; (2) by violating the Permit's effluent limitation requiring that the receiving waters remain free of pollutants and non-natural effects that interfere with designated uses; (3) by violating the Permit's effluent limitations relative to formaldehyde; (4) by violating the Permit's effluent limitations and the State's Certification requirement relative to pH; (5) by violating the Permit's effluent limitation prohibiting the direct discharge of cleaning water; and (6) by violating the Permit's narrative effluent limitation requirement to implement and maintain a Best Management Practices (BMP) Plan.

PERSONS RESPONSIBLE FOR ALLEGED VIOLATIONS

The Department, and its director and commissioners as agents of the Department, are the persons, as defined by 33 U.S.C. § 1362(5), responsible for the violations alleged in this Notice. The Department's director and commissioners, in their official capacity – including but not limited to Executive Director Glenn Normandeau, Fish & Game Commission Chair Robert Phillipson, and Fish & Game Commissioners Barry Carr, Paul G. McInnis, Christopher Hodgdon, Todd Baldwin, Eric G. Stohl, Ray Green, Ernest Millette, James W. Ryan, David L. Patch, and Bruce Temple – have operational control of the activities at the Facility and are responsible for ensuring that the Facility operates in compliance with its Permit.

LOCATION OF THE ALLEGED VIOLATION

The violations alleged in this Notice have occurred and continue to occur at the Powder Mill State Fish Hatchery, located at 288 Merrymeeting Road, New Durham, NH 03855.

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[1] *See* CWA §§ 301(a), 318; 33 U.S.C. §§ 1311(a), 1328.
[2] *See* 40 CFR §§ 122.24, 122.44(d)(1); 40 CFR Part 451.

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BACKGROUND

The Powder Mill Hatchery is a concentrated aquatic animal production facility regulated under the Clean Water Act. The Facility's Permit was issued on December 22, 2011, expired in December 2016, and has been administratively continued since its expiration. The Facility's operations include feeding and raising fish to be stocked in waters elsewhere in the state; cleaning and maintenance; and the discharge of wastewater into the Merrymeeting River.

The Merrymeeting River – a water of the United States – is designated as a Class B waterbody pursuant to RSA 485-A:8, meaning that it is suitable for fishing, swimming and other recreational purposes, and for use as a water supply after adequate treatment. The river flows out of Merrymeeting Lake and is a tributary of Lake Winnipesaukee in the Winnipesaukee River watershed. The Facility discharges into the Merrymeeting River at Waterbody segment NHRIV700020102-04.[3] The Merrymeeting River flows downstream from the Facility into, and is comprised of, Marsh Pond (Waterbody NHIMP700020102-01-02),[4] Jones Dam Pond (Waterbody NHIMP700020102-01-01),[5] Downing Pond (Waterbody NHLAK700020102-02),[6] and Merrymeeting River (Waterbody Segment NHRIV700020102-08).[7] These segments comprising the Merrymeeting River are all habitats for wildlife and aquatic life ("fish, shellfish and wildlife protection and propagation"), and all are used for fishing and primary and secondary contact recreation.[8] All of these segments are impaired for Fish Consumption as a result of the atmospheric deposition of mercury and are subject to the Northeast Regional Mercury TMDL.[9]

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[3] *See 2012 Waterbody Report for Merrymeeting River (NHRIV700020102-04)*, U.S. ENVTL. PROT. AGENCY (2012), https://ofmpub.epa.gov/waters10/attains_waterbody.control?p_au_id=NHRIV700020102-04&p_cycle=2012&p_state=NH&p_report_type=.

[4] *See 2012 Waterbody Report for Marsh Pond (NHIMP700020102-01-02)*, U.S. ENVTL. PROT. AGENCY (2012), https://ofmpub.epa.gov/waters10/attains_waterbody.control?p_au_id=NHIMP700020102-01-02&p_cycle=2012&p_state=NH&p_report_type=.

[5] *See 2012 Waterbody Report for Jones Dam Pond (NHIMP700020102-01-01)*, U.S. ENVTL. PROT. AGENCY (2012), https://ofmpub.epa.gov/waters10/attains_waterbody.control?p_au_id=NHIMP700020102-01-01&p_cycle=2012&p_state=NH&p_report_type=.

[6] *See 2012 Waterbody Report for Downing Pond (NHLAK700020102-02)*, U.S. ENVTL. PROT. AGENCY (2012), https://ofmpub.epa.gov/waters10/attains_waterbody.control?p_au_id=NHLAK700020102-02&p_cycle=2012&p_state=NH&p_report_type=.

[7] *See 2012 Waterbody Report for Merrymeeting River (NHRIV700020102-08)*, U.S. ENVTL. PROT. AGENCY (2012), https://ofmpub.epa.gov/waters10/attains_waterbody.control?p_au_id=NHRIV700020102-08&p_cycle=2012&p_state=NH&p_report_type=.

[8] *Id.;* U.S. ENVTL. PROT. AGENCY, *supra* notes 3-6.

[9] *Id.*

The Merrymeeting River is experiencing significant problems related to cyanobacteria, which can produce toxins that are harmful to human health and prevent people from enjoying water-based activities. In fact, the presence of cyanobacteria in Jones Dam Pond and Downing Pond has occurred in such high concentrations that both ponds have been designated as impaired for primary contact recreation (one of their designated and actual uses).[10] These primary contact recreation uses include but are not limited to swimming, bathing, water play by children, and other similar water-contact activities where immersion and ingestion are likely and expected.[11]

The presence of cyanobacteria has led to the issuance of multiple cyanobacteria warnings for the Merrymeeting River. For example, in August 2015 and July 2016, NHDES issued advisories for cyanobacteria (*Anabaena*) blooms exceeding 70,000 cells/mL at Downing Pond.[12] As part of the advisories, lake users were warned to avoid contact with the affected water and keep pets out of the water from August 17 to September 2, 2015 and from June 30 to July 29, 2016.[13] Levels of cyanobacteria reached cell concentrations of 4.1 million cells/mL during the 2015 advisory and 120,000 cells/mL during the 2016 advisory.[14] This summer has already seen two lake warnings for cyanobacteria. On July 20, 2018, NHDES issued a cynobacteria warning for Jones Pond, citing an estimate of over 3 million cells/ml of *Oscillatoria* and advising, *inter alia*, that lake users avoid contact with the water in areas experiencing elevated cyanobacteria cell conditions. This recent Jones Pond cyanobacteria bloom triggered a second NHDES cyanobacteria advisory one week later when blooms of *Oscillatoria* with 140,000 cells/mL were measured in Marsh Pond.[15]

In addition, samples taken in 2017 from Marsh Pond, Jones Dam Pond, and Downing Pond revealed cyanobacteria (*Oscillatoria*) in both Marsh Pond and Downing Pond. Samples from Marsh Pond also found *Ceratium* such as *Dinoflagellates* – the unicellular organisms associated

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[10] U.S. ENVTL. PROT. AGENCY, 2016 LIST OF THREATENED OR IMPAIRED WATERS THAT REQUIRE A TMDL (2017), https://www.epa.gov/sites/production/files/2018-06/documents/2016-nh-303d-list-report.pdf; U.S. ENVTL. PROT. AGENCY, *supra* notes 5, 6.

[11] U.S. ENVTL. PROT. AGENCY OFFICE OF WATER QUALITY, RECREATIONAL WATER QUALITY CRITERIA, https://www.epa.gov/sites/production/files/2015-10/documents/rwqc2012.pdf (last visited July 31, 2018).

[12] *State Removes Cyanobacteria Warning for Downing Pond, New Durham, NH*, N.H. DEP'T ENVTL. SERVS. (September 2, 2015), https://www.des.nh.gov/media/pr/2015/20150902-cyanobacteria-downing-pond.htm; *State Removes Cyanobacteria Warning for Downing Pond, New Durham, NH*, N.H. DEP'T ENVTL. SERVS. (July 29, 2016), https://www.des.nh.gov/media/pr/2016/20160729-cyanobacteria-downing-pond.htm.

[13] *Id.*

[14] *Id.*

[15] *State Issues Cyanobacteria Lake Warning for Marsh Pond in New Durham, N.H.*, N.H. DEP'T ENVTL. SERVS. (July 27, 2018), https://www.des.nh.gov/media/pr/2018/20180727-cyanobacteria-marsh-pond.htm.

with red tide.[16] Additional species of cyanobacteria including "long linear colonies of *Anabaena*" and *Aphanocapsa* were also present in samples from Downing Pond.

In addition to impairing recreational uses, cyanobacteria blooms pose a public health risk, as there is growing evidence that exposure to toxins associated with such blooms correlates with increased incidences of neurodegenerative disease, such as Alzheimer's and ALS (Lou Gehrig's disease).[17] Additional health effects that can result from exposure to *Anabaena*, *Oscillatoria*, and/or *Microcystis* include nausea, vomiting, diarrhea, general malaise, severe thirst, skin and mucous membrane irritation, staggering, and paralysis.[18]

The Merrymeeting River also is experiencing significant problems related to green algae growth and cultural eutrophication, which can be measured using a number of indicators including: (1) phosphorus concentrations; (2) concentrations of chlorophyll a (as a proxy for the concentration of small plants and algae in the water); and (3) the transparency or clarity of the water.[19] Marsh Pond, Jones Dam Pond, and Downing Pond are all eutrophic when measured in terms of phosphorus and chlorophyll a concentrations. Downing Pond is also eutrophic when measured using water clarity alone.

Jones Dam Pond and Marsh Pond both experienced significant green algae growth in the summer and early fall of 2016. Testing in Marsh Pond, Jones Dam Pond, and Downing Pond have revealed high levels of chlorophyll a and phosphorus as well as reduced clarity in all three ponds that are consistent with eutrophication. Samples taken in 2017 and 2018 by a collaboration

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[16] Red tides are harmful algal blooms that occur when neurotoxin-producing algae grow out of control. This leads to blooms that can kill fish, shellfish, mammals, and birds, and harm human health. Dinoflagellate red tides turn water red or brown with concentrations of the protists as high as 20 million cells/L. There are several different species of dinoflagellates that each produce different types and levels of toxins. *What is a Red Tide?*, NAT'L OCEAN SERV., https://oceanservice.noaa.gov/facts/redtide.html (last visited July 31, 2018); *Dinoflagellates and Red Tides,* SCRIPPS INST. OF OCEANOGRAPHY, https://scripps.ucsd.edu/labs/mlatz/bioluminescence/dinoflagellates-and-red-tides/ (last visited Aug. 1, 2018).

[17] Sandra Anne Bannack et al., *Detection of Cyanotoxins, β-N-methlamino-L-alanine and Microsystins, from a Lake Surrounded by Cases of Amyotrophic Lateral Sclerosis*, 7 TOXINS 322 (2015), http://www.mdpi.com/2072-6651/7/2/322; Paul Alan Cox et al., *Dietary Exposure to an Environmental Toxin Triggers Neurofibrillary Tangles and Amyloid Deposits in the Brain*, 283 PROCEEDINGS OF THE ROYAL SOC'Y B 20152397 (Jan. 20, 2016), http://rspb.royalsocietypublishing.org/content/royprsb/283/1823/20152397.full.pdf.

[18] *Recreational Exposure to Cyanobacteria (Blue-Green Algae)*, N.H. DEP'T ENVTL. SERVS., https://www.des.nh.gov/organization/divisions/water/wmb/beaches/cyano_bacteria.htm (last visited Aug. 1, 2018).

[19] *Measuring Eutrophication*, MICH. STATE UNIV. MICH. INLAND LAKES P'SHIP, https://www.canr.msu.edu/michiganlakes/lake_ecology/measuring_eutrophication (last visited July 31, 2018).

between New Durham town officials, University of New Hampshire scientists, concerned citizens, and USEPA[20] found extremely high concentrations of phosphorus in the Merrymeeting River, including Marsh Pond, Jones Dam Pond, and Downing Pond.

The above-described problems in the Merrymeeting River are also of great concern for downstream waters such as Lake Winnipesaukee's Alton Bay. The Merrymeeting River ultimately flows into Lake Winnipesaukee (Waterbody NHLAK700020110-02-19) at Alton Bay approximately nine miles downstream from the Facility, carrying with it any pollutants and organisms present in the River – including but not limited to phosphorus, cyanobacteria, algae and low pH levels.[21] Lake Winnipesaukee is a Class B waterbody pursuant to RSA 485-A:8, and its Alton Bay is a popular resource for residents, homeowners, and visitors who enjoy swimming, boating, kayaking, canoeing, fishing, paddleboarding, and a variety of primary contact recreation uses. Lake Winnipesaukee in Alton is listed on New Hampshire's 2016 Section 303(d) list as impaired – as a result of cyanobacteria hepatotoxic microsystins – for primary contact recreation uses.[22] It is further impaired for Fish Consumption from the atmospheric deposition of mercury and is subject to both the Northeast Regional Mercury TMDL and the New Hampshire 158 Acid Ponds TMDL.[23]

STANDARDS AND LIMITATIONS ALLEGED TO HAVE BEEN VIOLATED

The Powder Mill State Fish Hatchery, a concentrated aquatic animal production facility within the meaning of 40 CFR § 122.24 and 40 CFR Part 451, is required to comply with its Permit in order to discharge lawfully under the Clean Water Act. Pursuant to its Permit, which became effective December 22, 2011, the Facility has been specifically required, *inter alia*, to (1) not cause a violation of state water quality standards, which include but are not limited to a prohibition against violating Env-Wq Rules 1703.01(c) ("All surface waters shall provide, wherever attainable, for the protection and propagation of fish, shellfish and wildlife, and for recreation in and on the surface waters."), 1703.03 (General Water Quality Criteria), 1703.07 (Dissolved Oxygen), 1703.10 (Color), 1703.14 (Nutrients) and 1703.19 (Biological and Aquatic Community Integrity), and Part Env-Wq 1708 and Env-Wq 1708.01 (Antidegradation);[24] (2) ensure that the Merrymeeting River remains free from pollutants that produce adverse effects

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[20] USEPA conducted sampling only in 2017.

[21] *See 2012 Waterbody Report for Lake Winnipesaukee (NHLAK700020110-02-19)*, U.S. ENVTL. PROT. AGENCY (2012), https://ofmpub.epa.gov/waters10/attains_waterbody.control?p_au_id=NHLAK700020110-02-19&p_cycle=2012&p_state=NH&p_report_type=.

[22] NH DES, R-WD-17-09, App. 1, 2016 LIST OF THREATENED OR IMPAIRED WATERS THAT REQUIRE A TMDL (Nov. 30, 2017).

[23] *See* U.S. ENVTL. PROT. AGENCY, *supra*, note 21.

[24] U.S. ENVTL. PROT. AGENCY, PERMIT NH0000710, AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (Dec. 22, 2011) [hereinafter Permit] at 7 (Part I.A.3).

and render it unsuitable for its designated uses and/or result in any demonstrable harm to aquatic life;[25] (3) not discharge effluent with concentrations of formaldehyde exceeding 4.6 mg/L as a daily maximum or 1.6 mg/L as a monthly average;[26] (4) ensure that the effluent it discharges has a pH level of at least 6.5 standard units (S.U.) unless the pH level is no more than 0.5 S.U. lower than upstream river water pH;[27] (5) not directly discharge cleaning water;[28] and (6) implement and maintain a Best Management Practices (BMP) Plan.[29]

The Facility has failed to comply with these requirements of its Permit during various periods within the past five years and on an ongoing basis. Therefore, it has been and is operating in violation of the Clean Water Act and applicable regulations, as well as the State's Certification requirement pertaining to pH. CLF hereby provides notice that it intends to pursue claims in the U.S. District Court for the District of New Hampshire related to these violations, which are more fully described below.

ACTIVITIES ALLEGED TO BE VIOLATIONS

The Powder Mill State Fish Hatchery has been operated, and continues to be operated, in a manner that violates the Facility's Permit. Any discharge of a pollutant into waters of the United States not in compliance with a federal NPDES permit is a violation of the Clean Water Act. The Facility's Permit violations, as described below, are also violations of Sections 301(a) and 318 of the Clean Water Act ("CWA"), 33 U.S.C. §§1311(a) and 1328, and 40 CFR §§ 122.24 and 122.44(d)(1). Certain Permit violations also are violations of effluent guidelines and standards established for concentrated aquatic animal production facilities, 40 CFR Part 451.

a. The Facility has discharged, is discharging, and will continue to discharge effluent to waters of the United States in violation of the Permit's prohibition against violating state water quality standards.

The Permit includes an effluent limitation specifically requiring that discharges "shall not cause a violation of the water quality standards of the receiving water."[30] New Hampshire's state water quality standards include Env-Wq 1703.01 (Water Use Classifications; Designated Uses), which requires, *inter alia*, that "[a]ll surface waters shall provide, wherever attainable, for the protection and propagation of fish, shellfish and wildlife, and for recreation in and on the surface waters."[31] The state's water quality standards also include Env-Wq 1703.03 (General Water

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[25] *Id.* (Part I.A.4, 5).
[26] *Id.* at 3, 5 (Parts I.A.1, I.A.2).
[27] *Id.* at 2, 4, 16.
[28] *Id.* at 8 (Part I.A.9).
[29] *Id.* at 10-13 (Part I.B.4).
[30] *Id.* at 7 (Part I.A.3).
[31] N.H. Code Admin. R. Env-Wq 1703.01(c) (2016).

Quality Criteria), establishing certain physical, chemical, and biological criteria for all surface waters, and Env-Wq 1703.14, pertaining to nutrients. With specific regard to the latter, the state's water quality standards state in pertinent part:

> . . . .
> (b) Class B waters shall contain no phosphorus or nitrogen in such concentrations that would impair any existing or designated uses, unless naturally occurring.
> (c) Existing discharges containing phosphorus or nitrogen, or both, which encourage cultural eutrophication shall be treated to remove the nutrient(s) to ensure attainment and maintenance of water quality standards.
> (d) There shall be no new or increased discharge of phosphorus into lakes or ponds.
> (e) There shall be no new or increased discharge containing phosphorus or nitrogen to tributaries of lakes or ponds that would contribute to cultural eutrophication or growth of weeds or algae in such lakes or ponds.[32]

New Hampshire's surface water quality standards also include requirements for the protection of biological and aquatic community integrity,[33] and contain specific requirements pertaining to dissolved oxygen[34] and color.[35] The state water quality standards also include specific provisions related to antidegradation,[36] including but not limited to the requirement that "[e]xisting uses and the level of water quality necessary to protect the existing uses shall be maintained and protected."[37]

The Facility's discharges have caused or contributed to the violation of the above-referenced state water quality standards and continue to do so. As described above (*see* "Background" section, *supra*), the Merrymeeting River is experiencing significant problems associated with cyanobacteria, green algae, and cultural eutrophication. The Facility's operation, which includes significant discharges of phosphorus, nitrogen, ammonia, total suspended solids ("TSS"), and biological materials (as measured by biochemical oxygen demand (BOD)), is causing or contributing to these water quality problems, including but not limited to impairment of

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[32] N.H. Code Admin. R. Env-Wq 1703.14 (2016).
[33] *See* N.H. Code Admin. R. Env-Wq 1703.19 (2016) ("Biological and Aquatic Community Integrity"), stating:
> (a) All surface waters shall support and maintain a balanced, integrated, and adaptive community of organisms having a species composition, diversity, and functional organization comparable to that of similar natural habitats of a region.
> (b) Differences from naturally-occurring conditions shall be limited to non-detrimental differences in community structure and function.

[34] N.H. Code Admin. R. Env-Wq 1703.07 (2016).
[35] N.H. Code Admin. R. Env-Wq 1703.10(b) (2016) ("Class B waters shall contain no color in such concentrations that would impair any existing or designated uses, unless naturally occurring.").
[36] N.H. Code Admin. R. Part Env-Wq 1708 (2016) (Antidegradation).
[37] N.H. Code Admin. R. Env-Wq 1708.01(a) (2016).

designated uses and violation of the above-referenced state water quality standards, and continues to do so.

With specific regard to phosphorus, the Facility's own quarterly discharge monitoring reports show that it has continually discharged phosphorus from both outfalls nearly every quarter since the third quarter of 2013.[38] The Hatchery has discharged quantities as high as 1.5012 lbs/day from Outfall 001 and 3.13 lbs/day from Outfall 002, and concentrations as high as .09 mg/L from Outfall 001 and .11 mg/L from Outfall 002.[39]

Between May 2017 and February 2018, New Durham town officials, University of New Hampshire scientists, concerned citizens, and USEPA conducted water sampling in Merrymeeting River, including Marsh Pond, Jones Dam Pond, and Downing Pond. Critically, while levels of phosphorus were within a range of 6 µg/L or lower upstream of the Hatchery, extremely elevated concentrations of phosphorus (as high as 62.5 µg/L) were measured in the Merrymeeting River immediately downstream from the Facility's outfalls. High phosphorus concentrations were also measured in Marsh Pond (as high as 49.0 µg/L), Jones Dam Pond (as high as 30.7 µg/L), and Downing Pond (as high as 26.4 µg/L). Water sampling conducted during the summers of 2015 and 2016 found similarly high levels of phosphorus in all three of the river's ponds.

Levels of phosphorus in fresh water that exceed 20 µg/L combined with sunlight and water temperatures above 25° C can lead to toxic cyanobacterial and algal blooms. These concentrations of phosphorus were present in Marsh Pond, Jones Dam Pond and Downing Pond in the summers of 2015, 2016 and 2017 and, in combination with the warm weather, explain the cyanobacteria detected during all three summers as well as the 2016 algal blooms. The Facility's discharges of phosphorus have caused or contributed to the significant water quality problems described in the Background section, above, and to the past and ongoing violation of the above-referenced state water quality standards.

With respect to nitrogen and ammonia, the Facility's quarterly discharge monitoring reports show that the Hatchery has discharged nitrogen and ammonia from both outfalls for most reporting periods since 2014. The Facility has discharged quantities as high as 88.16 lbs/day of nitrogen and 14.933 lbs/day of ammonia from Outfall 002, and as high as 16.483 lbs/day of nitrogen and 3.336 lbs/day of ammonia from Outfall 001.[40] Like phosphorus, nitrogen and ammonia are nutrients that contribute to eutrophication, algal blooms, and cyanobacteria in waterbodies. Discharges of these pollutants have caused or contributed to the significant water

[38] N.H. FISH AND GAME DEP'T, NAT'L POLLUTANT DISCHARGE ELIMINATION SYS. DISCHARGE MONITORING REPORT, Permit No. NH0000710 (May 30, 2018) [hereinafter DMR].
[39] *Id.*
[40] *Id.*

quality problems described in the Background section, above, and to the past and ongoing violation of the above-referenced state water quality standards.

With respect to total suspended solids, the Facility has been discharging TSS both more frequently and in increasing amounts over the past four years. In the third quarter of 2017, 183.48 lbs/day of TSS (a record high) were discharged from Outfall 001.[41] In the second quarter of 2017, 91.82 lbs/day of TSS was discharged from Outfall 002.[42] Discharges of TSS, which are likely to be largely nutrient-rich excess fish food and fish feces, have caused and contributed to the significant water quality problems discussed in the Background section, above, and to the past and ongoing violation of the above-referenced water quality standards.

The Facility has also been discharging organic material as measured by high levels of biochemical oxygen demand (BOD) (a measure of the amount of oxygen needed to break down the organic material present in the water). Discharges from the Facility have contained BOD levels as high as 168.13 lbs/day from Outfall 001 and 84.06 lbs/day from Outfall 002.[43] Discharges of biochemical oxygen demanding organic materials have caused and contributed to the water quality problems discussed in the Background section, above, and to the past and ongoing violation of the above-referenced state water quality standards.

b. **The Facility has discharged, is discharging, and will continue to discharge effluent to waters of the United States in violation of the Permit's requirement that the receiving water remain free of pollutants and non-natural effects that interfere with designated uses.**

The Permit contains the following effluent limitation:

> The discharge shall be adequately treated to ensure that the receiving water remains free from pollutants in concentrations or combinations that settle to form harmful deposits, float as foam, debris, scum or other visible pollutants. It shall be adequately treated to ensure that the receiving water remain free from pollutants which produce odor, color, taste or turbidity which is not naturally occurring and would render it unsuitable for its designated uses.[44]

It further requires that "[n]o components of the effluent shall result in any demonstrable harm to aquatic life or violate any water quality standard which has been or may be promulgated . . ." and

[41] *Id.*
[42] *Id.*
[43] *Id.*
[44] Permit, *supra* note 24, at 7 (Part I.A.4).

that the Facility "shall not discharge into the receiving water any pollutant or combination of pollutants in toxic amounts."[45]

Discharge of pollutants from the Facility (including but not limited to discharges of phosphorus, nitrogen, ammonia, TSS, and organic materials) have resulted in unnatural odor, color, taste and turbidity in the waterbody segments that comprise the Merrymeeting River (including Marsh Pond, Jones Dam Pond, and Downing Pond). As described above, these waterbodies have been experiencing dangerous levels of cyanobacterial and algal blooms. Cyanobacterial and algal blooms cover the surface of the water with a layer of green-blue, blue, red, or brown organisms that discolor the water.[46] Cyanobacteria can also produce so-called "taste-and-odor" compounds that add unnatural tastes and odors to water and fish.[47] These waterbodies have also been observed to have low levels of clarity and increased turbidity, consistent with a eutrophic or mesotrophic state and likely caused by algae, plankton, and other organisms associated with nutrient discharge.[48]

The eutrophication and cyanobacteria in the waterbodies that make up the Merrymeeting River endangers the river's aquatic life. Eutrophication and algal blooms deplete the dissolved oxygen in the water – harming the fish and other animals that rely on it. The toxic compounds produced by cyanobacteria and red tides can kill fish, shellfish, mammals, and birds.[49]

Discharges from the Facility have caused, and continue to cause, not only violations of numerous state water quality standards (*see* subpart (a), above), but also the effluent limitations set forth in Parts I.A.4 and I.A.5(a) and (b) of the Permit.

c. <u>The Facility has discharged, is discharging, and will continue to discharge effluent to waters of the United States in violation of the Permit's effluent limitations for formaldehyde</u>.

The Permit contains effluent limitations for formaldehyde, establishing an average monthly discharge limitation of 1.6 mg/L, and a maximum daily discharge limitation of 4.6 mg/L.[50]

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[45] *Id.* (Part I.A.5(a), (b)).
[46] NAT'L OCEAN SERV., *supra* note 16; SCRIPPS INST., *supra* note 16.
[47] *Cyanobacterial (Blue-Green Algal) Blooms: Tastes, Odors, and Toxins,* U.S. GEOLOGICAL SURVEY, https://www.usgs.gov/centers/kswsc/science/cyanobacterial-blue-green-algal-blooms-tastes-odors-and-toxins-0?qt-science_center_objects=0#qt-science_center_objects (last visited July 31, 2018).
[48] *See Turbidity,* U.S. GEOLOGICAL SURVEY, https://water.usgs.gov/edu/turbidity.html (defining turbidity as "the measure of relative clarity of a liquid") (last visited July 31, 2018).
[49] NAT'L OCEAN SERV., *supra* note 16; SCRIPPS INST., *supra* note 16.
[50] Permit, *supra* note 24, at 3, 5 (Part I.A.1-2).

Since 2016, the Facility's own monitoring data has revealed at least three separate violations of the Permit's effluent limitations for formaldehyde.[51]

d. <u>The Facility has discharged, is discharging, and will continue to discharge effluent to waters of the United States in violation of the Permit's pH limitations.</u>

The Permit requires that effluent discharged from the Facility have a pH level within a specified range of 6.5 to 8.0 standard units ("S.U.").[52] In addition to including the foregoing requirement as an effluent limitation, the Permit further includes pH range limitations as a State Certification requirement.[53] In the last five years, the Powder Mill Fish Hatchery has engaged in monitoring that reveals at least 24 separate violations of the Permit's minimum pH level requirement of 6.5 S.U.[54] Upon information and belief, the Department also may not have satisfied all reporting requirements pertaining to pH.

e. <u>The Facility has discharged, is discharging, and will continue to discharge "cleaning water" in violation of the Permit</u>.

The Permit contains an effluent limitation specifically prohibiting any direct discharges of cleaning water.[55] Upon information and belief, the Facility has been operated, and continues to be operated, in a manner that violates this prohibition.

f. <u>The Facility has violated, is violating, and will continue to violate the Permit's requirements pertaining to the implementation and maintenance of a Best Management Practices (BMP) Plan.</u>

The Permit requires that the Facility "implement and maintain a BMP Plan" that, *inter alia*, addresses "solids control."[56] The Permit further requires that the Department amend its BMP Plan "within thirty (30) days following any change in facility design, construction, operation, or maintenance which affects the potential for the discharge of pollutants into surface waters. . . ."[57]

The Department's BMP Plan states with respect to solids management, *inter alia*, that "[t]he preferred option for [solids] disposal is land application of our agricultural manure on local

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[51] DMR, *supra* note 38.
[52] Permit, *supra* note 24, at 2, 4 (Part I.A.1-2).
[53] *Id.* at 16 (Part I.D.1.a).
[54] DMR, *supra* note 38.
[55] Permit, *supra* note 24, at 8 (Part I.A.9).
[56] *Id.* at 10-11 (Part I.B.4).
[57] *Id.*

farmer's hay fields, or crops, as part of the farmer's nutrient management plan. (Estimated at 3 times per year . . .)."[58]

Upon information and belief, the Facility has failed to comply with the solids control plan articulated in its BMP Plan since the Plan was implemented in October 2016. Upon information and belief, the Facility also has failed to maintain an up-to-date and amended BMP Plan that accurately addresses the Facility's response to the solids control requirement, as mandated by the Permit. Upon information and belief, these Permit violations, which also constitute violations of the CWA and applicable regulations, including the effluent guidelines and standards for concentrated aquatic animal production facilities,[59] are ongoing.

DATES OF VIOLATION

Each day on which the Facility is operated in violation of the Permit is a separate and distinct violation of Sections 301(a) and 318 of the Clean Water Act ("CWA"), 33 U.S.C. §§1311(a) and 1328, and applicable regulations.

The Facility has violated the Permit's prohibition against causing water quality standard violations, thereby also violating Section 301(a) of the CWA, 33 U.S.C. § 1311(a), on every day on which it has discharged phosphorus, nitrogen, ammonia, TSS, and/or organic materials, separately and/or in combination, in a manner to cause violations of state water quality standards, including but not limited to Rules Env-Wq 1703.01(c), 1703.03, 1703.07, 1703.10, 1703.14, and 1703.19, and Part Env-Wq 1708 and 1708.01(a).

The Facility has violated the Permit's prohibition against causing adverse water quality conditions, as set forth in Part I.A.5 of the Permit, on every day on which it has discharged phosphorus, nitrogen, ammonia, TSS, and/or organic materials, separately and/or in combination, in a manner to cause the adverse conditions prohibited by Part I.A.5 of the Permit.

The Facility has violated the Permit's effluent limitations for formaldehyde, thereby also violating Section 301(a) of the CWA, 33 U.S.C. § 1311(a), at least three times since 2013, on dates set forth in Attachment 1.

The Facility has violated the Permit's effluent limitations for pH, thereby also violating Section 301(a) of the CWA, 33 U.S.C. § 1311(a), and the State's Certification requirement, at least 24 times since 2013, on dates set forth in Attachment 1.

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[58] N.H. FISH & GAME DEP'T, BEST MGMT. PRACTICES PLAN: POWDER MILL STATE FISH HATCHERY (Oct. 2016) at 7.
[59] *See* 40 CFR § 451.11.

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The Facility has violated its Permit, thereby also violating Section 301(a) of the CWA, 33 U.S.C. § 1311(a), on every day that it has discharged cleaning water.

The Facility has violated its Permit, thereby violating Section 301(a) of the CWA, 33 U.S.C. § 1311(a), and applicable effluent guidelines and standards, 40 CFR Part 451, on every day on which it has failed to implement and maintain its Best Management Practices Plan.

These violations are ongoing and continuous, and barring a change in the discharge and treatment of effluent at the Facility and full compliance with the permitting requirements of the Clean Water Act, these violations will continue indefinitely.

RELIEF REQUESTED

The Department, and its director and commissioners in their official capacity, are liable for the above-described violations occurring prior to the date of this letter, and for every day that these violations continue. Each separate violation of the Clean Water Act subjects the violator to a penalty of up to the maximum amount allowed pursuant to sections 309(d) and 505(a) of the Clean Water Act, 33 U.S.C. §§ 1319(d), 1365(a), and 40 C.F.R. §§ 19.1–19.4. CLF will seek the full penalties allowed by law.

In addition to civil penalties, CLF will seek declaratory relief and injunctive relief to prevent further violations of the Clean Water Act pursuant to CWA Section 505(a) and (d), 33 U.S.C. § 1365(a) and (d), and such other relief as permitted by law. CLF will seek an order from the Court requiring that the Facility prevent further violations and fully comply with the Clean Water Act and applicable regulations, as well as the State Certification.

Lastly, pursuant to Section 505(d) of the Act, 33 U.S.C. § 1365(d), CLF will seek recovery of costs and fees associated with this matter.

CONCLUSION

Additional information, including information in the Department's possession, may reveal further details about the violations described above, as well as details about additional violations. This letter covers all such violations.

Finally, during the 60-day notice period, CLF would be pleased to discuss this matter, including effective remedies for the violations noted in this letter that may avoid the necessity of litigation. If you wish to pursue such discussions, if you believe any of the above information is incorrect, if you believe you are currently in compliance with the Clean Water Act, or if you have any questions about this notice, please have your attorney contact me at (603) 573-9139 within the next 20 days so that negotiations may be completed before the end of the 60-day notice period.

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We do not intend to delay the filing of a complaint in federal court if discussions are continuing at the conclusion of the 60 days.

Sincerely,

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cc:

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ATTACHMENT 1

Powder Mill State Fish Hatchery Quantitative Effluent Violations

pH Level

	Pollutant Criteria: pH Levels				
Pollutant Criteria	**Monitoring Period**	**Outfall**	**Measured Value**	**Permit Allowance**	**Type of Allowance**
pH	8/8/2013	001A	6.4	6.5	Minimum pH level
pH	8/14/2013	001A	6.23	6.5	Minimum pH level
pH	8/21/2013	001A	6.47	6.5	Minimum pH level
pH	8/28/2013	001A	6.17	6.5	Minimum pH level
pH	8/28/2013	002A	6.38	6.5	Minimum pH level
pH	9/4/2013	001A	6.45	6.5	Minimum pH level
pH	9/4/2013	002A	6.25	6.5	Minimum pH level
pH	9/11/2013	002A	6.23	6.5	Minimum pH level
pH	9/16/2013	001A	6.2	6.5	Minimum pH level
pH	9/16/2013	002A	6.18	6.5	Minimum pH level
pH	9/27/2013	001A	6.4	6.5	Minimum pH level
pH	10/2/2013	002A	6.45	6.5	Minimum pH level
pH	10/16/2013	001A	6.46	6.5	Minimum pH level
pH	10/23/2013	001A	6.48	6.5	Minimum pH level
pH	10/30/2013	002A	6.45	6.5	Minimum pH level
pH	11/6/2013	002A	6.44	6.5	Minimum pH level
pH	11/13/2013	002A	6.45	6.5	Minimum pH level
pH	7/23/2014	001A	6.44	6.5	Minimum pH level
pH	7/5/2017	002A	5.26	6.5	Minimum pH level
pH	7/12/2017	002A	5.89	6.5	Minimum pH level
pH	7/19/2017	002A	5.71	6.5	Minimum pH level
pH	7/28/2017	002A	5.76	6.5	Minimum pH level
pH	4/30/2018	001A	6.21	6.5	Minimum pH level
pH	4/30/2018	002A	6.05	6.5	Minimum pH level
	pH Violations:		**24**		

Formaldehyde

	Formaldehyde				
Pollutant	**Monitoring Period**	**Outfall**	**Measured Value (mg/L)**	**Permit Allowance (mg/L)**	**Type of Allowance**
Formaldehyde	9/30/2016	002A	75	4.6	Daily Max
Formaldehyde	11/30/2017	001	8.8	4.6	Daily Max
Formaldehyde	11/30/2017	001	3.26	1.6	Monthly Ave.
	Formaldehyde Violations:		**3**		