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***Sent via Email and Certified Mail Return Receipt Requested***

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**Re: Notice of Violations of the Endangered Species Act Regarding Approval of Water Quality Standards in New Hampshire, Vermont, Maine, and Connecticut**

On behalf of the Center for Biological Diversity and Northwest Environmental Advocates (collectively, "Environmental Groups"), we hereby provide notice of the Environmental Groups' intent to sue the United States Environmental Protection Agency ("EPA"), pursuant to section 11(g) of the Endangered Species Act ("ESA" or "Act"), 16 U.S.C. § 1540(g)(2)(A)(i), for violations of the ESA. The Center is a non-profit, public interest corporation with approximately one million members and supporters throughout the United States. The Center and its members are dedicated to protecting diverse native species and habitats through science, policy, education, and law. The Center's freshwater campaigns seek to improve water quality across the country and avert the extinction of freshwater and anadromous species that are harmed by degraded water quality. Northwest Environmental Advocates ("NWEA") is a non-profit environmental organization founded in 1969 and based in Portland, Oregon, with members located throughout the country, including in New England. NWEA's mission is to work through advocacy and education to protect and restore water and air quality, wetlands, and wildlife habitat. NWEA has spent decades working to improve water quality and water quality programs both in the Northwest and on a national level. The Environmental Groups and their members are harmed by EPA's continuing failures to take meaningful action to protect threatened and endangered species through ESA consultation on EPA-approved water quality standards.

EPA has violated the ESA's section 7(a)(2) consultation requirement regarding its discretionary decisions to approve substantive changes to the water quality standards for aquatic life for various pollutants in Vermont, New Hampshire, Maine, and Connecticut. Because EPA's actions cross the "may affect" threshold, and could negatively impact species listed under the ESA, EPA's failure to initiate consultations with the U.S. Fish and Wildlife Service ("FWS")

and the National Marine Fisheries Service (“NMFS”) (collectively “the Services”) violates the ESA. EPA’s failure to consult with the Services also harms the Environmental Groups and their members’ interests by undermining the procedural requirements of the ESA, which ensure that agencies, such as EPA, make informed decisions and act in conformity with the Act’s substantive requirements.

The substantive changes to water quality standards, approved by EPA, could jeopardize federally-listed species and adversely modify the critical habitat of listed species, but most certainly “may affect” ESA protected species and habitat. Although some of the changes have made the standards more stringent, the purpose of consultations is to not only avoid jeopardy and adverse modification of critical habitat, but to also minimize take of listed species and move them towards recovery.

## LEGAL 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....”<sup>1</sup> The ESA vests primary responsibility for administering and enforcing the statute with the Secretaries of Commerce and Interior, who have delegated this responsibility to NMFS and FWS, respectively.<sup>2</sup>

Section 2(c) of the ESA establishes that it is “the policy of Congress that all Federal departments and agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes of this Act.”<sup>3</sup> The ESA defines “conservation” to mean “the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this Act are no longer necessary.”<sup>4</sup>

In order to fulfill the substantive purposes of the ESA, federal agencies are required to engage in consultation with the Services to “insure that any action authorized, funded, or carried out by such agency . . . is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the adverse modification of habitat of such species.”<sup>5</sup>

Section 7 consultation is required for “any action [that] may affect listed species or critical habitat.”<sup>6</sup> Agency “action” is broadly defined in the ESA’s implementing regulations to include “all activities . . . of any kind authorized, funded, or carried out, in whole or in part, by Federal agencies.”<sup>7</sup> The Services’ regulations provide the following examples of agency actions:

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<sup>1</sup> 16 U.S.C. §§ 1531-1544; 16 U.S.C. § 1531(b).

<sup>2</sup> 50 C.F.R. § 402.01(b).

<sup>3</sup> 16 U.S.C. § 1531(c)(1).

<sup>4</sup> 16 U.S.C. § 1532(3).

<sup>5</sup> 16 U.S.C. § 1536(a)(2).

<sup>6</sup> 50 C.F.R. § 402.14.

<sup>7</sup> 50 C.F.R. § 402.02.

- (a) actions intended to conserve listed species or their habitat;
- (b) the promulgation of regulations;
- (c) granting of licenses, contracts, leases, easements, rights-of-way, permits, or grants-in-aid; or
- (d) actions directly or indirectly causing modifications to the land, water, or air.<sup>8</sup>

At the completion of consultation, FWS or NMFS issues a biological opinion that determines whether the agency action is likely to jeopardize the species or adversely affect its critical habitat. If jeopardy, or adverse modification or destruction of critical habitat, is found, then the biological opinion must specify reasonable and prudent alternatives (“RPAs”) that will avoid jeopardy and allow the agency to proceed with the action.<sup>9</sup> Where an action does not jeopardize a listed species or adversely modify or destroy critical habitat, the Services must provide an incidental take statement (ITS) and must also provide reasonable and prudent measures (“RPMs”) to minimize the impact of any taking of listed species.<sup>10</sup>

Section 7 requires that EPA consult with the Services on any of its agency actions “in which there is discretionary Federal involvement or control.”<sup>11</sup> EPA’s approval of new or revised state water quality standards qualifies as an agency action over which EPA exercises considerable discretionary involvement and control.<sup>12</sup> EPA has ample discretion in administering the state water quality standard review process “to consider the protection of threatened or endangered species as an end in itself.”<sup>13</sup>

## **B. The Clean Water Act**

The objective of the Clean Water Act (“CWA”) is “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”<sup>14</sup> The CWA sets a “national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water.”<sup>15</sup>

Under section 303(c)(3), states must set water quality standards, and then must review them every three years, and consider whether to revise their standards.<sup>16</sup> Water quality standards under the CWA must protect all existing uses in a waterbody. States must submit all new or revised water quality standards to EPA for review.<sup>17</sup> EPA is required to review these changes to ensure revisions in designated water uses are consistent with the CWA and that new or revised criteria protect the designated uses. If EPA disapproves a state’s water quality standards, EPA must specify “the changes needed to assure compliance with the requirements of the Act and this regulation, and shall explain why the State standard is not in compliance with such

<sup>8</sup> *Id.*

<sup>9</sup> 16 U.S.C. § 1536(b).

<sup>10</sup> 50 C.F.R. § 402.14.

<sup>11</sup> 50 C.F.R. § 402.03

<sup>12</sup> 50 C.F.R. § 402.02 (defining “action”).

<sup>13</sup> *Florida Key Deer v. Paulison*, 522 F.3d 1133, 1141 (11th Cir. 2008) (citing *Nat’l Ass’n of Home Builders v. Defenders of Wildlife*, 551 U.S. 644, 671 (2007)); see also *NRDC v. Jewell*, 749 F.3d 776, 784 (9th Cir. 2014); *Am. Rivers, Inc. v. United States Army Corps of Eng’rs.*, 421 F.3d 618, 630-631 (8th Cir. 2005)

<sup>14</sup> 33 U.S.C. § 1251(a).

<sup>15</sup> 33 U.S.C. § 1251(a)(2).

<sup>16</sup> 33 U.S.C. § 1313(c)(3).

<sup>17</sup> *Id.*

requirements.”<sup>18</sup> If the state fails to adopt the changes within 90 days, then EPA “shall promptly propose and promulgate such standard.”<sup>19</sup>

Section 303(c)(2)(B) requires states to adopt water quality criteria for toxic pollutants listed pursuant to section 307(a)(1) for which EPA has published criteria under 304(a) where the discharge or presence of these toxics could reasonably be expected to interfere with the designated uses adopted by the state. When formulating such standards, the State should establish numerical values based on (1) the 304(a) Guidance; (2) 304(a) guidance modified to reflect site-specific conditions; or (3) other scientifically defensible methods.<sup>20</sup>

## **EPA’S APPROVAL OF WATER QUALITY STANDARDS IN NEW HAMPSHIRE, VERMONT, MAINE, AND CONNECTICUT**

### **A. New Hampshire**

On January 14, 2013, New Hampshire submitted proposed changes to its water quality standards for aquatic life to EPA for approval. On September 17, 2013, EPA approved the following changes to the New Hampshire aquatic life water quality standards:<sup>21</sup>

- An update to the criteria in Env-Wq 1703.21 Table 1703.1 for selenium, cadmium and silver to protect aquatic life, consistent with EPA’s National Recommended Water Quality Criteria.
- The addition of Streamlined Water-Effect Ratio and Biotic Ligand Model procedures as options for determining site specific criteria for copper in Env-Wq 1703.21 and 1704.02(b).

### **B. Vermont**

On October 27, 2014, Vermont submitted its proposed changes to its water quality standards for aquatic life to EPA for approval. On September 15, 2015, EPA approved the following changes to the Vermont aquatic life water quality standards:<sup>22</sup>

- Adoption of new chloride criteria and revisions to the toxic substances criteria for the protection of aquatic life consistent with EPA’s guidance under section 304(a) of the federal Clean Water Act.
- Adoption of new numeric criteria for phosphorus in combination with appropriate response variables to protect the designated uses of aesthetics in lakes and reservoirs and aquatic life in medium and high-gradient wadeable streams.

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<sup>18</sup> 40 C.F.R. § 131.21.

<sup>19</sup> *Id.*

<sup>20</sup> 40 CFR § 131.11(b).

<sup>21</sup> U.S. EPA. 2013. Letter to Mr. Thomas S. Burack, Commissioner, New Hampshire Department of Environmental Services. Attached as Appendix A.

<sup>22</sup> U.S. EPA. 2015A. Letter to Alyssa Schufen, Commissioner, Vermont Department of Environmental Conservation. Attached as Appendix A.

Specifically, Vermont changed the following criteria:<sup>23</sup>

- The cadmium acute aquatic life standard was changed from 1.74 µg/l to 1.03 µg/l, and the chronic aquatic life standard was changed from 0.62 µg/l to 0.15 µg/l.
- The chromium acute aquatic life standard was changed from 311 µg/l to 322 µg/l, and the chronic aquatic life standard was changed from 101 µg/l to 42 µg/l.
- The copper acute aquatic life standard was changed from 8.8 µg/l to 7.0 µg/l, and the chronic aquatic life standard was changed from 6.24 µg/l to 4.95 µg/l.
- The nickel acute aquatic life standard was changed from 786 µg/l to 260 µg/l, and the chronic aquatic life standard was changed from 87.4 µg/l to 29 µg/l.
- The silver acute aquatic life standard was changed from 1.05 µg/l to 1.02 µg/l
- The zinc acute aquatic life standard was changed from 63.5 µg/l to 65.13 µg/l, and the chronic aquatic life standard was changed from 58.0 µg/l to 65.6 µg/l.
- The arsenic acute aquatic life standard was changed from 360 µg/l to 340 µg/l, and the chronic aquatic life standard was changed from 190 µg/l to 150 µg/l.
- The selenium acute aquatic life standard was changed from 20 µg/l to  $1/[(f1/MAC1) + (f2/MAC2)]$  where f1 and f2 are the fractions of total selenium that are treated as selenite and selenate, respectively, and MAC1 and MAC2 are 185.9 g/l and 12.82 g/l, respectively.
- The pentachlorophenol acute aquatic life standard was changed from  $\exp(1.005)(\text{pH})-4.86$  to  $19(1.005(\text{pH})-4.869)$  corresponding to a pH level of 7.8, and the chronic aquatic life standard was changed from  $\exp(1.005)(\text{pH})-5.13$  to  $15(1.005(\text{pH})-5.134)$  for chronic exposure, corresponding to a pH value of 7.8.
- The endrin acute aquatic life standard was changed from 0.18 µg/l to 0.086 µg/l, and the chronic aquatic life standard was changed from 0.0023 µg/l to 0.036 µg/l
- The ammonia standards were changed to reflect the CWA section 304(a) criteria set by EPA in 2013.
- A chloride acute aquatic life standard was established at 860 µg/l, and a chronic aquatic life standard was set at 230 µg/l.
- An acrolein acute and chronic aquatic life standard was established at 3 µg/l.
- An aldrin acute aquatic life standard was set at 3.0 µg/l for acute exposure.
- A carbaryl acute and chronic aquatic life standard was established at 2.1 µg/l.
- A diazinon acute and chronic aquatic life standard was established at 0.17 µg/l.
- The benzene hexachloride gamma (lindane) acute aquatic life standard was changed from 2.0 µg/l to 0.95 µg/l, and the chronic aquatic life standard was removed entirely.
- The nonylphenol acute aquatic life standard was established at 28 µg/l and the chronic aquatic life standard was established at 6.6 µg/l.
- The mercury acute aquatic life standard was changed from 2.4 µg/l to 1.4 µg/l.
- The aquatic life standards for individual polychlorinated biphenyl (“PCB”) congeners were removed and replaced with a new Total PCB chronic aquatic life criterion of 0.014 µg/l for freshwater.

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<sup>23</sup> Unless otherwise stated in the NOI, the listed aquatic life standards approved by EPA apply to freshwater.

## C. Maine

On January 14, 2013, the Maine Department of Environmental Protection submitted revisions of its surface water quality standards to EPA for approval. On February 2nd, 2015, EPA approved in part and disapproved in part Maine's submission.<sup>24</sup> EPA approved the following standards for aquatic life that may affect listed species:

- A diazinon acute and chronic aquatic life standard for freshwater was established at 0.17 µg/l, and an acute and a chronic aquatic life standard for saltwater was established at 0.82 µg/l.
- A nonylphenol acute aquatic life standard for freshwater was established at 28 µg/l, and a chronic aquatic life standard was established at 6.6 µg/l; an acute aquatic life standard for saltwater was established at 7 µg/l, and a chronic aquatic life standard was set at 1.7 µg/l.
- An acrolein acute and chronic aquatic life standard was established at 3 µg/l.

On June 5, 2015, EPA approved several additional standards criteria for aquatic life that may affect listed species:<sup>25</sup>

- 38 M.R.S. § 464(4.H) – Habitat and aquatic life criteria for new (post-1992) hydropower projects.
- 38 M.R.S. § 464(9-A.D and 9-A.E) – Habitat and aquatic life criteria for existing hydropower impoundments managed as great ponds.
- 38 M.R.S. § 464(10) – Habitat and aquatic life criteria for existing hydropower impoundments managed under riverine classifications.
- 38 M.R.S. 464(9-A.A.) – Habitat and aquatic life criteria for existing hydropower impoundment above the Ripogenus dam.
- 38 M.R.S. 464(11) – Habitat and aquatic life criteria for four river segments downstream of existing hydropower impoundments.

## D. Connecticut

On January 4, 2011, Connecticut submitted its proposed changes to its water quality standards for aquatic life to EPA for approval. On February 24, 2011, EPA approved the following changes to the Connecticut aquatic life water quality standards.<sup>26</sup>

- Adoption of numeric criteria for the protection of freshwater aquatic life for acrolein, chloride, and aluminum consistent with EPA's National Recommended Water Quality Criteria.
- Update of numeric criteria for cadmium for the protection of freshwater and saltwater aquatic life consistent with EPA's National Recommended Water Quality Criteria.

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<sup>24</sup> U.S. EPA. 2015B. Letter to Patricia W. Aho, Commissioner, Maine Department of Environmental Protection. Attached as Appendix A.

<sup>25</sup> U.S. EPA. 2015C. Letter to Patricia W. Aho, Commissioner, Maine Department of Environmental Protection. Attached as Appendix A.

<sup>26</sup> U.S. EPA. 2011. Letter to Amey W. Marrella, Commissioner, Connecticut Department of Environmental Protection. Attached as Appendix A.

- Update of the numeric criterion for silver for the protection of saltwater aquatic life consistent with EPA's National Recommended Water Quality Criteria.
- Update of the numeric criteria for arsenic, cyanide, mercury and selenium to apply to the total form of each of these inorganics.
- Revisions of dissolved oxygen criteria for Class SA and SB waters.

Specifically, Connecticut made the following changes to its water quality standards:

- The cadmium acute aquatic life standard was changed from 2.02 µg/l to 1.0 µg/l for freshwater and from 42 µg/l to 40 µg/l for saltwater; the chronic aquatic life standard was changed from 1.35 µg/l to 0.125 µg/l for freshwater and from 9.3 µg/l to 8.8 µg/l for saltwater.
- The silver acute aquatic life standard for saltwater was changed from 1.96 µg/l to 1.9 µg/l.
- The acrolein acute aquatic life standard was changed from a narrative criteria to 3 µg/l, and the chronic aquatic life standard was changed from a narrative criteria to 3 µg/l.
- The aluminum acute aquatic life standard was changed from a narrative criteria to 750 µg/l, and the chronic aquatic life standard was changed from a narrative criteria to 87 µg/l.
- The chloride acute aquatic life standard was changed from a narrative criteria to 860,000 µg/l, and the chronic aquatic life standard from a narrative criteria to 230,000 µg/l.

### **POLLUTION-BASED THREATS TO THREATENED AND ENDANGERED AQUATIC SPECIES IN NEW HAMPSHIRE, VERMONT, MAINE, AND CONNECTICUT**

At least four ESA-listed species are being adversely affected by water pollution in the four states noticed herein where EPA has failed to comply with the ESA in agency actions covered by this notice letter. The dwarf wedgemussel is the only one of these species under the jurisdiction of FWS, and is found in Vermont, Connecticut and New Hampshire. The Atlantic salmon is found in Maine, but was historically present as far south as New York. The Atlantic sturgeon and the shortnose sturgeon are found in Connecticut, New Hampshire and Maine. The latter three species are under the primary jurisdiction of NMFS.

The dwarf wedgemussel was listed as endangered in 1990. At the time of listing, FWS explained that the disappearance of the mussel from most of its historic sites "can best be explained by agricultural, domestic, and industrial pollution of its aquatic habitat. Mussels are known to be sensitive to potassium...zinc, copper, cadmium, and other elements...Pesticides, chlorine, excessive nutrients, and silt carried by agricultural runoff also present a threat to this species."<sup>27</sup> The 1993 recovery plan for the dwarf wedgemussel highlighted the threat that water pollution represents to freshwater mussels, which because of their life-history, often have higher concentrations of contaminants than surrounding waters.<sup>28</sup> The recovery plan noted that zinc was the most toxic heavy metal to mussels, but other pollutants such as arsenic, cadmium,

<sup>27</sup> *Determination of Endangered Status for the Dwarf Wedge Mussel*, 55 Fed. Reg. 9447 (Mar. 14, 1990).

<sup>28</sup> USFWS 1993. DWARF WEDGEMUSSEL (*ALASMIDONTA HETERODON*) RECOVERY PLAN at 13-15(1993) available at: [https://ecos.fws.gov/docs/recovery\\_plan/dwm%20recovery%20plan.pdf](https://ecos.fws.gov/docs/recovery_plan/dwm%20recovery%20plan.pdf); see also, Mathis, B.J. and T.F. Cumming 1973. *Selected metals in sediments, water, and biota in the Illinois River*, Water Pollut. Contr. Fed. 45:1573-1583.

chlorine, copper, iron, mercury, silver, nitrogen, phosphorus, and potassium were also harmful.<sup>29</sup> In addition, insecticides have significant negative effects on mussels,<sup>30</sup> as does chlorinated effluent from sewage treatment plants.<sup>31</sup> In its most recent five-year review, FWS determined that pollution continues to be a significant threat to the mussel.<sup>32</sup>

The Atlantic salmon was originally listed as endangered in 2000,<sup>33</sup> and in 2009 critical habitat was designated.<sup>34</sup> Like the dwarf wedgemussel, the Atlantic salmon is also disproportionately impacted by water pollution, particularly by heavy metals like copper and cadmium, as well as insecticides released into water from nearby agriculture activities.<sup>35</sup> For example, the organophosphate insecticide Diazinon has been linked to inhibited embryo development and emergence in Atlantic salmon.<sup>36</sup> In the 2016 joint draft recovery plan, the Services noted the importance of recovering the Atlantic salmon, indicating that the species' recovery would provide "ancillary benefits" to the surrounding environment including "improved water quality and flow in salmon rivers, an enhanced understanding of sustainable management for numerous aquatic resources, and a reduction of stressors that affect not only Atlantic salmon but general environmental quality."<sup>37</sup>

The Shortnose sturgeon was protected as endangered in 1967<sup>38</sup> and the Atlantic sturgeon was protected as endangered in 2012.<sup>39</sup> Sturgeon often are called "living fossils" because of their "primitive" features and because of their historic lineage.<sup>40</sup> Both the Atlantic and shortnose sturgeons are particularly slow-growing and long-lived — they do not reach sexual maturity until they are several years old and only spawn once every three to five years.<sup>41</sup> Because of their

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<sup>29</sup> S.L.H. Fuller 1997. *Freshwater and terrestrial mollusks*, In: J.E. Cooper, (eds.), *Endangered and threatened plants and animals of North Carolina*, 143-194.

<sup>30</sup> Salanki and I. Varanka, 1978. *Effect of some insecticides on the periodic activity of the freshwater mussel*, 29 Acta. Biol. Acad. Sci. Hung. 2:173-180.

<sup>31</sup> S.E. Goudreau, *Effects of sewage treatment plant effluents on mollusks and fish in the Clinch River in Tazewell County*, 127 (1988) (M.S.Thesis, University of Virginia), Virg. Polytech. Inst. and State Univ., Blacksburg, VA.

<sup>32</sup> DWARF WEDGEMUSSEL (ALASMIDONTA HETERODON) 5-YEAR REVIEW: SUMMARY AND EVALUATION at 15 (2007) available at: [http://ecos.fws.gov/docs/five\\_year\\_review/doc1098.pdf](http://ecos.fws.gov/docs/five_year_review/doc1098.pdf)

<sup>33</sup> *Final endangered status for a distinct population segment of anadromous Atlantic salmon (Salmo salar) in the Gulf of Maine*, 65 Fed. Reg. 69469 (2000).

<sup>34</sup> *Designation of Critical Habitat for Atlantic Salmon (Salmo salar) Gulf of Maine Distinct Population Segment*, 74 Fed. Reg. 29,300 (June 19, 2009).

<sup>35</sup> See generally, A.-K. Lundebye, et al. 1999 *Biochemical and Physiological Responses in Atlantic Salmon (Salmo salar) Following Dietary Exposure to Copper and Cadmium*, 39 Marine Pollution Bull. 1-12:137; see also, Katherine Nieves-Puigdoller, 2007. *Physiological Effects of Pesticides on Different Life Stages of Atlantic Salmon (salmo salar)* (Ph.D. Dissertation, University of Massachusetts Amherst).

<sup>36</sup> *Exposure to insecticides inhibits embryo development and emergence in Atlantic salmon (Salmo salar L.)* Fish, Physiology and Biochemistry 28:431-432 (2003).

<sup>37</sup> NMFS 2015. DRAFT RECOVERY PLAN FOR THE GULF OF MAINE DISTINCT POPULATION SEGMENT OF ATLANTIC SALMON, available at: [http://atlanticsalmonrestoration.org/resources/documents/atlantic-salmon-recovery-plan-2015/copy\\_of\\_Atlanticsalmondraftrecoveryplan.pdf/index\\_html](http://atlanticsalmonrestoration.org/resources/documents/atlantic-salmon-recovery-plan-2015/copy_of_Atlanticsalmondraftrecoveryplan.pdf/index_html).

<sup>38</sup> NMFS 1998. FINAL RECOVERY PLAN FOR THE SHORTNOSE STURGEON at 4 (1998) available at: [http://www.nmfs.noaa.gov/pr/pdfs/recovery/sturgeon\\_shortnose.pdf](http://www.nmfs.noaa.gov/pr/pdfs/recovery/sturgeon_shortnose.pdf)

<sup>39</sup> NMFS 2010. SHORT NOSE STURGEON BIOLOGICAL ASSESSMENT at 7 (Nov. 1, 2010) available at: [http://www.nmfs.noaa.gov/pr/pdfs/species/shortnosesturgeon\\_biological\\_assessment2010.pdf](http://www.nmfs.noaa.gov/pr/pdfs/species/shortnosesturgeon_biological_assessment2010.pdf)

<sup>40</sup> *Id.*

<sup>41</sup> *Id.* at 11-12.



benthic feeding life-history, they are particularly susceptible to pollutants that accumulate in sediment and those that can bioaccumulate in the food chain.<sup>42</sup>

As described in the Shortnose sturgeon's 1998 recovery plan, pollution is one of the main contributors to the species' decline. Atlantic sturgeon also are impacted by changes in water quality, particularly changes in oxygen levels, salinity, and temperature.<sup>43</sup> NMFS noted in 2010 that "water quality continues to be a problem even with existing controls on some pollution sources and water withdrawal..."<sup>44</sup> Increasing development and sprawl in recent years has caused "impervious surface cover in many drainage basins, further altering water quantity and quality."<sup>45</sup> In particular, NMFS determined that water quality pollution is a moderate threat in the Penobscot River, Kennebec river system, Merrimack River, Connecticut River, the Housatonic River, and the Hudson River.

Water quality is degraded throughout these four states and continues to be an impediment to the recovery of listed species. Vermont currently has 13 lakes and ponds, and 68 streams and rivers that are designated as impaired under CWA section 303(d).<sup>46</sup> This includes 54 waterbodies that include aquatic life as designated uses. Sixteen of those waterbodies are listed because they are polluted with toxic metals in excess of current water quality standards, yet even the criteria used to determine their impairment status may not be protective of the endangered Dwarf Wedgemussel and its designated critical habitat.

Connecticut has 288 waterbodies designated as impaired under section 303(d) of the CWA. The most common stressors in waters with aquatic life uses were identified to be habitat alterations, flow regime changes, toxics, nutrients, interactions between multiple pollutants, and low dissolved oxygen.<sup>47</sup> Toxics present in water bodies include mercury, copper, ammonia, zinc, cadmium, lead, and iron.

According to Maine's annual summary report 2012 report, Maine designated 84,564 acres of lakes, 1,206 miles of rivers and streams, and 399 acres of wetlands as impaired by some type of pollutant.<sup>48</sup> Of these, 408 miles of rivers were listed as unsuitable for aquatic life in the 2012 review.<sup>49</sup> Additionally, 879 miles of rivers showed traces of toxic pollutants, including metals, organics, DDT, and other pesticides.<sup>50</sup>

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<sup>42</sup> *Id.* at 32.

<sup>43</sup> *Designation of Critical Habitat for Atlantic Salmon (Salmo salar) Gulf of Maine Distinct Population Segment*, 74 Fed. Reg. 29300 (June 19, 2009).

<sup>44</sup> *Id.*

<sup>45</sup> Karen Limburg and John Waldman, 2009. *Dramatic Declines in North Atlantic Diadromous Fishes*, 59 *BioScience Mag.* 11: 955-962.

<sup>46</sup> Vermont Dep't of Env'tl. Conservation, *2014 303(d) List of Impaired Waters* at 1. While CWA section 303(d) lists are often outdated or incomplete and are often based on outdated and unprotective standards, they still serve as useful tools to evaluate the quality and impairments of states' waterbodies.

<sup>47</sup> Connecticut Dep't of Energy and Env'tl. Prot., *2014 Integrated Water Quality Report* at 212.

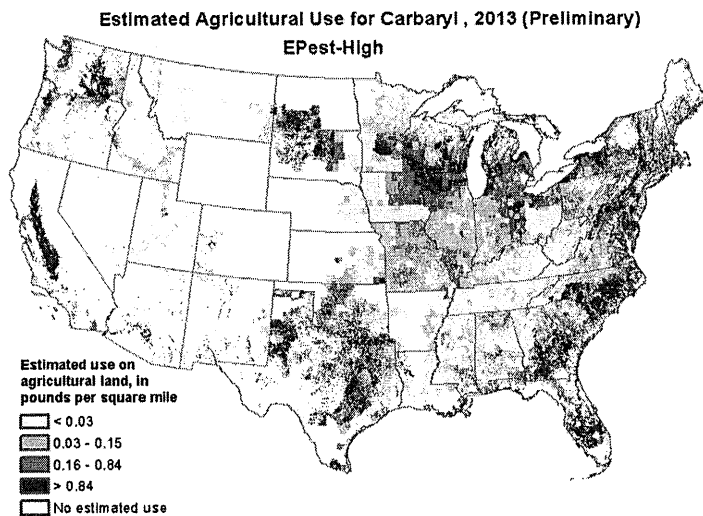
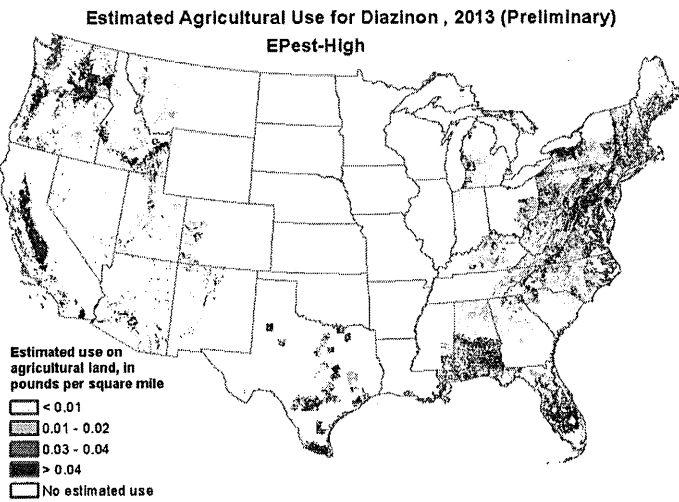
<sup>48</sup> Maine DEP. *2012 Integrated Water Quality Monitoring and Assessment Report* at 9. Maine implements a five category system to assess rivers, lakes, wetlands and marine waters. The categories are as follows: (1) attains all designated uses, no threat; (2) attains most designated uses, no threat; (3) insufficient data regarding threat to uses; (4) impaired or threatened; (5) waters impaired or threatened by a pollutant.

<sup>49</sup> *Id.* at 70.

<sup>50</sup> *Id.* at 71.

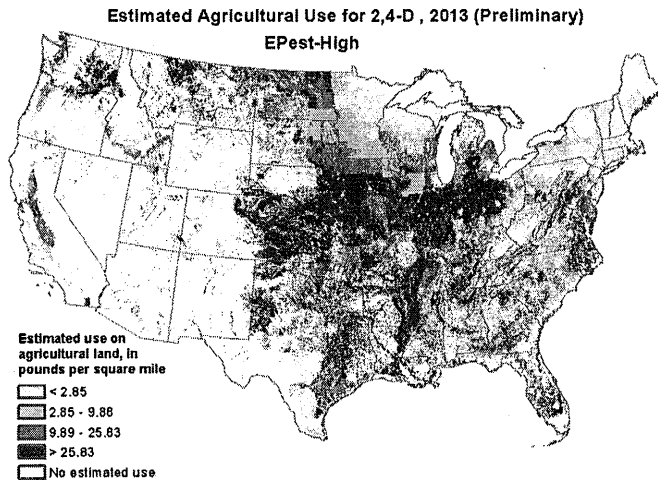
In New Hampshire's 2012 report, a probabilistic assessment found that 14.3% of the mileage of wade-able streams is not supporting aquatic life and 47.8% could not be assessed due to insufficient information. In lakes and ponds, approximately 0% of the acreage is fully supportive of aquatic life, 84.8% is not supporting and 15.2% could not be assessed due to insufficient information.<sup>51</sup>

Pesticide pollution is also a significant threat to listed species. In the noticed EPA-approvals, EPA approved several revisions to water quality standards for three pesticides — Diazinon, Carbaryl, and 2,4-D — all of which continue to be used in large amounts in the northeast United States.<sup>52</sup>



<sup>51</sup> New Hampshire Environmental Services. *2012 List of Threatened or Impaired Waters that Require a TMDL*. 2014.

<sup>52</sup> See generally, U.S. Gov't Serv., *Pesticide Use Maps* (last visited June 14, 2016), [http://water.usgs.gov/nawqa/pnsp/usage/maps/compound\\_listing.php](http://water.usgs.gov/nawqa/pnsp/usage/maps/compound_listing.php).



## VIOLATIONS ESA SECTION 7(A)(2)

Consultation under section 7 of the ESA is required whenever a discretionary agency action “may affect” any listed species or its critical habitat.<sup>53</sup> The “may affect” threshold is very low, and ensures that “actions that have any chance of affecting listed species or critical habitat — even if it is later determined that the actions are ‘not likely’ to do so — require at least some consultation under the ESA.”<sup>54</sup> According to the Fish and Wildlife ESA Consultation handbook, the “may affect” threshold is met if “a proposed action may pose **any** effects on listed species or designated critical habitat.”<sup>55</sup> This analysis includes an examination of both the direct effects of the action as well as its indirect effects, which are defined as “those effects that are caused by or will result from the proposed action and are later in time, but are still reasonably certain to occur.”<sup>56</sup> Consultation is still required even if the effects of the action are entirely beneficial or unknown.<sup>57</sup> Thus, to whatever extent that EPA believes its actions in approving water quality standards in New Hampshire, Vermont, Maine or Connecticut are beneficial, that fact is irrelevant regarding the consultation duty. As explained above, the Services have always interpreted the consultation requirement to apply to purportedly “beneficial” agency actions — thus, an action agency must consult in every situation except those where the agency determines there is “no effect.”

<sup>53</sup> 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.14(a) (“Each Federal agency shall review its actions at the earliest possible time to determine whether any action may affect listed species or critical habitat. If such a determination is made, formal consultation is required ...”); see also *Wash. Toxics Coalition v. EPA*, 413 F.3d 1024, 1032 (9th Cir. 2005); see also *Defenders of Wildlife v. Administration*, 882 F.2d 1294 (8th Cir. 1989).

<sup>54</sup> *Karuk Tribe of Cal. v. U.S. Forest Serv.*, 681 F.3d 1006, 1028 (9th Cir. 2012).

<sup>55</sup> U.S. Fish and Wildlife Serv. & Nat’l Marine Fisheries Serv., *Endangered Species Consultation Handbook: Procedures for Conducting Consultation and Conference Activities Under Section 7 of the Endangered Species Act* at xvi(1998)(hereafter “CONSULTATION HANDBOOK”) (emphasis in original).

<sup>56</sup> 50 C.F.R. § 402.02

<sup>57</sup> *Cal. ex rel. Lockyer v. U.S. Dep’t of Agric.*, 575 F.3d 999, 1018 (9th Cir. 2009) (“any possible effect, whether beneficial, benign, adverse or of an undetermined character, triggers the requirement.” (quoting 51 Fed. Reg. 19,926, 19,949 (June 3, 1986))); 50 C.F.R. § 402.02 (agency “action” includes “actions intended to conserve listed species or their habitat”).

There is a very good reason to consult with the Services even in situations where EPA is approving water quality standards that are somewhat more stringent than a State's existing standards. Because EPA Region 1 has historically failed to consult on its approvals of State water quality standards, there is no consultation baseline against which the agency can measure the new and revised standards that are the subject of this notice letter. Likewise, EPA has also failed to complete a single consultation on the development of section 304(a) recommended national criteria that are either adopted by the states as their standards or are used to establish the baseline for water quality. Without consultations, and without the procedural requirements of the ESA, the severity and magnitude of the threats to listed species is simply unknown—as is the amount of take that has occurred in the past due to water pollution, which has never been assessed or quantified, let alone legally authorized. If the water quality standards are still insufficiently protective of endangered species — often the most sensitive species to water pollution — then harm and take will continue to occur, and the recovery of those endangered species will be delayed or precluded.

The ESA makes completely clear that an agency cannot proceed on actions that cause take without an incidental take statement (“ITS”) from the Services. As part of an incidental take statement, the Services must provide reasonable and prudent measures (“RPMs”) to minimize the impact of any taking of listed species.<sup>58</sup>

Indeed, in 2001, EPA and the Services entered into a Memorandum of Agreement Regarding Enhanced Coordination Under the Clean Water Act and Endangered Species Act (“MOA”).<sup>59</sup> As the joint MOA between the Services and EPA explains, consultation could result in RPMs that would provide significant benefits in the context of EPA approvals of State water quality standards:

If the Service anticipates that incidental take will occur, the Service's biological opinion will provide an incidental take statement that will normally contain reasonable and prudent measures to minimize such take, and terms and conditions to implement those measures. Reasonable and prudent measures can include actions that involve only minor changes to the proposed action, and reduce the level of take associated with project activities. These measures should minimize the impacts of incidental take to the extent reasonable and prudent. Measures are considered reasonable and prudent when they are consistent with the proposed action's basic design, location, scope, duration, and timing. The test for reasonableness is whether the proposed measure would cause more than a minor change to the proposed action. 50 CFR 402.14(i)(2).

Appropriate minor changes can include, for example, a condition stating that the EPA Regional Office will work with the State or Tribe to obtain revisions to the water quality standards in the next triennial review. Where either of the Services

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<sup>58</sup> 50 C.F.R. § 402.13.

<sup>59</sup> U.S. EPA, U.S. FWS, and NMFS, 2001. *Memorandum of Agreement Between the Environmental Protection Agency, Fish and Wildlife Service and National Marine Fisheries Service Regarding Enhanced Coordination Under the Clean Water Act and Endangered Species Act* January 18, 2001, EPA-823-F-01-002 (hereafter “2001 MEMORANDUM”)

believe that there is a need for the standards to be revised more quickly, the Service should work with EPA and the State or Tribe to determine whether any revisions could be developed more quickly than the next anticipated triennial review. Because reasonable and prudent measures should not exceed the scope of EPA actions, reasonable and prudent measures in a water quality standards consultation should not impose requirements on other CWA programs unless agreed to by both EPA and the Services.

The Services may include research or data gathering undertakings as conditions of an incidental take statement contained in a biological opinion where it determines that the way to minimize future incidental take is through research and data gathering. However, to the maximum extent possible, the Services will work with EPA to identify research needs that will be addressed in the National Research and Data Gathering Plan. The Plan identifies high priority data and information needed to reduce the uncertainty inherent in the degree to which water quality criteria would protect listed species. Research and data identified in the Plan has the goal of minimizing any incidental take associated with water quality standards.

Where site specific research or data are needed that are not addressed in the Plan, the biological opinion will explain how the research or data gathering will minimize such take while not altering the basic design, location, scope, duration, or timing of the action.<sup>60</sup>

It is clear that EPA approved substantive changes to water quality standards for aquatic life in New Hampshire, Vermont, Maine and Connecticut that may affect threatened and endangered species without consulting under the ESA. By completely ignoring the potential effects of its approval actions on threatened and endangered species, EPA has violated section 7(a)(2) of the Act.

#### **PERSONS GIVING NOTICE AND REPRESENTING ATTORNEYS**

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<sup>60</sup> *Id.* at 17.

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### CONCLUSION

Additional information, including information in EPA's possession, may reveal additional EPA actions on Maine, Connecticut, Vermont, and New Hampshire water quality standards for which EPA was required to but never initiated consultation. The Environmental Groups have thoroughly reviewed the public record in an attempt to capture all such EPA actions here, but the complexity of EPA's actions over the course of many years leaves open the possibility that further violations will be uncovered. This letter puts EPA on notice that it is intended to cover such violations of the same type as described here — EPA actions on Maine, Connecticut, Vermont, and New Hampshire water quality standards for which EPA failed to initiate consultation — that have occurred since the species identified in this notice letter were first listed on the ESA.

If EPA does not act within 60 days to correct the violations described in this letter, we will pursue litigation. If you have any questions, believe any of the information contained above is in error, or would like to discuss this matter, please do not hesitate to contact me.

Sincerely,



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