



Dennis G. Rice  
Office of Surface Mining Reclamation and Enforcement  
Administrative Record  
Room 252 SIB  
1951 Constitution Avenue NW  
Washington, DC 20240  
Docket ID: OSM-2010-0018; OSM-2010-0021

Submitted Electronically  
via Federal e-Rulemaking Portal: <http://www.regulations.gov>

Mr. Rice,

Please find below our timely filed comments on the Office of Surface Mining's (OSM) Stream Protection Rule and accompanying Draft Environmental Impact Statement [Docket IDs: OSM-2010-0018; OSM-2010-0021]. The original deadline for comments was September 25, 2015. After many requests for an extension of time, OSM extended the deadline for comments to October 26, 2015.

The Conservation Law Center (CLC) is a not-for-profit public interest law firm located in Bloomington, Indiana and operates the Conservation Law Clinic under an agreement with the Indiana University Maurer School of Law. The CLC represents non-profit environmental organizations and governmental entities in conservation matters and works to improve conservation law and policy.

The Hoosier Environmental Council (HEC) is a non-profit organization incorporated in the State of Indiana whose goal is to make Indiana a better place to live, breathe, work, and play. For over thirty years HEC has worked to safeguard Indiana's air, land, water, and wildlife resources through education and advocacy.

Much of the proposed rule contains sensible steps to update existing regulations and to protect the environment from the well-known effects of coal mining. Existing stream protection regulations under the Surface Mining Control and Reclamation Act (SMCRA) are the same as they were in 1983, despite attempts at modernization. New information on the impacts of mining, the ineffectiveness of stream mitigation, and additions to the list of endangered and threatened species make this update crucial. If properly implemented by federal and state authorities, the proposed rule will further SMCRA's purpose of protecting the environment from the harmful effects of surface coal mining.



However, the proposed rule contains gaps that would allow significant damage to the environment. The proposed rule authorizes the destruction of perennial and intermittent streams on the promise that mitigation will restore destroyed ecological function and biological communities, despite evidence that such restoration is rarely successful. Federally endangered and threatened species would remain at risk from surface coal mining and would lack binding species-specific minimization and mitigation measures that are crucial to their survival.

We divide our comments into six sections. The first section urges OSM to prohibit mining through perennial and intermittent streams and within 100 feet of such streams, or, in the alternative, to clarify that regulatory authorities may not use a stream's form as a proxy for its function because such a link is not scientifically supported in most circumstances. The second section discusses the requirements of the Endangered Species Act and urges OSM to adopt more protections for listed species in the final rule. The third section argues that the proposed rule is inadequately protective of birds. The fourth section addresses the deficiencies in the cumulative and baseline analysis procedures. The fifth section urges clarifications to the proposed rule's provisions on fish and wildlife enhancement measures. The sixth section argues that the proposed rule's special treatment of remining operations is unlawful and unwise.

## Section 1: The Proposed Rule Must Do More to Protect Streams

### Comment 1.1: OSM should ban mining through perennial and intermittent streams and within 100 feet of such streams.

Despite being called a “stream protection rule,” the proposed rule authorizes the destruction of many streams. The proposed rule allows applicants to mine through or adjacent to streams upon a showing that there is no reasonable alternative that would avoid such impacts.<sup>1</sup> This requirement means nothing when applicants can define a project’s purpose to target coal under streams. Instead, OSM should ban mining through perennial and intermittent streams to fulfill SMCRA’s purpose of protecting the environment from the harmful effects of surface coal mining.<sup>2</sup>

Mining through or filling a stream destroys the biological community and aquatic functions that existed in that stretch. The effects of mining through streams are felt far away from the action and often persist for many years.<sup>3</sup> Current stream mitigation techniques have failed to effectively restore aquatic function and biological communities and sometimes struggle to replace even the physical form of impacted streams.<sup>4</sup>

OSM should also prohibit surface coal mining within 100 feet of perennial and intermittent streams. As the proposed rule notes, areas within 100 feet of streams provide many crucial benefits, including stabilizing banks, providing shade, reducing erosion, and providing

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<sup>1</sup> Proposed section 780.28(c)(2)(ii). Stream Protection Rule, 80 Fed. Reg. 44436, 44610 (proposed July 27, 2015).

<sup>2</sup> 30 U.S.C. § 1202(a), (d).

<sup>3</sup> See 80 Fed. Reg. at 44441 (citing study showing that adverse impacts from surface and underground mines on water quality in Appalachian streams extended an average of 6.2 miles downstream from the mine).

<sup>4</sup> See Margaret A. Palmer and Kelly L. Hondula, *Restoration as Mitigation: Analysis of Stream Mitigation for Coal Mining Impacts in Southern Appalachia*, 48(18) *Envtl. Science and Technology* 10552–10560 (2014) (finding that stream restoration efforts often failed to replace function and sometimes failed to replace the structure of impacted streams).

food and habitat for wildlife.<sup>5</sup> Allowing the destruction of these buffer zones would significantly harm streams even if no mining occurred within the channel and would further expose streams to increased sediment loads, acid-mine drainage, and other pollutants.

Allowing surface coal mining through perennial and intermittent streams inherently favors coal production instead of striking a balance between coal mining and environmental protection as required by SMCRA.<sup>6</sup> Mitigating for coal mining's impacts to aquatic communities and stream function has been mostly ineffective. Although the proposed rule would meet coal companies' desires to mine coal wherever they wish, the environment and local communities will still be left with destroyed and degraded streams. OSM should revise the proposed rule to protect perennial and intermittent streams from further degradation and destruction by coal mining.

**Comment 1.2: If OSM allows coal mining to destroy streams, the agency should clarify the proposed rule to require that applicants actually restore stream function instead of using form as a proxy for function.**

OSM must ensure that its protections for stream function are not watered down by regulatory authorities. The proposed rule requires applicants to replace both the form *and* function of streams impacted by coal mining operations.<sup>7</sup> Restored or diverted streams must meet the functional restoration criteria established by the regulatory authority under proposed section 780.28(e)(1).<sup>8</sup> Natural channel design stream restoration methods treat a stream's form as a proxy for its function, despite scientific evidence showing that such a connection is generally not supportable. Thus, many restoration projects will restore only a stream's form, ignoring its

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<sup>5</sup> 80 Fed. Reg. at 44494.

<sup>6</sup> 30 U.S.C. § 1202(f).

<sup>7</sup> See, e.g., proposed section 816.57(b)(2) (requiring applicants who mine through perennial or intermittent streams to restore their form and function as expeditiously as practicable). 80 Fed. Reg. at 44656.

<sup>8</sup> 80 Fed. Reg. at 44656.

function despite assumptions to the contrary. OSM must require that applicants replace stream function separately to ensure the final Stream Protection Rule actually protects this essential element of stream health.

The current scientific literature indicates that a stream's form is generally not a proxy for its function. A recent analysis of stream restoration efforts following mountaintop removal coal mining in Southern Appalachia concluded that mitigation monitoring reports provided no evidence that stream mitigation replaced "lost or degraded natural resource values and functions."<sup>9</sup> Other studies have found that leaf litter breakdown rates were lower in streams restored following surface mining<sup>10</sup> and that restored streams have more tolerant taxa compared to sensitive taxa.<sup>11</sup> OSM itself recognized that merely restoring the form of a stream is often not sufficient and can result in homogenized biological communities.<sup>12</sup>

Sections of the proposed rule contemplate that restoration of stream function is a separate requirement from restoring stream form. The reclamation timetable for bond release places restoration of form many steps before restoration of function.<sup>13</sup> Proposed section 780.28(c)(2)(vi) requires the applicant to submit an engineering certification that the restored or diverted stream will meet regulatory standards, but does not require the certification to contain information on stream function, presumably because engineers are not qualified to certify that

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<sup>9</sup> Palmer and Hondula, *supra* note 4.

<sup>10</sup> See Ken M. Fritz et. al., *Structural and Functional Characteristics of Natural and Constructed Channels Draining a Reclaimed Mountaintop Removal and Valley Fill Coal Mine*, 29(2) *Journ. N. Am. Benthol. Soc.* 673–689 (2010) (finding slower breakdown of oak leaves in valley fill catchments compared to forested catchments); J. Todd Petty et. al., *Ecological Function of Constructed Perennial Stream Channels on Reclaimed Surface Coal Mines*, 720 *Hydrobiologia* 39–53 (2013) (finding lower rates of organic matter processing in constructed channels compared to reference channels).

<sup>11</sup> See Desiree D. Tullos et al., *Analysis of Functional Traits in Reconfigured Channels: Implications for the Bioassessment and Disturbance of River Restoration*, 28(1) *Jour. N. Am. Benthol. Soc.* 80–92 (2009); Petty et al. *supra* note 10.

<sup>12</sup> Draft Environmental Impact Statement for the Stream Protection Rule, U.S. Dep't of the Interior, Office of Surface Mining Reclamation and Enforcement, 4-91 (July 2015) (DEIS).

<sup>13</sup> Proposed section 780.12(b). See 80 Fed. Reg. at 44487.

matter.<sup>14</sup> These provisions highlight the separate nature of the proposed rule's mandate that applicants restore a stream's form and function.<sup>15</sup>

It is necessary to make the restoration of stream function a clearly separate requirement to differentiate the restoration requirements for ephemeral streams and intermittent/perennial streams. The DEIS notes that the proposed rule requires applicants to restore only the form of an ephemeral stream, not its function.<sup>16</sup> The proposed rule requires applicants to restore both form and function in impacted perennial and intermittent streams.<sup>17</sup> Therefore, using form as a proxy for function (replacing only a stream's form with the unsupported promise that the function will follow) would make the restoration requirements for ephemeral, intermittent, and perennial streams identical. OSM must clearly state that form is not a proxy for function to avoid conflating these requirements.

The Clean Water Act will not act as a stopgap if a regulatory authority decides to use form as a proxy for function. The DEIS states that restoring form and function is also required under the No Action Alternative because of Clean Water Act requirements.<sup>18</sup> This is mistaken. Although the regulatory text requires replacement of form and function,<sup>19</sup> the Army Corps and some courts currently interpret the Clean Water Act to allow surface mining applicants to use structure as a proxy for function, despite the scientific evidence that no such link exists.<sup>20</sup> The

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<sup>14</sup> 80 Fed. Reg. at 44610.

<sup>15</sup> See, e.g., proposed section 780.28(c)(2)(iv) (requiring applicants to demonstrate that they can restore both the form and ecological function of a stream they proposed to mine through or divert).

<sup>16</sup> DEIS at 4-97-98.

<sup>17</sup> See, e.g. proposed section 780.28(c)(2)(iv).

<sup>18</sup> DEIS at 4-57.

<sup>19</sup> See 40 C.F.R. § 230.11(e) (requiring Army Corps to determine the impacts of a project on a stream's form and function); 40 C.F.R. § 230.93 (requiring mitigation of stream function).

<sup>20</sup> *Ohio Valley Env'tl. Coal. v. Aracoma Coal Co.*, 556 F.3d 177 (4th Cir. 2009); *Kentuckians for the Commonwealth v. U.S. Army Corps of Eng'rs*, 746 F.3d 698 (6th Cir. 2014).

only way that OSM can ensure that applicants replace stream function is to clearly state in the final rule that regulatory authorities and applicants may not use form as a proxy for function.

**Comment 1.3: OSM should promulgate standards for functional assessment to ensure that regulatory authorities properly consider stream function.**

To ensure that regulatory authorities do not simply use stream form as a proxy for stream function, OSM should require that functional assessment protocols developed under proposed section 780.28(e)(1)(i) test for specific attributes of stream function. Important functional metrics that regulatory authorities should specifically test for include the following: timing and amount of leaf litter and wood inputs, dissolved organic carbon, dissolved oxygen, nitrogen and phosphorus levels, gross primary production, and nutrient uptake and storage. At a minimum, OSM's stated goal of recovering the ecological function of impacted streams requires restoration of biological assemblages that represent all the functional groups that existed in the unimpaired stream and restoration of both the aquatic form *and* functions needed to sustain these communities.<sup>21</sup> OSM must promulgate these standards in the final rule to bind regulatory authorities that may seek less protective restoration efforts.

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<sup>21</sup> See Katharine Suding et al., *Committing to Ecological Restoration: Efforts Around the Globe Need Legal and Policy Clarification*, *Science* 638–640 (May 2015) (listing four principles of ecological restoration: increasing ecological integrity, sustainability in the long term, being informed by historical data and future projections, and benefitting and engaging society).

## **Section 2: OSM Should Take Greater Steps to Protect Endangered and Threatened Species**

The Endangered Species Act<sup>22</sup> (ESA) is one of our nation's strongest conservation laws. It prohibits the take of listed species and requires federal agencies to consult with federal wildlife agencies before taking action that may affect listed species or critical habitat. Many endangered or threatened species, including mussels, fish, and bats are found in and near surface coal mines. OSM must take special care to ensure these federally protected species receive proper safeguards and are adequately considered during the permitting process. Although OSM correctly identifies the need to consult on the proposed rule and entire SMCRA program, the proposed rule fails to ensure that permittees implement species-specific minimization and mitigation measures.

### **Comment 2.1: OSM properly concluded that consultation on the proposed rule and entire SMCRA program is necessary.**

Federal agencies must consult with federal wildlife agencies before taking any action that may affect species listed under the Endangered Species Act or critical habitat.<sup>23</sup> OSM stated it intended to consult with the U.S. Fish and Wildlife Service (FWS) on the proposed rule and reinstate consultation on the entire SMCRA program.<sup>24</sup> We agree with this plan.

A District of Columbia district court vacated OSM's 2008 Stream Buffer Zone Rule due to its failure to consult under the ESA.<sup>25</sup> The court determined that the 2008 rule would affect listed species because listed species occur where coal mining occurs, mining operations affect the habitat and species in the permit area, and the 2008 rule established different standards for mining in and near streams.<sup>26</sup> The court rejected OSM's reliance on a 1996 Biological Opinion

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<sup>22</sup> 16 U.S.C. §§ 1531 *et seq.*

<sup>23</sup> 50 C.F.R. § 402.14(a).

<sup>24</sup> DEIS at 4-88.

<sup>25</sup> *Nat'l Parks Conservation Ass'n v. Jewell*, 62 F.Supp.3d 7 (D.D.C. 2014).

<sup>26</sup> *Id.* at 15-17.

(1996 BiOp) because the 1996 consultation was based on different regulations and did not consider new scientific information on the impacts of coal mining on streams and aquatic life that emerged after 1996.<sup>27</sup>

The same factors that led the *National Parks* court to require consultation apply to OSM's proposed Stream Protection Rule. Mining continues to affect listed species residing in and near coal mines. The proposed rule will also change the standards under which coal mines receive permits and will change the conditions under which mining in and near streams may occur. The 1996 BiOp is even more irrelevant than it was in 2008 when OSM improperly relied upon the BiOp to avoid consultation. The science on coal mining's effect on streams and aquatic communities is considerably further developed than the science reflected in the 1996 BiOp. Further, the 1996 BiOp never contemplated the proposed rule.

OSM also properly reinitiated consultation on the entire surface coal mining program.<sup>28</sup> An agency must reinitiate consultation when discretionary Federal involvement or control of an action has been retained and any of the following occur: if new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; if the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion; or if a new species is listed or critical habitat designated that may be affected by the identified action.<sup>29</sup> All the triggers requiring OSM to reinitiate consultation for the SMCRA program have been met. OSM has control over permitting surface coal mines in Tennessee. The 1996 BiOp did not consider new information on coal mining's effect on stream function, the effects of selenium and

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<sup>27</sup> *Id.* at 19.

<sup>28</sup> DEIS at 4-88.

<sup>29</sup> 50 C.F.R. § 402.16.

conductivity on biological communities, and the difficulty of mitigating for lost aquatic function and biological communities.<sup>30</sup> The proposed stream protection rule will modify the SMCRA program in a way the 1996 BiOp did not contemplate. Finally, new species have been listed under the ESA since the 1996 BiOp, including the northern long-eared bat<sup>31</sup> and the sheepsnose mussel.<sup>32</sup>

**Comment 2.2: OSM should ensure that its definition of material damage to the hydrologic balance outside the permit area adequately protects listed species by not tying it to the ESA’s jeopardy analysis.**

The proposed definition of “material damage to the hydrologic balance outside the permit area” includes any adverse impact from surface or underground coal mining activities on the “quality or quantity of surface water or groundwater, or on the biological condition of a perennial or intermittent stream, that would...impact threatened or endangered species or have an adverse effect on designated critical habitat, outside the permit area in violation of the Endangered Species Act.”<sup>33</sup> OSM is considering alternative language that would prohibit adverse impacts that would jeopardize the continued existence of threatened or endangered species, or result in the destruction or adverse modification of designated critical habitat, outside the permit area in violation of the Endangered Species Act.<sup>34</sup>

OSM should not adopt the above alternative definition for “material damage to the hydrologic balance outside the permit area” because merely avoiding jeopardy is not adequately protective for three reasons. First, permitting mines so long as they do not individually cause

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<sup>30</sup> See DEIS at 4-90–91 (summarizing studies on stream function, selenium, and biological communities and surface coal mining).

<sup>31</sup> Threatened Species Status for the Northern Long-Eared Bat With 4(d) Rule, 80 Fed. Reg. 17794 (April 2, 2015).

<sup>32</sup> Determination of Endangered Status for the Sheepsnose and Spectaclecase Mussels Throughout Their Range, 77 Fed. Reg. 14914 (Mar. 13, 2012).

<sup>33</sup> Proposed section 701.5. 80 Fed. Reg. at 44588.

<sup>34</sup> 80 Fed. Reg. at 44475.

jeopardy to listed species is more likely to ignore cumulative effects from past, present, and reasonably foreseeable future coal mining operations that could cause jeopardy in concert. Second, defining material damage to the hydrologic balance outside the permit areas as avoiding jeopardy would be redundant because SMCRA regulations already require the regulatory authority to determine that the project is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of critical habitat.<sup>35</sup> Third, the ESA prohibits the take of a single member of a listed species without a permit<sup>36</sup>, and a similar focus on minimizing surface mining's effects to listed species is necessary.

**Comment 2.3: Depending on the results of OSM's consultation on the proposed rule and SMCRA program, the proposed rule may require more protections for listed species.**

As discussed above, the proposed definition of "material damage to the hydrologic balance outside the permit area" includes impacts on listed species or critical habitat that violate the ESA.<sup>37</sup> This standard is vague and could mean a wide range of things depending on the outcome of OSM's consultation with FWS on the proposed rule and SMCRA program. The final rule should ban any impacts to listed species or critical habitat that occur outside a binding minimization and mitigation plan developed with the FWS either through the ESA permitting process or through a mechanism set up by the consultation.

If FWS determines a federal action that has been subject to ESA consultation will not jeopardize the continued existence of a listed species or adversely affect critical habitat ("cause jeopardy"), or that reasonable and prudent alternatives to the action would not cause jeopardy, it issues the federal agency an incidental take statement (ITS).<sup>38</sup> The ITS specifies the impact of

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<sup>35</sup> 30 C.F.R. § 773.15(j).

<sup>36</sup> 16 U.S.C. § 1538(a).

<sup>37</sup> Proposed section 701.5.

<sup>38</sup> 16 U.S.C. § 1536(b)(4); 50 C.F.R. § 402.14.

incidental take on listed species and reasonable and prudent measures FWS considers necessary to minimize such impact.<sup>39</sup>

The 1996 BiOp contains an ITS with ineffective “reasonable and prudent” minimization measures. SMCRA regulatory authorities must implement and require compliance with species-specific protective measures developed by FWS.<sup>40</sup> This requirement means little because FWS has developed coal mining species protection plans for only two listed species, the Indiana bat and blackside dace,<sup>41</sup> and a regulatory authority may refuse to implement FWS’ recommended protections so long as it explains its position.<sup>42</sup> Regulatory authorities must also quantify the take of listed species and notify FWS of any take, but there is no limit on the amount of allowable take except the jeopardy threshold.<sup>43</sup> As OSM recognized, the nonbinding nature of FWS’ recommendations could lead to situations where a permit for surface coal mining activities could be issued without “all the protections that the U.S. FWS believes are necessary.”<sup>44</sup> In fact, under the existing rules a permit could be issued without any protections FWS considers necessary.

If the consultation does not create binding, species-specific avoidance, minimization, and mitigation measures, as the 1996 BiOp failed to do, the proposed rule should require that applicants receive an incidental take permit (ITP) from FWS before conducting operations that will take listed species. Binding measures to reduce and offset the take of listed species are essential for any project that will take listed species. Thus, if the current consultation does not

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<sup>39</sup> 16 U.S.C. § 1536(b)(4)(i)–(ii).

<sup>40</sup> FWS, Formal Section 7 Biological Opinion and Conference Report on Surface Coal Mining and Reclamation Operations Under the Surface Mining Control and Reclamation Act of 1977, 13 (Sept. 24 1996), available at <http://www.osmre.gov/lrg/docs/BiologicalOpinionConferenceReport.pdf> (1996 BiOp).

<sup>41</sup> DEIS at 4-87–88.

<sup>42</sup> 1996 BiOp at 13.

<sup>43</sup> *Id.* at 13.

<sup>44</sup> DEIS at 4-88.

adequately protect species, individual ITPs will be the only way to protect listed species impacted by surface coal mining projects.

If the consultation on the proposed rule and SMCRA program results in strong protections for listed species, including binding, species-specific avoidance, minimization, and mitigation measures, the proposed rule's definition of "material damage to the hydrologic balance outside the permit area" is likely sufficient. The mandatory protection measures in the ITS would likely protect listed species, any violation of the ITS' provisions would violate the ESA, and the ESA violation would constitute "material damage to the hydrologic balance outside the permit area."

**Comment 2.4: OSM must ensure that the biological condition of restored streams can support species that have been listed or proposed for listing under the Endangered Species Act.**

Proposed paragraph 816.57(b)(2)(ii)(A) states that a restored or diverted stream does not need to have exactly the same biota or biological condition as the original stream so long as the biological condition is adequate to support the uses that existed before mining and would not preclude attainment of the designated uses of the original stream before mining.<sup>45</sup> This language does not clearly state that the biological condition of streams must support listed species in the area. OSM noted that wildlife that feed on macroinvertebrates impacted by coal mining "may be indirectly affected through reduced prey populations or through the bioaccumulation of contaminants from feeding on contaminated prey."<sup>46</sup> Studies confirm that tolerant taxa generally replace intolerant taxa in reclaimed streams.<sup>47</sup> Because threatened or endangered species may

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<sup>45</sup> 80 Fed. Reg. 44553.

<sup>46</sup> DEIS at 4-88 (stating that surface mine permits may be issued without all the protections FWS believes are necessary to protect listed species).

<sup>47</sup> See, e.g., Desiree D. Tullos et al., *Analysis of Functional Traits in Reconfigured Channels: Implications for the Bioassessment and Disturbance of River Restoration* 28(1) *Journal of North American Benthological Soc.* 80–92

rely on intolerant taxa that disappear from reclaimed streams, the failure to restore communities of intolerant taxa in impacted streams could impact listed species. OSM should revise proposed paragraph 816.57(b)(2)(ii)(A) to make clear that all restored streams and receiving streams outside the permit area must have biological assemblages that support threatened and endangered species in the area.

**Comment 2.5: While consultation on the proposed rule and SMCRA program are underway, OSM should consult with FWS on each permit it issues.**

OSM and the courts both recognize that the 1996 BiOp is out of date. OSM acknowledged that the 1996 BiOp is inadequate to permit surface mines that may impact listed species and has reinitiated consultation on the SMCRA program.<sup>48</sup> Likewise, the D.C. District Court recognized that the 1996 BiOp could not support a finding that the 2008 Stream Buffer Zone Rule would have no effect on listed species partly because new species were listed in the interim and new scientific information has emerged on coal mining's effects on streams and aquatic life.<sup>49</sup>

Partially due to the 1996 BiOp's current irrelevance, listed species are being harmed by surface coal mining projects. Although the current consultation on the proposed rule and SMCRA program may produce protective results, listed species need protection now. Therefore, OSM should consult with FWS for each new permit it issues until FWS and OSM complete the current consultation.

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(2008) (reaches restored using natural channel design principles exhibited more tolerant, insensitive taxa compared to control reaches that contained sensitive taxa).

<sup>48</sup> DEIS at 4-88.

<sup>49</sup> *Nat'l Parks*, 62 F. Supp. 3d at 19.

### **Section 3: Impacts to Birds from Surface Mining**

Birds are protected under a variety of laws. The Endangered Species Act, Migratory Bird Treaty Act, and Bald and Golden Eagle Protection Act, together, closely regulate the killing of members of most bird species in America. Surface coal mining operations can destroy important bird habitat, interfere with nesting, and kill protected birds. The proposed rule fails to ensure the restoration of bird habitat near streams or protect birds from the effects of blasting. OSM should strengthen the protections for birds in the final rule.

#### **Comment 3.1: OSM should impose greater buffer widths for streams when wildlife surveys demonstrate the presence of birds dependent on such buffers.**

The proposed rule requires permittees to establish 100 foot riparian buffers along perennial, intermittent, and ephemeral streams as part of the reclamation process.<sup>50</sup> However, OSM acknowledges that birds often require larger riparian buffers.<sup>51</sup> Research confirms that birds often require riparian buffers greater than 100 feet.<sup>52</sup> OSM should require larger buffers in the final rule when such buffers are necessary to protect birds and restore essential bird habitat.

Riparian buffers larger than 100 feet may not be necessary depending on the local bird population. The regulatory authority should tie the size of the riparian buffer to the needs of the wildlife that uses the permit area. For example, if birds regularly using the site require 200-foot riparian buffers, the regulatory authority should require the restoration of 200-foot riparian buffers around all streams. OSM should revise the proposed rule to require bird surveys that will provide the regulatory authority with information about bird usage of the permit area over twelve months. Migratory bird species may depend upon the permit area as a migratory stopover,

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<sup>50</sup> Proposed section 780.16(c)(3).

<sup>51</sup> 80 Fed. Reg. at 44494 (noting that birds often require riparian buffers greater than 300 feet).

<sup>52</sup> Fischer, R.A. "Width of riparian zones for birds" *EMRRP Technical Notes Collection* (TN EMRRP-SI-09), U.S. Army Engineer Research and Development Center (Jan. 2000) (summarizing research showing bird riparian buffer requirements range from 40→500 meters, or 130→1640 feet).

nesting grounds, or seasonal habitat, and a single bird survey could miss these birds. The proposed rule gives applicants the time to conduct a twelve-month bird survey because proposed section 780.19(c)(4)(iv) requires at least twelve months of baseline water sampling.

**Comment 3.2: OSM should require testing for ponds that may contain toxic chemicals to ensure birds and other wildlife using the ponds remain protected.**

Proposed section 816.97(d)(4) tracks existing 30 C.F.R. § 816.97(e)(4) by requiring permittees to fence and cover ponds containing hazardous concentrations of toxic-forming chemicals that may harm wildlife. These ponds often contain heavy metals including selenium and arsenic, which can poison wildlife or their offspring.<sup>53</sup> Although the current and proposed rules require excluding wildlife from ponds with hazardous concentrations of toxic chemicals, the rules do not prescribe a means to determine when toxic chemicals in ponds reach hazardous levels. Thus, wildlife could be exposed to hazardous concentrations of toxic-forming materials without any oversight. OSM should revise proposed section 816.97(d)(4) to require monthly testing of ponds where the disposal of mining waste occurs. If the permittee does not wish to test for the presence of toxic-forming material, she may assume the presence of hazardous concentrations of toxic chemicals and fence and cover the ponds to exclude wildlife.

**Comment 3.3: OSM should revise its blasting regulations to limit the effects of blasting on birds.**

Noise pollution can affect birds in many ways, including physical damage to ears, stress and avoidance responses, changes in reproductive success, and potential changes in

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<sup>53</sup> See, e.g., Mark Wayland et al., *The American Dipper as a Bioindicator of Selenium Contamination in a Coal Mine-Affected Stream in West-Central Alberta, Canada*, 123 *Envtl. Monitoring and Assessment* 285–298 (2006) (finding elevated levels of selenium in the eggs of American dippers (*Cinclus mexicanus*) nesting downstream from coal mines); A. Dennis Lemly, “Aquatic Hazard of Selenium Pollution From Coal Mining” in *COAL MINING: RESEARCH, TECHNOLOGY AND SAFETY*, Gerald B. Fosdyke ed. (Nova Science Publishers, Inc. 2008) (Coal cleaning process water associated with coal mining can contain concentrations of selenium up to 63 µg/L).

populations.<sup>54</sup> Physical damage to ears occurs with single blasts above 140 dB[A] or multiple blasts above 125 dB[A].<sup>55</sup> Chronic stress can lower reproductive success. Studies have found that birds abandon nests and other habitat in response to blasting.<sup>56</sup>

Current surface mining regulations require permittees to control airblast so it does not exceed 128 decibel linear peak at any manmade structure or dwelling within one-half mile of the permit area.<sup>57</sup> The regulations also direct permittees to conduct blasting so as to prevent damage to property and changes to streams outside the permit area.<sup>58</sup>

These regulations endanger birds that use areas near coal mines and especially threaten birds that nest in colonies nearby. Nesting and migratory bird habitat could be exposed to limitless airblast so long as no manmade structures or dwellings existed within one half mile of the permit area. Even if a permittee limits airblast to 128 decibels within a half-mile area, birds could experience negative effects including physical damage to their ears and nest abandonment.

OSM should revise its blasting regulations to make them responsive to the needs of birds. Although the proposed rule is mainly intended to increase protections for streams under SMCRA, surface coal mining affects birds, and the loss of birds attributable to blasting could have effects on the health of streams and their biological communities. OSM should require

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<sup>54</sup> Catherine P. Ortega, *Effects of Noise Pollution on Birds: A Brief Review of Our Knowledge* 74 Ornithological Monographs 6–22, 8 (2012).

<sup>55</sup> *Id.* at 9.

<sup>56</sup> James Bednarz, *The Effect of Mining and Blasting on Breeding Prairie Falcon (Falco mexicanus) Occupancy in the Caballo Mountains, New Mexico* 18(1) Raptor Research 16–19 (1984) (observing no falcon nests on a mountain range with heavy blasting and mining, but multiple nesting sites on nearby ranges with similar features to the mined range); Sanford R. Wilbur, *The California Condor, 1966-76: A Look at its Past and Future*, North American Fauna No. 72, U.S. Fish and Wildlife Serv. 35–39 (1978) (California condors sometimes abandoned their nests in response to blasting, sonic booms, drilling, and low-flying aircraft).

<sup>57</sup> 30 C.F.R. § 715.19(e)(1)(vi).

<sup>58</sup> 30 C.F.R. § 715.19(e)(2)(i).

permittees to limit the frequency and intensity of blasting while birds are using the permit area or adjacent areas as nesting or migratory stopover habitat.

## **Section 4: Scope of Analysis and Review Under the Proposed Rule**

### **Comment 4.1: OSM should include areas experiencing current effects of past mining in the cumulative impact area.**

The proposed definition of “cumulative impact area” requires analyzing only areas where impacts from an actual or proposed mining operation may interact with impacts from existing or future mines.<sup>59</sup> This definition ignores the current effects of past mining despite the fact that the impacts of surface coal mining often persist for decades. These impacts may be especially pronounced if the mining occurred before SMCRA took effect. To harmonize SMCRA’s requirements with the National Environmental Policy Act (NEPA), OSM should revise the proposed definition of cumulative impact area to include areas within which impacts of a current or proposed surface or underground coal mining operation may interact with current impacts of past mining.

Current impacts of past mining can include channelization, siltation, acid mine drainage, elevated levels of pollutants, habitat fragmentation, impaired biological communities, and loss of aquatic function. These effects can interact with current and proposed mines to create cumulatively significant impacts.

NEPA directs agencies to include the current impacts of past actions in the cumulative impact analysis to the extent they are relevant in analyzing whether a project may have a

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<sup>59</sup> Proposed section 701.5. See 80 Fed. Reg. at 44587.

continuing, additive, and significant relationship to those effects.<sup>60</sup> Once an agency identifies current impacts of past actions, it must assess “the extent that the effects of the proposal for agency action or its alternatives will add to, modify, or mitigate those effects.”<sup>61</sup>

Courts have remanded permits for coal mines because an agency failed to include the current effects of past mining in its cumulative impacts analysis. The Sixth Circuit rejected a Clean Water Act § 404 nationwide permit when the U.S. Army Corps of Engineers failed to analyze whether the permitted coal mines would have cumulative effects when added to past degradation associated with coal mining.<sup>62</sup> Although the Corps used past impacts to forecast future impacts, “it failed to combine the two to gauge the cumulative impact” of reauthorizing the coal mining nationwide permit, as required by NEPA.<sup>63</sup> Similarly, a West Virginia district court rejected nationwide permits for surface coal mining because the Corps did not analyze the current effects of past mining.<sup>64</sup> The court could not “accept a presumption, unsupported by evidence, that all past activities have been successfully mitigated or even that the mitigated impacts of past activities will not contribute to the cumulative impacts of future [projects].”<sup>65</sup>

Although state implementation of SMCRA is exempt from NEPA, revising the cumulative impact area definition to include areas experiencing current effects of past mining is still necessary. OSM itself must comply with NEPA because it implements SMCRA for the State of Tennessee and its permitting decisions constitute major federal actions that trigger NEPA.<sup>66</sup>

Requiring state regulators to consider the current effects of past mining in their cumulative

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<sup>60</sup> James L. Connaughton, Council on Envtl. Quality Chairman, “Guidance on the Consideration of Past Actions in Cumulative Effects Analysis” (June 24, 2005).

<sup>61</sup> *Id.* at 3.

<sup>62</sup> *Ky. Riverkeeper v. Rowlette*, 714 F.3d 402 (6th Cir. 2013).

<sup>63</sup> *Id.* at 410.

<sup>64</sup> *Ohio Valley Envtl. Coal. v. Hurst*, 604 F.Supp.2d 860 (S.D.W.V. 2009).

<sup>65</sup> *Id.* at 886 n.21 (quoting *O’Reilly v. Army Corps of Eng’rs.*, 477 F.3d 225,235 (5th Cir. 2007)).

<sup>66</sup> See generally 42 U.S.C. § 4332(c) (requiring EIS for major Federal actions that significant affect the environment).

impact analysis is also necessary to understand a proposed project's cumulative effects and what would constitute material damage to the hydrologic balance outside the permit area.

**Comment 4.2: OSM should require applicants to submit digital maps as part of the baseline analysis instead of making it optional.**

Proposed section 779.24(c) gives regulatory authorities *the option* to require that applicants submit maps, plans, and cross-sections in a digital format that includes all necessary metadata.<sup>67</sup> OSM should instead *require* that all applicants submit this information in a digital format to enhance public review of the application. Having this information in a digital format will speed up records requests and reduce the workload of regulatory authorities responding to such requests. Digital receipt of this information will also streamline coordination and review with other state and federal agencies. Instead of needing to scan this information, the regulatory authority will have readily accessible digital copies.

## **Section 5: Fish and Wildlife Enhancement Measures**

**Comment 5.1: OSM should ensure that permittees avoid and minimize adverse impacts before utilizing enhancement measures in order to maximize environmental protection.**

Proposed section 816.97(a) requires permittees to minimize, to the extent possible using the best technology available, disturbances and adverse impacts on fish, wildlife, and related environmental values and to achieve enhancement of those resources where practicable.<sup>68</sup> This subsection shows an express preference for minimizing impacts to the extent *possible*, in contrast to the extent *practicable*.<sup>69</sup> However, the proposed section ignores the importance of avoiding impacts, the uncertain success of resource enhancement measures, and the timing of the

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<sup>67</sup> 80 Fed. Reg. at 44595.

<sup>68</sup> 80 Fed. Reg. at 44665.

<sup>69</sup> See *Nat'l Wildlife Fed'n v. Norton*, 306 F. Supp. 2d 920 (E.D. Cal. 2004) (reasoning that "practicable" is a less rigorous standard than "possible" in the ESA).

minimization and mitigation. OSM should revise the proposed rule to require that permittees avoid or minimize impacts to the extent possible *before* restoring, replacing, or enhancing fish and wildlife habitat to the extent practicable.

FWS's mitigation policy shows the proper way to reduce and offset environmental impacts. First, a permittee must attempt to avoid the environmental impact. Second, a permittee must attempt to minimize the environmental impact. Only then may a permittee take compensatory mitigation steps including restoring the affected environment, preserving other resources, or out of kind mitigation.<sup>70</sup>

A similar mitigation sequencing policy is appropriate in the surface mining context. Recent research indicates that natural channel design stream restoration, the main form of mitigation for stream impacts caused by surface mining, is generally ineffective at restoring aquatic function and biological communities.<sup>71</sup> Given the ineffective nature of current stream mitigation, OSM should revise the proposed rule to clearly state that permittees must take all possible steps to avoid and minimize their impacts to the environment before undertaking fish and wildlife enhancement measures.

**Comment 5.2: OSM should require fish and wildlife enhancement measures to be located within the same HUC-12 watershed as the proposed coal mine when possible.**

Proposed section 780.16(d)(2)(iii)(B) requires fish and wildlife enhancement measures to be located within the watershed in which the proposed operation is located, unless opportunities for enhancement are not available in that watershed.<sup>72</sup> However, the proposed rule gives

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<sup>70</sup> U.S. Fish and Wildlife Mitigation Policy; Notice of Final Policy, 46 Fed. Reg. 7656 (Jan. 23, 1981).

<sup>71</sup> See, e.g., Margaret A. Palmer et. al., *River Restoration, Habitat Heterogeneity and Biodiversity: A Failure of Theory or Practice?*, 55 (Suppl. 1) *Freshwater Biology* 205–222 (2005) (finding that stream structure is not a reliable predictor of aquatic biodiversity).

<sup>72</sup> 80 Fed. Reg. at 44495.

regulatory authorities the discretion to set the boundaries of the watershed in accordance with a generally accepted watershed classification system.<sup>73</sup> OSM should revise proposed section 780.16(d)(2)(iii)(B) to require that regulators use the HUC-12 watershed boundary, or a smaller watershed boundary, to ensure that fish and wildlife enhancement measures benefit the same environment affected by the proposed operation.

Using the HUC-12 watershed as the largest possible boundary for enhancement measures raises the chances that these measures will address cumulative impacts from the project. The proposed rule requires permittees to analyze cumulative impacts at a HUC-12 watershed level.<sup>74</sup> Once the regulatory authority identifies cumulative impacts, it can craft fish and wildlife enhancement measures to offset these harms. It makes more sense to construct enhancement measures within the same area as identified cumulative impacts to ensure that permittees offset the environmental consequences of their operations.

## **Section 6: Regulation of remining**

### **Comment 6.1: OSM should require biological monitoring for remining operations.**

Proposed section 780.23(d)(1) allows applicants to request that the regulatory authority modify or waive the biological monitoring plan in remining operations based upon an evaluation of the quality of groundwater and surface water and the biological condition of the receiving stream at the time of application.<sup>75</sup> This proposed rule gives applicants and regulatory authorities a blank check to ignore biological communities impacted by remining operations and is inconsistent with SMCRA.

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<sup>73</sup> *Id.* at 44495.

<sup>74</sup> Proposed Section 701.5. *See* 80 Fed. Reg. at 44587.

<sup>75</sup> 80 Fed. Reg. at 44607.

Monitoring the biological integrity of streams affected by remining operations is essential to gauge an operation's effect on the environment and compliance with SMCRA. SMCRA requires permittees to conduct surface mining operations in a way that minimizes disturbances and adverse impacts to fish, wildlife, and related environmental values to the extent possible using the best technology currently available.<sup>76</sup> OSM has acknowledged that the biological condition of streams "determines whether those waters are capable of achieving their designated uses," as required by the proposed rule's definition of material damage to the hydrologic balance outside the permit area.<sup>77</sup> Merely conducting a baseline assessment of a stream's biological condition, instead of conducting ongoing monitoring of the stream's biological condition, cannot meet these requirements on its own.

The proposed biological monitoring exemption for remining operations relies on the premise that previously mined areas contain no valuable biological communities. Under this theory, the physical condition of streams impacted by past coal mining is so poor that it cannot support healthy biological communities. Although physical parameters of stream health can sometimes approximate a stream's biological health, this is not always the case. For example, although conductivity is often used as an indicator of polluted streams, multiple studies have found high biological integrity in streams with high levels of conductivity.<sup>78</sup> The regulatory authority should not have the option to modify or waive biological monitoring if this is the case.

If OSM does allow regulatory authorities to modify or waive biological monitoring, it should place more standards on when biological monitoring is not necessary and require the

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<sup>76</sup> 30 U.S.C. § 1265(b)(24).

<sup>77</sup> 80 Fed. Reg. at 44507.

<sup>78</sup> See Heatherly et al., *Relationships Between Water Quality, Habitat Quality and Macroinvertebrate Assemblages in Illinois Streams*, 36 *Journal of Env'tl. Quality* 1653–1660 (2007); McPherson et al., *Diversity and Community Structure of Stream Insects in a Minimally-disturbed Forested Watershed in Southern Illinois*, 46 *Great Lakes Entomologist* 42–89 (2013).

regulatory authority to make affirmative findings that those standards have been met. Biological monitoring should be waived only when a stream contains no valuable biological community and biological monitoring is not necessary to determine material damage to the hydrologic balance outside the permit area.

**Comment 6.2: The exceptions for remining should apply only to areas that were actually mined in the past.**

OSM should clarify the proposed rule to state that the less stringent requirements for previously mined lands apply only to the portions of a project that were actually previously mined. Projects that may be classified generally as remining operations often contain areas within the permit boundary that were never mined. Applicants should still be required to comply with all elements of SMCRA on the newly-mined lands, even though the entire project may be classified as remining. Any justification for exempting previously mined lands from certain SMCRA requirements, such as that biological resources would not exist or be valuable in previously mined areas, is inapplicable when permitting development on land that never experienced coal mining.

**Comment 6.3: To understand the significance of its exemptions for remining operations, OSM should revise the DEIS to determine the extent of remining projects.**

The proposed rule lessens regulatory burdens on surface coal mining permits for remining operations. However, the DEIS does not analyze how much land would likely be covered by these less stringent standards. OSM briefly mentions the number of permits for remining in Kentucky and West Virginia from January 2000 to July 2008 but does not analyze how many acres were covered by these permits or the extent of remining in other states or at other times.<sup>79</sup> It is impossible to determine the environmental effect of the less stringent

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<sup>79</sup> DEIS at 3-238.

provisions for remined areas without an estimate of the amount of remined areas that would qualify.

Gathering information on remined areas likely would not be overly burdensome. For example, Indiana state agencies have digital maps showing the extent of both historic and active coal mines within the state.<sup>80</sup> Comparing the two maps would allow OSM to estimate acreage of recently remined areas and number of proposed permits on remined areas. Similar maps likely exist in other states<sup>81</sup> and would provide crucial information about the extent of the exceptions for remined areas under the proposed rule. OSM should clearly state how much land will be affected by the more lenient requirements for remining operations and should estimate the environmental effects of lowering protections for remined areas.

**Comment 6.4: OSM was likely mistaken when it stated that the regulatory authority could waive the baseline analysis of biological conditions in remining operations, but if OSM was not mistaken, the agency should not allow such a waiver.**

The proposed rule's discussion of proposed section 784.19 on baseline monitoring for underground mining operations suggests that under proposed section 780.19(e), the regulatory authority could waive the biological baseline analysis for surface remining operations.<sup>82</sup> The proposed rule suggests that waiving a biological baseline analysis will incentivize surface mining in previously mined areas so that private companies will reclaim the land without expenditure of public funds.<sup>83</sup> However, neither proposed section 780.19 nor OSM's discussion of proposed

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<sup>80</sup> See Indiana Coal Mine Information System, Indiana Geological Survey, <http://coalminemaps.indiana.edu/> (accessed September 29, 2015); Active Mining Permits Map, Indiana Dep't of Natural Resources, <http://www.in.gov/dnr/reclamation/5397.htm> (accessed September 29, 2015).

<sup>81</sup> OSM has already cited data on historical coal mining operations in its DEIS so likely has access to this information. See DEIS at 4-67 (estimating stream crossings at historical mine sites as part of analysis estimating the number of improved stream miles downstream of mine sites under different action alternatives).

<sup>82</sup> 80 Fed. Reg. at 44526.

<sup>83</sup> *Id.* at 44526.

section 780.19 in the proposed rule allow for such a waiver.<sup>84</sup> Thus, the discussion of proposed section 780.19's requirements in OSM's explanation of proposed section 784.19 is likely mistaken.

If OSM did intend the proposed rule to allow regulatory authorities to waive the biological condition baseline analysis for surface remining operations, the proposed rule is inadequate. Baseline analysis is crucial to understand the environmental impacts of a mine and gauge when reclamation is complete. Understanding the biological conditions of a site is necessary for the applicant to conduct operations in a manner that results in the lowest possible disturbance and adverse impact to biological communities, as required by SMCRA.<sup>85</sup>

Waiving the biological condition baseline analysis for remining projects would conflict with proposed section 780.23(d)(1). That proposed section allows the regulatory authority to modify or waive biological monitoring based on an evaluation of the quality of groundwater and surface water and biological condition on receiving streams at the time of application.<sup>86</sup> The only way the regulatory authority could determine that biological monitoring was not necessary under this regulation is by performing a baseline analysis of a stream's biological condition. Allowing regulatory authorities to waive the biological condition baseline analysis for surface coal remining projects would conflict with other portions of the proposed rule and should not be carried forward into the final rule.

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<sup>84</sup> *Id.* at 44499, 44603.

<sup>85</sup> 30 U.S.C. § 1265(b)(24).

<sup>86</sup> 80 Fed. Reg. at 44607.

**Comment 6.5: OSM is correct to require that remined areas be reclaimed to surface configuration that existed before *any* mining occurred.**

Proposed sections 816.104 and 816.105 both require applicants to restore the surface configuration of the mined area to its state before any mining occurred.<sup>87</sup> These sections of the proposed rule will fulfill SMCRA's purpose of promoting the reclamation of mined areas left without adequate reclamation before 1977.<sup>88</sup> Restoring the surface configuration to a degraded form would only perpetuate the environmental harms caused by past coal mining. Although it may be difficult to determine the surface configuration if mining occurred far in the past, this provision is vital to comply with SMCRA.

## CONCLUSION

We appreciate the opportunity to comment on this vital update to surface coal mining regulation. If properly implemented, the Stream Protection Rule will increase protections for communities, streams, and the environment. If improperly enforced, however, this rule could simply lead to more of the same environmental degradation that prompted this rule. After finalizing the proposed rule, OSM should carefully monitor states' compliance and should not hesitate to reassert primary authority over surface coal mining regulation should a state fail to comply with the Stream Protection Rule. The rule is only as strong as its enforcement, and OSM should not let its good work go to waste in state offices with histories of lax enforcement.

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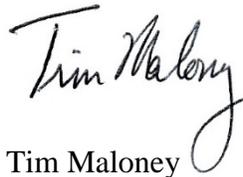
<sup>87</sup> See 80 Fed. Reg. at 44570–71.

<sup>88</sup> 30 U.S.C. § 1202(h).

Sincerely,



Peter Murrey  
Graduate Fellow Attorney  
Conservation Law Center  
116 S. Indiana Avenue, Suite 4  
Bloomington, IN 47408  
jpmurrey@indiana.edu



Tim Maloney  
Senior Policy Director  
Hoosier Environmental Council  
3951 N. Meridian St. Suite 100  
Indianapolis, IN 46208