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Public Comments Processing
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Division of Policy, Performance, and Management Programs
U.S. Fish and Wildlife Service
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RE: Comments on Proposed Revisions to the U.S. Fish and Wildlife Service Mitigation Policy [Docket No. FWS-HQ-ES-2015-0126]

Submitted electronically via Federal e-Rulemaking portal: http://www.regulations.gov

To Whom It May Concern:

Please find below our timely filed comments on the proposed revisions to the Fish and Wildlife Service (FWS) mitigation policy. 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 agreements with the Indiana University Maurer School of Law and Indiana University McKinney 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 proposed policy is the first update since 1981 to conservation planning under all the statutes FWS administers. This update properly incorporates principles of landscape ecology and correctly recognizes that avoiding and minimizing impacts is preferable to compensating for those impacts. A landscape approach to conservation will likely produce better outcomes than piecemeal project planning.

However, the proposed policy retains the confusing terms "mitigation" and "mitigation sequencing" to cover the entire avoidance, minimization, and compensation sequence. The policy also allows for deviations from this sequence that are not acceptable under the Endangered Species Act and could produce negative conservation outcomes. These deficiencies in the proposed policy could have severe effects on species that need protection more than ever in the face of new threats including climate change.

We divide our comments into four parts. First, we argue that FWS should use a different term than "mitigation" to cover the entire sequence of avoidance, minimization, and compensation measures and suggest how FWS should implement this sequence in project planning and permitting. In the second part we clarify how the proposed policy's landscape approach ought to function. Third, we suggest changes and clarifications to the policy to conform to the Endangered Species Act's requirements. In the last part, we urge FWS to perform an Environmental Impact Statement that studies the policy's effects on example species representing common management concerns.

PART 1: THE CONSERVATION HIERARCHY.

The proposed policy continues FWS' use of the confusing terms "mitigation hierarchy" or, more generally "mitigation," to cover all measures used to reduce and offset project impacts. Under the proposed policy, the single term "mitigation" can refer to one, three, or even five separate actions, which may or may not require sequential application. The confusion caused by the carefree use of the term "mitigation" has plagued environmental law for decades.

In this Part, we propose changes to the term "mitigation hierarchy" and FWS' use of the hierarchy in project planning. First, FWS should not use the general term "mitigation" to refer to

the full sequence of planning measures. The terms "conservation hierarchy" and "conservation sequencing" avoid the confusion caused by the general term "mitigation" and are more consistent with the Endangered Species Act. Second, FWS should not treat "rectify" as a subset of "minimize" because the two actions target different conservation objectives and take effect at different temporal scales. Third and fourth, FWS should not deviate from the temporal sequence of avoid, minimize, and compensate for projects impacting endangered species or important habitat. Fifth, FWS should consider environmental justice concerns when deviating from the temporal sequence or locating off-site compensation projects. Lastly, FWS should not use the term "practicable" to include a cost-effectiveness or cost-benefit analysis and should clarify that the different statutes FWS administers differ in environmental protectiveness.

I. FWS' Use of the Term "Mitigation" to Refer to Avoidance, Minimization, and Compensation Is Confusing and Inconsistent With the ESA.

The proposed policy defines "mitigation" as "a label for all types of mitigation that a proponent would implement toward achieving the Service's mitigation goal."[1] The five stages of mitigation are avoid, minimize, rectify, reduce over time, and compensate.[2] FWS sometimes reduces the five mitigation types to a three-part series: avoid, minimize, and compensate.[3] The last stage is sometimes called "compensatory mitigation"[4] or simply "mitigation."[5] This formulation causes needless confusion and blurs the separate duties to minimize and mitigate under Section 10 of the Endangered Species Act (ESA).

[1] Proposed Revisions to the U.S. Fish and Wildlife Service Mitigation Policy, 81 Fed. Reg. 12380, 12395 (March 8, 2016).
[2] *Id*. at 12395.
[3] *Id*. at 12395.
[4] *See e.g*., 81 Fed. Reg. at 12381, 12383, 12385.
[5] *See e.g*., 81 Fed. Reg. at 12391–2 (referring to "proponent-responsible mitigation" as part of the last stage of the sequence).

A. FWS' use of the general term "mitigation" creates unnecessary confusion.

FWS' use of the general term "mitigation" to cover the entire range of conservation activities creates confusion for two reasons. First, "mitigation" is an ambiguous term with two definitions relevant to the policy. Secondly, using the term "mitigation" can cause redundancies with the conservation hierarchy's three-stage formulation.

The word "mitigation" is ambiguous and has two meanings, both of which apply to different stages of conservation planning. One common use of "mitigate" – "mitigate one's losses" – refers to lessening or decreasing an impact. This usage of "mitigation," reducing an impact, fits into the minimization stage of the conservation sequence. The other meaning of "mitigate" is to offset or compensate, which is how the term mitigate is more commonly used in environmental law.[6] This more technical usage of the term "mitigation" – offsetting – relates to compensation, the last stage of the conservation sequence. Therefore, a simple direction to "mitigate" a project's impacts could be reasonably interpreted as either reducing the project's impacts through minimization measures or offsetting the project's impacts through compensation measures.

FWS sometimes refers to the general term "mitigation" as a three step process of avoidance, minimization, and compensatory mitigation.[7] FWS also sometimes drops the word "compensatory" from the last stage in the sequence, resulting in a sequence of avoid, minimize, and mitigate.[8] Under this formulation, "mitigation" refers to both the entire sequence and the last step in the sequence. As a matter of common sense, using one term to describe a sequence of

[6] *See* ENVIRONMENTAL MITIGATION, Black's Law Dictionary (10th ed. 2014).
[7] 81 Fed. Reg. at 12381.
[8] 81 Fed. Reg. at 12391 (referring to "proponent-responsible mitigation" as a type of compensatory mitigation).

activities that includes the term itself is bound to cause confusion. There is a continuing need to clarify the meaning of the term "mitigate."

Thus, when FWS directs someone to "mitigate the project's impacts," it must continually explain what it means. For example, the Greater Sage Grouse Range-wide Mitigation Framework begins with an explanation of what the term "mitigation" covers and later reminds the audience that mitigation is more than just compensatory mitigation.[9] After clarifying the meaning of "mitigation," FWS generally directs the regulated community to mitigate impacts when it often means engage in the full suite of avoidance, minimization, and compensation measures. This often makes it difficult to understand whether FWS is directing individuals to simply compensate for impacts or to avoid, minimize, and compensate for impacts. The confusion also raises concerns about compliance with the Endangered Species Act.

B. FWS' use of the general term "mitigation" to include minimization blurs the ESA's requirements.

FWS's use of the term "mitigate" to include minimization in the proposed policy is confusing at best when applied to ESA Section 10(a). Section 10(a)(2)(B)(ii) uses both terms: "minimize and mitigate."[10] According to well-known canons of statutory construction, we can assume that Congress intended the words "minimize" and "mitigate" to have separate and distinct meanings.[11] In particular, Congress would not have redundantly used two words "minimize" and "mitigate" if the word "minimize" were simply a subset of "mitigate."[12] In other words, if "mitigate" were intended to be a general type that includes "minimize" as a subset, then

[9] U.S. FWS, *Greater Sage Grouse Range-wide Mitigation Framework* 1, 8 (Sept. 3, 2014).
[10] 16 U.S.C. § 1539(a)(2)(B)(ii).
[11] *See, e.g., In re Montreal, Maine & Atlantic Ry., Ltd.*, 799 F.3d 1, 9 (1st Cir. 2015) ("There is a general canon of statutory construction which teaches that courts should construe statutes to avoid rendering superfluous any words or phrases therein."); *United States v. Ceballos–Martinez*, 387 F.3d 1140, 1144–45 (10th Cir. 2004) (stating that courts must interpret statutes so that "no clause, sentence, or word shall be superfluous, void, or insignificant") (quoting *Duncan v. Walker*, 533 U.S. 167, 174 (2001)).
[12] *See, e.g., United States. v. Caseer*, 399 F.3d 828, 851 (6th Cir. 2005).

there would be no need for both terms to be included in the series – i.e., "minimize" would be superfluous.[13] It is thus most likely that Congress used the term "mitigate" to mean compensate or offset in accordance with its technical use in environmental law. Indeed, FWS has frequently interpreted the term "mitigate" as used in Section 10(a)(2)(B)(ii) to mean compensation.

C. FWS should use the term "conservation hierarchy" instead of "mitigation hierarchy" to avoid this confusion.

Instead of continuing with this confusing terminology, FWS should use this large change in policy to rephrase its actions. The terms "conservation hierarchy" and "conservation sequencing" capture the full range of avoidance, minimization, and compensation measures covered by the proposed policy without creating the confusion that has plagued FWS' use of the term "mitigation."

The Migratory Bird Treaty Act[14] (MBTA) already uses a similar term to cover the suite of avoidance, minimization, and compensation measures. The regulations authorizing take incidental to military readiness activities require "conservation measures" in some circumstances.[15] MBTA regulations define "conservation measures" as "project design or mitigation activities that are reasonable from a scientific, technological, and economic standpoint, and are necessary to *avoid, minimize, or mitigate* the take of migratory birds or other adverse impacts."[16] This term captures the full range of planning measures without causing the confusion or inconsistencies that "mitigation sequencing" does. FWS should use the terms "conservation measures," "conservation hierarchy," or "conservation sequencing" to refer to the

[13] *See* Norman J. Singer & J.D. Shambie Singer, 2A Sutherland Statutory Construction § 46:6, at 230-52 (7th ed. 2010) ("No clause, sentence or word shall be construed as superfluous, void or insignificant if a construction can be found which will give force to and preserve all the words of the statute.").
[14] 16 U.S.C. §§ 703–712.
[15] 50 C.F.R. § 21.15(a)(1).
[16] 50 C.F.R. § 21.3 (emphasis added).

suite of avoidance, minimization, and compensation measures used to reduce and offset project impacts.

D. If FWS does not use the term "conservation hierarchy" to refer to the entire sequence, it should at least call the last stage of the sequence "compensation" to minimize confusion.

If FWS decides not to adopt the term "conservation hierarchy" to refer to the full suite of impact reduction and offsetting measures, it can still reduce the confusion caused by the term "mitigation hierarchy" by not calling the last stage of the sequence "mitigation" or "compensatory mitigation." Using the term "mitigation" to refer to the entire sequence and the last stage of the sequence is confusing. Instead, FWS should refer to the last stage solely as "compensation" or "compensate."

Confusion will remain if FWS rigidly uses the term "compensate" for the last stage of the hierarchy. As explained earlier, both "mitigate" and "compensate" can be defined as offset. Thus, a direction to "mitigate impacts" could still refer to both the entire sequence and the last stage of the sequence. Although still confusing, this alternative is preferable to the status quo of using the terms "compensatory mitigation" and "mitigation" to refer to the last stage of the hierarchy. FWS frequently uses the terms "compensate" and "compensation" in the proposed policy to refer to the last stage of the conservation sequence, so this change is likely easy to make.

II. The Proposed Guidance Improperly Characterizes Rectifying Impacts as Minimization. The Provided Definition and Examples Show That Rectification Is More Like On-Site Compensation.

The proposed policy sets out a five-step conservation hierarchy that the agency and applicants should generally follow sequentially. The steps, in order, are: avoid, minimize, rectify,

reduce over time, and compensate.[17] The policy then rephrases this five-step hierarchy into three stages: avoid, minimize, and compensate.[18] FWS proposes to combine the terms "rectify" and "reduce over time" under the term "minimize." Treating rectification as minimization violates the common sense definitions of these words, does not find support in the remainder of the proposed policy or other laws, and can have negative conservation outcomes.

FWS' statement that it "will retain the ability to distinguish, as needed, between minimizing, rectifying, and reducing impacts over time" does not solve the problem of conflating the terms "minimize" and "rectify."[19] Retaining the ability to distinguish between these very different conservation strategies is insufficient given the potentially vast differences between minimization and rectification strategies and the inconsistencies it creates for implementation of the ESA. FWS should change the proposed policy to clearly state that rectifying and reducing impacts over time do not constitute or stand in for minimization.

A. The definitions and examples FWS gives for the terms "minimize," "rectify," and "compensate" in the proposed policy show that rectifying impacts is not a form of minimization.

Comparing the definitions of "rectify" and "compensate" given in the proposed policy shows that those two actions are fundamentally the same. FWS defines "rectify" as "repairing, rehabilitating, or restoring the affected environment."[20] FWS defines "compensate" as "replacing or providing substitute resources or environments"[21] and includes "restoring habitats."[22] Thus, both definitions involve replacing a resource that was destroyed by the project. The only difference between the definitions FWS gives for "rectify" and "compensate" is the location

[17] 81 Fed. Reg. at 12389.
[18] *Id*. at 12389.
[19] 81 Fed. Reg. at 12389, 12400.
[20] 81 Fed. Reg. at 12390.
[21] *Id*. at 12390.
[22] *Id*. at 12390.

where the replacement occurs: rectification replaces the impacted resource solely within the affected environment, whereas compensation can replace the impacted resource within or outside the affected environment.

The examples of rectification and minimization in the proposed policy also show that rectification is not the same as minimization. Examples of "minimize" include "reduce the overall spatial extent and/or duration of the action," "adjust the spatial configuration of the action to retain corridors for species movement between functional habitats," and "install screens and other measures necessary to reduce aquatic life entrainment/impingement at water intake structures."[23] The measures FWS gives as an example of minimization target the action causing the impacts and reduce the severity or extent of the impact on the affected resource.

In contrast, most of the examples FWS provides for rectification do not target the project's design or attempt to reduce a project's impact on the affected environment in any way. Three of the four generalized examples FWS gives for rectify are:

a) Repair physical alterations of the affected areas to restore pre-action conditions or improve habitat suitability for the evaluation species.
b) Plant and ensure the survival of appropriate vegetation where necessary in the affected areas to restore or improve habitat conditions for the evaluation species and to stabilize soils and stream channels.
c) Stock species that experienced losses in affected areas when habitat conditions are able to support them over time.[24]

[23] *Id*. at 12390.
[24] 81 Fed. Reg. at 12390.

None of these examples of rectification reduce impacts to the affected resource over the course of the action, as minimization does. Instead, these examples remedy the project's impacts by improving or replacing the impacted resource itself, *e.g.*, restoring altered stream channels to stable dimensions.

The other example of rectification that FWS gives, "provide for fish and wildlife passage through or around action-imposed barriers to movement," does not match FWS' general definition of "rectify." Instead, the fish and wildlife passage example resembles one of the examples of avoidance that FWS gives: "add structural features to the action, where such action is sustainable (*e.g.*, *fish and wildlife passage structures*…)."[25]

If FWS' definition of rectify included only examples such as "provide for fish and wildlife passage through or around action-imposed barriers to movement" then the agency could likely treat rectifying impacts as minimization. However, the proposed policy cannot classify the term "rectify" as a subset of "minimize" because most of the definitions and examples of the term "rectify" in the proposed policy do not minimize any project impacts.

B. The Clean Water Act and NEPA do not treat rectification as a subset of minimization.

The proposed policy cites the Clean Water Act, the Presidential Memorandum on Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment, and 600 DM 6.4 as examples of how the term "minimize" includes the term "rectify."[26] Regulations under Section 404 of the Clean Water Act do not subsume rectification under minimization, but instead treat the components of FWS' definition of "rectify" as

[25] 81 Fed. Reg. at 12389–90 (emphasis added).
[26] *Id*. at 12389.

compensation. To the extent the other documents may support FWS' conclusion that rectify is a subset of minimize, FWS should not follow that approach.

i. Section 404 of the Clean Water Act treats minimization separately from FWS' definition of rectify.

The Section 404(b)(1) Guidelines governing dredge and fill operations distinguish minimization and compensation measures and do not mention the term "rectify" as a step in the conservation hierarchy. Subpart H of 40 C.F.R. Part 230 is titled "Actions to Minimize Adverse Effects." The vast majority of the examples given in the 404(b)(1) Guidelines on minimization of adverse effects reduce impacts by limiting the degree or magnitude of the action and its implementation, just as FWS proposes for minimization.[27] Minimization under Section 404 of the Clean Water Act, with one exception, never contemplates repairing, rehabilitating, or restoring the affected environment, as FWS proposes to define "rectify."

The 404(b)(1) Guidelines contain only one example under minimization that resembles FWS' proposed definition of rectify. When listing ways to minimize adverse effects on populations of plants and animals, the 404(b)(1) Guidelines include "[u]sing planning and construction practices to institute habitat development and restoration to produce a new or modified environmental state of higher ecological value by displacement of some or all of the existing environmental characteristics."[28] The same subsection also states that "[h]abitat development and restoration techniques can be used to minimize adverse impacts and *to compensate* for destroyed habitat. Additional criteria for compensation measures are provided in subpart J [on mitigation]."[29] The minimization Guidelines explicitly connect an example of rectify with compensation. FWS should not import a solitary reference to rectifying under Clean

[27] *See* 40 C.F.R. §§ 230.70–230.77.
[28] 40 C.F.R. § 230.75(d).
[29] *Id*. at (d) (emphasis added).

Water Act minimization into FWS' entire minimization program, especially given the harmful implications of treating rectification as minimization outlined below.

The provisions of 40 C.F.R. Part 230 Subpart J "Compensatory Mitigation for Losses of Aquatic Resources" in the 404(b)(1) Guidelines include the entire definition FWS gives for "rectify." The definition section for Subpart J defines "compensatory mitigation" as "*restoration* (re-establishment or *rehabilitation*), establishment (creation), enhancement, and/or in certain circumstances preservation of aquatic resources for the purpose of offsetting unavoidable adverse impacts which remain *after* all appropriate and practicable avoidance and *minimization* has been achieved."[30] In Subpart J, rehabilitation "means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of *repairing* natural/historic functions to a degraded aquatic resource."[31] Thus, each part of FWS' proposed definition of rectify as "repairing, rehabilitating or restoring the affected environment" is found in the Clean Water Act 404(b)(1) Guidelines on compensatory mitigation. The same Guidelines explicitly contrast rectification actions with the Clean Water Act's definition of minimization. FWS' proposal to classify rectifying impacts as a type of minimization is inconsistent with the Clean Water Act.

ii. NEPA, the source of FWS' definitions for the conservation hierarchy, does not treat rectify as minimize.

The definitions that FWS gives in the proposed guidelines for avoid, minimize, rectify, reduce over time, and compensate are identical to the definitions under NEPA.[32] Although the definition of "mitigation" under NEPA forms a sequence similar to the conservation hierarchy adopted by FWS in the proposed policy, the regulations never subsume the terms "rectify" and

[30] 40 C.F.R. § 230.92 (emphasis added).
[31] *Id*. (emphasis added).
[32] *Compare* 81 Fed. Reg. at 12389–90 *with* 40 C.F.R. § 1508.20.

"reduce over time" under the term "minimize."[33] Instead, rectifying impacts is a separate step from minimization. FWS should follow the example under NEPA and treat rectification separately from minimization.

C. Treating rectifying impacts as minimization has adverse implications for conservation planning and the Endangered Species Act.

FWS' proposal to classify rectifying impacts as minimization will negatively impact conservation planning in many ways. Allowing applicants to rectify impacts instead of minimizing impacts would delay conservation benefits and produce degraded resources when rectifying is not effective, such as in the field of stream restoration. Treating rectifying impacts as minimization can also distort the operation of statutes like the ESA and could cause difficulties when collaborating with other agencies that do not conflate the term "rectify" with "minimize."

Treating rectifying impacts as minimization would cause delays in conservation when compared to minimization measures. Many of the examples of rectification that FWS listed would not take effect until after the life of the project. For example, restoring altered stream channels on a surface coal mining site can proceed only after coal has been extracted from the action area. In contrast, the minimization measures FWS gives as examples, such as reducing the spatial extent of a coal mine, act through the entire life of the project or before the project's impacts occur. Classifying rectification as minimization would improperly delay conservation benefits at the minimization stage of the conservation sequence.

FWS' proposed treatment of rectification as minimization would lead to inconsistent application of terms between the Clean Water Act Section 404 Program and the proposed policy.

[33] 40 C.F.R. § 1508.20.

As shown above, the Section 404 Guidelines do not treat rectification as minimization. Because FWS often comments on Section 404 permits and assists in conservation planning, the two agencies should strive to use similar definitions and terminology.

Treating rectifying impacts as minimization distorts the operation of the ESA. If an ITP applicant can use rectification as minimization, she would not have really minimized her project's impacts to the maximum extent practicable as required by Section 10(a)(2)(B)(ii) and the D.C. Circuit's opinion in *Gerber v. Norton*.[34] She would not have reduced the impact of the project's take of species by killing fewer animals, destroying less habitat or less valuable habitat, or decreasing the magnitude of harassment. Instead, she would simply replace lost values later in the same location. Treating rectification as a subset of minimization distorts the conservation sequence inherent in Section 10's direction to minimize and mitigate impacts, as explained in greater detail in Section III of this Part.

Treating rectification the same as minimization also has serious implications for operations that destroy streams because restored streams generally lack the same functional attributes as the original stream.[35] The Office of Surface Mining recognized that stream restoration can result in homogenized biological communities.[36] Allowing applicants to destroy a stream and then "rectify" the loss with an inferior replacement, rather than avoiding or

[34] 294 F.3d 173, 184 (D.C. Cir 2002).
[35] 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).
[36] 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). *See also* 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) (finding that restored streams have more tolerant taxa than sensitive taxa compared to reference streams).

minimizing the damage, decreases functional attributes in the surrounding ecosystem and landscape.

III. FWS Should Not Deviate From the Conservation Hierarchy When Permitting Impacts to Species Listed Under the Endangered Species Act.

The proposed policy "recognizes it is generally preferable to take all appropriate and practicable measures to avoid and minimize adverse effects to resources, in that order, before compensating for remaining losses."[37] Thus, FWS will generally require that applicants design projects with the lowest practicable impact on the environment. However, the policy also notes that "some limited circumstances may warrant a departure from this preferred sequence."[38] FWS will allow compensation before avoidance or minimization when a project will impact low value habitat or when deviating would be more cost-effective.[39] Deviating from the conservation hierarchy would conflict with Section 10 of the ESA.

Section 10 of the ESA requires FWS to issue an ITP only if the permittee has "to the maximum extent practicable, minimized and mitigated the impacts of [the] taking."[40] The plain language of this provision and the D.C. Circuit's opinion in *Gerber v. Norton* both suggest that deviating from the conservation hierarchy is not appropriate.

The plain language of the phrase "to the maximum extent practicable, minimize and mitigate" requires applicants to avoid and minimize impacts, where practicable, before mitigating where practicable. The term "minimize" means "reduce or keep to a minimum."[41] Congress emphasized the plain meaning of the term "minimize" by requiring minimization to

[37] 81 Fed. Reg. at 12384.
[38] *Id*. at 12384.
[39] *Id*. at 12389.
[40] 16 U.S.C. § 1539(a)(2)(B)(ii).
[41] Minimize, Merriam-Webster Online Dictionary (2016).

"the maximum extent practicable," or, requiring applicants to reduce impacts to the feasible minimum. The only way to comply with ESA's requirement to "minimize and mitigate" is to first minimize impacts to a feasible minimum. If an applicant did not cause the lowest feasible amount of impacts before mitigating, she would have merely reduced impacts, instead of minimizing to the maximum extent practicable. Thus, applicants can comply with Section 10 only by deploying all practicable minimization measures before mitigating their project's remaining impacts.

The D.C. Circuit Court's opinion in *Gerber v. Norton* supports the principle that an applicant must fully minimize to the maximum extent practicable before mitigating. The court determined that "it [was] plain on the face of the statute" that FWS must independently find that an ITP applicant minimized her project's impacts to the maximum extent practicable.[42] The *Gerber* court would not have required more minimization if fixing the errors in the mitigation plan would have been sufficient to bring the ITP into compliance with the ESA.

A 2011 FWS guidance document on Indiana bats and wind energy projects asks and answers the conservation sequencing question. "Is it allowable for an applicant to mitigate in lieu of minimization measures, or must the applicant first minimize if possible? Response: An applicant must first minimize to the maximum extent practicable."[43] This guidance document uses the proper sequencing procedure for minimizing and mitigating under Section 10 of the ESA.

FWS should amend the proposed policy to state that it will not allow deviations from the conservation hierarchy for projects under Section 10 of the ESA.

[42] 294 F.3d 173, 184 (D.C. Cir. 2002).
[43] USFWS, Indiana Bat Section 7 and Section 10 Guidance for Wind Energy Projects, Revised (Oct. 26, 2011).

IV. FWS Should Not Deviate From the Conservation Hierarchy When Planning for Impacts to Important Habitat.

Under the proposed policy, the specific characteristics of the affected habitat may alter FWS' sequencing of the conservation hierarchy. The policy uses three metrics to assess the value of affected habitats: scarcity, suitability, and importance. Scarcity refers to "the relative spatial extent of the habitat type in the landscape context."[44] Suitability is "the relative ability of the affected habitat to support one or more elements of the evaluation species' life history."[45] Lastly, importance is "the relative significance of the affected habitat…to achieving conservation objectives for the evaluation species."[46] Important habitats are "irreplaceable or difficult to replace, or are critical to evaluation species."[47]

FWS states that compensation may receive greater emphasis when it "would more effectively and efficiently achieve the policy goal for mitigating impacts to habitats that are either abundant, of low suitability, or of low importance."[48] FWS states that it "will seek avoidance of all impacts" to "high value" habitats,[49] but does not define "high value" habitats. FWS might not treat important habitat the same way it treats "high value" habitat.

It is vital that FWS avoid and minimize impacts to habitats of high importance, regardless of their abundance or suitability. An abundance of highly important habitat does not mean it is acceptable to place compensation ahead of practicable avoidance or minimization measures. Abundant high importance habitat guards against stochasticity and unforeseen events. Highly important habitat that we currently believe is not well suited to an evaluation species may later

[44] 81 Fed. Reg. at 12388.
[45] *Id*. at 12388.
[46] *Id*. at 12389.
[47] *Id*. at 12389.
[48] 81 Fed. Reg. at 12389.
[49] *Id*. at 12389.

be discovered to be crucial to that species' survival, particularly given climate change.[50] Destroying irreplaceable habitat would be imprudent and could have severe effects on species.

V. FWS Should Consider Environmental Justice Before Deviating From the Conservation Hierarchy.

FWS recognizes that the species it manages are unique federal trust resources that provide aesthetic, recreational, and spiritual benefits to those living nearby.[51] The howl of the wolf and the song of the whippoorwill stir powerful emotions. Unfortunately, few Americans can call these species neighbors and many cannot afford to travel to parks, wildlife refuges, or other biodiverse areas. Instead, many Americans live in communities impaired by decades of environmental injustice.

FWS should strive to maintain existing natural communities of species in human communities impacted by environmental injustice. The Department of the Interior's recently released Draft Environmental Justice Strategic Plan 2016–2020 recognizes the need to "include environmental justice in management and planning processes."[52] Thus, when considering whether to deviate from the conservation hierarchy, FWS should take into consideration a community's access to nature. Instead of siting compensation projects outside of these communities, FWS should locate these projects within the local communities, if it can do so without foreclosing other kinds of economic development, to ensure these environmentally degraded communities are not further alienated from nature. FWS should also consider, where applicable, prioritizing these areas for off-site compensation projects. Although prioritizing compensation in environmentally degraded areas could be in tension with species management

[50] Given FWS' definition of "important habitat" as either irreplaceable or difficult to replace or critical to evaluation species, the only way that habitat could be both highly important and lowly suitable is if it is irreplaceable or difficult to replace.
[51] 81 Fed. Reg. at 12388.
[52] U.S. Dep't of the Interior DRAFT Environmental Justice Strategic Plan 2016–2020 (April 2016).

goals when decades of environmental injustice have left subpar habitat, FWS should strive to incorporate environmental justice principles where practicable and appropriate.

VI. The Use of the Term Practicability in the Conservation Hierarchy Differs Depending on the Governing Statute.

FWS' policy proposes to use conservation measures to the extent practicable across the many statutes the agency administers. Although an emphasis on practicability is laudable, the policy's approach to practicability suffers from two flaws. First, the policy defines practicability in terms of a cost-benefit analysis in violation of its common definition and usage in the courts. Second, the policy's application of practicability across all the statutes FWS administers creates a uniform standard even though the statutes differ in stringency. FWS should take care not to blur each statute's requirements or water down protections for those species that need it most.

A. FWS' definition of "practicable" as a cost-benefit analysis violates the plain meaning of the word practicable.

FWS defines the word "practicable" as "available and capable of being done after taking into consideration existing technology, logistics, and cost in light of a mitigation measure's beneficial value and a land use activity's overall purpose, scope, and scale."[53] The first part of the definition accurately tracks the common usage of "practicable" in dictionaries and courts. The second part of the definition improperly introduces a cost-benefit analysis that decreases the term's protectiveness. Instead of watering down the term "practicable," FWS should consider using a different term besides "practicable" when implementing statutes where Congress has not forbidden a cost-benefit analysis if the agency wishes to conduct such an analysis.

[53] 81 Fed. Reg. at 12395.

The D.C. Circuit has acknowledged that "practicability" is "commonly used to denote a feasibility consideration."[54] The D.C. District interpreted the "maximum extent practicable" standard in the ESA's recovery plan provisions to indicate "a strong congressional preference that the agency fulfill its obligation to the extent that it is possible or feasible."[55] These definitions confirm the dictionary definition of practicable as "reasonably capable of being accomplished; feasible in a particular situation."[56]

Courts have also interpreted the term "practicable" to preclude a cost-benefit analysis. The D.C. Circuit relied on the phrase "as far as practicable" in the Lead-Based Paint Poisoning Prevention Act to strike down regulations that selected hazard reduction methods based on the degree they were deemed cost-effective.[57] According to the Court, the statute's requirement to eliminate hazards "as far as practicable" showed that "[i]n plain language Congress commanded that if it is 'practicable' to eliminate an immediate hazard, that hazard *must* be eliminated."[58]

As the Supreme Court noted, "when Congress has intended that an agency engage in cost-benefit analysis, it has clearly indicated such intent on the face of the statute."[59] For example, Congress explicitly stated that the Clean Water Act's best practicable control technology effluent limitation standards must "include consideration of the total cost of

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[54] *Hercules, Inc. v. U.S. E.P.A.*, 598 F.2d 91, 111 (D.C. Cir. 1978) (holding that plain language of 1972 Clean Water Act did not require EPA to consider economic or technological feasibility when setting toxic effluent standards because none of the statutory factors used such a term). *See also, Nat'l Tire Dealers & Retreaders Ass'n, Inc. v. Brinegar*, 491 F.2d 31 (D.C. Cir. 1974) (motor vehicle safety standards using the word "practicable" require consideration of economic factors and technological feasibility); *Sierra Club v. Van Antwerp*, 661 F.3d 1147, 1151 (D.C. Cir. 2011), *as amended* (Jan. 30, 2012) (Clean Water Act § 404 practicable alternatives test, "although neither a cost-benefit test nor an efficiency test, nonetheless encompasses economic factors.").

[55] *Fund for Animals v. Babbitt*, 903 F. Supp. 96, 111 (D.D.C. 1995) *as amended*, 967 F. Supp. 6 (D.D.C. 1997) (citing *SMS Data Products Group, Inc. v. United States*, 853 F.2d 1547, 1553 (Fed. Cir. 1988) (finding the common usage of 'practicable' in Competition in Contracting Act means capable of being put into practice, done, or accomplished: feasible)).

[56] Blacks Law Dictionary (10th ed. 2014).

[57] *Ashton v. Pierce*, 16 F.2d 56 (D.C. Cir. 1983), *amended by* 723 F.2d 70 (D.C. Cir. 1983).

[58] *Id*. at 63–64 (emphasis in original).

[59] *Am. Textile Mfrs. Institute, Inc. v. Donovan*, 452 U.S. 490, 510 (1981).

application of technology in relation to the effluent reduction benefits to be achieved from such application."[60] Likewise, the D.C. Circuit refused to rely solely on practicability language in selecting long lasting clean-up remedies under CERCLA because the statute also required the selection of cost-effective remedies.[61]

B. Using a single definition of practicability for all the statutes FWS administers ignores the different levels of protection the various statutes provide.

FWS implements a range of statutes that provide varying levels of protection for fish, wildlife, and land. At the most stringent end, Section 10 of the ESA requires FWS to ensure that applicants minimize and mitigate their projects' impacts of take "to the maximum extent practicable" before they may receive an ITP. This language does not authorize any cost-benefit analysis and asks only whether it is technologically and economically feasible for an individual to implement more minimization or mitigation.[62] Likewise, regulations under the Bald and Golden Eagle Protection Act allow FWS to issue permits for individual instances of take of bald and golden eagles only when "the applicant has avoided and minimized impacts to eagles to the extent practicable."[63] On the less restrictive end, the regulations for permits under the MBTA do not have any practicability requirements for permits, although the statute prohibits any take of migratory birds without one of the specialized permits available. Thus, the standards of protection are different among these statutes and their implementing regulations.

Using the same definition of the term "practicable" across all these statutes would impermissibly blend the requirements of each, possibly watering down or unnecessarily restricting each statute's requirements. For example, interpreting the term "practicable" as

[60] 33 U.S.C. § 1314(b)(1)(B).
[61] *State of Ohio v. U.S.E.P.A.*, 997 F.2d 1520 (D.C. Cir. 1993).
[62] *See Fund for Animals*, 903 F. Supp. at 107, 111.
[63] 50 C.F.R. § 22.26.

including a cost-benefit analysis, as FWS proposes to do in the proposed policy, fundamentally changes the standards for ITP issuance under the ESA from how "few is it *feasible* to kill" into "how few is it *reasonable* to kill." The second statement, which adopts the cost-benefit approach proposed by FWS, is contrary the institutionalized caution principle of the ESA.[64] On the other hand, strengthening the standards for permits under the MBTA for healthy bird species risks placing unnecessary burdens on both the agency and the regulated community.

FWS should redefine "practicable" in the proposed policy to remove any references to cost-benefit analysis. Additionally, it should examine whether other terms, such as reasonable or cost-effective, should be used to describe FWS' approach to conservation planning under statutes other than the ESA and BGEPA.

PART 2: THE LANDSCAPE APPROACH IS SUPPORTED BY SCIENCE BUT MAY COMPROMISE FWS' NEGOTIATING POSITION BY ALLOWING EXCESSIVE DISCRETION.

The switch to a landscape approach is a major change in the proposed policy. Instead of applying the conservation hierarchy on a project-by-project basis, which FWS recognizes can result in isolated patches of conservation, the agency intends to integrate the conservation hierarchy with conservation planning efforts across landscapes.[65] FWS also plans to increase the use of advance conservation planning to identify high priority resources and site projects and compensation for those projects in a manner that maximizes the conservation gains.[66]

The landscape approach as outlined by FWS poses risks given its malleable definition. As FWS acknowledges, a "landscape is not defined by the size of the area, but rather the interacting elements that are meaningful to the conservation objectives for the resources under

[64] *See Tenn. Valley Authority v. Hill*, 437 U.S. 153, 194 (1978).
[65] 81 Fed. Reg. at 12385.
[66] 81 Fed. Reg. at 12386.

consideration."[67] Planning under the landscape approach differs greatly across spatial and temporal scales depending on the evaluation species and the geographic location. The success of conservation strategies will likely be tied to the initial choice of landscape. Developers engaged in planning negotiations with the FWS may be able seize on this flexibility to create the least expensive approach rather than the most appropriate. Therefore, the public should be involved in FWS' selection of the proper landscape scales and organizational levels for species management and project planning. FWS should amend the guidance to reflect such a requirement.

I. The Landscape Approach Can Address Different Levels of Scale and Organization Depending on the Species of Interest and Location.

A landscape approach to conservation must recognize the distinct concepts of scale (spatial and temporal) and level of organization. A project or action can have impacts at multiple scales and multiple levels of organization. The proper scale and level of organization to gauge impacts and plan conservation measures will necessarily vary by the impacted species, affected habitat, proposed project, and governing statutes. FWS should list some examples of the landscape approach for types of species to give the agency, public, and regulated community some insight into how the agency will use the landscape approach.

A. Principles of the landscape approach.

Spatial and temporal scale as applied to the proposed policy incorporates the concepts of extent and grain (or resolution).[68] A landscape approach requires identifying those scales (extent and grain) necessary to characterize the patterns, processes, impacts, and objectives of interest. Impacts of a single project may occur at multiple spatial and temporal scales. For the proposed

[67] 81 Fed. Reg. at 12394.
[68] J. Wu and H. Li, *Concepts of Scale and Scaling*, pp. 3–15 in SCALING AND UNCERTAINTY ANALYSIS IN ECOLOGY: METHODS AND APPLICATIONS (J. Wu et al. eds.) (2006 Springer); D. C. Schneider, *The Rise of the Concept of Scale in Ecology*, Bioscience 51, 545–553 (July 2001).

policy, the largest relevant extent typically will encompass multiple and interacting ecosystems, projects, and resources.[69]

Level of organization is a different concept than scale. The four main levels of biological organization within a single species are: (1) the organism or individual level, (2) the local population level, (3) the metapopulation (a network of spatially separated populations that interact) level, and (4) the species level. A single project may have impacts at all of these organizational levels.

The relationship between the scale of impact and the level of organization impacted may not be simple. The range of organizational levels significantly impacted by one or more projects depends on the type of impacts as well as their scale and intensity, and on the species involved. Typically, the larger the scale or intensity of impacts, the greater the risk to more organizational levels. However, the range of organizational levels affected does not necessarily correlate with the scale of impacts. For example, even a single, relatively localized project that blocks or fragments a necessary migratory or dispersal pathway of a species dependent on movement for survival may have significant impacts at all organizational levels.

The proper level of analysis under the landscape approach necessarily varies depending on the species. For species threatened by habitat fragmentation, such as the Florida panther, landscape planning will likely involve protecting or creating corridors and core habitat over a broad geographic area. For migratory birds, such as the whooping crane, FWS may need to focus on entire flyways to ensure the species have safe travel corridors and consider summer or winter habitat in other countries. On the smaller scale, the fairy shrimp, which lives in vernal pools and

[69] 81 Fed. Reg. at 12394–95; J.P. Clement et al. Energy and Climate Change Task Force, A Strategy for Improving the Mitigation Policies and Practices of the Department of the Interior (April 2014); see also D. L. Urban, R. V. O'Neill, and H. H. Shugart, Jr., *Landscape Ecology*, Bioscience 37, 119–127 (1987).

for which compensation has a poor track record, likely requires a smaller geographic scale focused on preserving existing habitat and the ecological processes that sustain it.

B. FWS' use of the terms "landscape-level" and "landscape-scale" is inaccurate and confusing.

Using the term "landscape-level" or "landscape-scale" confuses elements of the landscape approach with the approach itself. A "landscape" typically includes multiple ecosystems and species of interest.[70] Natural processes and anthropogenic impacts can occur at multiple geographic and temporal scales and at multiple organizational levels for a species of interest. The scales and organizational levels at which you study patterns, processes, and impacts can differ depending on the species of interest, the proposed project, or the applicable statute.

Referring to the proposed policy's approach as studying impacts at a "landscape-scale" confuses the fact that, in the landscape approach, planning usually accounts for multiple scales. Likewise, the term "landscape-level" ignores that impacts typically manifest at multiple organizational levels.

Instead of the terms "landscape-level" and "landscape-scale," FWS should simply refer to the "landscape approach." When discussing what attributes of a landscape FWS will study, FWS should not use the phrase "selection of landscape-scales" or "selection of landscape-levels." FWS should clarify that, by using the landscape approach, the agency will be selecting scales and organizational levels appropriate to the species, areas, and management objectives of interest.

[70] *See* J.P. Clement et al. Energy and Climate Change Task Force, A Strategy for Improving the Mitigation Policies and Practices of the Department of the Interior 9 (April 2014) (defining landscape "as a large area encompassing a mosaic of ecosystems and human systems that is characterized by a set of common management concerns" and contrasting the "landscape" with a regional approach).

C. FWS should give examples of the landscape approach to inform the public how it will plan for impacts to various types of species.

The variety of landscapes FWS regulates will likely leave the public and regulated community guessing what scales and organizational levels the agency will select for an evaluation species. Giving examples of proper landscape planning approaches for different types of species – such as migratory birds, large predators, species suffering from habitat fragmentation, localized species, and species threatened by water pollution – could give both the agency and public better guidance on the implementation of the landscape approach. Although it is impossible to list the correct planning scale for every species and every type of project, the agency should develop examples that it and the public can use to inform decisions in the future.

II. FWS Should Amend the Proposed Policy to Recommend That the Choice of the Relevant Scales and Organizational Levels Go Through Public Comment.

The wide range of possible scales and organizational levels that FWS can use to manage species gives the agency a large degree of discretion in managing and protecting species. Selection of the proper scale and organizational level will often be difficult, but crucial to the success of conservation planning efforts.

Setting the area or scope of analysis too large can overlook species or populations. For example, a study of multi-species HCPs found that many species ostensibly covered by an HCP were not confirmed to be within the action area, and thus lacked species-specific protections that are often crucial to their survival and recovery.[71] Other studies have questioned whether multi-species plans that focus on habitat preservation are as successful as species-specific plans.[72]

[71] Matthew E. Rahn, Holly Doremus, & James Diffendorfer, *Species Coverage in Multispecies Habitat Conservation Plans: Where's the Science?*, 56 BioScience 7, 613–619 (July 2006).
[72] Martin F. Taylor, Kieran F. Suckling & Jeffrey J. Rachlinksi, *The Effectiveness of the Endangered Species Act: A Quantitative Analysis*, 55 BioScience 4, 360–367 (April 2005) (finding that multispecies recovery plans are less

Public comment is crucial to the selection of the analysis inputs. Allowing public comment on advance conservation plans or the choice of scales and organizational levels will ensure the public can provide the agency with the best information to benefit affected species, rather than simply relying on the theory that protecting some habitat somewhere will offset losses from individual projects. Opening the landscape selection for a species to public comment also provides accountability for FWS' management of these federal trust resources and may improve FWS' negotiating position with project applicants.

The NEPA process will often provide a good way to solicit public comment, but may come too late in the planning process. NEPA is triggered by major federal actions that significantly affect the human environment.[73] The selection of the proper landscape for project planning will often occur before the agency considers permitting or engaging in a specific project that triggers NEPA review. FWS should amend the proposed policy to clearly state that it will seek public comment on its landscape approach for specific evaluation species, industries, or projects.

III. FWS Should Consider Environmental Justice Under the Landscape Approach.

FWS should also consider environmental justice and community environmental needs when selecting the proper scales for its landscape analysis. Many conservations plan focus solely on the ecological and economic attributes of proposed projects. Ignoring local communities' access to natural resources in designing these plans could shift nature-based recreation and

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effective than single-species recovery plans, possibly because the larger plans pay insufficient attention to individual species' needs).

[73] 42 U.S.C. § 4332.

environmental education opportunities away from communities and destroy important cultural sites.[74]

PART 3: FWS SHOULD CLARIFY THE PROPOSED POLICY'S INTERACTION WITH THE ENDANGERED SPECIES ACT.

FWS states that it intends to apply the proposed policy to species and members of species listed as threatened or endangered under the ESA. But the application of the proposed policy to permitting take of threatened or endangered species would, without explicit caveats and limitations, be at best problematic and at worst contrary to specific requirements of the ESA and thus unlawful.

Two proposed provisions in particular are the source of the potential problem. First, FWS states that it will seek a "net gain" or, at a minimum, "no net loss" in the status of affected resources.[75] Second, although FWS states it will generally follow the sequence of avoid, minimize, and compensate, the proposed policy allows departures from this hierarchy.[76]

FWS caveats the proposed application of these policy provisions by stating, "as allowed by applicable statutory authority and consistent with the responsibilities of action proponents under such authority."[77] FWS should expressly specify in the policy how this general provision would be handled when applied to processing Incidental Take Permit ("ITP") applications under ESA Section 10(a)(2)(B)(ii), especially for projects predicted to directly kill members of a listed species. Relying on vague or unspoken directions for applying the proposed policy to ESA

[74] *See* Christopher D. Ives and Sarah A. Bekessy, *The Ethics of Offsetting Nature* 10 Front Ecol. Environ. 10, 568–573 (2015).
[75] 81 Fed. Reg. at 12384.
[76] 81 Fed. Reg. at 12384.
[77] 81 Fed. Reg. at 12384; *see also* 12389 ("Nothing in this policy supersedes the statutes and regulations governing prohibited 'take' of wildlife . . . .").

Section 10(a) could create much confusion within the agency and between the agency and the public, and may also spawn litigation over the agency's application of the policy.

I. The ESA's requirements.

A. ESA Section 10(a)(2)(B)(ii).

ESA Section 10(a)(2)(B) states in relevant part,

> If the Secretary finds, after opportunity for public comment, with respect to a permit application and the related conservation plan that--(i) the taking will be incidental; (ii) the applicant will, to the maximum extent practicable, minimize and mitigate the impacts of such taking; (iii) the applicant will ensure that adequate funding for the plan will be provided; (iv) the taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild; and (v) the measures, if any, required under subparagraph (A)(iv) will be met; and he has received such other assurances as he may require that the plan will be implemented, the Secretary shall issue the permit. . . .

Specifically, ESA Section 10(a)(2)(B)(ii) requires that before issuing an ITP, FWS must find that "the applicant will, to the maximum extent practicable, minimize and mitigate the impacts of such taking." The impacts of taking members of a listed species must be both "minimized" to the maximum extent practicable and "mitigated" to the maximum extent practicable.

B. Definitions of "Take" and its Components.

The term 'take' in the ESA means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."[78] The ESA and implementing regulations define some of the terms more specifically.

Harm in the definition of "take" means "an act which actually kills or injures wildlife. Such act may include significant habitat modification or degradation where it actually kills or

[78] 16 U.S.C. § 1532(19).

injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering."[79]

Harass in the definition of "take" in the ESA means "an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering."[80]

II. A Landscape Approach to Minimizing Impacts Pursuant to ESA Section 10(a) Must Account for All Types of Take and All Levels of Organization.

Project impacts relevant to ESA Section 10(a) are proximally manifest at the individual level as "take." Here we focus on the three types of take discussed above and which are the most common forms of incidental take relevant to ESA Section 10(a): habitat modification or degradation (harm), harassment, and killing. Take produces further impacts at multiple levels of organization. The primary impacts of habitat modification or degradation, harassment, and killing are suggested in their definitions.

Impacts of habitat modification or degradation include "actually kill[ing] or injur[ing] wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering."[81] Thus, significant impairment of breeding, feeding, sheltering, dispersal, or migration, as well as disease, injury, or death, are all impacts of habitat modification or degradation. These impacts at the individual level can result in further impacts at population, metapopulation, and species levels, either through reduced abundance, reduced genetic diversity, or lower rates of recolonization within metapopulations.

[79] 50 C.F.R. § 17.3.
[80] 50 C.F.R. § 17.3.
[81] 50 C.F.R. § 17.3.

Examples of a landscape approach to minimizing impacts of habitat modification or degradation across all organizational levels include the following: (1) reduce the overall amount of habitat modified or degraded by lessening the spatial extent or duration of the action; (2) for a given number of acres affected, shift activities to lower quality or less sensitive habitats that contain fewer individuals or that receive less use for essential behaviors; (3) for a given number of acres affected, adjust the spatial configuration of the action to reduce habitat fragmentation and retain connectivity for movements such as migration and dispersal.[82]

Impacts of harassment include "the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering."[83] Thus, as with habitat modification and degradation, individual-level impacts of harassment include significant disruption of breeding, feeding, sheltering, dispersal, or migration, as well as disease, injury, or death, and these individual-level impacts may in turn result in changes at population, metapopulation, and species levels.

Examples of a landscape approach to minimizing impacts of harassment include the following: (1) reduce the frequency of contacts between animals and human activities by reducing the overall spatial extent or duration of the action, shifting activities to lower quality habitats that contain fewer individuals or that receive less use, or adjusting the spatial configuration or timing of the action to allow avoidance of contact; (2) reduce the intensity of harassing behavior such as blasting with lower payloads; (3) identify and avoid contact with individuals and populations most vulnerable to the stresses produced by contact, such as those individuals in marginal habitats or with low resilience.

[82] *See* 81 Fed. Reg. at 12390.
[83] 50 C.F.R. § 17.3.

The individual level impact of killing is direct and immediate: mortality is the ultimate individual level impact. Death of individuals then can lead to further impacts at the population, metapopulation, and species levels, including the unpredictable effects of the loss of unique genetic assets. A landscape approach to minimizing impacts of killing begins with efforts to reduce the number of individuals killed. Beyond this obvious minimization objective, the higher-level impacts of killing can be reduced by directing a given amount of mortality to individuals or populations believed to be less important genetically (if known, those that contribute little to genetic diversity or fitness) or demographically (the old, the sick, and the non-reproductive).

The examples FWS uses to explain the proposed policy are too heavily weighted toward circumstances in which the "taking" caused by a project is "harm" via habitat destruction.[84] But in many real situations, the "taking" caused by a project is harassment or direct killing of members of a listed species. Wind power turbines directly kill bats and birds. Ships directly harass cetaceans. These latter types of take introduce complexities into the application of FWS' proposed policy to ESA listed species. These complexities are not – but should be – expressly addressed in the agency's proposed policy.

III. Neither "No-Net Loss" Nor "Net Conservation Gain" Is an Appropriate Goal Under Section 10(a)(2)(B)(ii) if the Goal Implies That Impacts at the Individual Level Will Not be Minimized to the Maximum Extent Practicable.

FWS states in the proposed policy:

> The following fundamental principles will guide Service-recommended mitigation, as defined in this policy, across all Service programs.
>
> a. The goal is a net conservation gain. *The Service's mitigation planning goal is to improve (i.e., a net gain) or, at minimum, to maintain (i.e., no net loss) the current status of affected resources*, as allowed by applicable statutory authority and consistent with the responsibilities of action proponents under such authority,

[84] *See, e.g.*, 81 Fed. Reg. at 12381–82, 12386, 12390.

> primarily for important, scarce, or sensitive resources, or as required or appropriate. Service mitigation recommendations or requirements will specify the means and measures that achieve this goal, as informed by established conservation objectives and strategies.[85]

Whether "No-Net Loss" or "Net Conservation Gain" are appropriate goals under Section 10(a)(2)(B)(ii) depends on how such a goal would be applied. There are three possible applications, the first two of which are inconsistent with ESA Section 10(a)(2)(B)(ii).

A. The "No-Net Loss" or "Net Conservation Gain" Goal May Improperly Allow Compensation to Offset Impacts That Were Not First Minimized to the Maximum Extent Practicable – i.e., Allowing Compensation in Lieu of Minimizing to the Maximum Extent Practicable.

Various combinations and sequences of avoidance, minimization, and compensation measures may satisfy a "net gain" goal or a "no net loss" goal with respect to a listed species. Compensation alone, without *any* avoidance or minimization, could satisfy either or both of these goals. For example, if a project was predicted to kill (a form of ESA taking) 100 members of an endangered species, the "net gain" and "no net loss" goals could theoretically be satisfied by compensation alone if purchased habitat could be guaranteed to increase the number of births by 100 or more.

Indeed, FWS states in the proposed policy that in some circumstances compensation may provide the entire means for achieving conservation goals: "It is preferable to avoid or minimize impacts to listed species or critical habitat before rectifying, reducing over time, or compensating for such impacts. *Under some limited circumstances, however, the latter forms of mitigation may provide all or part of the means to achieving the best possible conservation outcome for listed species*."[86]

[85] 81 Fed. Reg. at 12384 (emphasis added).
[86] 81 Fed. Reg. at 12396 (emphasis added).

However, this strategy of replacing minimization with compensation would be inconsistent with the statutory requirement in Section 10(a)(2)(B)(ii) to *both* minimize impacts of taking to the maximum extent practicable *and* mitigate impacts of the taking to the maximum extent practicable. A pure compensation strategy would also conflict with the D.C. Circuit's opinion in *Gerber v. Norton* requiring FWS to make an independent finding that the applicant minimized the impacts of take to the maximum extent practicable.[87]

B. The "No-Net Loss" or "Net Conservation Gain" Goal May Improperly Allow a Potentially Unlimited Number of Individuals to be Taken So Long as There Is No Significant Population-Level Impact – That is, Impacts Below the Population Level are Not Minimized to the Maximum Extent Practicable.

Another application of the "No-Net Loss" or "Net Conservation Gain" goals that would be inconsistent with Section 10(a)(2)(B)(ii) is to measure "loss" or "gain" only at higher organizational levels. By measuring impacts, loss, and gain only at or above the population level, reducing impacts at the individual level would not be counted toward achieving these goals. For example, the agency could conclude that a conservation program produces a net conservation gain or no net loss for the species level so long as the amount of taking did not threaten the viability of the species. This strategy to meeting these goals, however, would be inconsistent with Section 10(a)(2)(B)(ii), which requires that *all* impacts of taking, including individual mortality or injury, be minimized and mitigated to the maximum extent practicable.

C. The "No-Net Loss" Goal May Properly Require Minimization of Impacts at All Organizational Levels to the Maximum Extent Practicable Before the Remaining Impacts Are Offset to Zero.

In contrast to the above two scenarios, application of the "No-Net Loss" goal would be consistent with Section 10(a)(2)(B)(ii) if impacts of taking at all organizational levels were minimized to the maximum extent practicable and then any remaining impacts were completely

[87] 294 F.3d 173, 184 (D.C. Cir. 2002).

offset. For example, if the project is predicted to kill 100 individuals of a listed species, and practicable minimization measures can reduce the kill to 40 individuals, then no net loss would require that the 60 remaining deaths be offset by compensation.

We are concerned, however, that the agency will not be able to mandate a "Net Conservation Gain" goal within the context of an ITP application process. Case law from the California federal court suggests that the agency may not require an ITP applicant to offset remaining impacts further than zero, which would produce a net conservation gain.[88] We are concerned that the ESA does not require, and provides no incentive for, an applicant to do more than achieve no net loss. How then would FWS hope to achieve a net conservation gain from an ITP applicant?

IV. FWS Should Not Allow Adaptive Management to Water Down Protections For Endangered and Threatened Species.

The proposed policy strives to integrate adaptive management into the policy's landscape approach.[89] Adaptive management allows conservation planners to make prudent changes to minimization and compensation measures in reaction to unforeseen events. However, agencies have a mixed record of deploying adaptive management. In some instances, agencies rely on future adaptive management decisions in lieu of reduced-impact alternatives or greater conservation from the beginning of the project.

FWS should clearly state that the later deployment of adaptive management measures does not allow the use of less protective minimization measures than are practicably achievable

[88] *See Nat'l Wildlife Fed'n v. Norton*, 306 F. Supp. 2d 920, 928–29 (E.D. Cal. 2004) (agreeing with ITP applicant that it should not be required to implement compensatory mitigation (purchase of mitigation land) more stringent than is necessary to fully offset the impacts of habitat loss remaining, even if it could afford to do so; explaining "if a permit authorized the destruction of one acre of habitat that normally supports one individual member of a protected species, it would not be necessary for the applicant to create 100 acres of new habitat that would support some 100 individuals of the species").

[89] 81 Fed. Reg. at 12382.

at the outset. Deploying adaptive management once the taking target has been exceeded does not fix the problem of setting the target improperly in the first place. If the applicant has not minimized impacts to the maximum extent practicable at the outset, deploying more minimization measures later in the life of a project would not bring the project into compliance with the ESA. The amount of take authorized under an ITP would still be too high because it was based on conservation measures that did not reduce the impacts of take to the maximum extent practicable.

PART 4: FWS SHOULD CONDUCT AN ENVIRONMENTAL IMPACT STATEMENT THAT ANALYZES THE PROPOSED POLICY'S IMPACTS ON A RANGE OF SAMPLE SPECIES.

FWS states that it intends to prepare an Environmental Assessment (EA) for the proposed policy rather than invoking a categorical exclusion (CE) or conducting a more comprehensive Environmental Impact Statement (EIS).[90] FWS justified its refusal to invoke a CE, which would have bypassed any analysis under the National Environmental Policy Act (NEPA), by saying that the proposed policy's revision to the 1981 Mitigation Policy is not purely administrative in nature and that the revision "may have the potential to trigger an extraordinary circumstance, as outlined in 43 CFR 46.215."[91] The likely presence of extraordinary circumstances and the magnitude of this policy change both weigh in favor of conducting an EIS rather than an EA.

NEPA is "our basic national charter for the protection of the environment."[92] The Act has two purposes: to ensure that federal agencies carefully consider the environmental consequences of their actions and to guarantee that the relevant decisionmaking information is

[90] 81 Fed. Reg. at 12403.
[91] 81 Fed. Reg. at 12403.
[92] 40 C.F.R. § 1500.1(a).

available to the public.[93] As the U.S. Supreme Court explained, "by focusing the agency's attention on the environmental consequences of a proposed project, NEPA ensures that important effects will not be overlooked or underestimated only to be discovered after resources have been committed or the die otherwise cast."[94]

Agencies must prepare an EIS for major federal actions with significant impacts on the environment. An agency may prepare a shorter EA to determine whether an EIS is warranted, but may rely solely on the EA's analysis only when a project will have no significant environmental impact.

FWS should perform an EIS rather than an EA because this sweeping change in policy is likely to have significant impacts on the environment. The transition to a landscape approach, paired with FWS' proposals to deviate from the conservation hierarchy, means that a large amount of lower value habitat could be wiped out under the proposed policy in the promise that higher value habitat will be preserved. Although this ecological calculus may sometimes hold true for some species, other environmental resources will not be replaced. The proposed policy will also form the backbone of future management decisions for countless species and projects. These future decisions are likely to have significant environmental impacts both individually and cumulatively.

The presence of extraordinary circumstances also weighs in favor of conducting an EIS rather than an EA. By regulation, extraordinary circumstances exist when a project would:

a) Have significant impacts on such natural resources and unique geographic characteristics as historic or cultural resources; park, recreation or refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or

[93] *See, e.g.*, *Nat'l Parks Conservation Ass'n v. Jewell*, 965 F.Supp.2d 67, 74 (D.D.C. 2013).
[94] *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989).

principal drinking water aquifers; prime farmlands; wetlands (EO 11990); floodplains (EO 11988); national monuments; migratory birds; and other ecologically significant or critical areas.

b) Have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources.
c) Have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks.
d) Establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects.
e) Have a direct relationship to other actions with individually insignificant but cumulatively significant environmental effects.
f) Have significant impacts on species listed, or proposed to be listed, on the List of Endangered or Threatened Species or have significant impacts on designated Critical Habitat for these species.[95]

Many of these extraordinary circumstances are triggered by significant environmental impacts. Significant impact on the environment is the same trigger that requires an EIS, rather than an EA. Because FWS acknowledged that the proposed policy may trigger one of these circumstances,[96] it should conduct an EIS rather than an EA.

Although it would be impossible to cover every project's every impact to every species covered by the proposed policy, FWS should analyze impacts on example species to educate the public and regulated community about the policy's effects. Many species share common management concerns that the proposed policy will likely address in similar ways. By analyzing the impacts of the policy on five to ten species, each of which exhibits one of these management concerns, FWS will be able to efficiently provide a programmatic analysis of the policy's effects on all the species sharing each management concern. This impact analysis should include an example of spatial and temporal scales used for the landscape approach, how FWS would deploy the conservation hierarchy for the species given a hypothetical project, and the proposed policy's

[95] 43 C.F.R. § 46.215.
[96] 81 Fed. Reg. at 12403.

projected impacts on all levels of organization (individual, population, meta-population, and species) for the species of interest.

Management concerns that FWS should analyze using the example species approach include habitat fragmentation, core habitat loss, limited prey populations, barriers along corridors or migratory pathways, limited migratory stop-overs and bottlenecks, and water quality and quantity. FWS should also analyze species that fall under different statutes to illustrate how it will implement the proposed policy across the Endangered Species Act, Bald and Golden Eagle Protection Act, and Migratory Bird Treaty Act.

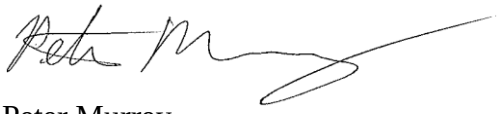
Using this example species approach furthers NEPA's goal of informed decision making. The proposed policy speaks generally on future effects and implementation, but is devoid of many specifics that will be essential to future decisionmaking under the policy. Analyzing the policy's effects on example species will give the agency a test run in making these choices and allow the public and regulated community to comment on those choices. This is the purpose of NEPA.

CONCLUSION

We appreciate the opportunity to comment on this dramatic but promising change to conservation policy. Using a landscape approach to first avoid, then minimize, and finally compensate for impacts from projects will likely bring greater conservation gains than the previous policy. However, the proposed policy retains confusing terminology and may distort the proper order of conservation planning for endangered species. FWS should make clear that minimization is a different step than rectifying and compensating for impacts. FWS should also take care that the policy respects the institutionalized caution principle of the ESA.

Please contact us if you have any questions or would like to continue discussing the future of conservation in America.

Sincerely,



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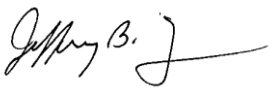

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