

MOVING BEYOND “JEOPARDY:” WATER QUALITY  
STANDARDS AND THE CONSERVATION AND RECOVERY OF  
ENDANGERED AQUATIC SPECIES

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## INTRODUCTION

Poor water quality in our nation's lakes and streams is a formidable obstacle to the protection of freshwater fish and wildlife.<sup>1</sup> The most telling indicator of water quality is the health of the plants and animals that inhabit an aquatic ecosystem.<sup>2</sup> The number of aquatic species listed as endangered or threatened in recent years is staggering. As of April 30, 2000, the federal government listed 79 species of fish as endangered and 44 as threatened in the United States.<sup>3</sup> In the Pacific Region alone, 37 individual populations of freshwater fish are listed as threatened or endangered.<sup>4</sup> Twenty-six of these are distinct populations

<sup>1</sup> See, e.g., NATIONAL RESEARCH COUNCIL, RESTORATION OF AQUATIC ECOYSTEMS 165-261 (1992) and sources cited therein; UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, NATIONAL WATER QUALITY INVENTORY, 1994 REPORT TO CONGRESS 140-44 (1995); UNITED STATES GENERAL ACCOUNTING OFFICE, WATER POLLUTION: MORE EPA ACTION NEEDED TO IMPROVE THE QUALITY OF HEAVILY POLLUTED WATERS 8 (1989).

<sup>2</sup> ROBERT W. ADLER ET AL., THE CLEAN WATER ACT: 20 YEARS LATER 59 (1993). See also, Revisions to the Water Quality Planning and Management Regulation and Revisions to the National Pollutant Discharge Elimination System Program in Support of Revisions to the Water Quality Planning and Management Regulation; Final Rules, (TMDL Regulations), 65 Fed. Reg. 43585, 43587-88 (2000) (to be codified at 40 C.F.R. pts. 9, 122, 123, 124, and 130) (proposed Aug. 20, 1999). Of the few streams that have been evaluated by EPA, only a fraction of them provide water quality suitable for fish, wildlife and human consumption. According to EPA, only 23% of the nation's rivers and streams have been assessed. However, of that 23% percent, over one third of those waters fail to meet minimum EPA requirements under the Clean Water Act, 33 U.S.C. § 1251 *et seq.* (1994 & Supp. III 1997). Another 10% of assessed streams have been designated as threatened. Estuaries appear to face a similar fate: 44% of the 32% of estuaries assessed failed to provide the water quality needed to support fish, wildlife, and human consumption. Of the 42% of lakes, ponds and reservoirs assessed, 45% provide poor water quality. EPA states that agriculture is the leading source of water quality impairment, while dams, urban run-off, and storm sewers are the second and third largest sources of impairment, respectively. Moreover, over 300,000 miles of rivers and shoreline have been listed as "impaired" by individual States and EPA. *Id.* If this is the condition of the nation's waterways, the future of threatened and endangered aquatic species appears bleak.

<sup>3</sup> U.S. Fish and Wildlife Service, Threatened and Endangered Species System, at <http://ecos.fws.gov/tess/html/boxscore.html>.

<sup>4</sup> U.S. Fish and Wildlife Service, Threatened and Endangered Wildlife and Plants, at <http://endangered.fws.gov/wildlife.html>.

of Pacific Salmon,<sup>5</sup> whose decline can be attributed in part to poor water quality.<sup>6</sup> Given these listings it seems clear that the implementation of the Clean Water Act ("the CWA"),<sup>7</sup> the nation's principal water pollution control law, has fallen far short of ensuring the water quality necessary to reverse the decline of these populations.<sup>8</sup>

One recent Fifth Circuit decision indicates that there may be hope for more effective implementation of the CWA by using section 7(a)(1) of the Endangered Species Act ("the ESA").<sup>9</sup> In 1998, the Fifth Circuit decided *Sierra Club v. Glickman*,<sup>10</sup> holding that all federal agencies have a mandatory duty to develop programs in consultation with the Secretary of Interior for the conservation of threatened and endangered species. The case involved the 175 mile-long Edwards Aquifer in central Texas, a water resource of economic significance to Texas, and ecological significance to five federally-listed endangered species.<sup>11</sup> The Sierra Club challenged the U.S. Department of Agriculture's ("USDA") failure to use its authority to carry out programs for the conservation of the Edwards-dependent species under section 7(a)(1) of the ESA.<sup>12</sup> At the end of a three-year legal battle, the Fifth Circuit breathed new life into section 7(a)(1) and the clarified federal agencies' obligations under it.

Similar to the USDA in *Sierra Club v. Glickman*, the U.S. Environmental Protection Agency ("EPA" or the "Agency") may also be required by section 7(a)(1) to use its authority to conserve aquatic species within waters of the United States. EPA's principle authority

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<sup>5</sup> National Marine Fisheries Service, Listing Status Snapshot: Endangered Species Act status of West Coast Salmonids, at <http://www.nwr.noaa.gov>.

<sup>6</sup> National Marine Fisheries Service, NMFS Fact Sheets for Pacific Salmon and Steelhead, at <http://www.nwr.noaa.gov/1salmon/salmesa/pubs/99sthdfs.htm>, and <http://www.nwr.noaa.gov/1salmon/salmesa/pubs/99chinfo.htm>. For a concise statement of the problem of endangered species and water quality in the Pacific Northwest, see Elizabeth Rosan, *EPA's Approach to Endangered Species Protection in State Clean Water Act Programs*, 30 ENVTL. L. 447, 448-450 (2000). For a discussion of salmon life history and habitat requirements, see generally, Melissa Powers, Note, *The Spirit of the Salmon: How the Tribal Restoration Plan Could Restore Columbia Basin Salmon*, 30 ENVTL. L. 867 (2001).

<sup>7</sup> Federal Water Pollution Control Act, 33 U.S.C. §§ 1251-1387 (1994 & Supp. III 1997).

<sup>8</sup> See Total Maximum Daily Load Regulations, 65 Fed. Reg. at 43,588. (EPA recognizes that the last 28 years of Clean Water Act implementation have not yielded the water quality necessary to support fish, wildlife, and human consumption in many of the nation's waters.)

<sup>9</sup> Endangered Species Act of 1973, 16 U.S.C. § 1536(a)(1) (1994 & Supp. I 1997). Section 7(a)(1) provides that "[a]ll other federal agencies shall, in consultation with and with the assistance of the Secretary, utilize their authorities in furtherance of the purposes of this chapter by carrying out programs for the conservation of endangered species and threatened species listed pursuant to section 1533 of this title."

<sup>10</sup> *Sierra Club v. Glickman*, 156 F.3d 606 (5<sup>th</sup> Cir. 1998).

<sup>11</sup> *Id.*

<sup>12</sup> 16 U.S.C. § 1536(a)(1) (1988).

for doing so lies in the CWA.<sup>13</sup> The value of the CWA in conserving listed species lies in part in its use of water quality standards for measuring, maintaining and improving the quality of the nation's waters. The water quality standards are an important component of the CWA,<sup>14</sup> as they play a fundamental role in the development of Total Maximum Daily Loads ("TMDLs"),<sup>15</sup> the issuance of National Pollutant Discharge Elimination System ("NPDES") permits,<sup>16</sup> state certification of federally licensed projects,<sup>17</sup> and overall water quality monitoring and reporting.<sup>18</sup>

Some commentators and authorities have identified water quality standards under the CWA as an important vehicle available to both the States and EPA to reduce risks to species listed under the ESA.<sup>19</sup> The concept of risk is central to implementation of the ESA, and defining it forms the foundation of federal agency decisions under the Act.<sup>20</sup> However, there will inevitably be uncertainty in estimating the risk to threatened species<sup>21</sup> because of the difficulty of quantifying incremental threats posed by both natural and human activities.<sup>22</sup> Even when defined, translating that level of risk into a standard for measuring and maintaining water quality is a formidable task.<sup>23</sup>

<sup>13</sup> 33 U.S.C. §§ 1251-1387 (1996).

<sup>14</sup> See generally, ROBERT V. PERCIVAL, ET AL., ENVIRONMENTAL REGULATION: LAW, SCIENCE, AND POLICY 700-33 (2000); WILLIAM MURRAY TABB, ENVIRONMENTAL LAW: CASES AND MATERIALS 584-623 (2<sup>d</sup> ed. 1997); ZYGMUNT B. PLATER, ET AL., ENVIRONMENTAL LAW: SCIENCE, NATURE, AND POLICY, 848-58 (1992); see also, David S. Baron, *Water Quality Standards for Rivers and Lakes: Emerging Issues*, 27 ARIZ. ST. L.J. 559, 578 (1995) (identifying and highlighting several key issues that may come up in future implementation water quality standards provisions of the CWA).

<sup>15</sup> 33 U.S.C. § 1313(d) (1999).

<sup>16</sup> 33 U.S.C. § 1342 (2000).

<sup>17</sup> 33 U.S.C. § 1341 (2000).

<sup>18</sup> 33 U.S.C. §§ 1313(d), 1318 (1999).

<sup>19</sup> Robert L. Fischman, *Biological Diversity and Environmental Protection: Authorities to Reduce Risk*, 22 ENVTL. L. 435, 444 (1992). See also ADLER, *supra* note 2, at 243; Rosan, *supra* note 6, at 464.

<sup>20</sup> NATIONAL RESEARCH COUNCIL, SCIENCE AND THE ENDANGERED SPECIES ACT 11 (1995).

<sup>21</sup> *Id.* at 175.

<sup>22</sup> See *id.* at 155-56.

<sup>23</sup> U.S. ENVIRONMENTAL PROTECTION AGENCY, AQUATIC HABITAT INDICATORS AND THEIR APPLICATION TO WATER QUALITY OBJECTIVES WITHIN THE CLEAN WATER ACT (1999) (hereinafter AQUATIC HABITAT INDICATORS). The EPA produced this document through a grant to the Idaho Water Resources Research Institute ("WRRI"), and it suggests that the EPA and states should develop numeric and narrative indicators of habitat quality as part of water quality standards to better protect threatened and endangered species. The document articulates the dilemma in defining risk in the water quality context by noting that the CWA appears to define the level of risk in terms of the threshold effects of pollution, while the ESA intends federal agency decisions to err in favor of the species. *Id.* at 7-8. The document further notes that the process of setting water quality standards was intended to strike a balance between protecting water uses while considering the social and economic effects of the standards. *Id.*

The EPA’s interpretation of its obligations under the ESA is presently embodied in a Draft Memorandum of Agreement (“MOA”) with the Fish and Wildlife Service and National Marine Fisheries Service. Under this interpretation, the EPA is required to insure that revised water quality standards do not jeopardize the continued existence of listed species under section 7(a)(2)<sup>24</sup> of the Act.<sup>25</sup> The regulatory definition of “jeopardy” is any action that “reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild....”<sup>26</sup> However, the CWA itself demands something *more* than a mere assurance that water quality standards do not cause the extinction of aquatic species.<sup>27</sup>

A flurry of activity has surrounded the effort to ensure that water quality standards do not cause “jeopardy” to aquatic species,<sup>28</sup> but

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<sup>24</sup> Section 7(a)(2) of the Act states, in relevant part:

Each federal agency shall, in consultation with and with the assistance of the Secretary, 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 destruction or adverse modification of habitat of such species....

16 U.S.C. §1536(a)(2) (1988).

<sup>25</sup> *Draft Memorandum of Agreement Between the Environmental Protection Agency, Fish and Wildlife Service, and National Marine Fisheries Service Regarding Enhanced Coordination Under the CWA and the Endangered Species Act*, 64 Fed. Reg. 2742 (Jan. 15, 1999) (hereinafter EPA/Services Draft MOA). The Draft MOA between the Services and EPA states that EPA has committed to promulgating revised water quality standards regulations to require that water quality not likely jeopardize the continued existence of a species or destroy or adversely modify designated critical habitat. EPA stated that it believed that the proposed rule essentially codified existing protection for endangered and threatened species under the CWA since, in EPA’s judgment, water quality is so degraded that it will likely cause jeopardy to the continued existence of a species would generally not be consistent with protections provided by the CWA standards adopted by the State or Tribe to protect water quality. 64 Fed. Reg. at 2744. The Draft MOA was finalized on February 22, 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; Notice*, 66 Fed. Reg. 11201 (February 22, 2001). The Final MOA recognized the need to incorporate section 7(a)(1) in EPA’s water quality programs, 66 Fed. Reg. at 11203-4, and created a provision for a “proactive conservation review” panel to explore EPA’s authority to conserve listed species. 66 Fed. Reg. at 11209. It is hoped that this note will contribute to that effort.

<sup>26</sup> 50 C.F.R. § 402.02 (1999).

<sup>27</sup> See discussion, *infra*, section II.

<sup>28</sup> See NATIONAL MARINE FISHERIES SERVICE, BIOLOGICAL AND CONFERENCE OPINION ON OREGON’S REVISED WATER QUALITY STANDARDS FOR TEMPERATURE, DISSOLVED OXYGEN AND PH (1999) (hereinafter BIOLOGICAL OPINION). As an example, EPA recently approved Oregon’s revised water quality standards for temperature, dissolved oxygen, and pH. Letter from Randall F. Smith, Director of the Office of Water, EPA Region 10, to Doug Llewelyn, Director of the Water Quality Program, Oregon Department of Environmental Quality (July 22, 1999). The approval took place after a three-year long consultation process with the Services regarding the effect of the proposed standards on listed salmon stocks in Oregon. At the end of the process,

merely preventing extinction may be the wrong goal. Water quality standards form the foundation of the water quality-based provisions of the CWA and have the potential to describe the habitat conditions necessary to the survival of listed fishes. As a result, section 7(a)(1) may provide the necessary mandate for EPA to ensure that revised state standards not only prevent jeopardy, but affirmatively promote the recovery of ESA-listed aquatic species.<sup>29</sup>

This paper is intended to establish the legal bases under both the CWA and section 7(a)(1) of the ESA, that require EPA to reconsider how it oversees state water quality standards programs. First, this paper asserts that the CWA requires that water quality criteria define habitat conditions necessary for the protection and recovery of threatened and endangered aquatic species. Second, even if the CWA does not require this level of protection, it certainly allows it. This in turn triggers EPA's duties under section 7(a)(1) of the ESA to develop and implement a plan for the conservation and recovery of those species.

Part I of this paper briefly reviews water quality standards provisions under the CWA, section 7 of the ESA, and the recent MOA between EPA and the Services addressing implementation of the two laws. Part II explores the legal relevance of the Draft MOA, and argues that the language and legislative history of the CWA, as well as EPA guidance documents indicate that EPA has misinterpreted its obligations under the CWA with respect to water quality standards. The CWA requires that EPA implement the water quality standards program in a way that affirmatively promotes the recovery of threatened or endangered species, rather than merely preventing their jeopardy. Addressing authorities under the ESA, Part III introduces *Sierra Club v. Glickman*, analyzes whether that decision was correctly decided, and discusses some caveats to implementation of section 7(a)(1) of the ESA. Part IV argues that the Fifth Circuit's reading of section 7(a)(1) in *Sierra Club v. Glickman* requires EPA to use its authority under the CWA to develop a species-specific conservation strategy for endangered species. This section also uses EPA's recent approval of Oregon's revised water quality criteria for temperature to illustrate the potential impact of a

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NMFS was only able to half-heartedly bless the revisions as ensuring "no jeopardy" to listed salmon, requiring Oregon to implement a series of "conservation measures" designed to mitigate the adverse effects of the standards. *Id.* at 50-53.

<sup>29</sup> See Fischman, *supra* note 19, at 440. Fischman recognized that 7(a)(1) may compel EPA to interpret its programmatic statutes in such a way as to promote the recovery of listed species. See also, Oliver A. Houck, *The Endangered Species Act and Its Implementation By the U.S. Departments of Interior and Commerce*, 64 U. COLO. L. REV. 277, 326 (1993). Similarly, Houck suggests that section 7(a)(1) carries the potential to require federal agencies to do more than merely avoid jeopardy. *Id.*

section 7(a)(1) plan on EPA’s implementation of the water quality standards provisions of the CWA. This paper concludes that, according to section 7(a)(1) of the ESA, that plan should require EPA to use the full breadth of its authority under the water quality provisions. This includes EPA’s authority to approve only those new or revised state water quality standards that are set at levels that eliminate or minimize water quality risks to listed aquatic species. In addition, the plan should require EPA to use its authority to review existing state water quality standards and develop and implement a new site-specific criterion where needed to ensure the recovery of those species.

### *I The Clean Water Act and The Endangered Species Act*

#### *A. Water Quality Standards Under the CWA: Statutory and Regulatory Requirements.*

Section 303 of the Federal Water Pollution Control Act (“the FWPCA”) of 1972,<sup>30</sup> requires states to establish water quality standards.<sup>31</sup> Under that provision, states are required to triennially review and revise their water quality standards established under the FWPCA.<sup>32</sup> These standards must be set “taking into consideration their use and value for public water supplies, propagation of fish and wildlife, recreational purposes, and agricultural, industrial, and other purposes...”<sup>33</sup> States that had already established water quality standards before the 1972 Amendments were required to submit the existing standards to the EPA for approval.<sup>34</sup>

The EPA requires the states to adopt, at a minimum, base “fishable/swimmable” uses articulated in section 101(a)<sup>35</sup> and restated in section 303(c)(2)<sup>36</sup> of the CWA. If a State chooses not to designate

<sup>30</sup> California ex rel. State Water Resources Board v. EPA, 426 U.S. 200 (1976). See also PLATER, *supra* note 14 at 827-28.

<sup>31</sup> 33 U.S.C. § 1313 (1999).

<sup>32</sup> *Id.* at § 1313(c)(1) (1999). Section 303(c)(1) requires states to revise water quality standards established under the 1972 Amendments “from time to time, (but at least once each three year period beginning with October 18, 1972).” *Id.*

<sup>33</sup> *Id.* at § 1313(c)(2)(A) (1999).

<sup>34</sup> *Id.* at § 1313(a)(2) (1999). That provision states in relevant part:

Any state which, before October 18, 1972, has adopted, pursuant to its own law, water quality standards applicable to intrastate waters shall submit such standards to the Administrator within thirty days after October 18, 1972.

<sup>35</sup> Section 101(a)(2) provides that “it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection of fish, shellfish, and wildlife and provides for recreation in and on the water be achieved by July 1, 1983.” 33 U.S.C. § 1251(a)(2).

<sup>36</sup> Section 303(c)(2) provides that water quality standards “shall be established taking into consideration their use and value for public water supplies, propagation of fish and wildlife, recreational purposes, and agricultural, industrial, and other purposes...” 33 U.S.C.

those uses, then the EPA requires that State to support its decision with technical and scientific data showing that the use cannot be attained.<sup>37</sup> In addition to adopting uses, the state is required to develop either narrative or numeric water quality criteria that are necessary to protect those uses.<sup>38</sup> An antidegradation policy is required to ensure that water quality does not degrade below existing levels necessary to support a healthy population of fish and wildlife.<sup>39</sup> Thus, in essence, a water quality standard is composed of a designated use for a given body of water, water quality criteria necessary to support that use,<sup>40</sup> and an antidegradation policy.<sup>41</sup>

This paper focuses on water quality criteria in the CWA as the primary means of identifying and measuring impacts on water quality. Water quality criteria serve as the backbone of the water quality standards and come in both narrative and numeric form.<sup>42</sup> Numeric criteria are of fundamental importance because they form the basis for establishing limits on NPDES dischargers, for developing TMDLs<sup>43</sup> for entire water bodies, and also for measuring impacts from non-point sources of pollution.<sup>44</sup> Numeric criteria are values expressed as levels, concentrations, toxicity units, or other numbers deemed necessary to

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§1313(c)(2)(A) (1999).

<sup>37</sup> 40 C.F.R. § 131.5(a)(4) (1999).

<sup>38</sup> *Id.* at § 131.5(a)(2) (1999).

<sup>39</sup> *Id.* at § 131.12(a) (1999).

<sup>40</sup> 40 C.F.R. § 131.3(i) (1999).

<sup>41</sup> 33 U.S.C. § 1313(d)(4)(B) (1999); 40 CFR § 131.1 (1999). An existing use, unlike a designated use, is a use *actually attained* in the water body on or after November 28, 1975 (the date of EPA's first water quality standards regulation after the 1972 Amendments). *See* Advanced Notice of Proposed Rulemaking, Water Quality Standards Regulation, 63 Fed. Reg. at 36,748 (Oct. 1998). Designated uses are aspirational, focusing on the *attainable goals* of the water body. *Id.* They are a function of the potential of water quality to support certain forms of aquatic life. *Id.* On the other hand, an existing use represents the *current or historical conditions* of the water body. *Id.*

<sup>42</sup> *Id.* at § 131.3(b). Water quality criteria are "elements of State water quality standards, expressed as constituent concentrations, levels, or narrative statements, representing a quality of water that supports a particular designated use."

<sup>43</sup> A TMDL, or Total Maximum Daily Load, represents the total assimilative capacity of a water body to hold pollution while also complying with water quality standards set by a State. Until recently, EPA regulations defined a TMDL as "the sum of the individual WLAs [waste load allocations] for point sources and LAs [load allocations] for non-point courses and natural background." 40 C.F.R. § 130.2(i) (2000). Although retaining the same basic concept, the definition was revised by EPA in July 2000 to include, among other components, implementation plans and reasonable assurances that TMDLs will achieve water quality standards. Revisions to the Water Quality Management Regulations and Revisions to the National Pollutant Discharge Elimination Program in Support of Revisions to the Water Quality Management Regulations: Final Rule, 65 Fed. Reg. 43,586, 43,666 (to be codified at 40 C.F.R. Part 9 *et al.*) (July 2000).

<sup>44</sup> *See generally*, AQUATIC HABITAT INDICATORS, *supra*, note 23.

protect designated uses.<sup>45</sup>

Narrative criteria can be applied to fill gaps where numeric criteria fail to anticipate all water quality impacts from the numerous sources in a state.<sup>46</sup> They are usually open-ended, “free from” statements that can be used to control nuisances, such as floating debris, oily scum, or other objectionable deposits.<sup>47</sup> Narrative criteria are useful in that not all states have designated uses for all water bodies and set specific numeric criteria for each use.<sup>48</sup> Thus, narrative criteria can be used on a site-specific level to either form the basis of protection, or enhance existing numeric criteria.<sup>49</sup>

The FWPCA provides a fallback mechanism if a state fails to adopt new standards, and also ensures that old standards do indeed protect water quality. If a state fails to adopt standards EPA must notify the state and specify what steps the state must take to comply with the Act.<sup>50</sup> The state is then given 90 days to conform the standard to EPA’s specifications.<sup>51</sup> If the state still chooses not to act, EPA must promptly publish a new proposed water quality standard for the state within 90 days of its failure to take action.<sup>52</sup> EPA also has the power to promulgate a revised standard where any existing state water quality standard is inadequate to meet the goals of the CWA, regardless of whether that standard had been submitted to EPA for approval.<sup>53</sup>

#### B. Overview of Section 7 of the ESA

The Endangered Species Act<sup>54</sup> was enacted in 1973 amid congressional concern over the loss of biodiversity in the United States and worldwide.<sup>55</sup> Its stated purposes are “to provide a means whereby the ecosystems upon which endangered species and threatened species

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<sup>45</sup> *Id.*

<sup>46</sup> See generally *Jefferson County PUD No. 1 v. Washington Dep’t of Ecology*, 511 U.S. 700, 715 (1994).

<sup>47</sup> Water Quality Standards Regulation, 63 Fed. Reg. at 36,762. For example, Oregon has a narrative standard for the protection of biological integrity of waters to protect aquatic life in all waters of the state. The standard requires that “[w]aters of the state shall be of sufficient quality to support aquatic species without detrimental changes in the resident biological communities.” OR. ADMIN. R. § 340-041-0027. (2001).

<sup>48</sup> U.S. ENVIRONMENTAL PROTECTION AGENCY, WATER QUALITY STANDARDS HANDBOOK, 2<sup>nd</sup> Ed., Int. 9 (1994) (hereinafter WQS HANDBOOK).

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

<sup>50</sup> 33 U.S.C. § 1313(c)(3) (1999).

<sup>51</sup> *Id.*

<sup>52</sup> *Id.*; see also 33 U.S.C. §1313(c)(4)(A) (1999).

<sup>53</sup> 33 U.S.C. § 1313(c)(4)(B) (1999).

<sup>54</sup> 16 U.S.C. §§ 1531-1544 (1999).

<sup>55</sup> *Id.* at § 1531(a).

depend may be conserved” and “to provide a program for the conservation of such endangered species and threatened species....”<sup>56</sup> The ESA defines “conservation” as “the use of all methods and procedures which are necessary to bring any endangered species or threatened species back to the point at which the measures provided...are no longer necessary.”<sup>57</sup> Thus, the goal of the ESA is to make itself inapplicable by recovering stressed wildlife populations to the point at which the law is no longer needed to protect them.<sup>58</sup>

Section 7, one of the central provisions of the ESA, places both substantive and procedural obligations on federal agencies.<sup>59</sup> Section 7(a)(2) has historically received the most attention by courts and commentators,<sup>60</sup> and requires all federal agencies to insure that any action taken, funded, or authorized by them does not jeopardize the continued existence of any species listed under the ESA as threatened or endangered.<sup>61</sup> Placing such a species in “jeopardy” means taking an action that “reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild....”<sup>62</sup>

In addition to the prohibition on jeopardy in section 7(a)(2), the duty to conserve species listed under section 4 of the ESA, as provided in section 7(a)(1), may offer great promise as the “other” substantive duty on federal agencies under the CWA.<sup>63</sup> That provision places every federal agency under a duty to “conserve” endangered species.<sup>64</sup> Specifically, section 7(a)(1) states that all federal agencies

shall, in consultation with and with the assistance of the Secretary, utilize their authorities...by carrying out programs for the conservation of endangered species and threatened

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<sup>56</sup> *Id.* at § 1531(b).

<sup>57</sup> *Id.* at § 1532(3).

<sup>58</sup> DANIEL J. ROHLF, *THE ENDANGERED SPECIES ACT: A GUIDE TO ITS PROTECTIONS AND IMPLEMENTATION*, 28 (Stanford Environmental Law Society ed., 1989). *See also* 16 U.S.C. § 1532(3), *infra* note 67.

<sup>59</sup> RICHARD LITTEL, *ENDANGERED AND OTHER PROTECTED SPECIES: FEDERAL LAW AND REGULATION* 47 (The Bureau of National Affairs, Inc. ed., 1992).

<sup>60</sup> Houck, *supra* note 29, at 314. *See also* ROHLF, *supra* note 58, at 148.

<sup>61</sup> 16 U.S.C. § 1536(a)(2) (1988). The ESA defines an endangered species as one “which is in danger of extinction throughout all or a significant portion of its range....” *Id.* at § 1532(6) whereas a threatened species is one that is “likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.” *Id.* at § 1532(20).

<sup>62</sup> 50 C.F.R. § 402.02 (1999).

<sup>63</sup> J.B. Ruhl, *Section 7(a)(1) of the New Endangered Species Act: Rediscovering and Redefining the Untapped Power of Federal Agencies’ Duty to Conserve Species*, 25 ENVTL. L. 1107, 1109 (1994).

<sup>64</sup> 16 U.S.C. § 1536(a)(1) (1988).

species....<sup>65</sup>

This explicit duty to conserve is also bolstered by the stated policy of the Act, which requires that "all federal departments and agencies shall seek to conserve endangered species and threatened species."<sup>66</sup> Although the courts have generally been unclear as to what this duty comprises,<sup>67</sup> the language clearly suggests that it requires something of federal agencies beyond section 7(a)(2)'s prohibition on jeopardy.<sup>68</sup>

In light of the definition of "conserve" section 7(a)(1) may be the key to ensuring that federal agencies actually contribute to the eventual "recovery" of listed species.<sup>69</sup> The Fish and Wildlife Service has defined "recovery" as the "the process by which the decline of an endangered species or threatened species is arrested or reversed, and threats to its survival are neutralized, so that its long term survival in nature can be ensured."<sup>70</sup> The goal of recovery is to maintain healthy, secure, self-sustaining wild populations of species.<sup>71</sup> This definition raises important questions regarding what level of protection the CWA requires relative to the ESA and how water quality standards can be used to ensure recovery of aquatic species.

### *C. CWA/ESA Interface: Draft Memorandum of Agreement Between EPA and the Services.*

The EPA, National Marine Fisheries Service ("NMFS"), and U.S. Fish and Wildlife Service ("FWS") entered into a Draft Memorandum of Agreement in 1999 detailing how EPA would meet its obligations under Section 7 of the ESA in implementing and overseeing programs

<sup>65</sup> *Id.*

<sup>66</sup> *Id.* at § 1531(c)(1).

<sup>67</sup> See discussion *infra*, Part III, relating to the interpretation of section 7(a)(1).

<sup>68</sup> Houck, *supra* note 29, at 326. See also *Sierra Club v. Glickman*, 156 F.3d 606 (5<sup>th</sup> Cir. 1998).

<sup>69</sup> See Ruhl, *supra* note 63, at 1111. Ruhl stresses the importance of federal agency implementation of recovery plans established by agencies under the Secretary of Interior, such as the National Marine Fisheries Service (NMFS) and the Fish and Wildlife Service (FWS). Specifically, he states that the "only construction [of section 7(a)(1)] that fulfills Congress' original legislative vision and harmonizes section 7(a)(1) with the other ESA provisions is that section 7(a)(1) imposes on all federal agencies a duty to initiate programs, either within or independent of their primary missions, which will implement the so-called recovery plans that FWS and NMFS develop under section 4 of the ESA to rescue species from endangered and threatened status." For purposes of this paper, it is assumed that an agency's efforts to conserve a listed species under section 7(a)(1) are intended to lead to its recovery. See generally, Eric Helmy, Note, *Teeth for a Paper Tiger: Redressing the Deficiencies of the Recovery Provisions of the Endangered Species Act*, 30 ENVTL. L. 843 (Winter 2001) (discussing the role of section 4(f) recovery plans and section 7(a)(1) in promoting the conservation of endangered species).

<sup>70</sup> U.S. FISH AND WILDLIFE SERV., REPORT TO CONGRESS: ENDANGERED AND THREATENED SPECIES RECOVERY PROGRAM, 5 (1990).

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

under the CWA.<sup>72</sup> The major components of the Draft MOA are procedures for interagency coordination and elevation, national level water quality standards activities, review of state and tribal water quality standards, and oversight of state and tribal NPDES permitting programs under the CWA. The core of the Draft MOA focuses on EPA's implementation of the water quality standards provisions in section 303 of the CWA and its oversight of the NPDES provisions in section 402.<sup>73</sup> The Draft MOA asserts that a national agreement between the two agencies on how water quality standards and NPDES permits should be implemented is necessary to achieve the complementary goals of the ESA and CWA.<sup>74</sup>

With respect to water quality standards, the Draft MOA addresses consultation procedures for both national level water quality standards activities and EPA review of state and tribal water quality standards. On the national front, the Draft MOA states that EPA will first propose amendments to its water quality standards regulations to require that water quality not likely jeopardize the continued existence of listed species, nor destroy or adversely modify critical habitats.<sup>75</sup> EPA and the Services also state that they will engage in a national consultation on EPA's recommended aquatic life criteria published under section 304(a) of the CWA.<sup>76</sup> The Draft MOA states that the intent of doing so is to streamline the section 7(a)(2) consultation process with respect to state water quality criteria that are equally or more stringent than federally recommended criteria.<sup>77</sup>

As with the national program, EPA review and approval of state water quality standards under section 303 of the CWA will also be subject to Draft MOA consultation procedures.<sup>78</sup> EPA states that it will

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<sup>72</sup> 64 Fed. Reg. 2742 (1999). EPA and the Services entered into similar draft agreements beginning in 1992, and again in 1997. See Rosan, *supra* note 6 at 465-69, for a thorough summary of the origin and content of those agreements. For a copy of the 1992 agreement, see WQS HANDBOOK, *supra* note 48, at Appendix H.

<sup>73</sup> *Id.*

<sup>74</sup> *Id.*

<sup>75</sup> 64 Fed. Reg. at 2744 (1999).

<sup>76</sup> *Id.*

<sup>77</sup> *Id.*

<sup>78</sup> 64 Fed. Reg. at 2745 (1999). The Draft MOA also provides procedures by which EPA will engage in section 7 consultation on State or Tribal issuance of NPDES permits. Specifically, the Draft MOA provides that EPA would insure that States or Tribes provide copies of draft NPDES permits for review by the Services. EPA would coordinate with the State or the Services to insure that the permit complies with all applicable CWA requirements. If the Services find that the permit is likely to adversely affect a listed aquatic species, EPA may object to the permit under section 402(d) of the CWA. If, based on section 7(a)(2) consultation, EPA finds that the permit is likely to jeopardize a listed species, EPA will use its CWA authority to object to the permit. 64 Fed. Reg. at 2746.

engage in ESA section 7(a)(2) consultation with the Services to insure that those standards will not jeopardize the listed species.<sup>79</sup> If EPA determines that a revised state water quality standard is likely to adversely affect a threatened or endangered aquatic species, the Services may suggest changes to the standards that would presumably avoid those adverse effects. If those adverse effects cannot be avoided, then EPA states that it will either disapprove the standard, or initiate formal consultation with the Services under section 7(a)(2).<sup>80</sup> Formal consultation requires either or both of the Services to conduct a Biological Opinion of EPA’s proposed approval of the water quality standards pursuant to Joint Services Regulations.<sup>81</sup> If either of the Services find that EPA’s proposed approval will result in jeopardy to an aquatic species, then the Services will propose that EPA disapprove the water quality standard and promulgate a revised water quality standard under section 303(c) of the CWA.<sup>82</sup>

*II. Water Quality Criteria and Species Conservation and Recovery: The Draft MOA’s Perspective on CWA Protections for Threatened and Endangered Species.*

Although the Draft MOA indicates that EPA and the Services intend it to be treated as a procedural document,<sup>83</sup> statements in the preamble

<sup>79</sup> 64 Fed. Reg. at 2752 (1999).

<sup>80</sup> 64 Fed. Reg. at 2753 (1999).

<sup>81</sup> *Id.* See also 50 C.F.R. § 402.14(c). If the Services anticipate that some incidental taking of the listed species will result from EPA’s approval of the standard, then the Services will include in the Biological Opinion a statement containing reasonable and prudent measures designed to minimize that take. 64 Fed. Reg. at 2754 (1999). Under Joint Services regulations, measures are considered reasonable and prudent if they are consistent with the location, scope, duration, timing, and basic design. A reasonable measure is one that would not cause more than a minor change to the proposed action. 50 C.F.R. § 402.14(I)(2). The Draft MOA lists one appropriate minor change as “a condition stating that the EPA Regional Office will work with the State or Tribe to obtain revisions in the next triennial review.” Another measure may include research and data gathering where such data is needed to minimize take associated with EPA’s approval. 64 Fed. Reg. at 2754 (1999).

<sup>82</sup> 64 Fed. Reg. at 2754 (1999). If the Services make a jeopardy finding in the Biological Opinion, it will identify any reasonable and prudent alternatives necessary for EPA to avoid jeopardy. These include, for example, EPA coordination with the State to obtain revisions to the standard necessary to remove jeopardy, EPA disapproval of the standard and promulgation of a revised standard, and EPA’s use of its authority under 33 U.S.C. § 1313(c)(4)(A) to promulgate federal standards as necessary. *Id.*

<sup>83</sup> 64 Fed. Reg. at 2742, 2747. The Draft MOA states that its main purpose is to improve procedures for EPA and the Services in complying with both the CWA and ESA. 64 Fed. Reg. at 2747. As such, EPA and the Services state that the Draft MOA does not “alter, expand, or substitute for applicable legal requirements.” *Id.* In addition, the procedures in the Draft MOA are binding only as to the EPA and the Services, not regulated parties. 64 Fed. Reg. at 2745. (EPA and the Services state that “[t]he MOA is solely a procedural document that does not impose any obligations on any party, including States and Tribes.”) Finally, the Draft MOA

to the Draft MOA provide evidence of how EPA interprets its obligations under the CWA in the context of section 7 of the ESA. First, EPA states in the Draft MOA that it intends to revise its water quality standards regulation<sup>84</sup> to require that water quality standards will not “likely jeopardize the continued existence of federally-listed species or destroy or adversely modify designated critical habitats.”<sup>85</sup> EPA states that the proposed rule would essentially codify “existing protections” in the CWA for endangered or threatened species.<sup>86</sup> This is because, according to EPA, “water quality that is so degraded that it will likely cause jeopardy to the continued existence of a species would generally not be consistent with protections provided by the Clean Water Act.”<sup>87</sup>

The above statement raises interesting issues about what level of protection the CWA actually provides for listed species. On one hand, given the goals and protections for aquatic life in the CWA, it would seem that the CWA would *never* permit water quality standards to cause jeopardy.<sup>88</sup> No regulation need be promulgated to implement that mandate; a plain reading of the CWA makes the point clear.<sup>89</sup> On the other hand, the statement suggests that “existing protections” under the CWA merely consist of preventing jeopardy to listed species. Compounding the confusion, the Draft MOA is solely devoted to creating procedures under section 7(a)(2) designed to ensure that water quality standards do not jeopardize the continued existence of aquatic species.<sup>90</sup> It does not create procedures designed to ensure that water

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specifically states that because the Draft MOA is only procedural, it is not subject to APA rulemaking requirements. Nonetheless, EPA and the Services have chosen to put out the Draft MOA for public comment and review. 64 Fed. Reg. at 2742-43.

<sup>84</sup> The current regulations are located at 40 C.F.R. § 131 *et seq.* EPA has not yet issued a proposed revision to the water quality standards regulation that includes a provision that water quality standards must not cause jeopardy to aquatic species. See EPA OFFICE OF WATER, RULES: OPEN, CLOSED, FINAL, at <http://www.epa.gov/ost/rules>.

<sup>85</sup> 64 Fed. Reg. at 2744.

<sup>86</sup> *Id.*

<sup>87</sup> *Id.* In addition, in responding to a commentator’s concern that the Draft MOA overstates the authority in both the ESA and CWA, EPA stated that its statutory responsibilities under both laws are carried out by ensuring that water quality is sufficient to ensure “the protection of endangered and threatened species.” 64 Fed. Reg. at 2745. However, it is not entirely clear from this statement what level of protection EPA intends water quality standards to provide. “Protection” in this context may merely mean preventing the species from going extinct, or it may mean ensuring that the species returns back to natural population levels.

<sup>88</sup> See *infra*, Part II(C). The author argues below that the CWA’s requirements for protection and propagation of aquatic life extend well beyond preventing jeopardy to listed species.

<sup>89</sup> *Id.*

<sup>90</sup> 64 Fed. Reg. at 2747. EPA and the Services assert that the Draft MOA applies only to federal actions subject to section 7(a)(2) consultation under the ESA. *Id.* Moreover, the procedures established in the Draft MOA for EPA are limited solely to ensuring that water quality standards

quality standards promote recovery, as it arguably should under section 7(a)(1).<sup>91</sup> This statement, and the very existence of the Draft MOA, suggest that EPA is deviating from the level of protection Congress originally intended water quality standards to achieve.<sup>92</sup>

*A. What the CWA Actually Requires, and Why the Draft MOA Misses the Mark.*

Even assuming that the Draft MOA is entitled to some level of deference as an EPA interpretation of either the CWA or its own regulations, that interpretation is incorrect for several reasons discussed below. First, a plain reading of the statutory language, and thus regulatory language, indicates that Congress intended water quality standards to provide a level of protection that ensures the recovery of listed species.<sup>93</sup> If EPA interprets its regulations to only require that standards prevent jeopardy, then those regulations may be vulnerable to challenge as an unreasonable interpretation of the CWA.<sup>94</sup> Second, even if the statutory language could be construed as ambiguous on this point, the legislative history resolves any lack of clarity.<sup>95</sup> The drafters of sections 101, 303, and 304 make clear their intent to require water quality standards to define conditions that lead to healthy, self-sustaining populations of aquatic species. Third, the Draft MOA is erroneous because it deviates substantially from previous EPA

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prevent jeopardy, rather than ensuring that they promote *recovery*.

<sup>91</sup> See *infra*, Part IV. Admittedly, the Draft MOA mentions "recovery" in several places, most notably in its statement of purpose. There, the Draft MOA states that one of its purposes is to "provide clear and efficient mechanisms for improved interagency cooperation, thereby enhancing protection and promoting the recovery of threatened and endangered species and their supporting ecosystems, and reducing the need for future listings under the ESA." 64 Fed. Reg. at 2747. The Draft MOA also states in the preamble that its procedures are intended to "facilitate recovery of species so that they no longer require protection under the ESA." 64 Fed. Reg. at 2742. However, the Draft MOA only creates procedures for consultation regarding jeopardy, not recovery. Though the Draft MOA appears to treat "no jeopardy" as equal to "conservation" and "recovery," Congress has determined that these two concepts have distinct roles in section 7. While section 7(a)(2) requires federal agencies to avoid jeopardy, 16 U.S.C. § 1536(a)(2) (1988), section 7(a)(1) requires federal agencies to "conserve" species listed under the ESA. 16 U.S.C. § 1536(a)(1) (1988). Recall that conserve means "to use...all methods and procedures which are necessary to bring any endangered species or threatened species back to the point at which the measures provided...are no longer necessary." 16 U.S.C. § 1532(3). As a result, avoiding jeopardy cannot be considered the same as promoting recovery; to think otherwise would be to make section 7(a)(1) meaningless. A more detailed discussion of the potential role for section 7(a)(1) can be found in Part IV of this article.

<sup>92</sup> It is also significant that EPA intends only to ensure that the water quality standards it approves will not cause jeopardy. See Draft MOA, 64 Fed. Reg. at 2744. This further indicates EPA intends to set the floor at "no-jeopardy" in the CWA.

<sup>93</sup> See *infra*, Part II(C)(1).

<sup>94</sup> *Id.*

<sup>95</sup> See *infra*, Part II(C)(2).

interpretations expounding on the level of protection that water quality standards are intended to provide.<sup>96</sup>

*1. Text of Sections 101, 303, and 304 of the CWA*

The Draft MOA's interpretation of the EPA's regulations is incorrect because the plain language of sections 101, 303, and 304 of the CWA requires more than the mere avoidance of jeopardy to aquatic life. Textual support for this proposition is, on the surface, admittedly sparse. However, some key language in the provisions of the CWA, as well as legislative history provide evidence that water quality criteria must be set not only to avoid jeopardy to listed species, but also to promote their recovery.

The water quality standards provisions<sup>97</sup> themselves provide the clearest indication that Congress intended the CWA to promote the recovery of threatened or endangered species. For example, section 303 requires that water quality standards take into consideration the use of navigable waters for "the protection and propagation of fish, shellfish, and wildlife," among other uses.<sup>98</sup> Similarly, section 304 requires EPA to develop guidance on recommended water quality criteria to assist states in developing criteria to protect designated uses.<sup>99</sup> Those guidance criteria are to consider "the effects of pollutants on biological community diversity, productivity, and stability...."<sup>100</sup> The emphasis on populations and ecological communities provides a clear indication that the CWA was intended to protect and preserve aquatic life. Where water quality is not sufficient to do so, sections 303 and 304 command that the state and EPA, respectively, set water quality standards at levels that will eventually bring those populations back to stable, healthy levels.

In addition to the plain language of sections 303 and 304, section 101 defines the objective of the CWA "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters."<sup>101</sup> The focus on "restore" and "maintain" in the first sentence of the law provides some indication that Congress intended the law to improve biological integrity, rather than merely prevent it from getting worse than it already is. Also, section 101(a)'s interim goal of achieving "water quality which provides for the protection and propagation of fish,

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<sup>96</sup> See *infra*, Part II(C)(3).

<sup>97</sup> 33 U.S.C. §§ 1313-15.

<sup>98</sup> 33 U.S.C. § 1313(c)(2) (1999).

<sup>99</sup> *Id.* at § 1314(a).

<sup>100</sup> *Id.*

<sup>101</sup> *Id.* at § 1251(a) (emphasis added).

shellfish, and wildlife..."<sup>102</sup> serves as the foundation for virtually all water quality based decisions made under the Act.<sup>103</sup> The term "propagation" is not defined anywhere in the CWA. However, the dictionary defines this term as "natural reproduction; production of young; natural increase (as a kind of organism) in numbers;..."<sup>104</sup> Thus, it appears that the plain meaning of "propagate" means reproduction, or a natural increase in population, not merely the status quo or managed decline. Therefore, this provision of the CWA envisions water quality necessary to bring threatened or endangered species back to healthy, reproductive levels.

## *2. Legislative History of Sections 101, 303, and 304*

Even if the statutory language of sections 101, 303, and 304 is unclear, the legislative history behind those sections illuminates their meaning and provides further evidence that the CWA requires that water quality be sufficient to promote recovery of listed species. According to a House Report, biological "integrity" as used in section 101 of the CWA is "a condition in which the natural structure and function of ecosystems is maintained."<sup>105</sup> The House Report goes on to define "natural" as that "condition in existence before the activities of man invoked perturbations which prevented the system from returning to its original state of equilibrium."<sup>106</sup> By placing this language in its statement of declarations and goals for the entire CWA, Congress clearly communicated its intention that EPA approve only those state water quality criteria that reflect the "natural" conditions of a water body.

The Senate Report on section 304 also refers to the "natural...integrity" of the nation's waters, focusing on the importance of historical records on species composition, ecological studies, and estimations of what a "balanced natural ecosystem" should look like.<sup>107</sup> Furthermore, the Conference Committee in 1972 stated that the term "water quality" is "intended to include reference to key species, natural temperature and current flow patterns, and other characteristics which

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<sup>102</sup> *Id.* at § 1251(a)(2) (emphasis added).

<sup>103</sup> S.REP. NO. 92-414, *reprinted in* 1972 U.S.C. at 3678.

<sup>104</sup> WEBSTERS THIRD INT'L DICTIONARY OF THE ENGLISH LANGUAGE (UNABRIDGED) 1817 (3<sup>d</sup> ed. 1986).

<sup>105</sup> H.R. REP. NO. 92-911, at 76 (1972), *reprinted in* Congressional Research Service, A LEGISLATIVE HISTORY OF THE WATER POLLUTION CONTROL ACT AMENDMENTS OF 1972 763 (1973).

<sup>106</sup> *Id.*

<sup>107</sup> S. REP. NO. 92-414, *reprinted in* 1972 U.S.C. at 3716.

help describe ecosystem integrity.”<sup>108</sup> This language suggests that water quality standards, and more specifically water quality criteria, are intended to describe the habitat needs of the fish and wildlife that inhabit those waters. Congress focused on “natural temperature” and “ecosystem integrity,” both of which are phrases that push for restoration of the aquatic environment. As a result, the CWA arguably requires that water quality criteria be set at these natural levels in order to realize the CWA’s goal of restoring our nation’s waterways.<sup>109</sup> A water quality criterion that fails to take all of these considerations into account does not describe the needs of endangered or threatened species, most probably will not contribute to their recovery, and likely violates the letter and spirit of the CWA.

Finally, the definition of pollution and its legislative history also make clear Congress’ commitment to full restoration and recovery of aquatic communities. Section 502(19) defines pollution as “the man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of water.”<sup>110</sup> In clarifying this definition, the Committee stated that pollution of the waterways should not have any permanent impact on the aquatic ecosystem.<sup>111</sup> Instead, the ecosystem should return to its original and natural state in a matter of hours, days,

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<sup>108</sup> *Id.* at 3717.

<sup>109</sup> See ADLER, *supra* note 2, at 64. Adler argues that waters with endangered or threatened species by definition do not meet the CWA’s goal of “fishable/swimmable” waters. Adler further points out that there is a significant disconnect in States between the number of ESA-listed species and the number of waters listed as impaired under the CWA. *Id.* at 65, Table 2.12. Adler notes that states with the highest number of listed species have a surprisingly low percentage of impaired waters. *Id.* The present author suggests that the inference that can be drawn from this is that states are not setting water quality standards with the goal of the recovery of listed species. Instead, standards are being set and attained at levels that may pose continued threats to these species. See also Ronald Outen, *A Conservationist’s View*, U.S. Environmental Protection Agency Symposium: The Integrity of Water 215 (1975), for a discussion and interpretation of the legislative history that suggests that the CWA intends water quality to be sufficient to protect the entire ecosystem rather than individual communities. See also NATIONAL COMMISSION ON WATER QUALITY, STAFF DRAFT REPORT IV-6 (1975), for an interpretation of section 101(a)(2) that accords with the above discussion of the legislative history.

<sup>110</sup> 33 U.S.C. § 1362(19) (1994).

<sup>111</sup> S. REP. NO. 92-414, *reprinted in* 1972 U.S.C at 3742. The reports states:

Maintenance of such integrity requires that any changes in the environment resulting in a physical, chemical, or biological change in a pristine water body be of a temporary nature, such that by natural processes, within a few hours, days or weeks, the aquatic ecosystem will return to a state functionally identical to the original.

or weeks.<sup>112</sup> Again, the legislative history clarifies that the CWA is intended to restore ecosystems to natural levels, which logically entails recovering endangered aquatic populations. Thus, water quality standards that are not set at levels requisite to the recovery of a population allow too high a level of pollution in the water body and may violate the CWA.

The above analysis of the plain language and legislative history indicates that the Draft MOA misses the mark as an interpretation of what protections the CWA requires for aquatic life. If EPA interprets its regulations to require only that water quality standards prevent the likely extinction of a species, then those regulations may be vulnerable to challenge as an unreasonable interpretation of the CWA.<sup>113</sup> Because the statutory language and legislative history lead to the conclusion that water quality standards should define conditions that promote the recovery of listed species, EPA's regulations, as interpreted by the Draft MOA, may be invalid under the CWA.

### *3. EPA Guidance Implementing Sections 101 and 303.*

In addition to statutory language and legislative history, an analysis of EPA guidance documents implementing CWA sections 101<sup>114</sup>, 303,<sup>115</sup> and 304<sup>116</sup> reveals that the Draft MOA presents an interpretation inconsistent with EPA's prior statements on what level of protection water quality standards should provide. EPA regulations implement sections 101, 303, and 304 by clarifying and defining water quality standards and the outcomes they are intended to achieve.<sup>117</sup> Presuming that EPA's regulations are ambiguous as to what the term "beneficial use protection" means,<sup>118</sup> several EPA guidance documents interpreting the CWA indicate that the goal Congress intended water quality standards to achieve is actually much higher than ensuring that they do not jeopardize the continued existence of species. As a result, these guidance documents present a conflict with the Draft MOA, and more likely stand as the correct interpretation of EPA's regulatory requirement to protect beneficial uses.

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<sup>112</sup> *Id.*

<sup>113</sup> See *Chevron U.S.A., Inc. v. Nat. Res. Def. Council*, 467 U.S. 837, 842-44 (1984).

<sup>114</sup> 33 U.S.C. § 1251 (1994).

<sup>115</sup> *Id.* at § 1313.

<sup>116</sup> *Id.* at § 1314.

<sup>117</sup> 40 C.F.R. § 131 (1989).

<sup>118</sup> See *infra* note 156.

*a) Defining "Protection of Beneficial Uses"*

Water quality criteria are required to "protect the designated use."<sup>119</sup> Although that phrase provides the sole legal standard by which EPA determines whether a state's water quality criteria comply with the CWA,<sup>120</sup> EPA has never clearly defined what beneficial use protection actually means. Instead, EPA recites in its regulations the statutory language from section 303<sup>121</sup> that states must adopt water quality standards "to protect public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act (the Act)."<sup>122</sup> Notwithstanding the above analysis of the plain meaning of those terms and their legislative history, it is not clear from the CWA or EPA regulations what it means to protect "beneficial uses."<sup>123</sup> Given the ambiguity of the term, it is necessary to look to other relevant interpretations issued by EPA to patch together a working definition of beneficial use protection.

First, EPA guidance for states on developing antidegradation policies provides some clarification regarding the definition of "beneficial use protection." The guidance states that existing uses<sup>124</sup> are protected when water quality criteria are sufficient to ensure surviving, healthy, aquatic

<sup>119</sup> 40 C.F.R. § 131.11(a).

<sup>120</sup> EPA regulations require that water quality criteria support the most sensitive use and require states to submit revised water quality standards to EPA for review and approval. *Id.* EPA states that in reviewing the standards, it will look to determine whether the state adopted water quality criteria "that protect the designated water uses." 40 C.F.R. §§ 131.5(a)(2), 131.6(a) (1989). EPA also looks at whether the state has adopted uses consistent with sections 101(a)(2) and 303(c)(2) that will provide for the protection and propagation of fish, shellfish, and wildlife. 40 C.F.R. § 131.6(a) (1989).

<sup>121</sup> 33 U.S.C. § 1313(c).

<sup>122</sup> 40 C.F.R. § 131.2. EPA goes on to codify the definition of "serve the purposes of the Act" as provided in sections 101(a)(2) and 303(c) of the Act, which require that the standards ensure water quality for the protection and propagation of fish, shellfish, and wildlife. *See infra* notes 123-129 and accompanying text.

<sup>123</sup> The absence of any guidance on what beneficial use protection means is striking. The term is not explicitly defined in the proposal to the first water quality standards promulgation published in the Federal Register, Water Quality Standards Regulation, 47 Fed. Reg. 49, 238 (Oct. 29, 1982), nor is it defined in the preamble to the final Water Quality Standards Regulation, 48 Fed. Reg. 51,405 (Nov. 8, 1983). It is also not defined in subsequent revisions to the Water Quality Standards Regulation, 54 Fed. Reg. 64,894 (1989) and 60 Fed. Reg. 15,387 (1995). Most significantly, EPA has issued an Advanced Notice of Proposed Rulemaking (ANPRM), where it discusses water quality standards concepts and requirements in great depth but nevertheless does not explicitly define the level of protection that the CWA provides beneficial uses. Advanced Notice of Proposed Rulemaking, Water Quality Standards Regulation, 63 Fed. Reg. 36,741 (July 1998). Given the lack of clarity from EPA, it is difficult to discern what legal standard the Agency is using to evaluate states' submissions of revised water quality standards.

<sup>124</sup> EPA defines an "existing use" as one that had been in place in the water body prior to November 28, 1975, regardless of whether the state had established water quality standards at that time. 40 C.F.R. § 131.3 (1999).

populations.<sup>125</sup> Specifically, EPA has stated that “[w]ater quality should be such that it results in no mortality and no significant growth or reproductive impairment of resident species.”<sup>126</sup> A threatened or endangered species is, by definition, arguably one that is experiencing significant growth or reproductive impairment. As a logical consequence, in order to protect existing uses water quality criteria must be established at the level that allows a listed species to recover from that impairment. According to this guidance document, the Draft MOA appears to be an inconsistent, if not plainly incorrect, interpretation of what it means to protect a use according to EPA regulations.

Second, other EPA guidance documents and preamble statements help patch together a working definition of “beneficial use protection.” Starting as early as 1982, EPA suggested in the preamble to a proposed water quality standards regulation that beneficial uses are protected when there is a “viable, balanced, aquatic community.”<sup>127</sup> In that same document, EPA defined “biological integrity” as it is used in section 101(a)(1)<sup>128</sup> of the CWA, declaring that states should evaluate biological integrity in terms of whether “a healthy, balanced ecological community exists.”<sup>129</sup> Perhaps not coincidentally, EPA noted that states should look at several factors listed in the legislative history to section 304 of the CWA<sup>130</sup> in determining whether a water body supports a healthy, balanced ecological community.<sup>131</sup> These include “species composition, abundance, dominance, and diversity” among others.<sup>132</sup> Although these preamble statements do not directly speak to the level of protection required, they nonetheless suggest a water body would not likely exhibit biological integrity where a threatened or endangered species is present. Instead, biological integrity and beneficial use protection exist only when species are abundant and diverse, and water quality is sufficient to

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<sup>125</sup> WQS HANDBOOK, *supra* note 48, 4.4.2, at 5.

<sup>126</sup> *Id.*

<sup>127</sup> 47 Fed. Reg. 49,234 (1982). The statement is found in the context of discussing whether site-specific water quality criteria may be appropriate where section 304 recommended criteria do not reflect local conditions at a site. As a result, EPA noted that a site-specific criterion may not be necessary where there is already a viable, balanced aquatic community at the site, implying that beneficial uses would be protected in such a case. 47 Fed. Reg. 49,234.

<sup>128</sup> 33 U.S.C. § 1251(a)(1).

<sup>129</sup> 47 Fed. Reg. 49,234. EPA goes on to state that states should look at “species composition, abundance, dominance, and diversity; spatial and temporal distribution, growth and reproduction of populations; disease frequency; trophic structure and productivity patterns, presence of opportunistic species; and the occurrence of mass mortalities.” *Id.*

<sup>130</sup> See discussion of the CWA legislative history, *infra* notes 135, 137-40 and accompanying text.

<sup>131</sup> *Id.*

<sup>132</sup> *Id.* See also U.S. EPA, BIOLOGICAL CRITERIA: NATIONAL PROGRAM GUIDANCE FOR SURFACE WATERS 14 (1990) (hereinafter BIOLOGICAL CRITERIA GUIDANCE).

restore endangered species back to healthy reproducing levels.

Third, EPA has made pronouncements in more recent guidance documents indicating that water quality goals should be sufficient to ensure recovery of aquatic species. For example, EPA defined "propagation," as used in sections 101(a)(2) and 303(c)(2), as "the full range of biological conditions necessary to support reproducing populations of all forms of aquatic life and other life that depend on aquatic ecosystems."<sup>133</sup> In yet another guidance document, EPA defines the goals of water quality criteria designed to protect aquatic life.<sup>134</sup> EPA states that aquatic life criteria should protect against not only short-term acute effects of pollutants, but also long-term chronic effects.<sup>135</sup> As a result, when water quality criteria protect against long-term exposure, they arguably protect beneficial uses and ensure the long-term survival of aquatic species. Protection from long-term exposure would clearly promote the recovery of a threatened and endangered species.

Fourth, EPA has endorsed state interpretations of "beneficial use protection" that go far beyond avoidance of jeopardy to listed species. For example, Oregon has defined that term as meaning that a "viable, sustainable population should be maintained at levels that fully utilize the habitat potential of a basin or ecoregion."<sup>136</sup> Oregon further defines "sustainable population" as one that "possesses the ability to survive natural fluctuations in environmental conditions and localized natural events that may impact or eliminate local sub-populations."<sup>137</sup> This definition is strikingly familiar to the EPA's guidance on antidegradation policies, in that it envisions a population able to fully "utilize the habitat potential" of a water body and "survive natural fluctuations." Oregon's definition of beneficial use protection appears to envision no mortality and "no significant impairment of growth or reproduction," and may even provide more protection than EPA's own regulations.

Perhaps more significantly, Oregon's definition of beneficial use protection and the EPA's guidance documents all use language very similar to the FWS' definition of recovery.<sup>138</sup> The FWS definition

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<sup>133</sup> BIOLOGICAL CRITERIA GUIDANCE *supra* note 132, at 9.

<sup>134</sup> WQS HANDBOOK, *supra* note 48, 3.3, at 12.

<sup>135</sup> *Id.*

<sup>136</sup> OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY, 1992-1994 WATER QUALITY STANDARDS REVIEW, FINAL ISSUE PAPER: TEMPERATURE 1-4 (1995) (hereinafter ODEQ FINAL ISSUE PAPER: TEMPERATURE).

<sup>137</sup> *Id.*

<sup>138</sup> *See supra* notes 86-87.

envisions healthy self-sustaining populations, as does the Oregon definition. Further, the FWS definition envisions neutralizing all threats to survival, just as the EPA antidegradation guidance visualizes “no mortality” and “no significant impairment of growth or reproduction.” As a result, it appears that the only plausible interpretation of beneficial use protection, and the one apparently advanced by EPA prior to issuance of the Draft MOA, is one that requires the level of water quality to be sufficient to promote the recovery of threatened and endangered aquatic populations. Where a water quality criterion is not set at that level, it does not protect beneficial uses and fails to “serve the purposes of the Act,” as stated in sections 101 and 303 of the CWA.

### B. Site-Specific Water Quality Criteria

The flexibility that states have to establish site-specific criteria to provide greater protection for threatened and endangered species provides further evidence that water quality standards were intended to move well beyond avoiding jeopardy to listed species. According to EPA regulations, states may adopt EPA recommended guidance criteria, modify those criteria to reflect site specific conditions, or use other scientifically defensible methods to establish their own water quality criteria.<sup>139</sup> Although states have used the “scientifically defensible methods” language in the past to dilute EPA recommended criteria,<sup>140</sup> the site-specific criteria language provides states with authority to take additional measures when the recommended criteria do not go far enough to protect uses.<sup>141</sup> Thus, EPA regulations appear to allow states a great deal of flexibility, recognizing that nationally recommended water quality criteria under section 304(a) may either be over-protective or under-protective depending on various site-specific characteristics.<sup>142</sup>

<sup>139</sup> 40 C.F.R. § 131.11(b) (2000).

<sup>140</sup> See e.g., *NRDC v. EPA*, 16 F.3d 1395 (4<sup>th</sup> Cir. 1993) (Court deferred to EPA’s approval of Maryland and Virginia’s water quality criteria for dioxin that were based on scientifically defensible methods, despite the fact that the criteria were less protective than EPA’s recommended criterion). See also *Miss. Comm’n on Natural Res. v. Costle*, 625 F.2d 1269 (5<sup>th</sup> Cir. 1980) (Court deferred to EPA’s disapproval of Mississippi’s dissolved oxygen criterion that was not based on scientifically defensible methods).

<sup>141</sup> State authority to move beyond basic CWA requirements can be found in section 510 of the CWA, 33 U.S.C. § 1370. That section, known as the primacy provision, states that nothing in this chapter shall:

(1) preclude or deny the right of any State or political subdivision thereof or interstate agency to adopt or enforce (A) any standard or limitation respecting discharges of pollutants, or (B) any requirement respecting control or abatement of pollution;...

<sup>142</sup> WQS HANDBOOK, *supra* note 48, 3.7.2, at 40. For example, the nationally recommended criterion may be underprotective where it fails to protect species that are already under considerable stress due to other factors, such as overharvest, predation, or habitat modification. *Id.*

These site-specific characteristics fall into two categories according to EPA: 1) where certain species have a heightened sensitivity to pollution at the site, and 2) where physical or chemical characteristics alter the toxicity of a chemical pollutant in the body of water.<sup>143</sup>

According to the EPA, establishing a site-specific criterion is appropriate where a species that is “critical” to the site is particularly sensitive to the pollutant and requires a lower criterion to ensure a healthy population.<sup>144</sup> EPA states that an example of a critical species is one that is listed as threatened or endangered under section 4 of the ESA.<sup>145</sup> It appears to be Agency policy to encourage states to develop site-specific criteria where listed species are either a designated or existing use, or both. This specific guidance language indicates that a site-specific criterion may not only be allowed under the CWA, but it may be highly encouraged where the nationally recommended criterion is inadequate to ensure a healthy, thriving population, particularly where the use consists of threatened or endangered species.<sup>146</sup>

### C. Conclusion

Although the Draft MOA’s efforts to ensure that water quality standards do not prevent jeopardy to listed species is an admirable step forward in integrating the CWA and ESA, the Draft MOA seems to miss the mark by focusing only on jeopardy under the ESA. The goal of water quality standards should be much higher than mere avoidance of jeopardy to aquatic species. According to a plain reading of the CWA, its legislative history, and EPA guidance documents interpreting its own regulations, water quality standards should be set at levels that will contribute to the recovery of ailing populations and bring them

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<sup>143</sup> *Id.* at 3.7.1, 38. EPA states that, as an example of this latter interaction, “alkalinity, hardness, pH, suspended solids and salinity influence the concentrations of toxic forms of some heavy metals, ammonia, or other chemicals.” *Id.*

<sup>144</sup> WQS HANDBOOK, *supra* note 48, 3.7.4, at 41.

<sup>145</sup> *Id.*

<sup>146</sup> WQS HANDBOOK, *supra* note 48, 3.7.2, at 40. According to EPA, the site-specific criterion is intended to supplement rather than replace the nationally recommended criterion to provide the maximum level of protection at the site. *Id.* at 38. EPA guidance also makes clear that site-specific criteria are optional for states. *Id.* A state can more broadly define the geographic scope of a site-specific criterion than the name suggests. EPA guidance states that a site may be an entire State, a region, a watershed, water body, or segment of a water body. WQS HANDBOOK, at 3.7.3, 41. EPA has further stated that a site can be as large as a “generally consistent biogeographic zone permits,” providing as examples large segments of the Chesapeake Bay, Lake Michigan, or the Ohio River. *Id.* According to EPA, all that really matters is whether the concept of the site is consistent with the need for developing a site-specific criterion. WQS HANDBOOK, at 3.7.3, 41. Thus, where application of a national criterion over a wide spatial area of water bodies fails to protect designated uses, as a matter of policy EPA or the state should develop a site-specific criterion for those water bodies to ensure a healthy population.

back to healthy, natural levels. Ensuring that water quality does not cause extinction to a listed species, while an important first step, is only half the battle. Recovery is the next step, and the CWA provides the necessary authority and mandate to take it.

### III Section 7(a)(1) of the ESA and *Sierra Club v. Glickman*

#### A. *Sierra Club v. Glickman*

In addition to the CWA's goal of providing water quality sufficient to recover listed species, a recent pronouncement by the Fifth Circuit on the scope of section 7(a)(1) of the ESA places additional pressure on EPA to use its authority under the CWA to protect listed species. In *Sierra Club v. Glickman*, the Fifth Circuit held that all federal agencies are under a mandatory duty, enforceable by citizen suit, to develop programs for the conservation of listed species and to consult with the Services on those programs with respect to each individual species.<sup>147</sup> In that case, an environmental group challenged the USDA's failure to comply with section 7(a)(1) of the ESA. The USDA managed the Edwards Aquifer, a 175-mile long underground aquifer spanning eight counties in central Texas.<sup>148</sup> The Edwards Aquifer supplies water to farmers for irrigation and the general public as a source of drinking water.<sup>149</sup> At the same time, when undisturbed by human extraction, the Aquifer recharges surface waters on which five listed endangered species depend.<sup>150</sup>

The Sierra Club alleged in its complaint that the USDA, in its management of the Edwards Aquifer, had failed to consult with the Fish and Wildlife Service and had failed to use its authorities to carry out programs for the conservation of the Edwards-dependent species pursuant to section 7(a)(1) of the ESA.<sup>151</sup> The Sierra Club prevailed in district court and the USDA appealed.<sup>152</sup> The court agreed with the Sierra Club, holding that section 7(a)(1) imposed a mandatory duty on all federal agencies to develop species-specific conservation plans in consultation with the Secretary of Interior.

<sup>147</sup> *Sierra Club v. Glickman*, 156 F.3d 606, 617-18 (5<sup>th</sup> Cir. 1998). For a brief discussion of this case, see Craig N. Johnston, 1998 - *The Year in Review*, 29 ENVTL. L. 69, 96-97 (1999).

<sup>148</sup> For a physical and geological description of the Edwards Aquifer, see Todd H. Votteler, *The Little Fish that Roared: The New Endangered Species Act, State Groundwater Law, and Private Property Rights Collide Over the Texas Edwards Aquifer*, 28 ENVTL. L. 845, 846-50 (1998).

<sup>149</sup> *Id.* at 609.

<sup>150</sup> *Id.* According to the court, these species are the fountain darter, the San Marcos gambusia, the San Marcos salamander, the Texas blind salamander, and the Texas wild rice.

<sup>151</sup> *Id.* at 610.

<sup>152</sup> *Id.* at 611.

In so holding, the Fifth Circuit reasoned that the ESA “represented the most comprehensive legislation for the preservation of endangered species” ever enacted.<sup>153</sup> The court pointed to the purposes of the Act and the definition of “conserve” as the “use of all methods...which are necessary” to bring the species back from the brink of extinction.<sup>154</sup> In defining “conserve” with such vigor the Fifth Circuit reasoned that Congress clearly demonstrated a concern for the “conservation” of listed species as the term is used in section 7(a)(1).<sup>155</sup> Therefore, the court concluded that the only logical reading of section 7(a)(1) must be that agencies have a specialized, rather than generalized, duty to consult on *specific* programs designed to benefit *specific* species.<sup>156</sup> Moreover, because the USDA did not challenge the scope of the lower court’s injunction on appeal, the Fifth Circuit allowed the injunction to stand, requiring USDA to “develop, in consultation with FWS, ‘an organized program for utilizing USDA’s authorities for the conservation of the Edwards-dependent endangered and threatened species’”.<sup>157</sup>

The holding of *Sierra Club v. Glickman* is important because it suggests that all federal agencies have a duty to conserve independent of their duty to prevent jeopardy to listed species under section 7(a)(2) of the ESA. Although all of the Fifth Circuit’s analysis of the duty to conserve was couched in a discussion of standing and subject matter jurisdiction, the substantive issue in the case was whether section 7(a)(1) imposed a mandatory duty on the USDA to develop a species specific conservation plan in consultation with the FWS. In holding that the USDA does have that duty, the Fifth Circuit’s decision could be read to mean that all federal agencies are required to develop a plan in consultation with the Services for the conservation and recovery of listed species. This would be true regardless of whether the agency is engaged in specific actions that may jeopardize a given species. As long as the agency has discretion to make decisions that may impact a listed species, the duty to consult and conserve is triggered.

#### B. Was *Sierra Club v. Glickman* Correct?

In finding that USDA had a mandatory duty to conserve under section 7(a)(1), the Fifth Circuit relied heavily on *Tennessee Valley Authority v. Hill*.<sup>158</sup> In *TVA v. Hill*, the court enjoined the construction of

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<sup>153</sup> *Sierra Club v. Glickman*, 156 F.3d at 611.

<sup>154</sup> *Id.*

<sup>155</sup> *Id.*

<sup>156</sup> *Id.* (emphasis added).

<sup>157</sup> *Id.* at 618.

<sup>158</sup> *Tennessee Valley Authority v. Hill*, 437 U.S. 153 (1978).

the nearly completed Tellico dam project on the Little Tennessee River after the Fish and Wildlife Service discovered an endangered population of snail darters in the waters immediately affected by dam construction. The court indicated that all federal agencies were under a duty to conserve threatened and endangered species.<sup>159</sup> In so holding, the Supreme Court pointed to the statutory definition of “conservation” as “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 were no longer necessary.<sup>160</sup>

The Fifth Circuit’s reliance on *TVA v. Hill* to argue that section 7(a)(1) imposes a mandatory duty to develop conservation programs for each individual species is somewhat troubling. Although *TVA v. Hill* has been hailed as the most significant decision affecting implementation of the ESA,<sup>161</sup> the Supreme Court in *TVA v. Hill* was unclear as to which provision of section 7 formed the basis of its holding. The court’s holding seemed to be grounded in TVA’s substantive obligations to prevent jeopardy under section 7(a)(2), while it referred more frequently to the separate duty to conserve under section 7(a)(1).<sup>162</sup> Equally problematic is that in *TVA v. Hill* the FWS determined that the construction of the dam would jeopardize the snail darter, whereas in *Sierra Club v. Glickman* the FWS made no such determination because the USDA had not yet consulted with them. As a consequence, the Fifth Circuit’s reliance on *TVA v. Hill*’s muddled discussion of section 7 seems incomplete: *TVA v. Hill* gave little indication when the duty to conserve is triggered, whether the duty relates to specific species, or whether consultation is actually required

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<sup>159</sup> *Id.* at 180. The Court was alluding to section 2(c), which states that “all Federal departments and agencies shall seek to conserve endangered species and threatened species...” 16 U.S.C. §1531 (2) (c) (1988).

<sup>160</sup> *Id.*, citing 16 U.S.C. § 1532(3) (1988).

<sup>161</sup> For a candid analysis of *TVA v. Hill* and its effect on modern ESA implementation, see Zygmunt J.B. Plater, *The Embattled Social Utilities of the Endangered Species Act – A Noah Presumption and a Caution against Putting Gasmasks on the Canaries in the Coalmine*, 27 ENVTL. L. 845, 854 (1997) and sources contained therein.

<sup>162</sup> See *Pyramid Lake Paiute Tribe of Indians v. U.S. Dep’t of Navy*, 898 F.2d 1410, 1418 (9<sup>th</sup> Cir. 1990). The court stated that “while the Court in *TVA* referred to section 7(a)(1), its holding was premised upon section 7(a)(2).” See also Ruhl, *supra* note 63, at 1126, who also admitted that “the principal basis of the Court’s interpretation of section 7(a)(2) is found in section 7(a)(1).” However, Ruhl suggested that the fact that Congress has not amended section 7(a)(1) (as it did with section 7(a)(2) in spite the outcome of *TVA v. Hill*) suggests that section 7(a)(1) poses a separate and distinct duty on federal agencies to conserve listed species. See, e.g., *Strahan v. Linnon*, 967 F. Supp. 581, 595 (D. Mass. 1997) (“[T]he holding in *TVA* was premised on §7(a)(2), while §7(a)(1) is at issue here.”). For further discussion of *Strahan*, see *infra* note 240. These sources demonstrate the confusion surrounding which provision actually formed the basis of the Supreme Court’s decision in *TVA v. Hill*.

as part of section 7(a)(1).<sup>163</sup>

1. *Plain Meaning of Section 7(a)(1).*

Irrespective of the Fifth Circuit's reliance on *TVA v. Hill*, the result in *Sierra Club v. Glickman* is consistent with an analysis of the plain language of section 7(a)(1). First, as noted in *Sierra Club v. Glickman*,<sup>164</sup> section 7(a)(1) is mandatory. It provides that all federal agencies "shall" use their authority to carry out programs for the conservation of threatened and endangered species.<sup>165</sup> There is little question that "shall" indicates a clear mandatory duty,<sup>166</sup> and no court to date has suggested that "shall" means otherwise in the context of section 7(a)(1).<sup>167</sup>

In addition, the Fifth Circuit in *Sierra Club v. Glickman* was adamant that the plain language requires that this mandatory duty apply to each individually listed species, not only to endangered species in general. The plain meaning of section 7(a)(1), when read in the context of the definition of "conserve,"<sup>168</sup> indicates that the section 7(a)(1) duty applies with equal vigor to each species listed under the ESA.<sup>169</sup> The definition of "conserve" in section 2 of the ESA requires each federal agency to use "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 chapter are no longer necessary."<sup>170</sup> By focusing on "any" species, Congress intended "conservation" to apply to each species listed under the ESA.<sup>171</sup> Moreover, in creating section 7(a)(1) and requiring federal agencies to carry out programs for

<sup>163</sup> For a discussion and analysis of cases interpreting section 7(a)(1), see ROHLF, *supra* note 58, at 92-100 (1989). Professor Rohlf contends that case law is unclear as to what actions trigger section 7(a)(1)'s duty to conserve. *Id.* at 97.

<sup>164</sup> *Sierra Club v. Glickman*, 156 F.3d at 616. "Given the plain language of the statute and its legislative history, we conclude that Congress intended to impose an affirmative duty on each federal agency to conserve each of the species listed pursuant to §1533." *Id.*

<sup>165</sup> 16 U.S.C. §1536(a)(1) (1988).

<sup>166</sup> BLACK'S LAW DICTIONARY 1379-80 (7<sup>th</sup> ed. 1999) ("shall. *vb.* Has duty to; more broadly, is required to;...").

<sup>167</sup> This last statement should be qualified. The Ninth Circuit, in *Carson Truckee Water Conservancy District v. Clark*, declined to decide whether the Secretary of Interior was required to conserve the endangered *cui-ui* if faced with competing demands on water withdrawals authorized by other legislation. 741 F.2d 257, 262 n.5 (9<sup>th</sup> Cir. 1984). However, this decision is of little concern for the present purpose because, as discussed later in the text, the Ninth Circuit did recognize the Secretary of Interior's affirmative duty to conserve the *cui-ui* under section 7(a)(1) in that case. *Id.*

<sup>168</sup> 16 U.S.C. § 1532(3) (1988).

<sup>169</sup> *Sierra Club v. Glickman*, 156 F.3d. at 616.

<sup>170</sup> 16 U.S.C. § 1532(3) (1988) (emphasis added).

<sup>171</sup> See *Sierra Club v. Glickman*, 156 F.3d at 615.

the “conservation” of listed species, Congress intended section 7(a)(1) to apply to individual species.

## 2. *Prior Case Law Interpreting Section 7(a)(1)*

The holding in *Sierra Club v. Glickman* is also consistent with a history of prior case law recognizing a federal agency’s affirmative duty to implement programs for the conservation of listed species under Section 7(a)(1). One of the first discussions of section 7(a)(1) arose in *Defenders of Wildlife v. Andrus*.<sup>172</sup> In that case the Plaintiff challenged a decision by the Secretary of Interior permitting twilight shooting of waterfowl in hunting areas. The problem was one of mistaken identification: the hunters would mistake game fowl for endangered fowl during the dawn and dusk hours of shooting. The Plaintiff argued that, as a result, the regulations allowing hunting to occur during these hours did not protect threatened and endangered species.<sup>173</sup> The FWS countered that it was not required to prohibit hunting during these hours because habitat decline was the principal cause of endangerment to these species, not over-hunting.<sup>174</sup> The court rejected that contention, holding that the regulations were arbitrary because FWS failed to consider the extent to which twilight shooting contributes to the extinction of endangered waterfowl in hunting areas.<sup>175</sup> In so holding, the court stated that FWS “must do far more than merely avoid the elimination of protected species” and that the agency has an affirmative duty to increase the population of those species.<sup>176</sup>

The court in *Connor v. Andrus* also recognized that the Fish and Wildlife Service has an affirmative duty to conserve listed species, in this case the population of Mexican ducks, citing *Defenders of Wildlife v. Andrus*.<sup>177</sup> There the court held that in meeting its duty to conserve under Section 7(a)(1), a federal agency must develop a plan that actually attacks the source of the problem for listed species.<sup>178</sup> In *Connor*, a hunter’s organization brought suit to enjoin regulations on Mexican

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<sup>172</sup> *Defenders of Wildlife v. Andrus*, 428 F. Supp. 167 (D.D.C. 1977).

<sup>173</sup> *Id.* at 168.

<sup>174</sup> *Id.* at 169.

<sup>175</sup> *Id.* at 170.

<sup>176</sup> *Id.* Although this decision spoke to the Secretary’s duty to conserve, rather than that of a non-Interior agency’s, at least one case has suggested that the duty to conserve is no different between the Secretary and other federal agencies. *Pyramid Lake*, 898 F.2d at 1417, n.15. In a footnote in that case, the Ninth circuit stated that the agency fulfilled its duty to conserve when it consulted with the Secretary. *Id.*

<sup>177</sup> *Connor v. Andrus*, 453 F. Supp. 1037, 1039 (W.D. Tex. 1978).

<sup>178</sup> *Id.*

duck hunting.<sup>179</sup> In an effort to comply with section 7(a)(1), the Fish and Wildlife Service restricted duck hunting to certain specified areas of Texas, New Mexico, and western Arizona. It took this action in spite of the fact that the Biological Opinion conducted under the Act found that the regulations were unlikely to jeopardize the continued existence of the Mexican duck.<sup>180</sup>

Recognizing the duty to conserve, the district court stated “such a duty is not met by promulgating regulations which do not attack the cause or causes of population depletion of a species.”<sup>181</sup> Thus, the court held that the record did not support a finding that over-hunting was the source of the Mexican duck’s woes.<sup>182</sup> As a result, a prohibition would not meet the Secretary’s duty to conserve. If anything, the court stated, the regulations would have the opposite effect because people who would preserve the habitat for duck hunting were converting the marshy areas into farmland, leading to habitat destruction.<sup>183</sup> This decision is important not only because it shows that section 7(a)(1) is mandatory, but also because it illustrates that courts are willing to look at the substance of an agency’s actions to determine whether the mandate has been met.

*Pyramid Lake Paiute Tribe of Indians v. U.S. Dep’t of Navy*<sup>184</sup> and *Carson Truckee Water Conservancy District v. Clark*<sup>185</sup> have both recognized an affirmative duty under section 7(a)(1), though both have declined to consider its scope.<sup>186</sup> In *Carson Truckee Water Conservancy District v. Clark*, the issue was whether the Department of Interior was required to sell its remaining water allocations under the Washoe Project Act, rather than save the water for the conservation of an endangered species of fish, the cui-ui.<sup>187</sup> The appellants argued that the Secretary is only authorized to take actions that avoid “jeopardizing” the continued existence of a species under section 7(a)(2) of the Act.<sup>188</sup> The Washoe Project Act, however, did not require the Secretary to sell remaining water allocations. Instead, section 7(a)(1) provided the Secretary with ample authority to withhold the sale of water if doing so

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<sup>179</sup> *Id.*

<sup>180</sup> *Id.* at 1038.

<sup>181</sup> *Id.*

<sup>182</sup> *Id.* at 1041.

<sup>183</sup> *Id.*

<sup>184</sup> *Pyramid Lake*, 898 F.2d at 1416-17.

<sup>185</sup> *Carson Truckee*, 741 F.2d at 261-62.

<sup>186</sup> See, e.g., *Pyramid Lake*, 898 F.2d at 1416-18; see also, e.g., *Carson Truckee*, 741 F.2d at 262 n5.

<sup>187</sup> *Carson-Truckee*, 741 F.2d 257.

<sup>188</sup> *Id.* at 261.

would protect the *cui-ui*.<sup>189</sup> Although the court declined to determine whether section 7(a)(1) would have required the Secretary to withhold the sale of water if forced to choose between the Washoe Project Act and section 7(a)(1),<sup>190</sup> the holding nonetheless recognized the Secretary’s affirmative duties under section 7(a)(1).

In *Pyramid Lake*, the tribe challenged the U.S. Navy’s alleged failure under section 7(a)(1) to conserve the endangered *cui-ui*, a species of fish, on and near the Naval Air Station by refusing to reduce its water allocation from a reservoir that provided water for nearby Pyramid Lake.<sup>191</sup> The tribe argued that the Navy was required to adopt conservation measures above and beyond that which it had already implemented. The court held that section 7(a)(1) imposes a mandatory duty on federal agencies to conserve listed species, and that the Navy had satisfied that duty by developing a restoration plan for the *cui-ui* in consultation with FWS.<sup>192</sup> In so holding, the court reasoned that the Navy was to be given some discretion in meeting its section 7(a)(1) duties, and that the tribe’s proposal would have an insignificant effect on the conservation of the *cui-ui*.<sup>193</sup> Although the tribe ultimately lost the war in *Pyramid Lake*, it won the battle on whether section 7(a)(1) was mandatory.<sup>194</sup>

### C. Caveats, Complications, and Solutions

Assuming *Sierra Club v. Glickman* was correctly decided, there are at least three caveats to the argument that *Sierra Club v. Glickman*

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<sup>189</sup> *Id.*

<sup>190</sup> *Id.* at 262 n.5.

<sup>191</sup> *Pyramid Lake*, 898 F.2d at 1417.

<sup>192</sup> *Id.* at 1417-18.

<sup>193</sup> *Id.*

<sup>194</sup> See Ruhl, *supra* note 63, at 1129-35 for a somewhat different analysis of *Defenders, Connor, Carson Truckee*, and *Pyramid Lake*. Ruhl analyzes those cases to conclude that section 7(a)(1) may be used as a “shield” to protect agency decisions from anti-environmental attacks to provide more protections for listed species; as a “sword” against agency decisions not to promote conservation; and, finally, as a “prod” to force agencies to take action for the benefit of listed species. *Id.* See also ROHLF, *supra* note 58, for an analysis of *Carson Truckee* and *Pyramid Lake*. See *Florida Key Deer v. Stickney* which held that the Federal Emergency Management Agency (“FEMA”) had violated its duty to conserve the Florida Key Deer in administering the National Flood Insurance Program (“NFIP”). 864 F. Supp. 1222, 1238 (S.D. Fla. 1994). The court specifically referred to the section 7(a)(1) duty as “mandatory,” and cited *Carson Truckee* and *Pyramid Lake* as support for this interpretation. Most significantly, the court recognized that the section 7(a)(1) claim, in conjunction with FEMA’s violation of section 7(a)(2), could be brought under the citizen’s suit provision of the ESA. This is significant because citizen suits under the ESA are available to enjoin any person, including any agency of the federal government, from violating any provision of the ESA. By inference, the decision could be read as holding that section 7(a)(1) imposes a mandatory duty on all federal agencies when the court allowed plaintiffs to proceed under the ESA citizen suit provision.

requires the EPA to develop a species-specific conservation plan. First, federal courts have been clear that a federal agency's duty to conserve under section 7(a)(1) only extends as far as its authority under its programmatic statute. Section 7(a)(1) does not expand an agency's substantive powers.<sup>195</sup> In *Platte River Whooping Crane Critical Habitat Maintenance Trust v. FERC*, an environmental group filed a series of lawsuits against the Federal Energy Regulatory Commission ("FERC") for its failure to impose protective conditions for wildlife in annual licenses issued to two hydroelectric projects on the Platte River.<sup>196</sup>

In an earlier case, the D.C. Circuit determined that FERC had abused its discretion in failing to explore the need for protective conditions on the annual licenses, and remanded the case back to FERC for further consideration.<sup>197</sup> FERC decided that it could impose protective conditions on one of the two licenses, Nebraska Public Power District ("NPPD"), but lacked statutory authority under the Federal Power Act to impose conditions on the other, Nebraska Public Power and Irrigation District ("Central"). The Trust appealed, arguing that ESA Section 7 required FERC to amend Central's license. The court rejected the argument, reasoning that section 7 "directs agencies to 'utilize their authorities' to carry out the ESA's objectives; it does not expand the powers conferred on an agency by its enabling act."<sup>198</sup> Section 7, according to the court, had no place in FERC decision-making under the FPA because FERC's discretion was limited to the power granted by that statute.<sup>199</sup>

A second complication arises from the discretionary nature of an agency's duty to conserve. *Sierra Club v. Glickman* and prior cases have declined to consider what specific actions a federal agency must take in meeting its duty to conserve.<sup>200</sup> The court in *Sierra Club v.*

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<sup>195</sup> *Platte River Whooping Crane Critical Habitat Maintenance Trust v. FERC*, 962 F.2d 27 (D.C. Cir. 1992) [hereinafter *Platte River I*].

<sup>196</sup> The Platte River provides habitat for a number of threatened and endangered migratory birds, including the whooping crane, the bald eagle, the interior least tern, and the piping plover. *Id.* at 30.

<sup>197</sup> *Platte River Whooping Crane Critical Habitat Maintenance Trust v. FERC*, 876 F.2d 109, 119 (D.C. Cir. 1989) [hereinafter *Platte River II*].

<sup>198</sup> *Platte River I*, 962 F.2d at 33.

<sup>199</sup> *Id.*

<sup>200</sup> See *infra* notes 217-226, and accompanying text citing *Carson Truckee and Pyramid Lake*. See also *Hawksbill Sea Turtle v. Fed. Emergency Mgmt. Agency*, 11 F. Supp. 2d 529, 541-42 (D.V.I. 1998). In *Hawksbill*, plaintiffs challenged FEMA's alleged failure to comply with section 7(a)(1) with respect to the endangered hawksbill sea turtle and tree boa in constructing emergency housing for hurricane victims. The court held that FEMA had complied with section 7(a)(1) by developing a Mitigation Plan for both species. In so holding, the court reasoned that plaintiffs had failed to identify additional conservation measures that FEMA should have included in its Mitigation Plan. The issue was not whether FEMA was required to comply with section 7(a)(1)

*Glickman* stated that it would not address whether a federal agency would be liable under section 7(a)(1) for failing to do enough to benefit a listed species when that species is not in risk of jeopardy.<sup>201</sup> The court also made clear it would not consider whether an agency would be liable under section 7(a)(1) if the program adopted to recover a listed species were less effective than other options available to the Agency.<sup>202</sup> Therefore, *Sierra Club v. Glickman* made clear that although the duty to conserve under section 7(a)(1) is mandatory, how the Agency meets its obligations is discretionary.<sup>203</sup>

In spite of the discretionary nature of the duty to conserve, it is worth noting that the discretion is not unbounded.<sup>204</sup> Section 7(a)(1) presents a substantive end to be achieved. First, federal agencies must act affirmatively to increase the numbers of threatened and endangered species to the point of their recovery.<sup>205</sup> Second, although the plaintiffs in *Pyramid Lake* did not prevail on their section 7(a)(1) claim, the court interpreted section 7(a)(1) to require agencies to significantly improve

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by consulting with FWS and developing a conservation plan, because it clearly had. Plaintiff’s complaint in this case instead appeared to go to the adequacy of the particular mitigation measures, and not whether section 7(a)(1) required those particular measures to be taken.

<sup>201</sup> *Sierra Club v. Glickman*, 156 F.3d at 613.

<sup>202</sup> *Id.* Specifically, the court stated:

We likewise express no opinion as to whether a plaintiff could have standing to challenge a decision of a federal agency to adopt, after consultation with FWS, one program over another solely on the grounds that the program not adopted would do more for the recovery of the endangered species than the program that was adopted, when the program that was adopted would nonetheless either benefit or not adversely affect the species in question. *Id.*

<sup>203</sup> Adding to this confusion is the fact that the regulations implementing the ESA do not appear to make section 7(a)(1) mandatory. Interagency Cooperation – Endangered Species Act of 1973, amended by, 50 C.F.R. § 402.14(j) (1999) (hereinafter Joint Services Regulations); see also ROHLF, *supra* note 58, at 97; *Pyramid Lake*, 898 F.2d at 1417-1418. Joint Services Regulations state: “The Service may provide with the biological opinion a statement containing discretionary conservation recommendations. *Conservation recommendations are advisory and are not intended to have any binding legal force.*” 50 C.F.R. § 402.14(j) (1999) (emphasis added). If the efforts to conserve listed species are discretionary, how can the section 7(a)(1) duty be considered mandatory? One likely answer is that the regulations can be read to speak only to *how* an agency meets its section 7(a)(1) mandate, not whether it *must*. That is, an agency must still comply with section 7(a)(1) by consulting with the Joint Services Regulations and developing a conservation plan, but they are given discretion as to whether to implement their own program or adopt the recommendations of the Joint Services Regulations. Therefore, *Sierra Club v. Glickman* does not appear to pose any conflict with those regulations. Moreover, the regulations do not impact EPA’s mandatory duty to develop a conservation plan; they merely emphasize that the contents of that plan are discretionary with the Agency.

<sup>204</sup> See *Sierra Club v. Glickman*, 156 F.3d at 617. The Fifth Circuit rejected USDA’s argument that because it has discretion in making program decisions, it has unreviewable discretion to ignore §7(a)(1) altogether. The court stated that “[a] mission agency’s discretion to make the final substantive decision under its program authorities does not mean that the agency has unlimited unreviewable discretion.” *Id.*, citing *Bennett v. Spear*, 117 S.Ct. 1154, 1166 (1997).

<sup>205</sup> See discussion of *Defenders*, 428 F. Supp. 167, section VI(B).

conditions for endangered species. Recall that in *Pyramid Lake*<sup>206</sup> the tribe contended that the Navy's failure to choose the tribe's suggested plan for reducing its water allocation breached its duty to conserve the *cui-ui*.<sup>207</sup> However, the court held that the Navy was not obligated to adopt the tribe's proposal because it would have an "insignificant effect" on the availability of water for the *cui-ui*.<sup>208</sup> In so holding, the court reasoned that "an 'insignificant' conservation measure in the context of the ESA is oxymoronic."<sup>209</sup> Therefore, the conservation activities that the agency *does* adopt must have some beneficial effect beyond avoiding jeopardy. Finally, in addition to taking action to increase the population of a protected species, Section 7(a)(1) efforts must be aimed at curing the threats to those species.<sup>210</sup>

A third complication arises from the apparent overlap between section 7(a)(2) and section 7(a)(1).<sup>211</sup> At first glance, the duty to conserve in section 7(a)(1) appears to make the duty to prevent jeopardy in section 7(a)(2) obsolete. This problem is highlighted in *Hawksbill*

<sup>206</sup> *Pyramid Lake*, 898 F.2d 1410.

<sup>207</sup> *Id.* at 1413.

<sup>208</sup> *Id.* at 1418.

<sup>209</sup> *Id.* Despite the Tribe's citation to a portion of the record that indicated reducing the water diversions to the Naval Air Station would promote the conservation of the *cui-ui*, the Ninth Circuit remained unconvinced. The record did not indicate to what extent those reductions would benefit the *cui-ui*, nor did it indicate that reducing water diversions was the only option available to the Navy for promoting the conservation of the *cui-ui*.

<sup>210</sup> *Connor*, 453 F. Supp. at 1039. But, the court said, "such a duty is not met by promulgating regulations which do not attack the cause or causes of population depletion of a species." *Id.* Thus, the court found that the record did not support a finding that over-hunting was the source of the Mexican duck's woes. *Id.* at 1041. As a result, a prohibition would not meet the Secretary's duty to conserve. If anything, the court stated, the regulations would have the opposite effect. People who would preserve the habitat for duck hunting were converting the marshy areas into farmland, leading to habitat destruction. *Id.*

<sup>211</sup> See ROHLF, *supra* note 58, at 96-97. Rohlff identifies overlap between these two provisions as a significant problem in implementing the conservation mandates of the ESA. Specifically, he states:

Sections 7(a)(1) and 2(c) affirmatively direct agencies to use all methods necessary to promote recovery of listed species, while section 7(a)(2) prohibits agency actions jeopardizing species or adversely affecting critical habitat. If both mandates apply to all agency actions...the directives to conserve listed species would subsume the section 7(a)(2) jeopardy provisions. *Id.*

Professor Rohlff proposes to solve the problem of overlap by interpreting the recovery plans developed by NMFS and FWS under section 4 of the ESA to provide the necessary trigger for an agency's section 7(a)(1) duties. *Id.* at 98. See also Ruhl, *supra* note 63, at 1111. Ruhl agrees and proposes that the problem of overlap can be solved by reading section 7(a)(1) to require federal agencies to initiate programs that will implement recovery plans. Specifically, he states:

The only construction that fulfills Congress' original legislative vision and harmonizes section 7(a)(1) with other ESA provisions is that section 7(a)(1) imposes on all federal agencies a duty to initiate programs, either within or independent of their primary missions, which will implement the so-called recovery plans that FWS and NMFS develop under section 4 of the ESA to rescue species from endangered or threatened status. *Id.*

*Sea Turtle v. Federal Emergency Management Agency*.<sup>212</sup> In that case, the court rejected the plaintiff’s claim that FEMA had failed to comply with section 7(a)(1) in constructing an emergency shelter for 1995 Hurricane Marilyn victims on habitat for the endangered tree boa and the hawksbill sea turtle.<sup>213</sup> FEMA requested section 7(a)(2) consultation with the Fish and Wildlife Service. As part of that request, FEMA submitted a Tree Boa Mitigation Plan to FWS that detailed procedures designed to mitigate adverse impacts on the species. Based in part on FEMA’s mitigation plan, FWS determined that the emergency shelter would not have adverse effects on the tree boa or its habitat. A group of homeowners and a condominium association that lived near the affected area filed suit, alleging that FEMA had failed to meet its duty to conserve under section 7(a)(1).<sup>214</sup> The court rejected the plaintiffs’ argument, reasoning that federal agencies have broad discretion in determining how to meet their duties under section 7(a)(1).<sup>215</sup> The court noted that FEMA had adopted specific and targeted mitigation measures to conserve the tree boa and the nearby bay waters.<sup>216</sup>

The outcome in *Hawksbill Sea Turtle* is troubling because the Tree Boa Mitigation Plan formed the basis of the FWS’s “not likely to adversely affect” determination under section 7(a)(2), and also satisfied FEMA’s section 7(a)(1) duty to conserve the tree boa. This outcome confuses the role of section 7(a)(1), and eviscerates the provision of any meaningful substance. Section 7(a)(1) requires an agency to use its authorities for “conservation.”<sup>217</sup> Recall that conservation requires an agency to use any means necessary to bring a species back from the brink of extinction.<sup>218</sup> It strains reason to argue that construction of an emergency shelter for hurricane victims was actually intended to “conserve” the tree boa. Instead, the emergency shelter would inevitably cause some harm to the tree boa; the only question was how much. The Mitigation Plan was designed to mitigate that harm, not to recover the species from its endangered status or necessarily play a role in a larger FWS recovery plan for the tree boa. The reasoning in *Sierra Club v. Glickman* may prevent this kind of overlap because it suggests

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<sup>212</sup> *Hawksbill Sea Turtle*, 11 F. Supp. 2d at 541-42. See also Johnston, *supra* note 180, at 96; Strahan v. Linnon, 967 F. Supp. 581, 596 (D. Mass. 1997).

<sup>213</sup> *Hawksbill Sea Turtle*, 11 F. Supp. 2d at 535.

<sup>214</sup> *Id.*

<sup>215</sup> *Id.* at 542.

<sup>216</sup> *Id.*

<sup>217</sup> 16 U.S.C. § 1536(a)(1) (1988). See also Ruhl, *supra* note 63, at 1119 (“Section 7(a)(1) is the first, last, and only place in section 7 that mentions any federal agency species conservation duty.”)

<sup>218</sup> 16 U.S.C. § 1532(3) (1988).

that every federal agency must develop a species-specific conservation plan under section 7(a)(1), irrespective of its duty to consult on specific federal agency actions under Section 7(a)(2).

#### IV Water Quality Criteria and EPA's Duty to Conserve

The holding in *Sierra Club v. Glickman* may apply to EPA's implementation of the water quality standards provisions of the CWA. Under *Sierra Club v. Glickman*, EPA must develop a species-specific plan for the conservation of threatened and endangered populations of aquatic species in navigable waters of the United States. Moreover, EPA is required to consult with the Services on that plan with respect to each individually listed species affected. Water quality criteria have the potential to play a significant, if not mandatory, role in EPA's efforts to meet its section 7(a)(1) obligations. As a result, section 7(a)(1) can act as a vehicle for implementing the water quality standards provisions of the CWA in a way that promotes recovery of threatened and endangered aquatic species.

Although the duty to develop a conservation plan under section 7(a)(1) of the ESA is mandatory, it seems clear that EPA has some discretion in determining what actions it will take to meet its duty to conserve.<sup>219</sup> A strong argument can be made, however, that the CWA already allows, if not requires, the EPA to approve only those state water quality criteria that are set at the threshold of recovery for listed aquatic species.<sup>220</sup> This paper argues that EPA should meet its section 7(a)(1) duty to conserve by reviewing both revised and existing state water quality criteria for each specific body of water.<sup>221</sup> Where those criteria are inadequate, EPA should use the water quality standards review process to adopt more stringent<sup>222</sup> revised water quality criteria in waters supporting listed species.<sup>223</sup> EPA should also promulgate a more protective site-specific criterion where an *unrevised existing* state criterion is inadequate to ensure the recovery of a population of listed

<sup>219</sup> See *supra* Part III.

<sup>220</sup> See *supra* Part II.

<sup>221</sup> See *infra* Part IV.B.

<sup>222</sup> Letter from Russell Nelson, Regional Water Quality Standards Coordinator, U.S. EPA, Region 6 to Andrew Hanson (July 7, 2000). An EPA official cautioned that the word "stringent" should be qualified in the context of discussing site-specific water quality criteria. Although he noted that many site-specific criteria are actually less stringent than EPA recommended criteria, they are intended to provide the same level of protection as the recommended criteria. Therefore, he states, a more "stringent" criterion may not necessarily be more protective.

<sup>223</sup> This process is articulated in section 303(c) of the CWA, 33 U.S.C. 1313(c), and summarized in Section I of this article.

species.

A. *Crafting a § 7(a)(1) Conservation Plan – EPA's Approval of Oregon's Water Quality Standards.*

1. *Oregon's Triennial Review under Section 303 of the CWA.*

EPA's recent approval of Oregon's water quality standards for temperature, dissolved oxygen, and pH helps illustrate the possible impact of a section 7(a)(1) conservation program on EPA review and approval of revised water quality standards, as well as its impact on existing standards that are not reviewed. Oregon initiated a triennial review of its water quality standards in 1992 and adopted revised standards in 1996.<sup>224</sup> EPA then initiated section 7(a)(2) consultation under the ESA with the National Marine Fisheries Service and Fish and Wildlife Service (jointly referred to as the Services).<sup>225</sup>

Over the course of Oregon's triennial review and subsequent two and a half-year consultation with the Services, temperature became the most controversial revision of Oregon's standards.<sup>226</sup> High stream temperatures limit the survival of threatened salmon in Oregon<sup>227</sup> and impair water quality in almost 11,000 miles of streams in the state.<sup>228</sup> The fact that eight species of salmon had been listed as either threatened or endangered in Oregon since 1996 was evidence of the threat.<sup>229</sup> The effects of temperature have been well documented on fish. Studies conclude that temperatures higher than 50-60 degrees fahrenheit (F) can have a multitude of both lethal and sublethal adverse effects.<sup>230</sup> These effects include pre-hatch mortality, reduced disease resistance, increased disease virulence, increased disease incidence for adults and juveniles, reduced growth of juveniles, interference with migratory patterns, and others.<sup>231</sup>

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<sup>224</sup> BIOLOGICAL OPINION, *supra* note 28, at 2.

<sup>225</sup> *Id.*

<sup>226</sup> Nina Bell & Andy Hanson, *Oregon's Salmon Standards*, Big River News, Vol. 6, No. 2 (Winter 2000).

<sup>227</sup> Cara Berman, OREGON TEMPERATURE STANDARD REVIEW 2 (1998).

<sup>228</sup> Oregon Department of Environmental Quality, Water Quality Program, *Oregon's 1996-1998 § 303(d) list of Water Quality Limited Stream Segments*, available at <http://www.waterquality.deq.state.or.us/wq/303dlist/303dpage.htm>.

<sup>229</sup> BIOLOGICAL OPINION, *supra* note 28, at Table 2.

<sup>230</sup> *See id.*; *see also* UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, BIOLOGICAL ASSESSMENT OF OREGON'S REVISED WATER QUALITY STANDARDS FOR TEMPERATURE, DISSOLVED OXYGEN, AND PH, 79-95 (1998) (hereinafter BIOLOGICAL ASSESSMENT); OREGON TEMPERATURE STANDARD REVIEW, *supra* note 227, at 28-29; ODEQ FINAL ISSUE PAPER: TEMPERATURE, *supra* note 136, at 2-10.

<sup>231</sup> BIOLOGICAL OPINION, *supra* note 28, at 25-36.

Oregon adopted a temperature criterion of 64 degrees F for bodies of water supporting salmonid rearing and migration in all watersheds except the Willamette and Columbia rivers. Prior to approval, EPA initiated section 7(a)(2) consultation with NMFS regarding the effects of the temperature criterion on the viability of threatened salmon populations.<sup>232</sup> EPA determined in its Biological Assessment of Oregon's revised water quality standards that the 64 degree criterion was likely to adversely affect most listed salmonids in Oregon.<sup>233</sup> In an independent review, an EPA scientist also determined that 64 degrees (F) was too warm and would pose a "significant and unacceptable risk" to the viability of most listed salmonid populations in the state.<sup>234</sup>

Ultimately, NMFS concurred with EPA's findings that the standard was likely to adversely affect threatened salmon in Oregon.<sup>235</sup> At the same time, however, NMFS determined that the criterion would not pose "jeopardy" to listed salmon in Oregon.<sup>236</sup> This finding was made contingent upon EPA's commitment to implement several "conservation measures." Those included, for example, EPA's commitment to conduct a regional review of its recommended temperature criterion for the states of Idaho, Washington, Oregon, and Alaska,<sup>237</sup> and Oregon's commitment to implement several measures designed to mitigate the adverse effects of the criterion.<sup>238</sup> EPA ultimately approved the 64 degree F criterion, but it noted that it was "at

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<sup>232</sup> BIOLOGICAL OPINION, *supra* note 28, at 1.

<sup>233</sup> BIOLOGICAL ASSESSMENT, *supra* note 230, at 79-95.

<sup>234</sup> See OREGON TEMPERATURE STANDARD REVIEW, *supra* note 227, at 28. For example, the review stated that "[e]xposing Snake River sockeye salmon to [64 degrees F] during migration, rearing, and smoltification poses a significant and unacceptable risk to their viability." *Id.* The review further recommended that the rearing criterion should be reassessed and a new temperature criterion protective of Snake River sockeye salmon during migration, rearing, and smoltification should be developed." *Id.* at 29.

<sup>235</sup> *Id.* at 25-36.

<sup>236</sup> *Id.* at 50-53.

<sup>237</sup> *Id.* EPA outlined a proposal to review the recommended temperature criteria for salmonid rearing in Attachment 4 to the NMFS Biological Opinion. EPA stated that the goals of the Regional Temperature Review project are to develop EPA regional temperature criteria that meet the biological requirements for species survival and recovery under the ESA and the CWA, and to have states and tribes in Region 10 adopt those criteria. Attachment 4, at 2. The project is expected to be completed by 2001, with expected state adoption in subsequent triennial reviews under section 303(c) of the CWA. *Id.*

<sup>238</sup> BIOLOGICAL OPINION, *supra* note 28, at 50-53. These conservation measures were outlined in Attachment 3 of the NMFS Biological Opinion, and include Oregon's commitment to develop guidance on the application of narrative criteria for the protection of threatened and endangered species; develop implementation guidance for its antidegradation policy; identify NDPEs permits that discharge into streams rather than water quality limited for temperature or dissolved oxygen; identify geographic area and time period to which the spawning criteria for temperature and dissolved oxygen apply; increased temperature monitoring; and others. *Id.* at Attachment 3, 1-3.

the upper range of what is considered protective of salmonids.”<sup>239</sup> EPA’s approval was based in part on the criterion’s consistency with the nationally-recommended temperature criterion for salmon rearing, as well as the fact that Oregon had committed to properly identify spawning locations and times for salmon.<sup>240</sup>

## 2. CWA Authorities for Developing a Section 7(a)(1) Conservation Plan in Oregon.

The scientific uncertainty regarding the effects of elevated temperature on salmon in the wild coupled with their threatened status in Oregon arguably triggers EPA’s duty to recover under section 7(a)(1) of the ESA. Substantively, section 7(a)(1) requires EPA to use its authority to develop programs for the conservation of threatened and endangered species. The plain language of section 7(a)(1), as well as the ESA’s definition of “conserve,” indicate that EPA must do something beyond avoiding jeopardy to listed fish in the Northwest. Procedurally, *Sierra Club v. Glickman*’s holding that all federal agencies are under a mandatory duty to consult with the Services in developing a plan for conserving listed species makes clear that EPA must consult not only on its “no jeopardy” duties under section 7(a)(2), but also on its conservation duties under section 7(a)(1).

The CWA provides two important authorities for EPA to meet its substantive duties under ESA section 7(a)(1) where water quality impairment contributes to a species’ decline. These two authorities inevitably play a key role in EPA’s section 7(a)(1) conservation plan. First, section 303(c)(4)(A) of the CWA requires EPA, in reviewing state water quality standards, to promulgate a new water quality standard when the state’s new or revised standard does not ensure protection and propagation of fish, shellfish, and wildlife.<sup>241</sup> That goal is arguably not met where a water quality criterion “poses a significant risk to the viability”<sup>242</sup> of a threatened species, particularly in light of other risks

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<sup>239</sup> Letter from Randall F. Smith to Doug Llewlyn (July 22, 1999) (regarding EPA’s approval of Oregon’s 64 degree fahrenheit salmonid rearing criterion).

<sup>240</sup> Memorandum from Dru Keenan, Water Quality Standards Coordinator, EPA Region 10, through Tim Hamlin, Chief, Water Quality Unit, EPA Region 10, to “File” regarding EPA’s basis of approval for the Oregon temperature standard 6.

<sup>241</sup> 33 U.S.C. § 1313(c)(4)(A) (1999). Specifically, section 303(c)(4)(A) states:

The Administrator shall promptly prepare and publish proposed regulations setting forth a revised or new water quality standard for the *navigable waters involved* – (A) if a revised or new water quality standard submitted by such state under paragraph (3) is determined by the Administrator not to be consistent with the applicable requirements of this chapter, . . . *Id.* (emphasis added).

<sup>242</sup> See OREGON TEMPERATURE STANDARD REVIEW, *supra* note 227, at 28-29.

placed on the fish.<sup>243</sup> Moreover, recovery cannot reasonably be equated with “posing a significant risk to the viability” of a species. ESA section 7(a)(1)’s duty to conserve may require EPA to review revised standards affecting listed species more closely, and may actually trigger EPA’s CWA duty to promulgate a more protective criterion if needed. One significant implication of this is that section 7(a)(1) limits EPA to approving only those standards that actually promote the recovery of threatened and endangered species where water quality contributes to their decline.

Second, section 303(c)(4)(B) of the CWA requires EPA to promulgate a more protective water quality standard whenever it finds that a state standard does not meet the goals of the CWA.<sup>244</sup> The plain language of this provision makes clear that EPA can use this authority during the triennial review process or at any time EPA determines that a new standard is necessary to ensure protection and propagation.<sup>245</sup> A section 7(a)(1) plan may require EPA to review and audit existing state water quality criteria and make findings as to whether those criteria will ensure protection and propagation, and hence, the recovery of endangered species. Where those existing criteria are inadequate, both the CWA and the “conservation” mandate of section 7(a)(1) require EPA to use its authority under section 303(c)(4)(B) of the CWA to develop a revised site-specific criterion that accurately describes habitat conditions necessary to the recovery of threatened or endangered fish.

Importantly, both sections 303(c)(4)(A) and (B) apply only to “the navigable waters involved.”<sup>246</sup> As the language of sections 303(c)(4)(A) and (B) implies, EPA has the authority to conduct a form of surgical promulgation by carefully selecting those sites that need the more protective criterion, or a new, additional criterion. An impaired water body that provides habitat for a threatened or endangered species triggers EPA’s duty under the CWA to promulgate a more protective site-specific criterion for those sites. As a result, a section 7(a)(1) plan may require EPA to use section 303(c)(4) of the CWA to retract its approval of Oregon’s revised temperature criteria and develop new site-

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<sup>243</sup> These may include habitat degradation and loss, predation, increased harvest rates, ocean nutrient cycles, and the presence of physical obstacles such as hydroelectric dams. BIOLOGICAL OPINION, *supra* note 28, at 14.

<sup>244</sup> 33 U.S.C. § 1313(c)(4)(B) (1999). Specifically, § 303(c)(4)(B) states:

The Administrator shall promptly prepare and publish proposed regulations setting forth a revised or new water quality standard for the navigable waters involved – (B) in any case where the Administrator determines that a revised or new standard is necessary to meet the requirements of this chapter.

<sup>245</sup> *Id.*

<sup>246</sup> *Id.*

specific criteria to protect the threatened salmon populations.<sup>247</sup>

*B. Overcoming the Caveats to Applying Section 7(a)(1) to the Oregon Example*

*1. Sufficient Authority under the CWA.*

As noted earlier, section 7(a)(1) does not apply to agencies that lack the statutory discretion to base decision-making on the potential to recover threatened or endangered species.<sup>248</sup> This caveat to section 7(a)(1), however, does not apply to EPA’s oversight of Oregon’s water quality standards program. EPA has clear statutory authority under section 303 of the CWA to disapprove revised water quality criteria and promulgate new water quality criterion for temperature in Oregon waters supporting salmon rearing and migration as part of a Section 7(a)(1) conservation plan.<sup>249</sup> Alternatively, EPA has clear authority to address existing state criteria by replacing them with more protective measures that accurately reflect natural conditions in the stream.<sup>250</sup> Given the language of sections 303(c)(4)(A) and (B) regarding “navigable waters involved,” these more protective measures could take the form of site-specific criteria.

In addition to the text and legislative history of the CWA, EPA guidance asserts express authority to protect threatened and endangered species.<sup>251</sup> Specifically, EPA has the authority to develop and implement more protective site specific water quality criteria when needed to protect a threatened or endangered species, and has suggested that states may be required to do so in the same instances.<sup>252</sup> Moreover, several courts addressing EPA’s authority under the water quality standards provisions<sup>253</sup> of the CWA have expressly recognized the broad

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<sup>247</sup> There are, of course, questions as to how EPA should implement a section 7(a)(1) conservation plan founded on more stringent site-specific criteria in Oregon and the Northwest. One issue beyond the scope of this paper is whether a site-specific criterion should be set statewide, or should be set on a population by population basis to account for different biological, chemical, and physical stressors on those populations. For example, EPA is currently engaged in a review of the temperature needs of salmon in the Northwest. BIOLOGICAL OPINION, *supra* note 28, at Attachment 4. One possible outcome of the review is that a more restrictive site-specific temperature criterion could apply on a regional basis in Washington, Idaho, and Oregon.

<sup>248</sup> *Platte River I*, 962 F.2d at 33.

<sup>249</sup> See *supra* Part I. EPA appears to have ample statutory authority to use the water quality standards provisions of the CWA to promote the recovery of listed species as part of a section 7(a)(1) conservation plan.

<sup>250</sup> *Id.*

<sup>251</sup> WQS HANDBOOK, *supra* note 48, 3.7.4, at 40.

<sup>252</sup> *Id.*

<sup>253</sup> 33 U.S.C. §§ 1313, 1314 (1999).

discretion of both the EPA and the states in implementing those provisions.<sup>254</sup> There is little question that the CWA provides EPA with ample authority to implement a section 7(a)(1) plan under the ESA grounded in sections 303(c)(4)(A) and (B) of the CWA.

*C. The Discretionary Nature of the Section 7(a)(1) Duty to Conserve.*

As noted earlier, although section 7(a)(1) imposes a mandatory duty on EPA, *Sierra Club v. Glickman* and earlier cases make clear that EPA should have broad discretion in choosing what actions it will take in meeting its section 7(a)(1) obligations. It may be arbitrary and capricious, however, for EPA to ignore entirely sections 303(c)(4)(A) and (B) in meeting its duty to conserve because those provisions are so perfectly suited to meeting that duty. EPA has many authorities under the CWA, but none are as suited to the task of creating habitat conditions conducive to recovery as are water quality criteria for two reasons. First, water quality standards define the water quality goals of a water body, and water quality criteria serve as narrative and numeric descriptions of the habitat needs of species that inhabit those waters.<sup>255</sup>

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<sup>254</sup> *Arkansas v. Oklahoma*, 503 U.S. 91 (1992) (holding that EPA's requirement that the City of Fayetteville, Arkansas, comply with Oklahoma's water quality standards for the Illinois River was a reasonable exercise of its statutory discretion in achieving compliance with water quality standards); *PUD No. 1 of Jefferson County v. Washington Dep't of Ecology*, 114 S.Ct. 1900 (1994) (State had broad discretion to impose minimum stream flow conditions on a hydroelectric project in order to ensure that beneficial uses of the water would be protected); *Nat'l Wildlife Federation v. Browner*, 127 F.3d 1126 (D.C. Cir. 1997) (holding that the State was not required to designate Lake Superior and other waters as Outstanding National Resource Waters under the state antidegradation policy, and EPA was not required to review the state's refusal to do so because such refusal was not a "revised water quality standard" under section 303 of the Act); *Natural Resources Defense Council v. U.S. EPA*, 16 F.3d 1395 (4<sup>th</sup> Cir. 1993) (holding that the EPA did not abuse its discretion in approving water quality criteria for dioxin submitted by the states of Maryland and Virginia, although those criteria were orders of magnitude less protective than the EPA-recommended criterion); *Mississippi Comm'n on Natural Res. v. Costle*, 625 F.2d 1269 (5<sup>th</sup> Cir. 1980) (holding that the EPA had broad discretion to disapprove Mississippi's dissolved oxygen criterion when it was inconsistent with EPA's recommended criterion and the State failed to provide scientifically defensible reasons for the less protective criterion).

<sup>255</sup> See Baron, *supra* note 14, at 571-76 for a discussion of narrative and numeric water quality criteria and the role they play in protecting human health and aquatic life. See also Bell & Hanson, *supra* note 259, at 7; AQUATIC HABITAT INDICATORS, *supra* note 23, at 8. Cf., Rosan, *supra* note 6, at 463. Rosan states that relying on water quality standards raises doubts as to whether water quality criteria are capable of protecting listed species. Rosan argues that a State's failure to properly identify populations of listed species, the inability of criteria to predict cumulative effects to listed species, and the laxity of enforcement by State and federal agencies indicates that more protective water quality criteria are not enough to protect listed species. *Id.* Although this author admits that water quality criteria are only one piece in the puzzle to protecting listed species, that is certainly no reason to discount their value in the context of promoting recovery for listed species. Criteria are clearly under-used as a means of defining the habitat goals of a water body, and without scientifically sound bases for developing these criteria, implementation efforts will be wasted.

EPA has recognized the need for water quality criteria to better define the habitat conditions necessary to protect threatened or endangered salmon and trout populations in the Northwest.<sup>256</sup> Without these criteria, EPA states that it has "a limited basis for judging the adequacy of protection measures and the effectiveness of recovery efforts for salmon and trout populations."<sup>257</sup> As a result, accurate water quality criteria are an essential step towards recovery of threatened and endangered fish.<sup>258</sup>

Second, all other provisions of the CWA are based on accurate use designations and scientifically credible water quality criteria necessary to protect those uses. If the criterion is incorrectly set at a level above what is needed to protect a species, or a water body use has gone unnoticed or unidentified, implementation of the incorrect standard will have serious ramifications for the issuance of NPDES permits.<sup>259</sup> Permitted discharges under the CWA are ultimately required to comply with water quality standards.<sup>260</sup> The NPDES permit will arguably have little meaning if the standard to be achieved is not adequate to meet the goals of the CWA.

Moreover, water quality criteria and use designations also serve as the trigger for restoration efforts under section 303(d) of the CWA.<sup>261</sup> Where a water body does not meet a given water quality criterion, whether for temperature or any other pollutant, the state must promulgate a Total Maximum Daily Load (TMDL) for the water body that defines the assimilative capacity of the stream to absorb pollution while still protecting beneficial uses.<sup>262</sup> EPA has recently put

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<sup>256</sup> AQUATIC HABITAT INDICATORS, *supra* note 23, at 2.

<sup>257</sup> *Id.*

<sup>258</sup> This statement assumes that the population has already been identified and designated as a use under the CWA. As such, developing water quality criteria might be considered the second step in the process. The first step would be to identify properly the fish population and designate it as water body use under state regulations adopted to implement the CWA. Only then can accurate and specific water quality criteria be developed to describe habitat conditions necessary to the recovery of these fish.

<sup>259</sup> See *Northwest Environmental Advocates v. Portland*, 56 F.3d 979 (9<sup>th</sup> Cir. 1995), *reh'g denied* 74 F.3d 945, *cert. denied*, 518 U.S. 1018 (1996) (holding that state water quality standards are conditions of NPDES permits enforceable by citizen suit provisions of the CWA); *cf.* *ONDA v. Dombeck*, 172 F.3d 1092 (9<sup>th</sup> Cir. 1998), *cert. denied*, 120 S.Ct. 397 (1999) (holding that the U.S. Forest Services was not required to obtain CWA section 401 certification that grazing permits would not result in violations of state water quality standards because section 401 applies only to point source discharges of pollution; grazing results in non-point sources of pollution and therefore section 401 certification was not required). See *generally*, Rosan, *supra* note 6, at 464 ("ESA consultations on [water quality] standards have the potential to fundamentally change NPDES permit requirements and nonpoint source pollution.")

<sup>260</sup> 33 U.S.C. § 1311(b)(1)(C).

<sup>261</sup> 33 U.S.C. § 1313(d).

<sup>262</sup> *Id.* Where a state fails to promulgate TMDLs for impaired waters, EPA must step in and establish those TMDLs. See, e.g., *Alaska Center for the Environment v. Reilly*, 762 F. Supp.

tremendous administrative and technical efforts into establishing new regulations governing TMDLs and has given states additional time to promulgate TMDLs for impaired water bodies.<sup>263</sup> If the water quality standard does not accurately reflect the habitat needs for threatened or endangered species, efforts spent on developing TMDLs will be wasted and the goals of “protection and propagation of fish, shellfish, and wildlife” will never actually be achieved.

In summary, the descriptive nature of water quality criteria and their pervasive role in meeting CWA goals compels the inclusion of water quality criteria in any section 7(a)(1) plan developed by EPA for threatened and endangered salmon in Oregon. While acknowledging that agencies have some latitude in developing their section 7(a)(1) plans, that discretion is not unlimited.<sup>264</sup> No recovery effort can be truly successful for aquatic species if EPA does not ensure that the state water quality criteria that it approves will help create habitat conditions necessary to recovery. Sections 303(c)(4)(A) and (B) could be the keys to achieving that outcome under the CWA.

*D. The Problem of Overlap Between Section 7(a)(1) and Section 7(a)(2)*

A significant hurdle in establishing EPA’s responsibilities under section 7(a)(1) is finding a way to prevent the overlap of that mandate with section 7(a)(2), which prohibits federal agencies from jeopardizing threatened or endangered species or adversely modifying their critical habitats.<sup>265</sup> EPA might argue that because it engaged in section 7(a)(2) consultation regarding its approval of Oregon’s revised water quality standards, that it also satisfied its section 7(a)(1) obligations.<sup>266</sup> That

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1422 (W.D. Wash. 1991) (hereinafter *ACE I*); Alaska Center for the Environment v. Reilly, 769 F. Supp. 1374 (W.D. Wash. 1992) (hereinafter *ACE II*); Alaska Center for the Environment v. Browner, 20 F.3d 981 (9<sup>th</sup> Cir. 1994) (hereinafter *ACE III*). See also Idaho Sportsman’s Coalition v. Browner, 951 F. Supp. 962 (W.D. Wash. 1996); Sierra Club v. Hankinson, 939 F.Supp. 865 (N.D. Ga. 1996), *order issued*, 939 F. Supp. 872 (N.D. Ga. 1996).

<sup>263</sup> See Revisions to the Water Quality Planning and Management Regulation and Revisions to the National Pollutant Discharge Elimination System Program in Support of Revisions to the Water Quality Planning and Management Regulation Final Rules, 65 Fed. Reg. 43585 (July 13, 2000) (to be codified at 40 C.F.R. pts. 9, 122, 123, 124, and 130) (proposed Aug. 20, 1999). See also Note, *Addressing Water Pollution From Livestock Grazing After ONDA v. Dombeck: Legal Strategies Under the Clean Water Act*, 30 ENVTL. L. 617 (Fall 2000). Lacey argues that TMDLs could be a potentially effective long term strategy under the CWA for regulating non-point source pollution in the context of grazing on federal lands. Lacey also includes an overview and brief analysis of the EPA’s now final regulations revising listing and TMDL requirements under section 303(d) of the CWA. *Id.*

<sup>264</sup> See *supra* Part III(C).

<sup>265</sup> 16 U.S.C. § 1536(a)(2) (1988).

<sup>266</sup> See Draft MOA, 64 Fed. Reg. 2750. The Draft MOA suggests that conservation

argument is both *procedurally* and *substantively* defective, however, because of the plain language of section 7(a)(1).

Turning first to procedure, EPA’s section 7(a)(2) consultation on Oregon’s new and revised standards was inadequate to comply with section 7(a)(1) for three main reasons. First, the consultation focused on preventing *jeopardy*, rather than promoting *recovery* – the substantive goal of section 7(a)(1). The plain language of section 7(a)(1) requires consultation on conservation, not jeopardy.<sup>267</sup> Technically speaking, there was no consultation on Oregon’s revised water quality standards under section 7(a)(1). Second, the discretionary conservation recommendations developed by NMFS in its Biological Opinion dealt only with mitigating the adverse affects of the temperature and dissolved oxygen standards under section 7(a)(2).<sup>268</sup> The consultation did not address whether those conservation recommendations would actually “conserve” under section 7(a)(1). Third, the consultation did not cover Oregon’s existing water quality standards that may be inadequate to conserve threatened or endangered species.<sup>269</sup> Although there was no agency action on those standards, and therefore no section 7(a)(2) consultation, such consultation is still technically required under section 7(a)(1).

Turning next to substance, EPA may be liable for failing to meet its duty to use its authorities to conserve threatened or endangered species in Oregon for two reasons. First, EPA must develop a section 7(a)(1) conservation plan that uses its authority to promote conservation and recovery goals of the ESA. No such plan presently exists that would guide EPA’s future decisions on state submissions of water quality standards for its review and approval. Until that time, EPA’s efforts at conservation will continue to be ad hoc and will be included only when EPA is engaged in section 7(a)(2) consultation on revised standards. Second, EPA may be liable under section 7(a)(1) for failing to take action on existing water quality standards in Oregon that may be

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recommendations provided by the Services under section 7(a)(2) consultation are, if implemented by EPA, adequate to meet EPA’s section 7(a)(1) duty to conserve. Specifically, the Draft MOA states that “biological opinions may contain discretionary conservation recommendations to promote the recovery of the subject species...Implementation of these conservation recommendations would help conserve and recover listed species.” *Id.* Because NFMS included discretionary conservation measures that would be implemented by Oregon with EPA’s oversight, EPA could argue that its oversight of Oregon’s efforts is adequate to meet its duty to conserve.

<sup>267</sup> 16 U.S.C. § 1536(a)(1) (1988).

<sup>268</sup> See BIOLOGICAL OPINION, *supra* note 28, at 67.

<sup>269</sup> *Id.* at 9. Because Oregon did not revise the Columbia River temperature criterion, EPA did not review it. As a result, it was not included in the section 7(a)(2) consultation.

inadequate to ensure the conservation and recovery of threatened or endangered species. For example, EPA chose not to review Oregon's temperature standard for the Columbia River in spite of the fact that it determined that the very same temperature standard for the Willamette River would not comply with the CWA.<sup>270</sup> Those two rivers share the same designated uses and are connected by surface water. Also, both rivers provide vital rearing habitat for several species of threatened and endangered salmon.<sup>271</sup> The Columbia River temperature criterion, however, was not the subject of section 7(a)(2) consultation because it was not submitted as a revised standard.<sup>272</sup> Section 7(a)(1) may require the agency to revisit that existing standard and consider disapproval and promulgation of a new, more protective standard for those species.

Most importantly, evidence produced by EPA and NMFS indicates that Oregon's revised water quality standards will not meet the substantive end that section 7(a)(1) envisions, namely, recovery to the point at which the species no longer requires the protections of the ESA. EPA and NMFS both determined that the temperature criterion for salmonid rearing (64 degrees F) and the inter-gravel dissolved oxygen criterion<sup>273</sup> would both adversely affect salmon in Oregon.<sup>274</sup> An EPA scientist also stated that the temperature criterion for salmonid rearing would pose a "significant and unacceptable risk" to the species.<sup>275</sup> Considerations of jeopardy aside, the temperature criterion cannot

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<sup>270</sup> EPA currently interprets section 303(c) as not requiring it to review and approve existing water quality standards that go unrevised during a state's triennial review. *See e.g.*, National Wildlife Federation v. Browner, 127 F.3d 1126 (D.C. Cir. 1997) (holding that Michigan's denial of a petition to designate Lake Superior as an Outstanding National Resource Water under the state's antidegradation policy was not a revised water quality standard triggering EPA review and approval under section 303 of the CWA); *see also* Miccosukee Tribe of Indians v. EPA, 105 F.3d 599 (11<sup>th</sup> Cir. 1997) (holding that EPA had a mandatory duty to review as a revised water quality standard a Florida law that would remove certain water quality protection requirements from the Everglades); Natural Res. Def. Council v. Fox, 909 F. Supp. 153 (S.D.N.Y. 1995) (holding that EPA was not required to review a state's antidegradation policy each time a state submitted its revised water quality standards for EPA review and approval).

<sup>271</sup> BIOLOGICAL OPINION, *supra* note 28.

<sup>272</sup> *See id.* NMFS states specifically that "EPA did not include the Columbia River temperature standard as part of its approval action, because the standard was not changed." *Id.*

<sup>273</sup> The 64 degree F temperature criterion in combination with dissolved oxygen levels can have synergistic effects on a fishes' respiratory system. EPA determined that Oregon's intergravel dissolved oxygen criterion of a spatial median of 6.0 mg/L is likely to adversely affect threatened and endangered salmonids. BIOLOGICAL ASSESSMENT, *supra* note 230, at 65. EPA states that the early life stages of fish are recognized as being the most sensitive and requiring relatively high dissolved oxygen (DO) concentrations. *Id.*, at 64. Higher temperatures in a water body increase a fishes' demands for DO. *Id.* However, elevated temperatures also decrease the ability of the water column to hold DO, which in turn decreases the rate of seepage into the gravel. *Id.*

<sup>274</sup> *See supra* notes 260-263, and accompanying text.

<sup>275</sup> *See supra* note 262, and accompanying text.

reasonably be said to promote the substantive goal of recovery in section 7(a)(1).

Although NMFS identified several conservation recommendations in its Biological Opinion which appeared to be intended to satisfy EPA's section 7(a)(1) obligations, those recommendations likely fail to meet section 7(a)(1)'s substantive goal of recovery. Recall that federal agencies have an affirmative duty to use all means reasonably necessary to conserve threatened and endangered species.<sup>276</sup> Notwithstanding the fact that the recommendations were not species-specific,<sup>277</sup> as *Sierra Club v. Glickman* requires,<sup>278</sup> many of the measures consisted of actions that EPA was already under a mandatory duty to undertake under the CWA. For example, Oregon committed to developing an antidegradation implementation plan for implementing its antidegradation policy.<sup>279</sup> However, such a plan is already required under EPA regulations,<sup>280</sup> and should have been completed long ago. Further, Oregon committed to participate in a regional review of its temperature criterion over a three-year period.<sup>281</sup> Although this deliberative process is valuable, these meetings will not produce on-the-ground implementation during that period, and therefore, will not improve the chances of survival for Oregon's fish. Moreover, there is no promise that the process will produce a more protective criterion at the end of that three-year period. These recommendations hardly cover the breadth of EPA's authority to promote the conservation and recovery goals of the ESA.

#### CONCLUSION

This paper is intended to establish the legal bases under the CWA and section 7(a)(1) of the ESA for forcing EPA to reconsider how it implements state water quality standards programs as they specifically

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<sup>276</sup> 16 U.S.C. §1532(3) (1988).

<sup>277</sup> See Rosan, *supra* note 6, at 476-77. In commenting on Draft Memorandum of Agreement between NMFS, FWS, and EPA on consultation procedures under section 7(a)(2) of the ESA on EPA's implementation of the CWA, Rosan notes that

EPA has affirmative duties to conserve listed species under section 7(a)(1) and to consult with the Services on how the agency's actions might affect each of the listed species; EPA cannot "just undertake a generalized consultation" as the draft MOA proposes. In order to develop species-specific conservation programs and comply with section 7(a)(1) obligations, EPA should evaluate listed species by water body and ecosystem for both individual water quality standards and permitting actions.

(citations omitted).

<sup>278</sup> 156 F.3d at 606.

<sup>279</sup> See BIOLOGICAL OPINION, *supra* note 28.

<sup>280</sup> See 40 C.F.R. § 131.12(a)(1) (1999).

<sup>281</sup> See BIOLOGICAL OPINION, *supra* note 28.

relate to establishing enforceable water quality criteria. Presently, EPA limits its ESA obligations to determining whether water quality standards are likely to jeopardize already struggling populations of fish and wildlife. This is clearly the wrong goal as far as the CWA is concerned. An analysis of the statutory language, legislative history, and EPA guidance documents interpreting sections 101(a)(2) and 303(c) reveals that the CWA mandates recovery of threatened or endangered species in order to ensure the protection and propagation of fish, shellfish, and wildlife as a stated goal of the Act.<sup>282</sup> Merely requiring that the standards prevent jeopardy is a misuse of their potential as a recovery mechanism, and possibly a violation of the CWA.

Although the Draft MOA has limited EPA's requirements regarding the implementation of water quality standards, to preventing jeopardy under Section 7(a)(2), section 7(a)(1) offers new hope after *Sierra Club v. Glickman*. Section 7(a)(1) requires EPA to consult with the Services in using its authorities to develop and implement a species-specific plan for the conservation of threatened and endangered species. Although EPA has some discretion in developing the substance of its section 7(a)(1) conservation plan, the substantive outcome of that plan must have some measurable, beneficial effect on threatened and endangered species.

To produce a beneficial effect on aquatic species, EPA has two clear authorities under the CWA to meet its duty to conserve. First, EPA has the power to review state submittals of their new and revised water quality standards, and disapprove those standards that fail to contribute to the recovery of threatened or endangered species. Second, EPA has the power to promulgate a new water quality standard, including a site-specific criterion, whenever it determines that an existing state water quality standard fails to promote the recovery of threatened or endangered species. A site-specific criterion may even be required to protect a threatened or endangered species. Until EPA uses those authorities to move water quality standards beyond jeopardy, however, the potential for water quality criteria to play a central role in the recovery of listed species may not be realized.

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<sup>282</sup> See *supra* Part I.