

March 1, 2024

Katherine Harrigan  
Senior Policy Advisor, National Wildlife Refuge System  
U.S. Fish and Wildlife Service  
5275 Leesburg Pike  
Falls Church, VA 22041

**Re: The Pew Charitable Trusts' comments on proposed updated framework for Biological Integrity, Diversity and Environmental Health of the National Wildlife Refuge System (FWS-HQ-NWRS-2022-0106)**

Dear Ms. Harrigan:

Thank you for the opportunity to comment on the proposed rule and policy updates for ensuring the biological integrity, diversity, and environmental health of the National Wildlife Refuge System.

The Pew Charitable Trusts' U.S. Conservation project seeks to sustain biodiversity and resilient ecosystems by developing commonsense solutions in collaboration with policymakers, communities and businesses, Tribes, and many others. Conservation of our public landscapes is an important component of our work. Our comments focus on areas where our priorities intersect with both individual National Wildlife Refuges and the Refuge system as a whole.

In 2001, pursuant to the National Wildlife Refuge System Improvement Act of 1997, the U.S. Fish and Wildlife Service (Service) developed a policy to ensure the "biological integrity, diversity and environmental health" (BIDEH) of the National Wildlife Refuge System are maintained for the benefit of present and future generations of Americans. Unfortunately, since this policy was developed nearly 25 years ago, threats to U.S. wildlife and the habitats that support them remain. Some of these threats are the result of historical practices – such as ditching, damming, and transportation infrastructure - that continue to fragment terrestrial and aquatic habitats, negatively impacting the fish, birds and other wildlife that depend on these ecosystems. Others are related to continued practices that occur outside the borders of an individual Refuge, such as land cover change resulting from development. Impacts brought about by climate change – including shifting precipitation patterns and sea level rise – both

exacerbate these threats and pose new challenges.<sup>1</sup> The Fifth National Climate Assessment finds that climate change is impacting ecosystems across the United States, noting that climate related impacts are leading to reduced biodiversity, altered distribution and life cycles of species, and increased risk of disease and invasive species. “These accelerating changes have profound impacts on economies, sociocultural systems, and human well-being.”<sup>2</sup>

Accordingly, we strongly support the overall intent of the proposed rule and policy updates that would modernize the Service’s approach to ensuring BIDEH by incorporating climate change into Refuge system planning and management. The proposed rule and policy update provide a framework for individual Refuges to adopt goals and practices necessary for addressing the climate and biodiversity crisis facing our nation and the globe.<sup>3</sup>

We also endorse the Service’s recognition that maintaining BIDEH requires refuge managers to consider the broader landscape and seascape beyond Refuge boundaries. Pew supports more holistic landscape-level strategies through robust engagement and planning with public and private landowners, Indigenous communities and Tribal nations, and community stakeholders.

The approved acquisition boundaries of individual Refuges can support landscape-level management by conserving surrounding areas when feasible. As the Service implements the updated BIDEH rule and policies, we recommend reviewing acquisition boundaries with an eye toward conserving areas that serve or have the potential to serve as corridors for wildlife populations, as well as areas—referred to as climate refugia—that will enable persistence of healthy ecosystems in the face of climate change.

The Service should embrace approaches such as the Willapa National Wildlife Refuge’s effort to develop a new Land Protection Strategy (LPS) and Land Protection Plan (LPP) utilizing best available climate science and data to prioritize habitats for the proposed boundary expansion, ensuring that climate refugia and habitat migration areas impacted by sea level rise are managed to foster climate resilience. This process includes: 1) conducting a climate-informed threat analysis utilizing existing climate modeling, land cover, and species data; 2) developing climate-informed goals and objectives, adaptive management and monitoring protocols; and, 3) engaging the public. The work at Willapa National Wildlife Refuge can serve as a model for integrating BIDEH updates into local Refuge planning processes.

For relevant areas outside of approved boundaries, the Service can partner with other public and private landowners to enhance connectivity and implement conservation measures. For example, coordination through the Sentinel Landscapes Partnership can increase access to resources and tools that could help the Service account for broader landscape and seascape

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<sup>1</sup> NatureServe. 2023. [Biodiversity in Focus: United States Edition](#). NatureServe: Arlington, VA.

<sup>2</sup> McElwee, P.D. et al, 2023: Ch. 8. Ecosystems, ecosystem services, and biodiversity. In: Fifth National Climate Assessment. Crimmins, A.R. et al, U.S. Global Change Research Program, Washington, DC, USA. <https://doi.org/10.7930/NCA5.2023.CH8>

<sup>3</sup> [https://www.ipcc.ch/report/ar6/wg2/downloads/outreach/IPCC\\_AR6\\_WGII\\_FactSheet\\_Biodiversity.pdf](https://www.ipcc.ch/report/ar6/wg2/downloads/outreach/IPCC_AR6_WGII_FactSheet_Biodiversity.pdf)

conservation needs, foster collaboration with local and state entities, and promote layered protections across authorities and jurisdictions.

We support the proposed BIDEH policy updates related to cooperation and coordination with Tribal Nations and Indigenous communities and the incorporation of Indigenous knowledge. As the agency implements the update, we recommend incorporating guidance from the Administration's [Executive Order on Reforming Federal Funding and Support for Tribal Nations to Better Embrace Our Trust Responsibilities and Promote the Next Era of Tribal Self-Determination](#). In particular, the Service should implement the Executive Order's call to promote "compacting, contracting, co-management (and) co-stewardship." With respect to the policy update that would "identify and define Indigenous knowledge as an appropriate source of historical information that would support best available scientific information ...," we recommend striking the word "historic," since Indigenous Knowledge can inform current management practices addressing climate-related threats—for example, applying cultural burning practices to help address the rise of catastrophic wildfire.<sup>4</sup>

Finally, we recognize the proposed rule and policy updates are intended to be high level, which will enable the Service to consider specific conditions and impacts at the Refuge level. Given the acceleration of climate-related threats to biodiversity and environmental health in the U.S., we urge the Service to expeditiously apply this framework through updates of Refuge Comprehensive Conservation Plans that explicitly incorporate climate considerations, as [proposed by the Service](#) in September of 2023. In addition, although BIDEH focuses on the Refuge System, we encourage the Service to apply these concepts to national monuments under its jurisdiction, including marine national monuments, in coordination with its comanaging agency partners.<sup>5</sup>

Additional detailed comments and recommendations are provided below.

### **§ 29.3 a: Ensure Biological integrity, diversity, and environmental health**

We support the proposed overarching statement defining what it means to achieve BIDEH: "[t]o ensure biological integrity, diversity, and environmental health means to holistically conserve refuge ecosystems and all their components and processes across multiple spatial scales; promote natural processes; and address ecological transformation caused by climate change and other anthropogenic change to accomplish the mission of the National Wildlife Refuge System." We recommend adding "temporal" to the statement ("across multiple spatial *and temporal* scales") to support climate scenario planning and associated measures that would heighten conservation in areas projected to serve as climate refugia and corridors in the future.

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<sup>4</sup> See for example: <https://www.universityofcalifornia.edu/news/how-indigenous-practice-good-fire-can-help-our-forests-thrive>

<sup>5</sup> Gignoux-Wolfsohn et al (2024), [New framework reveals gaps in US ocean biodiversity protection](#), provides recommendations for more strategic protections of marine biodiversity.

### § 29.3 b: Definitions

For the proposed definition of “climate change mitigation,” we recommend referencing measures that *reduce emissions* related to degraded landscapes and *prevent emissions* that would otherwise occur from land conversion. For example, restoring peatlands would reduce greenhouse gas (GHG) emissions,<sup>6</sup> and protecting coastal wetland migration corridors would prevent release of stored carbon that may result from sea level rise-driven conversion of wetlands to open water.<sup>7</sup> To incorporate this in the definition, we would suggest (in red): “Climate change mitigation means measures taken to reduce the amount and speed of future climate change by reducing emissions of heat-trapping gases or removing carbon dioxide from the atmosphere, including by improving ecosystem capacity for biological carbon sequestration, **reducing greenhouse gas emissions through restoration of degraded landscapes, and preventing carbon loss through increased protection of habitats vulnerable to conversion.**”

Pew supports the added clarity provided in the definition of “native” to include “when species expands or shifts in range as a result of natural processes in response to environmental change.” We encourage additional guidance in § 29.3 d (Management activities and uses) to help Refuges apply the “resist, accept, direct” framework to address climate-driven expansions and shifts that may negatively impact Refuge-managed species—for example, the northern expansion of mangroves into salt marsh systems.

We also recommend adding the definition for “corridor” to § 29.3 b to align with the Council on Environmental Quality’s [Guidance for Federal Departments and Agencies on Ecological Connectivity and Wildlife Corridors](#). This guidance defines corridors as “distinct components of a landscape, waterscape, or seascape that provide connectivity.”

### § 29.3 c: Management directives for ensuring BIDEH

Pew supports these systemwide management directives that would center Refuge-level management on the need to mitigate, adapt to, and build resilience to climate change. We appreciate that these directives are broad enough to accommodate the needs and conditions of individual Refuges. However, we recommend increased specificity for the following directives:

(2) *Conserve and connect habitats.*

For this section, we recommend (in red) specifying the need to remove and/or modify barriers that fragment aquatic and terrestrial habitats, as well as the need to identify and conserve future habitat areas. “When natural processes cannot meet habitat objectives or facilitate adaptation to anthropogenic change, we will use science-based management techniques, **including removing and modifying barriers that fragment aquatic and terrestrial habitats, and/or acquire lands, including identifying, acquiring and conserving lands that will support future habitat, such as marsh migration areas.**” In implementing this management directive, Refuges

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<sup>6</sup> See for example: Richardson et al, “Annual Carbon Sequestration and Loss Rates Under Altered Hydrology and Fire Regimes in Southeastern USA Pocosin Peatlands,” *Global Change Biology*, Sept. 2, 2022. <https://doi.org/10.1111/gcb.16366>

<sup>7</sup> Warnell K, Olander L, Currin C (2022) Sea level rise drives carbon and habitat loss in the U.S. mid-Atlantic coastal zone. *PLOS Clim* 1(6): e0000044. <https://doi.org/10.1371/journal.pclm.0000044>

should also incorporate the Administration's [guidance on ecological connectivity and wildlife corridors](#).

*(4) Uphold water rights.*

For this section, we support proposed policy updates that "would provide substantive policy guidance for refuge managers to follow to uphold refuge water rights and would further empower them to pursue and secure critical water assets to support the myriad of migratory birds, fish, and other wildlife that rely on refuge habitats." We recommend the Service prioritize Refuges where water rights are not yet asserted, and where the waters and the wildlife and habitat that depend on them may be under more immediate threats.

**Conclusion**

Thank you for your consideration of Pew's comments on the Service's proposed rule and policy updates for ensuring BIDEH across the National Wildlife Refuge System. These updates, taking place almost a quarter century after the BIDEH policy was first promulgated, will help the System meet today's pressing challenges posed by the biodiversity and climate crises. Please do not hesitate to reach out to Sylvia Troost at [STroost@pewtrusts.org](mailto:STroost@pewtrusts.org) should you have questions or feedback.

Sincerely,

A handwritten signature in blue ink, appearing to read "Marcia Argust", with a horizontal line extending to the right.

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