



March 28, 2014

**VIA CERTIFIED MAIL, RETURN RECEIPT REQUESTED**

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U.S. Environmental Protection Agency  
1200 Pennsylvania Ave NW  
Washington, DC 20460

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U.S. Department of the Interior  
1849 C St NW  
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Heather Toney, Regional Administrator  
U.S. Environmental Protection Agency  
Atlanta Federal Center, 61 Forsyth St  
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Daniel M. Ashe, Director  
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**Re: Notice of violations of the Endangered Species Act in connection with the Environmental Protection Agency's Approval of Amendments to Kentucky's Water Quality Standards for Selenium and Nutrients**

Dear Ms. McCarthy, Ms. Toney, Ms. Jewell, and Mr. Ashe,

We write on behalf of Sierra Club, Appalachian Voices, Kentuckians For The Commonwealth, Kentucky Waterways Alliance, Kentucky Resources Council, Center for Biological Diversity, and Defenders of Wildlife (collectively, "Commenters") to provide you with 60 days' notice of the U.S. Environmental Protection Agency's ("EPA") violations of Section 7 of the Endangered Species Act ("ESA"), 16 U.S.C. § 1536, and its implementing regulations, 50 C.F.R. Part 402.

By failing to complete consultation with the U.S. Fish and Wildlife Service ("FWS") prior to approving Kentucky's revised water quality standard for selenium, and revised definition of eutrophication and narrative water quality standard for nutrients, EPA has violated its procedural and substantive obligations under ESA Section 7(a)(2), 16 U.S.C. § 1536(a)(2), to ensure against jeopardy to listed species or destruction or adverse modification of critical habitat.

If the statutory violations described herein are not promptly and diligently rectified within the 60-day period commencing with receipt of this letter, Commenters may file suit in federal district court to seek appropriate legal and equitable remedies. This notice is provided in fulfillment of the requirements of the citizen suit provision of the ESA, 16 U.S.C. § 1540(g)(2)(A)(i).

## I. LEGAL FRAMEWORK

### A. ENDANGERED SPECIES ACT

Section 7 of the ESA and its implementing regulations require each federal agency, in consultation with the appropriate wildlife agency – here, the FWS – to insure that any action authorized, funded, or carried out by the agency is not likely to (1) jeopardize the continued existence of any threatened or endangered species or (2) result in the destruction or adverse modification of the critical habitat of such species. 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.14(a).

“Action” is broadly defined to include actions that may directly or indirectly cause modifications to the land, water, or air, and actions that are intended to conserve listed species or their habitat. 50 C.F.R. § 402.02. An action would “jeopardize the continued existence of” a species if it “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 by reducing the reproduction, numbers, or distribution of that species.” *Id.* “Destruction or adverse modification” of critical habitat means “a direct or indirect alteration that appreciably diminishes the value of critical habitat for both the survival and recovery of a listed species. Such alterations include, but are not limited to, alterations adversely modifying any of those physical or biological features that were the basis for determining the habitat to be critical.” *Id.*

For each federal action, the federal action agency – here, EPA – must request from the FWS a list of any ESA-listed or proposed species that may be present in the area of the agency action. 16 U.S.C. § 1536(c)(1); 50 C.F.R. § 402.12. “Action area” is defined by regulation to be broader than simply the project area: it means “all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action.” 50 C.F.R. § 402.02.

If the action agency determines that its proposed action will not affect listed species or critical habitat, it is not obligated to consult with the FWS. 50 C.F.R. § 402.14. Effects determinations must be based on the sum of the direct, indirect, and cumulative effects of the action, added to the environmental baseline and interrelated and interdependent actions. *Id.* § 402.02 (defining “effects of the action.”). The threshold for triggering consultation is low: if the action agency determines that its proposed action may affect any listed species or critical habitat, it must engage in formal or informal consultation with the FWS. 50 C.F.R. §§ 402.13, 402.14; *see also Heartwood v. Kempthorne*, 302 Fed. Appx. 394, 395 (6th Cir. 2008).

To complete informal consultation, the action agency must determine, with the written concurrence of the FWS, that the action is not likely to adversely affect listed species or critical habitat. 50 C.F.R. § 402.13(a). If the action is likely to adversely affect listed species or critical habitat, the action agency and FWS must engage in formal consultation. *Id.* § 402.14. To complete formal consultation if the agency action is not likely to result in jeopardy or destruction or adverse modification of critical habitat, the FWS must provide the action agency with a biological opinion, explaining how the proposed action will affect the listed species or habitat, together with an incidental take statement and any reasonable and prudent measures necessary to avoid jeopardy. 16 U.S.C. § 1536(b); 50 C.F.R. §§ 402.14(g)-(i). If the FWS, however, determines that the action is likely to jeopardize the species or result in the destruction or adverse modification of critical habitat, the agency “shall suggest those reasonable and prudent alternatives which [it] believes” would not result in jeopardy or adverse modification. 16 U.S.C. § 1536(b)(3).

The action agency also has a mandatory duty to confer with the FWS on any actions that are “likely to jeopardize the continued existence of any proposed species or result in the destruction or adverse modification of proposed critical habitat.” 50 C.F.R. § 402.10(a). Although prior to final listing or final critical habitat designation, the conference opinion is advisory, not binding, the conference process “is designed to assist the Federal agency and any applicant in identifying and resolving potential conflicts at an early stage in the planning process.” *Id.*

Throughout the consultation process, the FWS must use “the best scientific and commercial data available” to evaluate the impacts the action will have on listed species and to provide its “biological opinion” whether, as a result of those impacts, the action is likely to result in jeopardy or destruction of critical habitat. 16 U.S.C. §§ 1536(a)(2) & (b)(3); 50 C.F.R. § 402.14(g). The action agency also has an independent obligation to “use the best scientific and commercial data available” under Section 7. 16 U.S.C. § 1536(a)(2).

Once the action agency has initiated consultation, Section 7(d) prohibits it from making “any irreversible or irretrievable commitment of resources with respect to the agency action which has the effect of foreclosing the formulation or implementation of any reasonable and prudent alternative measures which would not violate [ESA Section 7(a)(2)]. 16 U.S.C. § 1536(d); 50 C.F.R. § 402.09.

Section 9 of the ESA prohibits any person, including any federal agency, from “taking” any listed species without proper authorization through a valid incidental take permit. 16 U.S.C. § 1538(a)(1)(B); 50 C.F.R. § 17.31(a) (extending the “take” prohibition to threatened species). The term “take” is statutorily defined broadly as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” 16 U.S.C. § 1532(19). The definition of “harm” has been defined broadly by regulation as “an act which actually kills or injures wildlife. Such act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.” 50 C.F.R. § 17.3; *see also Babbitt v. Sweet Home Ch. Of Communities for a Great Oregon*, 515 U.S. 687 (1995) (upholding regulatory definition of harm). Courts have found federal agencies liable for unlawful take of listed species where agency-authorized activities resulted in the killing or harming of such species. *See, e.g., Defenders of Wildlife v. Adm’r, Envtl. Prot. Agency*, 882 F.2d 1294 (8th Cir. 1989).

## B. CLEAN WATER ACT

Congress enacted the Clean Water Act (“CWA”) to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” 33 U.S.C. § 1251(a). The Act establishes a goal of attaining “water quality which provides for the protection and propagation of fish, shellfish, and wildlife.” *Id.* § 1251(a)(2). States are obligated to develop and implement standards for protection of water quality that conform to the minimum standards established by the EPA Administrator. *Id.* § 1313. Water quality standards consist of a designated use for the water bodies involved and water quality criteria that will protect the designated use, as well as an antidegradation policy to protect existing uses and maintain high water quality. *Id.* § 1313(c)(2)(A).

States that have been delegated authority to administer the CWA are required to adopt and periodically revise water quality standards. Pursuant to 33 U.S.C. § 1313(c)(1), states must hold public hearings and review their water quality standards at least once every three years, and, if appropriate, modify existing standards or adopt new standards. 40 C.F.R. § 131.20(a).

Whenever a state adopts a new or revised standard, it must submit that standard to EPA for approval. 33 U.S.C. § 1313(c)(2); 40 C.F.R. § 131.20(c). The new or revised standard only becomes the applicable water quality standard for the state if EPA determines that the standard meets all requirements of the CWA. 33 U.S.C. § 1313(c)(3); 40 C.F.R. § 131.21(c). EPA must notify the state within 60 days if it approves the new or revised state standards. *Id.* If EPA concludes that the new or revised state standards do not meet the CWA's requirements, it must notify the state of its disapproval of such standards and specify the changes necessary to come into compliance with the CWA within 90 days. *Id.* If the state fails to adopt the specified changes within 90 days of EPA's notification, EPA must itself promulgate water quality standards for the state. *Id.*; 33 U.S.C. § 1313(c)(4).

### C. EPA'S APPROVALS OF REVISED WATER QUALITY STANDARDS ARE SUBJECT TO ESA SECTION 7 COMPLIANCE

EPA must consult with the FWS on any of its agency actions "in which there is discretionary Federal involvement or control." 50 C.F.R. § 402.03. EPA's approval of revised state water quality standards pursuant to 33 U.S.C. § 1313 qualifies as an agency action over which EPA exercises considerable discretionary involvement and control. EPA has ample discretion in administering the state water quality standard review process "to consider the protection of threatened or endangered species as an end in itself." *Florida Key Deer v. Paulison*, 522 F.3d 1133, 1141 (11th Cir. 2008) (citing *Nat'l Ass'n of Home Builders v. Defenders of Wildlife*, 551 U.S. 644, 671 (2007)).

EPA has long recognized its legal duties to comply with the substantive and procedural obligations of the ESA in the state water quality standard approval process. To enhance coordination between EPA and the wildlife agencies (the FWS and the National Marine Fisheries Service) in fulfilling these statutory responsibilities, the three federal agencies signed a memorandum of agreement ("MOA") in 2001. 66 Fed. Reg. 11,202 (Feb. 22, 2001). In responding to comments on the draft MOA's provisions relating to EPA's oversight of state water quality standards, EPA specifically acknowledged that its discretionary control over the approval process triggers its ESA obligations, rejecting comments to the contrary:

[O]ur decision as to whether a particular standard meets the requirements of the CWA involves the exercise of considerable judgment. We believe that where approval of new or revised standards may have an effect on a listed species or critical habitat, consultation under section 7(a)(2) is required. . . . [W]ater-dependent endangered and threatened species are an important component of the aquatic environment that the CWA is designed to protect, and steps to ensure the protection of those species are well within the scope of the CWA.

*Id.* at 11,206.

The MOA also acknowledged EPA's commitment to the timeframes and informational requirements set forth in the ESA's implementing regulations at 50 C.F.R. Part 402 to ensure that EPA can timely comply with its ESA consultation obligations while meeting its statutory and regulatory deadlines under the CWA. For example, generally speaking:

EPA will strive to provide advance notice to the Services concerning anticipated consultations, to provide thorough biological evaluations, to comment promptly on draft opinions and to provide, where appropriate, additional available information

requested by the Services. . . . Where EPA prepares a biological evaluation, EPA will attempt to provide the Services a biological evaluation at least 90 days before reaching a decision on the proposed action.

*Id.* at 11,210.

The MOA describes at length the coordination process EPA committed to undertake to ensure that its review of new and revised water quality standards complies with the ESA. *Id.* at 11,213-15. In particular, the MOA recognizes that the CWA's strict timeframes for approval or disapproval of a state's revised water quality standard require close coordination between EPA and FWS; to that end, EPA stated its intentions to work with states to provide final drafts of revised water quality standards to FWS well in advance of the state's final submission to EPA. *Id.* at 11,214.

The MOA also memorializes EPA's recognition of its duty to confer with FWS pursuant to 50 C.F.R. § 402.10 if it determines that any CWA activities it authorizes, funds, or carries out are likely to jeopardize proposed species or result in the destruction or adverse modification of proposed critical habitat. 66 Fed. Reg. at 11,211.

## II. FACTUAL BACKGROUND

### A. EPA'S APPROVAL OF KENTUCKY'S REVISED SELENIUM STANDARD AND NEW EUTROPHICATION DEFINITION AND NUTRIENTS STANDARD

#### 1. THE 2013 REVISIONS TO KENTUCKY'S WATER QUALITY STANDARDS

The revised federal water quality standards to which this notice letter pertains are Kentucky Division of Water's ("DOW") revised definition of eutrophication and its revised narrative nutrient water quality standard, as well as its revised chronic warm water aquatic life water quality criteria for selenium.

Kentucky DOW's revised definition of eutrophication works in concert with the revised nutrient criteria. The previous definition was: "the enrichment of a surface water by the discharge or addition of a nutrient." The revision changed the definition to mean:

the enrichment of a surface water with nutrients nitrogen and phosphorus resulting in adverse effects on water chemistry and the indigenous aquatic community. Resulting adverse effects on water chemistry manifest by daily dissolved oxygen supersaturation followed by low dissolved oxygen concentrations and diurnal increase in pH. Resulting adverse effects on the indigenous aquatic community include:

- (a) Nuisance algae blooms;
- (b) Proliferation of aquatic plants;
- (c) Displacement of diverse fish or macroinvertebrate community by species tolerant of nutrient-enriched environments; or
- (d) Fish kills brought on by severe, sudden episodes of plant nutrient enrichment.

401 KAR 10:001(30).

The definition of eutrophication is critical to the narrative nutrient water quality standard. Kentucky DOW revised that standard from:

Nutrient Limits. In lakes and reservoirs and their tributaries, and other surface waters where eutrophication problems may exist, nitrogen, phosphorus, carbon, and contributing trace element discharges shall be limited in accordance with:

- (1) The scope of the problem;
- (2) The geography of the affected area; and
- (3) Relative contributions from existing and proposed sources.

to the following: “Nutrient Criteria. Nutrients shall not be elevated in surface water to a level that results in eutrophication.” 401 KAR 10:031 § 1. Taken together these standards appear to allow nutrient pollution and even algal blooms to occur until the pollution actually has an adverse effect on the aquatic community.

Kentucky DOW also revised the chronic warm water aquatic life water quality criteria for selenium. The revision of the chronic water quality criteria for selenium transformed the former chronic limit of 5 µg/L as measured in the water column to a fish tissue-based criteria. The fish tissue-based criteria consist of concentrations of selenium in whole fish tissue and fish egg/ovary that serve as the new regulatory standard. The chronic water quality criteria for selenium is now 8.6 µg/g (dry weight) of whole fish tissue or, 19.3 µg/g (dry weight) of fish egg/ovary tissue. 401 KAR 10:031 Section 6, Table 1. Kentucky DOW’s revised standard does not include a way to determine compliance with the criteria when adequate fish tissue cannot be obtained for sampling.

## 2. EPA’S ROLE IN APPROVING THE REVISED STANDARDS

As required by the CWA, Kentucky DOW transmitted its water quality revisions for review by EPA on May 23, 2013, stating that the revisions were duly adopted pursuant to Kentucky law.

On October 25, 2013, EPA requested information “concerning how the Commonwealth plans to establish Kentucky Pollution Discharge Elimination System (“KPDES”) permit limitations for the chronic fish tissue criteria for dischargers where fish are present in or immediately downstream of the receiving water and also where fish are not present in such waters.” Letter from EPA Region IV Water Protection Division Director James Giattina to Commissioner Bruce Scott Kentucky DOW (Oct. 25, 2013). The Division Director explained that “[t]his information will assist the EPA in its review of the Commonwealth’s water quality criteria submission.” *Id.*

On November 1, 2013, Commissioner Scott explained in response that, while the procedures for implementing the new chronic selenium criteria were “still in development,” “in the event that sufficient fish tissue cannot be obtained, the proposed KPDES permit will state that if adequate fish tissue cannot be obtained to determine permit compliance with the fish-tissue limit the permit holder will be deemed to be in non-compliance with the proposed KPDES permit for exceeding the chronic trigger level as established in the proposed KPDES permit.” Letter from Kentucky Department of Environmental Protection Commissioner Bruce Scott to Water Protection Division Director James Giattina (Nov. 1, 2013). Commissioner Scott made clear that the letter represented only Kentucky’s “intentions” for implementing the standard, and that the implementation procedures would be subject to future public comment and review by the Department. *Id.*

On November 15, 2013, EPA approved Kentucky's fish tissue-based chronic warm water aquatic habitat criterion for selenium and its revisions to the definition of eutrophication and to the narrative standard for nutrients.<sup>1</sup> Letter from A. Stanley Meiburg to Dr. Leonard Peters and Accompanying Decision Document (Nov. 15, 2013). In so doing, EPA disapproved a revision to the Kentucky acute water quality criterion for selenium because "[t]he acute criterion that Kentucky has adopted does not provide [aquatic life] protection because it is based on water-only exposure [to selenium], with no associated dietary exposure. Therefore, the acute criterion adopted by the Commonwealth is not scientifically defensible or consistent with 40 CFR 131 and the CWA." *Id.* at 2; EPA, *Decision Document* at 12.

EPA further explained that, in addition to its review under Section 303 of the CWA, "Section 7(a)(2) of the Endangered Species Act[, 16 U.S.C. § 1536,] requires federal agencies, in consultation with the U.S. Fish and Wildlife Service, to ensure that their actions are not likely to jeopardize the continued existence of federally listed species." *Id.* at 2. EPA stated that its "decision to approve revisions within Kentucky Water Quality Regulations contained in Chapter 401 KAR 10:001, 10:026, and 10:031 is subject to the results of consultation under section 7 of the ESA." *Id.*

### 3. THE FWS'S COMMENTS ON KENTUCKY'S 2013 REVISED WATER QUALITY STANDARDS AND ACKNOWLEDGEMENT OF THE NEED FOR SECTION 7 CONSULTATIONS

On March 7, 2013, as part of the public review of Kentucky's proposed 2013 water quality standard revisions, the Kentucky Ecological Services Field Office of the FWS reviewed and sent comments on the proposed fish tissue-based chronic selenium standard to the Kentucky DOW. Letter from Kentucky FWS Field Supervisor Virgil Lee Andrews to Director Sandy Gruzesky, Kentucky DOW (March 7, 2013). The letter noted that tissue-based criteria for selenium are "unprecedented in the United States" and recommended that the Kentucky DOW seek "independent peer review at a nation scale for the criteria" so that recognized selenium experts could "review the DOW's interpretation of the literature and criteria derivation for scientific soundness." *Id.* at 1.

The FWS letter also criticized Kentucky's proposed chronic fish tissue-based criteria for, among other things, allowing selenium to "cycl[e] in the food web at an undetermined level, thus posing

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<sup>1</sup> In approving the fish tissue-based criterion, EPA asserted that the amended chronic water quality criteria for warm water aquatic habitat for selenium are "scientifically defensible" and "protective of the designated uses of warm water aquatic habitat in the Commonwealth's water bodies. The criteria are therefore consistent with 40 C.F.R. 131 and the CWA and are approved." With respect to the 5.0 µg/L "trigger," EPA's Decision Document stated that "[t]he 5.0 µg/l trigger value is not a new or revised water quality standard and did not require EPA action under Section 303(c) of the CWA." *Decision Document* at 14. EPA also stated that it recognized the advantages of expressing the chronic aquatic life criteria as a tissue-based concentration, and understood the need for appropriate translation into a water column value for purposes such as meeting the permitting requirements of Clean Water Act Section 402 and the implementing regulations at 40 CFR § 122.44. *Id.* EPA further signaled its intent to recommend a water column translation as part of its forthcoming CWA 304(a) criteria and stated that it will urge states to modify their water quality standards at that time. *Id.*

risks to biota that are more sensitive than fish” and for failing to address situations where “fish are absent in selenium-affected waters.” *Id.* at 1-2.

After raising these concerns, it was not until November 14, 2013, that EPA initiated Section 7 consultations with the FWS. Letter from EPA Water Quality Division Chief Annie Godfrey to Kentucky FWS Field Supervisor Virgil Lee Andrews (Nov. 14, 2013). On that date, only one day before it approved Kentucky’s 2013 revised water quality standards, EPA sent to FWS a “biological evaluation” that concluded that Kentucky’s revised water quality standards for nutrients and selenium were “not likely to adversely affect” listed species and requested FWS’s concurrence with that determination. *Id.* at 1.

Upon receiving an extension for its response, on December 27, 2013, the FWS explained that it did not concur with EPA’s “not likely to adversely affect” determination. Letter from Field Supervisor Virgil Lee Andrews to Chief Annie Godfrey, WQS EPA, FWS #2014-B-0086; Biological Evaluation for the EPA’s approval of new and revised water quality standards for Kentucky (Dec. 27, 2013). The FWS letter went on to explain that such an “after-the-fact” consultation request did not conform to the consultation process outlined in the applicable memorandum of agreement between the agencies. *Id.* The letter further explained that EPA had utilized an “inaccurate” list of threatened and endangered species and provided an accurate list of listed species, designated critical habitat, proposed species and critical habitat, candidate species, and species petitioned for listing. *Id.* at 1, 6-11.

The FWS letter explained that it was “evident” that the changes to the Kentucky’s revised eutrophication criteria “are insufficient to avoid adverse effects to federally-listed species.” *Id.* at 2. The letter went on to note the FWS’s concern that, “[w]ith seven listed fish species and 26 listed mussel species in Kentucky, the potential for take associated with eutrophication needs to be fully addressed in the narrative criteria and thoroughly evaluated in the BE.” *Id.*

The FWS also strongly recommended “that nationally recognized selenium experts review the DOW’s interpretation of the literature and criteria derivation for scientific soundness” because “the documents developed by KDOW . . . do not explore whether the actual water quality/selenium bio-uptake chemistries found in Kentucky waters fit the fish tissue model proposed in these documents.” *Id.* at 3. The FWS voiced its concern that “egg-laying vertebrates, such as fish, amphibians, reptiles, water birds and other aquatic dependent wildlife may be exposed to excessive dietary selenium before fish tissue concentrations ever approach the recently-approved whole body chronic criterion.” *Id.* at 4. The FWS reiterated that it “considers dietary selenium levels (e.g., fish tissue) at or below 5ppm (dry weight) to be protective of water birds, such as the federally endangered interior least tern (*Sterna antillarum*).” *Id.*

On information and belief, EPA has yet to provide a sufficient biological evaluation to the FWS. Further, the FWS has yet to conclude consultation either by concurring that EPA’s approval of Kentucky’s 2013 revised water quality standards is not likely to adversely affect listed species or by providing its biological opinion on this action.



**B. LISTED SPECIES AND CRITICAL HABITAT IN KENTUCKY MAY BE AFFECTED BY KENTUCKY DOW'S REVISED WATER QUALITY STANDARDS**

The Kentucky landscape seethes with abundance and a biodiversity richer than most landscapes of the North American continent. Kentucky is home to a wide range of species protected under the ESA, including a great diversity of freshwater-dependent species.

The FWS provided EPA with a list of species that must be addressed in EPA's revised biological evaluation. *See* Letter from Field Supervisor Virgil Lee Andrews to Chief Annie Godfrey, WQS EPA, FWS #2014-B-0086; Biological Evaluation for the EPA's approval of new and revised water quality standards for Kentucky at 6-11 (Dec. 27, 2013) (listing at least 50 species for inclusion in the agencies' Section 7 consultation). This list of over 50 species ranges from bats and birds to mussels, fish, insects, and plants and includes numerous species with designated critical habitat. In addition, it includes species proposed for listing or that are candidates for listing under the ESA.

Commenters agree that an initial analysis of each of these species is necessary to determine whether the revised narrative nutrient standards and revised selenium standards may affect listed, proposed for listing, and candidate species. However, readily available information strongly suggests that many of the threatened and endangered species protected under the ESA in Kentucky are likely to be adversely affected by the revised nutrient and selenium standards adopted by Kentucky DOW. As a result, formal consultation will be required for EPA's approval of these standards.

**1. THE REVISED DEFINITION OF EUTROPHICATION AND THE NEW NARRATIVE NUTRIENT WATER QUALITY STANDARD WILL ADVERSELY AFFECT ESA-PROTECTED SPECIES**

Streams have varying background levels of nutrients from upstream, runoff, groundwater, and the air. Cycling of those nutrients is an important function of streams. When certain nutrients, namely nitrogen and phosphorus, are overabundant within a stream or water body, they have deleterious effects. Closely related to nutrient loading is the process referred to as eutrophication. Eutrophication means an increase in nutrient levels that triggers excessive algae/plant growth, leading to alterations in the water body, namely oxygen depletion. These changes cause death of fish and other aquatic organisms, creating an entirely different aquatic environment. While eutrophication can happen naturally in some ecosystems, it is frequently human-caused; when it is, it occurs at a rapid rate, frequently leaving "dead zones" in water bodies.

Eutrophication and nutrient loading are fairly well-known water pollution problems. A review of Kentucky's 2010 Integrated Report to Congress on the Condition of Water Resources in Kentucky and 303(d) List of Surface Waters illustrates that eutrophication and nutrient loading are existing problems in many water quality limited water bodies in Kentucky.<sup>2</sup> In its 2010 report, Kentucky DOW identified sources of eutrophication/nutrients in water bodies that are water quality limited for these pollutants. *Id.* A wide variety of activities are implicated, including those that Kentucky DOW permits such as surface mining, concentrated animal feeding operations, and other point source discharges. Additionally a whole host of other, largely non-point source discharges, also

<sup>2</sup> This report is available here: <http://water.ky.gov/waterquality/303d%20Lists/2010%20IR%20Volume%202-%20Final.pdf> (last visited March 19, 2014).

contribute to these water quality problems. Agriculture, livestock grazing, riparian habitat loss and stream bank modifications are common sources of nutrient pollution, as are urban pollution from stormwater, illegal dumping, sewer overflows, and the like. *See* Appendix A (listing sources of eutrophication and nutrient water quality problems identified by Kentucky DOW for certain water body segments).

Rather than ameliorating these problems, Kentucky's 2013 revised definition of eutrophication and revised narrative nutrient standards will cause these water quality problems to increase and spread throughout the state. ESA-listed species that are freshwater dependent, depend upon freshwater prey, and/or require freshwater for survival will be adversely affected throughout Kentucky by the revised definition of eutrophication and the revised narrative nutrient standard. Under the 2013 revisions, nutrients are allowed to be deposited in a water body to the point that eutrophication results. 401 KAR 10:031 § 1. The new definition of eutrophication requires "adverse effects on water chemistry and the indigenous aquatic community" to occur before the standard is triggered. Indeed, because adverse effects to the indigenous aquatic community, including endangered and threatened species, are required for the nutrient standard to apply in the first instance, the plain language of these revisions automatically triggers the need for formal consultation.

## **2. THE REVISED SELENIUM STANDARDS WILL ADVERSELY AFFECT ESA-PROTECTED FRESHWATER SPECIES AND ESA-LISTED SPECIES THAT PREY UPON FRESHWATER SPECIES**

Selenium is a naturally occurring element that, at low thresholds, is important to normal life functions in many fish and animals. Selenium is thought to occur at background levels averaging 0.1 to 0.4 µg/L (USDOJ, 1998). At high concentrations, however, selenium becomes toxic, especially as it bioaccumulates within the food web. Exposure to selenium in a water body is rarely at a level that is immediately toxic.<sup>3</sup> It is the bioaccumulation of selenium and its various forms in the ecosystem that leads to toxic effects. High levels of selenium are introduced to water bodies from mining activities, such as surface coal mining, and from ash ponds at coal-fired power plants.

Research is still emerging on the levels of selenium that are toxic to freshwater species in large part because many variables affect toxicity. Water temperature, life stage, feeding patterns and habits, whether the receiving water is lentic or lotic, and the form of the selenium (selenate, selenite, etc.) are just some of the variables hypothesized as affecting toxicity. That said, the best available science does provide some useful guidance for analyzing the impacts of the selenium revisions on ESA-protected species in Kentucky.

In terms of the presence of selenium in the water column, EPA's current aquatic life criteria for selenium is 5 µg/L. This standard dates from 1987; reliance upon it has led to at least one biological opinion from the FWS concluding that California's water quality standards for toxics (including selenium) would jeopardize the continued existence of ESA listed species (Lemly, A.D. and J.P. Skorupa, 2007). As a result, these criteria have been proposed for revision. *See* 69 Fed. Reg. 75,541 (Dec.17, 2004) (proposing new criteria). In a 2010 early draft criteria document that was circulated for peer review, EPA recommended water column criteria of 2.6 µg/L in flowing waters and 1.3 µg/L in impounded waters. EPA has yet to finalize new criteria.

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<sup>3</sup> Note that selenium has been documented at levels that led to extirpation of species from certain water bodies (Hamilton, 2004).

Currently, the best available science recommends a water column standard for selenium at 2 µg/L (Lemly, A.D. and J.P. Skorupa, 2007; Hamilton, 2004); this includes Department of Interior guidelines (USDOI, 1998). Once selenium reaches concentrations above 2 µg/L in the water column, adverse effects to freshwater species are likely to occur, as documented in the scientific studies just cited. Diminished water quality above this level also poses the threat of jeopardy to species such as mussels that are incapable of escaping localized water degradation and many of which exist in small isolated populations. As a result, by using 5 µg/L selenium in the water column as the trigger for fish-tissue based sampling, Kentucky DOW will permit discharges that are likely to adversely affect ESA-protected species.

Additionally, the actual fish tissue-based criteria are also likely to lead to adverse effects to ESA-protected species. The standard's fish tissue concentration was derived by averaging the fish tissue concentrations deemed to be protective in four separate taxa: *Lepomis* (bluegill), *Salvelinus* (brook trout), *Esox* (northern pike), and *Micropterus* (largemouth bass). The whole fish tissue criteria is 8.6 µg/g (dry weight) and the fish egg/ovary tissue criteria is 19.3 µg/g (dry weight). 401 KAR 10:031 Section 6, Table 1.

Again, the best available science shows that a lower standard is required to avoid adverse effects to ESA-protected species. For example, the FWS recommends fish tissue criteria at or below 5ppm (dry weight). Hamilton (2002) recommends "4 µg/g to be a conservative value for a national tissue-based criterion for selenium" based upon "laboratory and field data." As these examples demonstrate, by all accounts Kentucky DOW has adopted a fish tissue criteria that will allow adverse effects to occur to ESA-protected species. Indeed, EPA withdrew its 2004 proposed criterion of 7.91 µg/g whole fish tissue in the face of overwhelming criticism from other expert agencies that the standard was not sufficiently protective.

### **3. ESA-PROTECTED FISH SPECIES ARE LIKELY TO BE ADVERSELY AFFECTED BY THE REVISED STANDARDS**

ESA-protected freshwater fish are likely to be adversely affected by the revised standards because of the water quality impacts these standards are likely to create. As the FWS has explained, "[s]treams associated with mountaintop mining and valley fills are characterized by increased conductivity, total dissolved solids, and concentrations of sulfate, bicarbonate ions, and metals such as manganese, iron, aluminum, and selenium" and that "[i]ncreased levels of selenium have been shown to bioaccumulate in organisms, leading to deformities in larval fish and potentially harming birds that prey on fishes." 76 Fed. Reg. 48,722, 48,731 (Aug. 9, 2011). The FWS further noted that "[c]oal mining represents a major source of" non-point source pollutants that "contribute high concentrations of dissolved metals and other solids that lower stream pH or lead to elevated levels of stream conductivity" which "negatively affect fish species." *Id.*

In addition to coal mining, coal-fired power plants and their related scrubber wastewater discharges and ash ponds also discharge selenium. Kentucky has 43 ash ponds at 17 different facilities throughout the state (EPA, 2009). Duke Energy's recent Dan River coal ash spill in North Carolina has drawn attention to Commenters' concerns about leaching and spills from coal ash ponds in Kentucky, which have the ability to deposit large amounts of selenium and other pollution into the environment (Quarles & Segall, undated). Additionally, coal-fired power plants discharge selenium as part of their scrubber wastewater discharges. There are 20 coal-fired power plants with KPDES permits in 18 counties in Kentucky (Quarles & Segall, undated). In particular, the following species

occur in counties with active surface coal mining and/or coal-fired power plants – activities that are known to discharge selenium – and thus, necessitate inclusion in formal consultation due to the impacts from selenium pollution: blackside dace; Cumberland arrow darter; Kentucky arrow darter; duskytail darter; Cumberland darter\*; and palezone shiner.<sup>4</sup>

Additionally, many freshwater species are adversely affected by nutrient loading and eutrophication. As many water bodies are water quality limited for these pollutants in Kentucky, *see supra* at 9-10, the effects of the revised nutrient standard on ESA-protected fish will be widespread and include urban areas, agriculture areas, and waterways near mines.

An example of an ESA-listed fish that is likely to be adversely affected by Kentucky's revised water quality standards is the Cumberland darter. A roughly two-inch yellow fish with brown markings, 75 Fed. Reg. 36,035, 36,036 (June 24, 2010), the Cumberland darter is typically found in "pools or shallow runs of low to moderate gradient sections of streams with stable sand, silt, or sand-covered bedrock substrates." *Id.* The FWS has explained that "[w]ater quality is [] important to the persistence of the Cumberland darter," which "requires relatively clean, cool, flowing water to successfully complete its life cycle . . ." 77 Fed. Reg. 63,604, 63,614 (Oct. 16, 2012). The Cumberland darter's habitat and food sources are "negatively impacted" by pollutants, such as "sediments, fertilizers, herbicides, pesticides, animal wastes, septic tank and gray water leakage, pharmaceuticals, and petroleum products," that "tend to increase concentrations of nutrients and toxins in the water and alter the chemistry of affected streams." 76 Fed. Reg. 48,722, 48,731 (Aug. 9, 2011); *see also id.* at 48,732 ("Non-point source pollutants can cause excess eutrophication (increased levels of nitrogen and phosphorus), excessive algal growth, instream oxygen deficiencies, increased acidity and conductivity, and other changes in water chemistry that can seriously impact aquatic species (KDOW 1996, pp. 48–50; KDOW 2006, pp. 70– 73).").<sup>5</sup>

The FWS has identified as threats to the Cumberland darter "[c]ontaminants associated with coal mining (metals, other dissolved solids), domestic sewage (bacteria, nutrients), and agriculture (fertilizers, pesticides, herbicides, and animal waste)" as a cause of degraded "water quality and habitats through increased acidity and conductivity, instream oxygen deficiencies, excess eutrophication, and excessive algal growths." 76 Fed. Reg. at 48,732. These threats are imminent and a cause for concern given the "small" remaining populations of the darter. *Id.* Kentucky DOW's revised eutrophication definition and nutrient criteria as well as the revised selenium standard are likely to adversely affect the Cumberland darter and many other similarly situated listed freshwater species in Kentucky.

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<sup>4</sup> Species with \* indicate those species with designated critical habitat in counties with active surface coal mining and/or coal-fired power plants.

<sup>5</sup> The Cumberland darter and its critical habitat are known to occur in at least two Kentucky counties where surface coal mining takes place: McCreary and Webster.

#### 4. FRESHWATER MUSSEL SPECIES ARE ALSO LIKELY TO BE ADVERSELY AFFECTED BY THE REVISED STANDARDS

Of course, fish are not the only threatened and endangered freshwater species that will be adversely affected. Kentucky supports 26 ESA-protected mussels and many of these species, as well as other ESA-protected invertebrates, will also be adversely affected by the revised water quality standards.

For example, in listing the spectaclecase and sheepsnose mussels, the FWS explained that “established criteria or benchmarks currently in place to protect aquatic life may not be adequate to protect [them].” 77 Fed. Reg. 14,914, 14,931 (March 13, 2012). This conclusion is “based in part on studies that have demonstrated greater sensitivity” and led the FWS to “assume that the spectaclecase and sheepsnose may be more sensitive to contaminants than standard test organisms for toxicity testing.” *Id.* at 14,931.

In particular, the following mussel species occur in counties with active surface coal mining and/or coal-fired power plants – activities that are known to discharge selenium – and, thus, necessitate formal consultation due to the impacts from selenium pollution: tan riffleshell; oyster mussel\*; littlewing pearl mussel; Cumberlandian combshell\*; Cumberland bean pearl mussel; fluted kidneyshell; clubshell; Cumberland elktoe\*; ring pink; purple catspaw pearl mussel; spectaclecase; snuffbox; fanshell; rabbitsfoot\*; fat pocketbook; rough pigtoe; sheepsnose; pink mucket; and orangefoot pimpleback.<sup>6</sup>

For example, the revised selenium standard is likely to adversely affect the snuffbox, a small mussel ranging in size from 1.8 to 2.8 inches with a yellowish or yellow-green shell. 75 Fed. Reg. at 67,552. The remaining populations of snuffbox are “highly fragmented and restricted to short reaches” in Kentucky, including “Tygarts Creek, Kinniconick Creek, Licking River, Slate Creek, Middle Fork Kentucky River, Red Bird River, Red River, Rolling Fork Salt River, Green River, and Buck Creek.” *Id.* at 67,560. Mining has negatively affected “snuffbox habitat in eastern Kentucky (lower Ohio and Mississippi River systems in southeastern Illinois and western Kentucky; upper Cumberland River system in southeastern Kentucky.” 76 Fed. Reg. 67,552, 67,574 (Nov. 2, 2010). According to the FWS, mining adversely affects snuffbox and its habitat by discharging metals, including selenium, “which can negatively affect biological processes such as growth, filtration efficiency, enzyme activity, valve closure, and behavior (Naimo 1995, pp. 351–355; Keller and Zam 1991, p. 543; Jacobson et al. 1997, p. 2390; Valenti et al. 2005, p. 1244).” *Id.* at 67,573. Kentucky DOW’s revised selenium standard completely ignores potential impacts on mussels such as the snuffbox. Neither EPA nor Kentucky DOW has provided any analysis whatsoever of whether the revised standards based on fish-tissue levels of selenium will adequately protect mussels and other invertebrates.

Additionally, mussels are adversely affected by nutrients “such as nitrogen and phosphorus.” 76 Fed. Reg. at 67,573. According to the FWS, nutrients:

can impact streams when their concentrations reach levels that cannot be assimilated, a condition known as over-enrichment. Nutrient over-enrichment is primarily a result of runoff from livestock farms, feedlots, and heavily fertilized row crops (Peterjohn and Correll 1984, p. 1471). Over-enriched conditions are exacerbated by

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<sup>6</sup> Species with \* indicate those species with designated critical habitat in counties with active surface coal mining and/or coal-fired power plants.

low-flow conditions, such as those experienced during typical summer-season flows and that might occur with greater frequency and magnitude as a result of climate change. Bauer (1988, p. 244) found that excessive nitrogen concentrations can be detrimental to the adult freshwater pearl mussel (*Margaritifera margaritifera*), as was evident by the positive linear relationship between mortality and nitrate concentration. Also, a study of mussel life span and size (Bauer 1992, p. 425) showed a negative correlation between growth rate and eutrophication, and longevity was reduced, as the concentration of nitrates increased. Nutrient over-enrichment can result in an increase in primary productivity, and the subsequent respiration depletes dissolved oxygen levels. This may be particularly detrimental to juvenile mussels that inhabit the interstitial spaces in the substrate where lower dissolved oxygen concentrations are more likely than on the sediment surface where adults tend to live (Sparks and Strayer 1998, pp. 132–133).

*Id.* Thus, the revised nutrient criteria and eutrophication definition are also likely to lead to adverse effects to ESA-protected mussels and other invertebrates, necessitating formal consultation.

#### **5. PISCIVOROUS BIRDS ARE ALSO LIKELY TO BE ADVERSELY AFFECTED BY THE REVISED STANDARDS**

Listed freshwater species such as mussels and fish are not the only ones that are likely to be adversely affected by the revised standards. Listed freshwater-dependent species that prey upon aquatic species also will likely suffer adverse effects. For example, the endangered interior least tern is likely to be adversely affected by the new selenium standard. The tern is a summer resident of Kentucky and has been found in the following counties: Ballard, Carlisle, Fulton, Hancock, Hickman, Livingston, Marshall, McCracken, and Union. The Coleman coal-fired power plant operates in Hancock county and the Shawnee coal-fired power plant operations in McCracken County (EIP, 2013). Additionally, coal mining occurs in Union County. Thus, selenium is likely to be discharged within these counties in the tern's range in Kentucky.

The smallest of the terns, the interior least tern fishes for food, swallowing its one- to three-inch prey whole or feeding it to its young. Given the species' feeding patterns, it is particularly susceptible to the bioaccumulation of heavy metals, such as selenium, and organochlorines in the freshwater ecosystems where it feeds (Allen, G.T. et al., 1997; Brown, M.B. et al., 2011). Bioaccumulation of toxics in terns can lead to death or infertility (Brown, M.B. et al., 2011). Selenium has deleterious consequences upon egg survival rates and nesting success when least tern eggs contain more than 5 µg/g dry weight (Allen, G.T. et al., 1997).

When the FWS conducted ESA consultation on the impacts of California's toxics water quality standards, which included selenium, it concluded that:

selenium poisoning of birds foraging in aquatic systems may occur at or below concentrations permissible under the aquatic life criteria proposed in the [standards]. The effects of selenium poisoning on avian species include: gross embryo deformities, winter stress syndrome, depressed resistance to disease due to depressed immune system function, reduced juvenile growth and survival rates, mass wasting, loss of feathers (alopecia), embryo death, and altered hepatic enzyme function. In addition the interactive effects between mercury and selenium produce super-toxic

effects greater than effects of each compound individually that may include embryo deformities, embryo death, reduced juvenile survival, behavioral abnormalities, depressed immune response, mass wasting, and mortality. It is the aggregation of these effects that the Service believes are likely to adversely affect the . . . California least tern . . . based on the potential for these species to be impacted by elevated levels of selenium through their dietary habits, dependence on the aquatic ecosystem, and their limited distribution.

(USFWS, 2000: 130). The FWS went on to recommend “a selenium criterion on the order of 1.4 µg/L (ppb) (generic piscivorous bird model; Lillebo et al. 1988) to 1.9 µg/L (ppb) (Bald eagle model; Peterson and Nebeker 1992)” finding that the “proposed criterion of 5 µg/L (ppb)” was “unprotective of California least terns” (USFWS, 2000: 133-34). The revised selenium standard in Kentucky is far above these levels and thus likely to lead to adverse affects on interior least terns and other piscivorous bird species.

### III. LEGAL VIOLATIONS

#### A. EPA VIOLATED SECTION 7(A)(2) BY INITIATING BUT NOT COMPLETING CONSULTATION ON ITS APPROVALS OF KENTUCKY’S REVISED STANDARDS BEFORE APPROVING THEM

As shown above, EPA initiated but failed to complete consultation with the FWS prior to approving Kentucky’s revised water quality standards for selenium and nutrients. Indeed, given that EPA requested the FWS’s review of its biological evaluation and concurrence with EPA’s “not likely to adversely affect” determinations on November 14, 2013, literally the day before EPA issued its approval and decision document to the Kentucky DOW, EPA made it impossible for the FWS to respond timely to the biological evaluation, let alone to complete timely consultation.<sup>7</sup>

EPA has entirely failed to comply with its procedural and substantive obligations under ESA Section 7(a)(2) to ensure against jeopardy to listed species and destruction or adverse modification of critical habitat. 16 U.S.C. § 1536(a)(2). “The ESA mandates that defendants place conservation above any of the agency’s competing interests.” *Kentucky Heartwood v. Worthington*, 20 F. Supp. 2d 1076, 1083 (E.D. Ky. 1998). These procedural and substantive violations cannot be separated. Congress established the Section 7(a)(2) consultation procedure explicitly “to ensure compliance with the [ESA’s] substantive provisions.” *Thomas v. Peterson*, 753 F.2d 754, 764 (9th Cir. 1985). “If a project is allowed to proceed without substantial compliance with those procedural requirements, there can be no assurance that a violation of the ESA’s substantive provisions will not result.” *Id.* (citing *Tenn. Valley Auth. v. Hill*, 437 U.S. 153 (1978)); *see also Conner v. Burford*, 848 F.2d 1441, 1458 (9th Cir. 1988) (the ESA’s “strict substantive provisions . . . justify more stringent enforcement of its procedural requirements, because the procedural requirements are designed to ensure compliance with the substantive provisions.”); *Washington Toxics Coal. v. Envtl. Prot. Agency*, 413 F.3d 1024, 1034-35 (9th Cir. 2005).

EPA’s violations of ESA Section 7(a)(2) in connection with its approvals of Kentucky’s revised selenium and nutrients water quality standards are actionable under the ESA’s citizen suit provision,

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<sup>7</sup> In fact, the FWS did not receive EPA’s letter requesting concurrence until November 18, 2013, three days after EPA transmitted its approval to Kentucky. Godfrey Letter at 1.

16 U.S.C. § 1540(g)(1)(A). Should EPA fail to remedy these violations within the 60-day notice period, Commenters may commence suit to obtain all available judicial remedies.

**B. EPA VIOLATED SECTION 7(A)(4) BY APPROVING KENTUCKY'S REVISED STANDARDS WITHOUT DETERMINING WHETHER ITS APPROVALS WOULD JEOPARDIZE PROPOSED SPECIES OR DESTROY OR ADVERSELY MODIFY PROPOSED CRITICAL HABITAT**

EPA's biological evaluation failed to account for the effects of Kentucky's revised water quality standards on species proposed for listing and/or critical habitat proposed for designation, in violation of its obligation to confer with FWS on any actions that are "likely to jeopardize the continued existence of any proposed species or result in the destruction or adverse modification of proposed critical habitat." 50 C.F.R. § 402.10(a). EPA's biological evaluation failed to identify three species proposed for listing in Kentucky: the northern long-eared bat (*Myotis septentrionalis*), Kentucky glade cress (*Leavenworthia exigua* var. *laciniata*), and Short's bladderpod (*Physaria globosa*). Commenters are not aware of any other documentation of EPA's consideration of the likelihood that its approval of Kentucky's revised water quality standards for selenium and nutrients would jeopardize any of these three species or result in the destruction or adverse modification of proposed critical habitat for Kentucky glade cress or Short's bladderpod.

EPA's violations of ESA Section 7(a)(4) in connection with its approvals of Kentucky's revised selenium and nutrients water quality standards are actionable under the ESA's citizen suit provision, 16 U.S.C. § 1540(g)(1)(A). Should EPA fail to remedy these violations within the 60-day notice period, Commenters may commence suit to obtain all available judicial remedies.

**C. EPA VIOLATED SECTION 7(D) BY MAKING AN IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES WHICH MAY FORECLOSE REASONABLE AND PRUDENT ALTERNATIVES TO JEOPARDY**

By prematurely approving Kentucky's revised water quality standards without first completing consultation with FWS in accordance with ESA Section 7(a)(2), EPA has violated the ESA's prohibitions against any irreversible and irretrievable commitment of resources that would foreclose the formulation and implementation of reasonable and prudent alternatives to jeopardy. *See* 16 U.S.C. § 1536(d).

Congress specifically enacted Section 7(d) "to prevent Federal agencies from 'steamrolling' activity in order to secure completion of the projects regardless of their impact on endangered species." *Pac. Rivers Council v. Thomas*, 936 F. Supp. 738, 745 (D. Idaho 1996) (quoting *N. Slope Borough v. Andrus*, 486 F. Supp. 332, 356 (D.D.C. 1980), *aff'd in part and rev'd in part on other grounds*, 642 F.2d 589 (D.C. Cir. 1980)). Section 7(d) "clarifies the requirements" of Section 7(a)(2) to "ensur[e] that the status quo will be maintained during the consultation process." *Conner v. Burford*, 836 F.2d 1521, 1536 & n.34 (9th Cir. 1988).

By rushing to approve Kentucky's revised water quality standards for selenium and nutrients without obtaining a final concurrence or biological opinion from FWS, especially in light of the myriad harmful effects that these standards are likely to have on listed species and designated critical habitats, EPA has failed to maintain the status quo during the consultation process. Kentucky DOW is now free, without any further action from EPA, to issue KPDES permits requiring permittees to comply with revised standards that are less protective of aquatic life, including listed species. Even if



the revised standards are later made more stringent – including as a result of FWS consultation – KPDES permittees will benefit from the permit shield provision of the CWA, 33 U.S.C. § 1342(k).

The leading case interpreting the CWA's permit shield is *Piney Run Preservation Ass'n v. Cty. Comm'rs of Carroll Cty.*, 268 F.3d 255 (4th Cir. 2001). That case holds that the permit shield defense is available when: “(1) the permit holder complies with the express terms of the permit and with the Clean Water Act's disclosure requirements and (2) the permit holder does not make a discharge of pollutants that was not within the reasonable contemplation of the permitting authority at the time the permit was granted.” *Id.* at 259; *see also Natural Res. Def. Council, Inc. v. Cty. of Los Angeles*, 725 F.3d 1194, 1204 (9th Cir. 2013) (citing *Piney Run's* general discussion of the permit shield); *Atl. States Legal Found., Inc. v. Eastman Kodak Co.*, 12 F.3d 353, 356 (2d Cir. 1993).

The permit shield provision is “a major benefit to a permittee because it protects the permittee from any obligation to meet *more stringent limitations* promulgated by the EPA unless and until the permit expires.” *Cty. of Los Angeles*, 725 F.3d at 1204 (emphasis added). As a result, “[w]here a permittee discharges pollutants in compliance with the terms of its NPDES permit, the permit acts to ‘shield’ the permittee from liability under the CWA.” *Id.* (citing 33 U.S.C. § 1342(k)).

EPA periodically updates the effluent limitations applicable to particular categories of discharges as more is learned about those discharges and the technologies available to control them. *See, e.g.*, 33 U.S.C. § 1311(d) (requiring periodic revision of technology-based effluent limitations). The permit shield is thus intended to allow permittees to continue utilizing their existing treatment practices and technologies until a permit is amended, revoked, or renewed, at which time permittees must make improvements to comply with any new effluent standards or other limitations to obtain a new permit.

On information and belief, EPA has taken the position in federal litigation over revisions to water quality standards that the permit shield provision protects NPDES permit holders from having to comply with subsequently-revised water quality standards until such time as the permit is amended or revoked by the state permitting agency, or until the permit expires by its own terms. Therefore, should the FWS determine at the conclusion of formal consultation that Kentucky's revised water quality standards for selenium and/or nutrients will result in jeopardy to any listed species or the destruction or adverse modification of any designated critical habitat, its options for reasonable and prudent alternatives, based on the status quo prior to EPA's approval, have been curtailed by EPA's premature action allowing Kentucky to proceed with KPDES permitting. Once such KPDES permits issue, EPA has no power to require their revocation or amendment to comply with more stringent standards that would ensure against jeopardy to species or destruction or adverse modification of critical habitat.

EPA's violations of ESA Section 7(d) in connection with its approvals of Kentucky's revised selenium and nutrients water quality standards are actionable under the ESA's citizen suit provision, 16 U.S.C. § 1540(g)(1)(A). Should EPA fail to remedy these violations within the 60-day notice period, Commenters may commence suit to obtain all available judicial remedies.

**D. EPA'S APPROVAL OF KENTUCKY DOW'S REVISED WATER QUALITY STANDARDS IS CAUSING TAKE OF ESA PROTECTED SPECIES**

EPA is in violation of the prohibition on the "take" of listed species in Section 9 of the ESA. 16 U.S.C. § 1538(a)(1)(C) (prohibiting take by any person); *id.* § 1532(13) ("person" includes "any officer, employee, agent, department or instrumentality of the Federal Government"). As previously discussed, federal agencies are liable for take resulting from activities they approve. *Straban v. Coxe*, 127 F.3d 155, 163 (1st Cir. 1997); *Loggerhead Turtle v. Cty. Council of Volusia Cty.*, 148 F.3d 1231, 1251 (11th Cir. 1998); *Defenders of Wildlife v. Adm'r, Envtl. Prot. Agency*, 882 F.2d 1294 (8th Cir. 1989). By approving Kentucky DOW's revised water quality standards without completing consultation with FWS, EPA (along with Kentucky DOW and any new KPDES permittees permitted under the revised standards) are operating without take liability coverage.

Kentucky's revised water quality standards will cause take, including death and injury to ESA-listed species, either from direct impacts or from habitat modification. The revised nutrient criteria allow nutrient loading to the point that eutrophication or "adverse effects on water chemistry and the indigenous aquatic community" result. These adverse effects will harass, harm, injure, and even lead to the death of ESA-protected species such as Cumberland darter, blackside dace, palezone shiner, relict darter, Kentucky cave shrimp, Cumberland elktoe, spectaclecase, fanshell, Cumberlandian combshell, oyster mussel, tan riffleshell, catspaw, Northern riffleshell, snuffbox, pink mucket, ring pink, littlewing pearlymussel, orangefoot pimpleback, sheepnose, clubshell, rough pigtoe, fat pocketbook, fluted kidneyshell, and rabbitsfoot.

Likewise, the revised selenium standard will cause harm, injury, and even death of ESA-listed species due to the overly high trigger for the fish-tissue standards – 5 µg/L – and the fish-tissue standards themselves, which are not sufficiently protective of freshwater species and freshwater-dependent species. These standards are likely to result in take of ESA-listed species such as interior least tern, blackside dace, duskytail darter, Cumberland darter, palezone shiner, tan riffleshell, oyster mussel, littlewing pearlymussel, Cumberlandian combshell, Cumberland bean pearlymussel, fluted kidneyshell, clubshell, Cumberland elktoe, ring pink, purple catspaw pearlymussel, spectaclecase, snuffbox, fanshell, rabbitsfoot, fat pocketbook, rough pigtoe, sheepnose, pink mucket, and orangefoot pimpleback.

In order to achieve safe harbor from ESA take liability for its approvals of Kentucky DOW's revised water quality standards for nutrients and selenium, EPA (in addition to Kentucky DOW and any newly permitted dischargers) must have written authorization from the FWS in the form of an incidental take statement ("ITS") issued as part of the FWS's biological opinion at the conclusion of formal consultation under Section 7. Because EPA has failed to carry out its obligations to comply with Section 7 and obtain an ITS from the FWS as part of a biological opinion, EPA is liable for violations of Section 9 of the ESA.

EPA's violations of ESA Section 9 in connection with its approvals of Kentucky's revised selenium and nutrients water quality standards are actionable under the ESA's citizen suit provision, 16 U.S.C. § 1540(g)(1)(A). Should EPA fail to remedy these violations within the 60-day notice period, Commenters may commence suit to obtain all available judicial remedies.

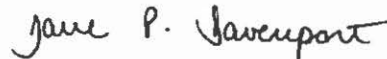
## CONCLUSION

If the EPA does not act to remedy these violations within 60 days, Commenters may initiate litigation in federal district court against the EPA concerning these violations to seek declaratory and injunctive relief and reasonable attorneys' fees and costs. If you have any questions or would like to discuss potential remedies prior to the expiration of this notice, please do not hesitate to contact us at the telephone numbers or email addresses below.

Sincerely,



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Appendix A

Excerpt of Sources of Eutrophication/Nutrients from 2010 Report

Basin Water Quality Limited for Eutrophication/Nutrients	Source of Eutrophication/Nutrients
Kentucky River Basin	Livestock grazing or feeding operations, agriculture, on-site treatment systems (septic systems and similar decentralized systems), managed pasture grazing, non-irrigated crop production, package plant or other permitted small flows discharges, unspecified urban stormwater , landfills, loss of riparian habitat, grazing in riparian or shoreline zones, municipal point source discharges, unrestricted cattle access, urban runoff/storm sewers, crop production, upstream impoundments, post development erosion, residential districts, channelization, internal nutrient recycling □ □
Licking River Basin	Animal feeding operations, municipal point source discharges, agriculture, livestock, urban runoff/storm sewers, dredging, natural sources, siculture activities, golf courses, residential districts, grazing in riparian or shoreline zones, loss of riparian habitat, crop production, highways, roads, bridges, loss of riparian habitat, sanitary sewer overflows, site clearance
Ohio River Basin	Urban stormwater, agriculture, crop production, animal feeding operations, grazing in riparian or shoreline zones, municipal point source discharges, livestock, site clearance, siculture activities, site clearance, dredging, illegal dumps
Salt River Basin	Illegal dumps, municipal point source discharges, sanitary sewer overflows, urban runoff/storm sewers, agriculture, grazing in riparian or shoreline zones, crop production, livestock, cafos, habitat modification, site clearance, landfills, wet weather discharges, industrial point source discharges, crop production, upstream impoundments, managed pasture grazing, non-irrigated crop production, highway /road/bridge runoff, loss of riparian habitat, streambank modification, package plant or other small flow discharge, siculture activities
Lower Cumberland River Basin	Agriculture, crop production, livestock, non-irrigated crop production, grazing in riparian or shoreline zones, municipal point discharges, habitat modification
Mississippi River Basin	Loss of riparian habitat, non-irrigated crop production, agriculture, other recreational pollution sources, channel erosion, hydromodifications, crop production, loss of riparian habitat
Ohio River Basin	Non-irrigated crop production, channelization, loss of riparian habitat, agriculture, municipal point source discharges, package plant or other small flow discharges, urban runoff
Tennessee River Basin	Municipal point source discharges, on-site treatment systems, package plant or other small flow discharges, sand/ gravel/ rock mining, agriculture, urban runoff, non-irrigated crop production, channel erosion, hydromodifications, impervious surface runoff, urban runoff

Upper Cumberland River Basin	Municipal point source discharges, sewer discharges, surface mining, Agriculture, upstream source, non-point source, combined sewer overflows, urban runoff, package plant or other small flow discharges, highway/road/bridge runoff, managed pasture grazing, non-irrigated crop production, siculture activities, unrestricted cattle access, onsite treatment systems, livestock, loss of riparian habitat, site clearance, streambank modification, domestic waste
Green River Basin	Agriculture, crop production, streambank modification, loss of riparian habitat, industrial point source discharge, site clearance, urban runoff, non-irrigated crop production, cafos, managed pasture grazing, livestock, upstream impoundments, rangeland grazing, municipal point source, urban runoff, grazing in riparian or shoreline zones, municipal point source discharges, siculture harvesting, streambank destabilization, site clearance, unrestricted cattle access