



October 29, 2021

The Honorable Shannon Estenoz
Assistant Secretary for Fish, Wildlife and Parks
1849 C Street NW
Washington D.C. 20240

Re: Docket FWS-HQ-MB-2020-0023, Advance Notice of Proposed Rulemaking; Eagle Take Permits
Submitted via <http://www.regulations.gov>

Dear Assistant Secretary Estenoz:

We represent clean energy industries¹ and environmental/wildlife conservation organizations^{2,3,4} that have united around the need to enhance permitting under the Bald and Golden Eagle Protection Act (BGEPA) to improve conservation outcomes for eagles, ease the administrative burden on the U.S. Fish and Wildlife Service (FWS or the Service), and provide a workable pathway for industry to secure take coverage in order to support the necessary growth in wind energy to meet the President's objectives for clean energy deployment and addressing the climate crisis⁵ and the conservation of eagles.

¹ ACP is the national trade association representing the renewable energy industry in the United States, bringing together hundreds of member companies and a national workforce located across all 50 states with a common interest in encouraging the deployment and expansion of renewable energy resources in the United States. By uniting the power of wind (both land-based and offshore), solar, storage, and transmission companies and their allied industries, we are enabling the transformation of the U.S. power grid to a low-cost, reliable, and renewable power system. The American Wind Energy Association (AWEA) merged into ACP on January 1, 2021. Additional information is available at <http://www.cleanpower.org>.

² Audubon protects birds and the places birds need, today and tomorrow. Audubon works throughout the Americas using science, advocacy, education, and on-the-ground conservation. Thirty-two state programs, 27 nature centers, over 700 chapters, and our partners in the Americas give Audubon an unparalleled wingspan that reaches millions of people each year to inform, inspire, and unite diverse communities in conservation action. A nonprofit conservation organization since 1905, Audubon believes in a world in which people and wildlife thrive.

³ Defenders is dedicated to protecting native animals and plants in their natural communities. Founded in 1947, Defenders is a national conservation organization with nearly 2.2 million members and activists focused on wildlife and habitat conservation and protecting biodiversity.

⁴ Natural Resources Defense Council (NRDC) combines the power of more than three million members and online activists with the expertise of some 700 lawyers, scientists and policy advocates to solve the most pressing environmental issues we face today: curbing global warming and creating the clean energy future, reviving the world's oceans, defending endangered wildlife and wild places, protecting our health by preventing pollution, ensuring safe and sufficient water and fostering sustainable communities. We have been doing it since 1970, with a powerful track record of success. NRDC staff is committed to promoting environmentally responsible renewable energy development in this country while simultaneously ensuring the protection of unique and sensitive natural resources.

⁵ Executive Order 14008, available at <https://www.federalregister.gov/documents/2021/02/01/2021-02177/tackling-the-climate-crisis-at-home-and-abroad>.

Our comments summarize a jointly developed general eagle permit framework for wind energy projects that we believe enhances the Service’s ability to meet the preservation standard goal of protecting eagles at the eagle management unit and local population levels under BGEPA, while also providing an effective and more efficient mechanism for industry compliance and agency oversight. We urge the Service to incorporate such a framework into the draft rule and are happy to further elaborate on the details provided in appendices to these comments—including the full 10-page proposed general permit framework as well as flow charts that provide a visual representation of the proposed permitting regime—details that represent over a year of collaborative efforts between our organizations and industries.⁶

Climate Context

Climate change is an existential crisis facing our country and the world and is one of the greatest threats facing wildlife. As the Service itself has noted, “Due to the effects of climate change, some populations may decline, many will shift their ranges substantially, and still others will face increased risk of extinction.”⁷ Audubon’s *Survival by Degrees* analysis finds 389 avian species are at risk of extinction due to climate change.⁸ Audubon further notes by stabilizing carbon emissions and holding warming to 1.5 degrees Celsius above pre-industrial levels, 76 percent of vulnerable species will be better off and nearly 150 species would no longer be vulnerable to extinction due to climate change.

With respect to eagles specifically, Audubon finds golden eagles⁹ are moderately vulnerable to climate change due to spring heat waves endangering young birds in nests and fire incinerating habitat. Audubon also identifies the same risks for bald eagles,¹⁰ but due to their more robust population, the species is considered at lower risk from climate change impacts.

To address the climate crisis and its impacts to avian species, including eagles, we need to rapidly expand deployment of clean energy resources, including wind energy. In 2019, wind energy alone avoided nearly 200 million metric tons of carbon dioxide emissions,¹¹ which is equivalent to roughly 14 percent of total power sector carbon emissions.

To reduce carbon emissions to the levels scientists have found are necessary to address climate change and correspondingly benefit eagles and other avian populations, various studies¹² have found that annual deployment of wind energy (along with solar energy) will need to expand up to four times current record levels over the next two decades and beyond. Our groups collectively recognize this needed expansion of renewable energy and strongly believe it can be done in ways compatible with the preservation of bald and golden eagles. Indeed, the quadrupling of bald eagle populations over the last

⁶ In addition to the signatories, industry representatives that participated in this effort included: Avangrid Renewables (Laura Nagy), Berkshire Hathaway Energy (Jennifer McIvor), Duke Energy (Tim Hayes), EDP Renewables (Jon VanDerZee) and Pattern Energy (Rene Braud).

⁷ <https://www.fws.gov/home/climatechange/>

⁸ <https://www.audubon.org/climate/survivalbydegrees>

⁹ <https://www.audubon.org/field-guide/bird/golden-eagle#bird-climate-vulnerability>

¹⁰ <https://www.audubon.org/field-guide/bird/bald-eagle#bird-climate-vulnerability>

¹¹ <https://cleanpower.org/facts/wind-power/>

¹² Princeton Net Zero America Project report available at: <https://netzeroamerica.princeton.edu/the-report>, the University of California Berkeley analysis on achieving 90 percent carbon reduction emissions by 2035 available at:

<https://www.2035report.com/electricity/>, Lawrence Berkeley National Lab (LBNL) Halfway to Zero report available at:

https://eta-publications.lbl.gov/sites/default/files/halfway_to_zero_report.pdf, LBNL and Evolved Energy Research report on carbon neutral pathways available at: <https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2020AV000284>

decade reported earlier this year¹³ by the Service is fantastic news and has occurred while wind energy has been expanding at record levels.

The Need and Benefits of a General Permit Pathway

For wind energy to make the important contribution to mitigating the climate crisis we need it to while also preserving bald and golden eagle populations, we need a regulatory system that confines fatalities to acceptable levels while moving projects through the permitting process as smoothly as possible. To date, the eagle take permit program has disincentivized participation of projects that pose a limited risk to eagles due to the uncertainty, cost and time necessary to try to secure a permit. These barriers mean the benefits from expanded industry participation, including eagle conservation dollars, additional data collection and others described below, are being forgone. We welcome the Service's effort "to improve and make more efficient the permitting process for incidental take of eagles in a manner that is compatible with the preservation of bald and golden eagles"¹⁴ and believe our proposed general permit proposal would meet that need.

As described in the ANPR, there is likely to be increased demand¹⁵ for eagle take permits going forward due to the need for infrastructure expansion, including wind energy.¹⁶ Such demand could result in a crushing administrative burden for the Service. The existing individual take program has resulted in fewer than 30 permits for wind energy facilities since 2009 and cannot accommodate an expected forty-fold increase in the coming decade. A well-structured general permit pathway for projects that have limited impact, while maintaining the individual permit pathway for higher risk projects, is a necessity.

If implemented effectively, a properly structured general permit could provide numerous benefits to eagle conservation, the Service, the public and industry. Specifically, our proposal can deliver the following benefits:

- Funding for conservation and research efforts on all causes of eagle mortality, including compensatory mitigation payments based on project coverage take limits even in cases where the limit is not reached, which industry experience suggests is a large majority of cases.¹⁷

¹³ <https://www.fws.gov/migratorybirds/pdf/management/bald-eagle-population-size-2020.pdf>

¹⁴ Federal Register, Vol. 86 No. 175, September 14, 2021, page 51,094. Available at <https://www.govinfo.gov/content/pkg/FR-2021-09-14/pdf/2021-19717.pdf> ("Eagle ANPR")

¹⁵ As of the end of 2020, according to ACP, there were 1,229 operating wind energy facilities in the U.S. Roughly 820 (67%) of these are not in "low risk" areas based on eagle abundance identified by the Service in its December 2018 webinar and therefore may want to seek an eagle take permit. To achieve the President's climate objectives requires roughly 300 gigawatts of additional wind energy by 2030, or approximately 640 new projects. If 67 percent of those are also interested in seeking take permit coverage (which represents the same ratio as the 820 operating facilities versus the full fleet of operating facilities referenced above), then 429 additional take permit applications could be filed. Collectively that equates to a possible demand of more than 1,200 permits from wind energy facilities alone over the next decade.

¹⁶ 86 Fed. Reg. 51,904-51,907. (September 14, 2021) The "Service and the regulated community share an interest in introducing further efficiencies into the eagle incidental-take-permitting process to meet this demand, while preserving bald and golden eagles pursuant to the Eagle Act."

¹⁷ ACP's individual comments filed in this docket summarize data collected in a survey of its membership including facilities representing approximately 38% of the operating wind energy fleet. Eighty-seven percent of these facilities take zero bald and golden eagles over their operational history (avg. approximately 8 operating years/facility). When compared with the proposed 2 eagles/5-yr eligibility criteria, 98% of the facilities are taking two or fewer bald eagles and 95% taking two or fewer golden eagles over 5 years. Approximately 95% of the facilities utilize some standardized form of systematic monitoring for life of the project.

- Safeguards for the Service to revise, limit or phase-down the program —including five-year program reviews, five-year project take coverage limited terms, flyway and sub-flyway take limits, and penalties for take exceedance.
- An increase in projects participating in the eagle take permit program (both existing and new).
- More data from this increased industry participation, monitoring, and reporting to assist the Service in eagle population management and conservation and provide greater transparency for the public.
- An ability to focus limited FWS resources to broader program and population-level management and on projects with the highest potential for impacts via the individual permit program.
- Re-directing industry dollars otherwise spent on administration, securing permits, and extensive pre- and post-construction monitoring for projects with limited risk instead to actual eagle conservation.
- More timely and cost-effective take coverage for industry, which provides legal and economic certainty and expedites the benefits of renewable energy in combatting climate change.

The balance of our comments summarize the elements of what we consider to be a properly structured general permit program in response to question 4 posed in the ANPR, seeking comment on “potential new regulatory approaches to authorizing incidental take under the Eagle Act, particularly for projects that can be shown in advance to have minimal impact on eagles that would reduce the time and/or cost associated with applying for and operating under long-term permits for incidental take of eagles.”¹⁸

NGO-Industry General Permit Framework

Industry and conservation organization representatives developed the individual elements of our proposed framework through a year-long series of facilitated discussions. The provisions of our proposal work together to ensure the preservation of eagles while providing for efficient general permit coverage for wind energy facilities. This proposed general permit framework was developed to function as a whole, delicately balancing elements that deliver our collective support. We welcome the opportunity to further discuss why this complete package would be undermined by cherry-picking various components versus others.

Overarching General Permit Framework

As referenced above, our proposed general permit framework is for wind energy projects that have a demonstrated limited impact to eagles (see the “eligibility” section below for how we define limited impact). An individual permit pathway is envisioned to sit alongside this new general permit pathway for projects that fall outside the eligibility requirements for the general permit up front or that exceed take limits in a way that disqualifies them from project take coverage under the general permit program.

Our overall program design proposes the following elements:

1. A general permit program is established with the National Environmental Policy Act (NEPA) analysis done at the programmatic level, as opposed to the individual project level.
2. The terms and conditions (eligibility, best management practices, monitoring, etc.) are set at the general permit (i.e., programmatic) level and are subject to public comment and review every five years.

¹⁸ Eagle ANPR at 51096.

3. An applicant files a notice of intent (NOI) to seek coverage, attests to meeting eligibility criteria and pays applicable fees. The Service reviews for accuracy and completeness of the NOI (i.e., meets eligibility requirements, is attested to, fees are paid). Upon notice from the Service that the application is accurate and complete, project take coverage is automatically authorized.
4. Applicants can seek project take coverage for bald eagles, golden eagles, or both.
5. The general permit program elements are subject to review and adjustments at five-year intervals with notice and comment.
 - a. FWS shall ensure programmatic elements continue to meet the preservation standard during the periodic reviews –
 - i. Take limits, requirements for coverage, compensatory mitigation fees, etc. are included in the review.
 - ii. Revisions in requirements may be up or down, i.e., made more or less stringent, depending on eagle population status and best available science.
6. The program may also be reviewed subject to a petition by the public.
 - a. Any public citizen, including representatives of outside entities and permittees, can petition a flyway management officer to conduct special reviews of new information that may meaningfully impact general permit issuance or administration. Petitions must be supported by new, compelling, and verifiable scientific evidence that indicates changes in eagle management unit (EMU), regional or local population levels that show the preservation standard has not been maintained in that flyway or flyway region.
7. Fees are required that flow into an Eagle Mitigation Fund and an Eagle Conservation Fund.

Flyway-level Eagle Population Management

We are proposing that eagle populations be managed at the flyway level with a lead for each flyway to coordinate permitting and ensure consistency across eagle management units (EMU). The specifics of our proposed general permit framework include:

1. The Service will establish EMU take limits based on population demographics, take levels, natural mortality, etc. (informed by data collected via the general permit program, along with data from other sources).
2. EMU take limits represent the amount of eagle fatalities (calculated separately for bald and golden eagles) allowable while still achieving the preservation standard.
 - a. Any take above an EMU take limit requires mitigation to fully offset.
 - b. The Service currently does not require compensatory mitigation for bald eagle take up to the established take limit, given robust and increasing bald eagle populations.¹⁹
 - c. As the Service indicates in the ANPR, given golden eagle population numbers, take of golden eagles must be fully offset by compensatory mitigation.²⁰
3. EMU take limits are re-calculated at least once every five years considering updated population estimates, total mortality, advancements in technology or compensatory mitigation that may be reducing take, etc.

¹⁹ The FWS 2020 bald eagle population status update found the population has quadrupled since 2009 to 71,400 nesting pairs and 316,700 individual bald eagles, available at: <https://www.fws.gov/migratorybirds/pdf/management/bald-eagle-population-size-2020.pdf>

²⁰ Eagle ANPR at 51095 “...all new take of golden eagles authorized under permit must be offset by conservation measures that will reduce ongoing mortality or enhance population numbers to a commensurate degree.”

4. The Service shall also establish an overall flyway cap (OFC) which represents the maximum amount of take that can be authorized within each flyway from all sources without imperiling the flyway population.
 - a. Should the OFC be reached, the Service may suspend the ability to file NOIs for additional project coverage permits in that flyway or a region of that flyway under certain conditions.

Project Take Coverage Details

Take Coverage Duration

We propose the project take coverages have a five-year duration. While the proposed five-year duration does not provide industry with full certainty over the expected lifespan of a project, it provides an important periodic assessment point for the Service in terms of eagle populations and general permit program terms and conditions to be able to make corrections should something unexpected happen. These periodic check-ins would limit risk posed by eligible projects, allowing the terms and conditions to be less onerous than those under the individual permit program. Further, project take coverages continue for that five-year duration under the terms and conditions in place at time of approval, even if, in the interim, a review of the general permit program is conducted and the Service finalizes changes to the program terms and conditions, take limits, mitigation fees, etc.

When the five-year permit program review approaches, project take coverages that are in full compliance with all terms and conditions of the general permit will automatically qualify for coverage under the general permit program for another five-year term provided they submit an NOI for renewal, pay NOI fees and pay mitigation fees (as applicable). Importantly, however, project take coverage renewals are subject to the terms and conditions under the general permit in place *at the time of renewal*, not at the time of original issuance.

In the event FWS does not complete a five-year review of the program in a timely fashion, the project take coverages shall remain in effect until FWS takes final action to reissue, modify, or suspend the general permit program terms and conditions.

Project Eligibility & Take Limits

Both already-operating facilities and those under development would be eligible for the general permit under criteria specific to those categories. Operating facilities are eligible if documented eagle fatalities have not exceeded the take limits for their project take coverage (i.e., 0.4 eagles per year or two eagles over five years) for each of the eagle species proposed to be covered. New facilities are eligible based on data showing proximity to active nests. Additional details on these eligibility criteria can be found in Appendices A and B at the end of these comments.

The proposed take limits for project take coverage is two eagles of both species over five years.

Only actual eagle fatalities or injuries are counted toward the take limit. All eagle fatalities or injuries found within the wind project area will be assumed to be the result of wind turbine collision and counted towards the take limit unless it is determined that the fatality or injury is the result of other causes.

Until such time as best available science dictates otherwise, we believe that this proposed take limit will promote participation in the program—thereby providing accompanying data and conservation measures—and ensure that expected impacts to eagles remain consistent with the preservation standard, with safeguards and transparency in place to adjust as needed. For golden eagles, compensatory mitigation is required to fully offset any authorized take and should thereby guard against population-level impacts. Moreover, based on the experience of operating facilities as cited earlier in these comments, ACP expects most projects that seek coverage will take 0-1 eagles over five years and should therefore provide a net conservation benefit through non-refundable up-front conservation and mitigation fees for the full authorized take allowance.

BMPs and CCPs

In addition to meeting these eligibility requirements, a facility seeking project take coverage also must commit to a suite of best management practices for project construction, installation, and operation that the Service has identified as a part of the currently existing individual permit program.

Applicants would also commit to preparation and implementation of a Compliance Correction Plan (CCP) should the project-level take limit be exceeded. The CCP is eagle species and circumstance-specific and it shall include additional action or actions the permittee will take to reduce the risk of additional take. These actions may include a variety of avoidance and minimization measures that are currently standards in the industry and may be developed in the future.

Additional details can be found in Appendices A and B at the end of these comments.

Monitoring

Our general permit framework includes three layers of monitoring: (1) a regular, standardized monitoring protocol, (2) incidental eagle finds, and (3) programmatic monitoring.

- Our monitoring framework has at its core a standardized, regular monitoring protocol based on the monitoring provisions in a habitat conservation plan (HCP) already approved by the Service.²¹ It is not centered around incidental or opportunistic finds.
- Under our proposed monitoring framework,²² the permittee is required to implement a standardized wildlife monitoring and reporting program to be used by all on-site personnel with

²¹ Appendix K, Compliance Monitoring Protocol from MidAmerican Energy Company's Final Habitat Conservation Plan for its Iowa Wind Project Portfolio. Available at: https://www.fws.gov/midwest/endangered/permits/hcp/pdf/MidAmerican/MEC%20Final%20HCP%20Appendix%20K%20-%20Compliance%20Monitoring%20Protocol_121918.pdf

²² The standardized monitoring protocol is conducted throughout the project take coverage term and includes the following elements:

- Each wind turbine being searched at least once every 3 months corresponding to highest eagle use seasonal periods to the maximum extent practicable.
- Monitoring may be conducted by trained site operations personnel and/or qualified consultants, at the permittee's election; and
- May incorporate advanced technologies or techniques e.g., use of dogs or UAV/drones if demonstrated to be equally effective as human searches.

annual training required. As the Service may be aware, peer reviewed literature has documented the efficacy of monitoring by trained on-site personnel.²³

- Independent third-party monitoring and/or additional monitoring protocols and searches may be required under the general permit program if a project take coverage has been exceeded and may be included in the CCP.
- While not required under project take coverage, carcass persistence trials, searcher efficiency trials, and bias corrections may inform regional or programmatic bias corrections to inform the Service's management of the general permit program.
- The Service may audit an individual facility's monitoring program and results upon written notice to the holder of the project take coverage.
- Evidence of Absence (EoA) or another model to estimate take will not be used to determine take limit compliance.

Take Exceedance and Permit Revocation

If the project take coverage limit is reached by a holder, the CCP is immediately provided to the Service and implemented. In addition, the facility pays a penalty and additional compensatory mitigation fee (as applicable) if the take limit is exceeded. As an example, the March 23, 2021, Final Rule on 2021 Inflation Adjustments for Civil Monetary Penalties²⁴ identifies a maximum civil penalty of \$13,685 for BGEPA violations.

The project take coverage is revoked if take:

1. Exceeds the project take coverage limit by two eagles; or,
2. Exceeds the project take coverage by one eagle in any two five-year terms.

In cases of revocation, an applicant can work with the Service on an individual permit.

Project Take Coverage Fees

We propose two fees associated with project take coverage:

1. Project NOI fee
 - a. The project take coverage NOI fee is set to cover costs of FWS administration of the general permit program and payment to the Eagle Conservation Fund (details on the fund follow in the next section of these comments).

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- Any new eagle nest established after submission of NOI (including for existing projects) within 1 mile of the closest turbine will be monitored 3 times from the ground during the nesting season at no less than 30-day intervals to provide nest and nest success data to FWS.
 - Incidental finds between periodic standardized searches made by site operations personnel are also recorded, reported and count toward the take limit.
 - Reporting of take to the Service must occur within 24 hours.
 - Our framework also requires annual public reporting of take.
 - All data, information, compliance reports and related information reported under the general permit is considered publicly available information and not considered confidential business information.

²³ Hallingstad EC, Rabie PA, Telander AC, Roppe JA, Nagy LR (2018) Developing an efficient protocol for monitoring eagle fatalities at wind energy facilities. PLoS ONE 13(12): e0208700. <https://doi.org/10.1371/journal.pone.0208700>.

²⁴ *Federal Register*, Vol. 86 No. 54, Tuesday, March 23, 2021, pages 15427-28, available at: <https://www.govinfo.gov/content/pkg/FR-2021-03-23/pdf/2021-05779.pdf>

- i. As an illustrative example: \$2,500 for the administration cost and a \$7,500 payment per project to the Eagle Conservation Fund for a total of \$10,000 for the NOI fee.
 - ii. The payment to the Eagle Conservation Fund as part of the Application fee is made up-front.
- 2. Compensatory mitigation
 - a. Any take above the EMU take limit shall require a “per eagle” compensatory mitigation fee paid up-front based on the take limit regardless of whether the project ultimately reaches the take limit. This approach will result in a net benefit as described in the final 2016 rule given the industry expectation that most permitted projects will take less than the authorized amount.
 - i. We expect compensatory mitigation to be required for golden eagles from the start of the program, given the current population status.
 - ii. We do not expect compensatory mitigation to be required for bald eagles at the start of the program, given the current population status.
 - b. Illustrative examples of per eagle costs can be found in:
 - i. *Proxies for the Market Value of Bald and Golden Eagles* report prepared for FWS, Table ES.1, which finds the average cost of production for a golden eagle between the low and high estimates is roughly \$25,000-\$29,000.²⁵
 - ii. *Proxies for the Market Value of Bald and Golden Eagles* report prepared for FWS, Table ES.1, which finds the average cost of production for a bald eagle is \$9,800.²⁶
 - iii. *MidAmerican Energy Company Habitat Conservation Plan for Wind Energy Facilities I-X in Iowa*, which identifies the average cost of rehabilitation for a bald eagle is \$5,340.²⁷
 - iv. November 18, 2015, FWS OLE Chief’s Directive for Civil Settlement Agreements of Legacy Avian Take at Qualifying Wind Energy Project that sets a \$25,000 fee per eagle.

Mitigation and Conservation Funds

The fees referenced above are paid into one of two funds: The Eagle Conservation Fund or the Eagle Mitigation Fund.

The **Eagle Conservation Fund** is envisioned to be funded by a portion of the NOI fee paid by applicants and fees from penalties for take exceedance. The Eagle Conservation Fund could support projects to:

1. Better understand eagle population dynamics, including wind and non-wind energy stressors.
2. Reduce threats to eagles from other stressors such as lead and rodenticide poisoning, road-side collisions, illegal shooting, and disease.
3. Address and improve various components of the eagle permitting program, such as:
 - a. Gathering and analyzing demographic data;
 - b. GPS tagging and tracking of eagles to support programmatic monitoring;
 - c. Validating avoidance, minimization, and mitigation measures; and,

²⁵ Proxies for the Market Value of Bald and Golden Eagles, ABT Associates, prepared for FWS, August 30, 2017.

²⁶ *Id.*

²⁷ See <https://www.fws.gov/midwest/rockisland/te/MidAmericanHCP.html>, Appendix I.

- d. Improving standardized monitoring requirements and risk prediction models and analysis at the flyway level.

The **Eagle Mitigation Fund** is responsible for carrying out compensatory mitigation to offset take and is funded by a per-eagle fee assessed to covered projects based on the take limit (as proposed, two eagles per every five years). Projects pay the compensatory mitigation fee up-front regardless of whether that amount of take actually occurs. Covered projects are not responsible for carrying out the mitigation. Rather, mitigation is managed by a Service-approved mitigation entity. Mitigation investments are informed by a technical advisory committee composed of federal and state wildlife agency representatives, industry, and conservation/science organizations.

Consistency of the General Permit Framework with the Preservation Standard

The 2016 Eagle Take Permit Program final rule redefined the “preservation standard” under BGEPA to mean “consistent with the goals of maintaining stable or increasing breeding populations in all eagle management units and the persistence of local populations throughout the geographic range of each species.”²⁸

We believe the following elements of our proposed general permit framework ensure its consistency with the preservation standard protection in EMUs as well as local populations:

1. Establishment of overall flyway caps
2. Establishment of EMU take limits
3. Expanded participation in the permit program to qualified projects, resulting in expanded data collection and reporting
4. Five-year programmatic reviews and adjustments, including in response to regional and local population changes
5. Five-year project take coverage, with renewals subject to updated terms and conditions
6. Implementation of BMPs and criteria for issuance of project take coverage
7. Limited take authorization level (0.4 per year, or 2 over 5 years) with strict project-level compliance and exceedance procedures
8. Eagle Conservation Fund – conservation fee paid in advance
9. Eagle Mitigation Fund – compensatory mitigation provided for golden eagles resulting in no net loss (and likely a net benefit)
10. Standardized, regular monitoring by trained O&M personnel, supplemented with incidental finds and programmatic monitoring

Conclusion

Thank you for the opportunity to respond to the ANPR and provide the general permit framework outlined in these comments. We strongly urge the Service to incorporate this general permit framework into any new eagle permitting proposals. As explained throughout, the framework is consistent with the preservation standard protections, provides expanded conservation benefits to eagles, is more administratively feasible for the Service, and provides a more timely and cost-effective permitting option, allowing for rapidly expanding deployment of all renewable energy, including wind energy, to

²⁸ *Federal Register*, Vol. 81 No. 242, December 16, 2016, page 91497.

address the climate crisis. We would appreciate the opportunity to meet to discuss this proposal and stand ready to answer any questions.

Very truly yours,

Tom Vinson	Garry George	Monica Goldberg	Katie Umekubo
Vice President	Director	Vice President	Senior Attorney
Policy and Reg. Affairs	Clean Energy Initiative	Landscape Conservation	Lands Division
American Clean Power Assn	National Audubon Society	Defenders of Wildlife	NRDC

Enclosures

Appendix A – Detailed Proposed General Permit Framework

Appendix B – Flow Charts Illustrating Core Elements of the Proposed General Permit Framework

Appendix A. Detailed Proposed General Permit Framework

Nationwide Wind Energy Programmatic General Permits for Bald and Golden Eagles

The Nationwide Wind Energy Programmatic General Permits are issued by the U.S. Fish & Wildlife (FWS) to authorize take of Bald and Golden Eagles. There is a single programmatic permit for Bald Eagles (BAEA) and one for Golden Eagles (GOEA). This permit authorizes low level (at project level) of take of each eagle species and is intended for wind energy projects that present low collision risk to eagles.

OVERALL Permitting changes for Bald and Golden Eagles

- a. FWS shall establish a Flyway Management Office/Coordinator in each of the four flyways [i.e., EMUs] and Alaska²⁹ to administer the General Permit to provide consistency for eagle permitting across an EMU.³⁰
- b. Eagle population demographics will be estimated by each Flyway Management Office/Coordinator (FMO) using mid-winter survey data or other appropriate demographic data. Each FMO will update eagle population demographics periodically. Assessments of eagle population demographics will include identification of sources of mortality and adjustments to eagle flyway concentrations/populations to inform take thresholds for each flyway.
- c. Each FMO will calculate “EMU Take Limits”^{31,32} that set the threshold for total unmitigated take of eagles for each flyway/EMU. These “Take Limits” will be recalculated as needed, but not less than every five years. Any adjustments will be based on elements including, but not limited to: new population demographic data, advancement and use of technology and advancements in compensatory mitigation,³³ and updated estimates of total mortality.
- d. FWS shall establish an Overall Flyway Cap (OFC) for each of the four flyways. The OFC is the maximum amount of take the FWS can authorize within each flyway from all sources without jeopardizing flyway population³⁴. If the OFC is met in any of the flyways, the FWS shall take the actions outlined in the BGEPA regulations.
- e. It is assumed the EMU Take Limit for GOEA is zero at present. Covered Projects may still qualify for a project coverage, even though the BAEA or GOEA EMU Take Limit is reached, but will be required to pay a mitigation fee to fully offset potential eagle take. FWS shall ensure that any such additional take does not exceed the Overall Flyway Cap or cause declines in regional or local eagle populations.

²⁹ This does not need to be a new physical location or new staff (unless necessary). It is meant to provide consistency and clarity for the regulated community and other stakeholders.

³⁰ EMUs defined in 50 CFR 22.3 and as interpreted in the Final PEIS and preamble to the rule. (“*Eagle management unit (EMU)* means a geographically bounded region within which permitted [take](#) is regulated to meet the management goal of maintaining stable or increasing breeding populations of bald or golden eagles.”)

³¹ EMU Take Limit is the number of eagle fatalities that can be sustained without causing reductions in flyway populations. The calculation of this Limit includes the consideration of all permitted eagle take in the flyway, as well as natural mortality rates. Any take above the EMU Take Limit must be accompanied by appropriate levels of FWS-approved compensatory mitigation measures.

³² The EMU Take Limit for GOEA is currently zero.

³³ For example, improvements in fatality detection, detection and deterrent technologies and/or compensatory mitigation options could warrant an increase in the authorized take limit as already acknowledged in the existing advanced conservation practices under the current rule.

³⁴ The OFC is intended as a safeguard against jeopardy, similar to the how jeopardy is defined and applied in the ESA. It is included here as a safeguard against rapid and unforeseen population declines, resulting from any stressor or combination of stressors.

- f. The FMO shall ensure that eagle permit programs (GP and other) are consistent with the preservation standard. For the Wind GP special reviews, this includes but is not limited to consideration of localized concentrations of wind energy development that could impact localized population viability, or significant change in eagle population dynamics related to wind energy exclusively or in combination with other sources of eagle mortality detected between standard 5-year reviews.

Nationwide General Eagle Permitting Program

I. Permit Terms

- a. The General Permit term shall be 5 years.
- b. Every 5 years, the General Permit will be reviewed, amended as necessary, and renewed (see III).
- c. The initial proposed General Permit and proposed renewal of General Permit will be subject to public notice and comment in each renewal.
- d. Programmatic NEPA, Section 7 ESA and Section 106 NHPA compliance will be conducted initially and upon each renewal.
- e. FWS may adjust General Permit elements at each 5 year renewal based on factors such as eagle population demographics, actual and estimated eagle take, advancement in technology, advancements in compensatory mitigation options and effectiveness, and other factors identified in the public review document.

II. Administration & Analysis by Flyway

- a. Administration of the General Permit will be conducted by each applicable Flyway Management Office (FMO). Administrative responsibilities include:
 - i. Receiving, tracking and assessing completeness and accuracy of individual Project notifications;
 - ii. Collecting all applicable fees;
 - iii. Conducting the 5-year reviews for renewal of the General Permit; and
 - iv. Making General Permit information available to the public.
- b. Each FMO shall ensure the General Permit is consistent with statute and regulations, including the BGEPA Preservation Standard.
 - i. Any public citizen, including representatives of outside entities and permittees, can petition a FMO to conduct special reviews of new information that may meaningfully impact general permit issuance or administration. Petitions must be supported by new, compelling and verifiable scientific evidence that indicates changes in EMU, regional or local population levels. Special reviews shall be initiated within 45 days of an FWS determination that the request is compelling and ripe for consideration; special reviews will be conducted no more frequently than every two years and are subject to public notice and comment. FWS may review multiple petitions simultaneously and shall seek to incorporate all related public input and petitions when opening a review process.
 1. If such special review occurs within a 5-year General Permit term individual Projects covered under the current General Permit continue to be covered by the current General Permit until the Project coverage term expires, provided they are in full compliance with the General Permit terms and conditions and unless such inclusion fails to meet the preservation standard.
 - ii. Each FMO shall provide meaningful and robust opportunities for public engagement and input on the General Permit program and conservation under the General Permit.

III. General Permit Program Renewal, Amendment and Suspension

- a. FWS shall ensure that the General Permit program adheres to BGEPA's preservation standard.
- b. Project coverage and compensatory mitigation (if needed) fees will be reevaluated by FWS as part of the five-year renewal. Any changes to the fees will be subject to public notice and comment prior to incorporating into the new General Permit.
- c. At General Permit renewal time, each FMO shall evaluate whether a revision (up or down) of the Covered Projects take limits, mitigation requirements and other General Permit terms and conditions is warranted.
- d. FWS must identify if, based on data collected and reported under the General Permit, information submitted as part of either the 5-year renewal or a "special" review, or other scientifically credible information available to FWS and made public as part of this section:
 - i. Wind energy impacts contribute, in a scientifically credible and statistically significant manner, to regional or local eagle population decline.
 - ii. Exceedance of the General Permit take limit occurs at multiple wind projects within a flyway or subsection of a flyway resulting in a trend towards EMU, regional or local population level impacts; or
 - iii. For any reason, the General Permit(s) is/are not consistent with BGEPA.
- e. Upon such an identification in part d of this section, FWS or FMO may propose to amend this General Permit(s) to impose regional, local or other geographically based conditions to ensure consistency with BGEPA. Amendments to the General Permit(s) will be subject to public notice and comment in accordance with section I.c.
 - i. Such conditions may include:
 1. A reduction or increase in the take limit in a smaller specific, defined regional or local geographic area, if appropriate; and/or
 2. The suspension of the General Permit(s) in certain geographic areas within the flyway (i.e. within a specific distance to a specific feature).
 - ii. Covered Projects under the current General Permit continue to be covered by the current General Permit until the Project authorization term expires, or for extension of that authorization term, provided they are in full compliance with the General Permit terms and conditions and unless such inclusion fails to meet the preservation standard.
- f. If the OFC for one or both species in a flyway is reached, the General Permit for that species in that flyway may be suspended if FWS:
 - i. Relying on best available science, finds:
 1. Eagle take authorized by the General Permit is jeopardizing the flyway eagle population taking into consideration compensatory mitigation; or
 2. Compensatory mitigation provided by the General Permit is not adequately offsetting eagle take authorized by the General Permit;
 - ii. Provides appropriate public notice and specific notice to Covered Projects; and
 - iii. Suspends all other permitted take from other sources as well.
- g. If FWS finds, through best available science, that the preservation standard is not being met, it may amend or terminate the General Permit program following appropriate public notice and specific notice to Covered Projects.

IV. Eligible Projects to Receive Coverage under the General Permit(s)

- a. Existing Wind Projects

- i. All existing wind projects are eligible for coverage under the General Permit provided that a Project's Designated Authorized Representative³⁵ attests³⁶ that documented eagle fatalities at the Project have not exceeded the General Permit limit of 0.4 per year for each species included in the Project's NOI.
 - ii. A project can seek coverage for bald eagles, golden eagles, or both.
- b. Development Wind Projects
- i. All development projects are eligible for coverage under the applicable General Permit provided that all of the project's turbines are:
 - 1. Greater than 1 mile from an active Bald Eagle Nest or 2 miles from an Active Golden Eagle Nest
 - 2. Greater than 1 mile of a documented Bald Eagle communal roost area known from existing data sources.
 - ii. In determining compliance with the criteria in section IV. b. i., project proponents may utilize reliable, publicly available data for evaluation of Active Nests and Communal Roost Areas including, but is not limited to, data from state and federal wildlife agencies, a national communal roost registry, Audubon Christmas Bird Counts, Cornell Breeding Bird Surveys, and eBird data.
 - iii. If no reliable data are available, projects should conduct either a protocol-level nest survey or bald eagle communal roost survey within 2 miles of the project area the breeding season prior to start of construction.
 - iv. Project applicants should determine, based on site characterization assessments, whether the following areas of potential BAEA or GOEA foraging or concentration areas are located within 1 mile of the project. This assessment is provided as a tool for applicant risk management, is not an eligibility criterion, and is not subject to FWS approval (though FWS should be consulted as part of the assessment) and may include identification of feature that may indicate risk, including;
 - major rivers (BAEA)
 - lakes, reservoirs, wetlands or waterbodies (BAEA)
 - Mapped concentrated migratory corridors (e.g., raptor watch areas) (BAEA/GOEA)
 - breeding or concentrated foraging areas. (BAEA/GOEA)
 - v. Presence of any of features identified from site characterization assessments conducted under section (iv) of this part does not disqualify a Project for coverage under the

³⁵ Designated Authorized Representative means a responsible corporate officer, such as (i) a president, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to sign contracts and agreements on behalf of the corporation, make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign contracts and agreements on behalf of the corporation has been assigned or delegated to the manager in accordance with corporate procedures. *Borrowed from 40 CFR 122.22.*

³⁶ Example from 40 CFR 122.22:

Any person signing a Notice of Intent under this General Permit shall make the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

General Permit but helps inform the potential applicant whether coverage under the General Permit would be appropriate.

V. Project Coverage Issuance Priority & Process

- a. Notice of Intent (NOI): The Project seeking coverage must submit a NOI:
 - i. signed by an Designated Authorized Representative of the Project seeking coverage;
 - ii. include NOI Fee;
 - iii. include mitigation fee for GOEA; if required for BAEA, pay mitigation fee within 45 days notice from FWS (see Section VI); and attest that it meets the eligibility criteria in Section IV a or b, as applicable, and has prepared a Compliance Correction Plan.³⁷
- b. Individual eligible Projects can apply for 5 years of Covered Project authorization initially under a current General Permit(s). Coverage under the terms, project take limit, conditions, and NOI Fee of the General Permit(s) in place at the time of approval shall remain in place for 5 years regardless of any Amendment, suspension or renewal of the General Permit unless such inclusion fails to meet the preservation standard.
- c. Projects can apply for coverage under the BAEA General Permit, GOEA General Permit, or both, provided they meet the eligibility requirements as outlined in Section IV.
- d. In the initial five-year General Permit term, Project coverage will be offered first to Existing Operating projects for a period of three months. Project coverage will then be offered to projects safe-harbored for Federal Production Tax Credit benefits³⁸ (PTC Projects) for a period of three months. If the General Permit program is finalized after the full expiration of PTC benefits, the initial offering to Existing Operating projects will be expanded to six months. If the Production Tax Credit is extended, the initial offering to PTC Projects will be expanded to 6 months.
 - i. Coverage of non-operating projects must commence construction within 6 months of Coverage issuance and must reach commercial operation within 24 months of Coverage issuance. Coverage for non-operating projects must notify the FMO of start of construction date and commercial operation date.
 1. The FMO may waive the 24-month commercial operation requirement due to unforeseen or unpreventable construction delays upon written request, and such request shall be not unreasonably denied.
- e. Upon receipt of a NOI and payment of the NOI Fee, the applicable FMO must notify the Permittee within 30 days of:
 - i. Specified deficiencies in the NOI;
 - ii. The required compensatory mitigation fee, if any, for BAEA Project Coverage. If notice is given by the FMO, the Project must pay specified compensatory mitigation fees within 45 days of NOI submittal in order to receive Project Coverage. If notice is not given by the FMO on application deficiencies, the Project is, by default, provided

³⁷ A Compliance Correction Plan (CCP) is a plan that the Covered Project will implement to ensure it does not exceed the General Permit take limit of two eagles over a five-year period. The CCP is not required to be submitted to FWS unless it reaches the permit take limit. A copy of the CCP must be maintained by the project operator. The CCP will be eagle species and circumstance specific and will vary with each Covered Project. The CCP includes the standard BMPs required by the General Permit, but will include additional action or actions the Covered Project will take to reduce risk of take to eagles should the project reach the take limit. These actions may include:

1. Enhanced carrion removal if its determined that eagle risk is being driven by attraction to carrion.
2. Prey source reduction if its determined that eagles are keying in on a specific prey source and a reduction of this prey is practicable and achievable.
3. Daytime and/or seasonal curtailment of certain turbine(s)
4. Use of bio monitors to detect and curtail turbines
5. Use of technology to detect and curtail turbines or deter eagles from turbines

³⁸ As defined and qualified by the IRS

coverage under the General Permit program provided all terms and conditions of the General Permit program are being followed, the Project Coverage NOI fee has been paid and the Permittee has met all requirements for eligibility as attested to in the NOI.

- e. An FMO may establish procedures to process and review NOI, these shall be limited to checking for accuracy and completeness of the NOI, in order to efficiently review NOIs and provide timely feedback.
- f. Once the EMU Take Limit is reached (currently only for GOEAs), Project coverage will only be issued to NOIs that pay specified compensatory mitigation fees within 45 days of NOI submittal, as dictated in the General Permit terms and conditions and subject to revision at 5-year renewal.

VI. Project Coverage Application and Compensatory Mitigation Fees

- a. Initial funding may need to be provided by FWS general budget in the initial stages before NOI fees are generated. Over time, goal is for the program to be fully funded by Project Coverage NOI fees.
- b. A Project Coverage NOI Fee shall be established by FWS and reassessed at each 5 year renewal, including funding considerations addressed in section XI below. The NOI Fee covers both administrative costs incurred by FWS as well as payment to an Eagle Conservation Fund established in Section XI.
 - i. As an illustrative example: \$2,500 for the administration cost³⁹ and a \$7,500 payment per project to the Eagle Conservation Fund for a total of \$10,000 for the NOI fee.
- c. Where EMU Take Limits are exceeded, a per-eagle Compensatory Mitigation Fee shall be established by FWS in order to achieve “no net loss”. This amount is subject to review with each 5-year renewal, accounting for advances in compensatory mitigation and associated costs. This Compensatory Mitigation Fee shall be deposited into the Eagle Mitigation Fund established in Section X.a.
 - i. Illustrative examples of per eagle costs can be found in *Proxies for the Market Value of Bald and Golden Eagles* report prepared for FWS, Table ES.1, which finds the average lost production for a golden eagle between the low and high estimates is roughly \$25,000-\$29,000.⁴⁰
 - ii. Another illustrative example for BAEA can be found in a *Proxies for the Market Value of Bald and Golden Eagles* report prepared for FWS, Table ES.1, which finds the average cost of production for a bald eagle is \$9,800.
 - iii. Another illustrative example for BAEA can be found in *MidAmerican Energy Company Habitat Conservation Plan for Wind Energy Facilities I-X in Iowa*, which identifies the average cost of rehabilitation for a bald eagle is \$5,340.⁴¹
 - iv. Another example is the November 18, 2015 FWS OLE Chief’s Directive for Civil Settlement Agreements of Legacy Avian Take at Qualifying Wind Energy Project that sets a \$25,000 fee.

VII. Permit Limit, Exceedance, Compliance and Enforcement

- a. Subject to the General Permit terms and conditions, the take limit for both BAEA and GOEA for Covered Projects under the General Permit(s) shall be 0.4 BAEA and 0.4 GOEA per year (cumulatively, 2 BAEA and/or 2 GOEA over 5 years).

³⁹ Currently, FWS charges \$2,500 for an individual eagle take permit of 5 years or less. It is assumed this amount is sufficient to administer this 5-year permit as well given the less intensive requirements imposed on FWS from a general permit program. See: <https://www.fws.gov/migratorybirds/pdf/policies-and-regulations/3-200-71FAQ.pdf>.

⁴⁰ Proxies for the Market Value of Bald and Golden Eagles, ABT Associates, prepared for FWS, August 30, 2017.

⁴¹ See <https://www.fws.gov/midwest/rockisland/te/MidAmericanHCP.html>, Appendix I.

- i. Only actual eagle take or injuries discovered within the wind project will be counted toward the Permit limit.
 - 1. All eagle take found within the wind project will be assumed to be the result of wind turbine collision and counted towards the Permit limit unless it is determined that the casualty is the result of other causes.⁴²
- b. Permit Exceedance:
 - i. If the Covered Project reaches the eagle take limit during any coverage period:
 - 1. The Project shall promptly, and no longer than 24 hours after such discovery, notify FWS in writing, submit the Compliance Correction Plan within 5 business days and verify the implementation of such plan in order to avoid exceedance of the take limit.
 - ii. If the Covered Project Authorization take limit is exceeded by 1 eagle take during any coverage term, the Covered Project is in violation of the Permit.
 - 1. The Covered Project shall:
 - a. Immediately notify FWS, and follow up within 24 hours with notification in writing; and
 - b. Pay a penalty for such exceedance which shall be deposited into the Eagle Conservation Fund (Section XI).
 - i. As an example, the March 23, 2021 Final Rule on 2021 Inflation Adjustments for Civil Monetary Penalties which identifies a maximum civil penalty of \$13,685 for BGEPA violations.
 - 2. FWS may recommend additional monitoring and verified mitigation measures.
 - 3. FWS shall make such information publicly available, including actions taken under this subpart and any exceedance of the take limit by the Covered Project.
 - 4. No enforcement action will be initiated provided that the Covered Project complies with all sections of the subpart, maintains compliance with all other General Permit conditions, and does not exceed the take limit by 1 eagle
 - iii. If the Covered Project Authorization take limit is:
 - 1. Exceeded by two eagles of the same species in any single project coverage term, or
 - 2. Exceeded by one eagle of the same species in any two project coverage terms, then

FWS shall immediately withdraw the take authorization upon notification to the Covered Project and the Covered Project shall be disqualified for future coverage under the General Permit. At the applicant's request, the Service will work with the applicant to facilitate the transition to an individual permit.
- c. At any time, the Covered Project can take any steps necessary to stay within the Permit limit or otherwise remain in compliance, including but not limited to: temporarily or seasonally curtailing turbines, implementation of a bio-monitoring program to detect eagles and curtail turbines, installation of technology to detect/curtail/deter eagles or other conservation practices.
- d. While FWS will provide notice to the Covered Project in accordance with this section and provide an opportunity to discuss appropriate avoidance and minimization measures, final

⁴² Permittee has the right to request a necropsy for eagle casualties found within the permitted wind site, provided that the permittee pay for the requested necropsy. If necropsy results demonstrate otherwise, the eagle fatality shall not be counted toward the permit limit.

General Permit applicability and coverage decisions will be made by the FWS following an exceedance of General Permit terms and conditions.

VIII. General Permit Compliance Conditions and Monitoring:

- a. All Covered Projects must adhere to the terms and conditions, including best management practices and/or standardized avoidance and minimization measures, established by the General Permit
- b. Best Management Practices: Project-level BMPs shall be implemented to ensure that eagle take is avoided, minimized and mitigated for as required under BGEPA regulations. FWS will identify such measures, including operational measures, in the General Permit and may revise such measures, subject to public notice and comment, during the 5-year renewal. Minimum BMPs required include but are not limited to:
 - vi. Prompt carrion removal or burial (livestock and large wildlife, as allowed by state law) within the project site;
 - vii. Tubular wind turbine towers with no perching features;
 - viii. Vehicle speed limits of 25 mph for wind site personnel on wind site project roads;
 - ix. Collector lines shall be buried to the extent possible, unless burial of lines is prohibitively expensive (e.g. shallow bedrock exists or other geological or engineering obstacles are present) or where greater adverse impacts to biological or other resources would result. Above ground electric lines shall be fully insulated and/or follow Avian Powerline Interaction Committee suggested practices;
 - x. No guyed permanent communication and meteorological towers. If guy wires are necessary, bird flight diverters or high visibility marking devices should be used.
 - xi. No implementation of habitat enhancements by the Permittee for eagle prey within the project area;
- c. Compliance Monitoring
 - i. Permittee shall implement a standardized wildlife monitoring and reporting program for all on-site personnel with annual training required for all personnel.^{43, 44} The standardized monitoring protocol is conducted throughout the permit term and includes the following elements:
 1. Each wind turbine being searched at least once every 3 months⁴⁵ corresponding to highest eagle use seasonal periods to the maximum extent practicable;
 2. Monitoring may be conducted by trained site operations personnel and/or qualified consultants, at the permittee's election⁴⁶; and
 3. May incorporate advanced technologies or techniques e.g. use of dogs or UAV/drones if demonstrated to be equally effective as human searches.Incidental finds between periodic searches made by site operations personnel are also recorded, reported and count toward the take limit.

⁴³ Annual Training can be Computer-Based Training. Operators will train and instruct O&M personnel to look for and report any eagle fatalities or signs of fallen carcasses. Because of the nature of eagle mortality (large birds with long carcass persistence), a large number of eagle mortality reporting across the country has originated from incidental reporting by operators or other personnel on wind project sites. This is a low-cost way to supplement the efforts described above, and can provide an important form of monitoring throughout the life of the project.

⁴⁴ Peer reviewed literature has documented the efficacy of monitoring by trained on-site personnel. See: Hallingstad EC, Rabie PA, Telander AC, Roppe JA, Nagy LR (2018) Developing an efficient protocol for monitoring eagle fatalities at wind energy facilities. PLoS ONE 13(12): e0208700. <https://doi.org/10.1371/journal.pone.0208700>.

⁴⁵ Scientific studies show long-term persistence of eagle carcasses given their size. See: Hallinstad et.al. (2018)

⁴⁶ An example of compliance monitoring using on-site personnel can be found in Appendix K, Compliance Monitoring Protocol from MidAmerican Energy Company's Final Habitat Conservation Plan for its Iowa Wind Project Portfolio. Available at:

https://www.fws.gov/midwest/angered/permits/hcp/pdf/MidAmerican/MEC%20Final%20HCP%20Appendix%20K%20-%20Compliance%20Monitoring%20Protocol_121918.pdf

- ii. Independent third-party monitoring and/or additional monitoring protocols and searches may be required under the General Permit program if a Covered Project has exceeded the take limit within any permit term (see section XIII b.) as part of the Compliance Correction Plan.
- iii. Any new eagle nest established after application date (including for existing projects) within 1 mile of the closest turbine will be monitored 3 times from the ground during the nesting season at no less than 30-day intervals in order to provide nest and nest success data to FWS. ⁴⁷
- d. Use of Monitoring Results
 - i. Carcass persistence trials, searcher efficiency trials, and bias corrections may be collected to inform regional or programmatic bias corrections to inform management of the General Permit program. Evidence of Absence or another estimator will not be used to determine take limit compliance.
 - ii. FWS may audit the monitoring program and results upon written notice to the Permittee.

IX. Reporting

- a. All data, information, compliance reports, and other related information reported under the General Permit is considered publicly available information and is not considered confidential business information.
- b. Covered Projects will report all discovered eagle take or injuries to FWS within 24 hours of discovery and follow specified handling and storage procedures.⁴⁸
 - i. Special Purpose Utility Permit under the MBTA shall not be required under the General Permit program.
 - ii. FWS or their agent shall be responsible for collecting eagle fatalities and parts thereof from the Permittee.
- c. Covered Projects will submit an annual report to FWS describing the project-level monitoring program and any related findings, including results of incidental, standard carcass searches and nest monitoring (if applicable). Such report shall be signed by Permittee's Designated Authorized Representative.

X. Eagle Mitigation Fund

- a. FWS shall establish an Eagle Mitigation Fund to carry out requisite compensatory mitigation under the General Permit program.
- b. The Eagle Mitigation Fund/s shall be administered by the National Fish and Wildlife Foundation (NFWF) or other FWS-approved State program or mitigation entity, with the advice and oversight of a technical advisory committee to be comprised of representatives of federal and state wildlife agencies, wind industry, scientific and conservation non-governmental organizations and other interested stakeholders.

⁴⁷ Establishment of new nests within 1 mile after the date of application does not result in project becoming ineligible for coverage under a general permit.

⁴⁸ Permittees shall make discovered eagle carcasses and all parts thereof, unavailable for scavenging by immediately placing and anchoring a container over the carcass and all parts. Permittee is authorized under the General Permit AND upon verbal or written approval by a FWS OLE agent or FWS representative to take temporary possession of the eagle carcass provided that the carcass and all parts thereof be immediately placed in a freezer housed at the wind site O&M building. All retrieved carcasses and parts thereof shall:

- I. Be placed in a watertight plastic bag.
- II. Have a copy of the Permit and chain of custody form completed and placed in or affixed to the bag.
- III. Have a tag affixed to the carcass with a unique carcass identification number, date, Permit number, Permittee name, Project Name, and nearest wind turbine number.

- c. The Eagle Mitigation Fund shall be available to mitigate eagle casualties resulting from Covered Projects (i.e., the operations of Covered Projects) to offset actual take.
- d. Covered Projects will not be responsible for delivering or implementing specific mitigation projects under the General Permit program. Covered Projects instead provide per-eagle mitigation funds, as specified in the General Permit terms and conditions, with mitigation projects to be delivered and implemented by the Eagle Mitigation Fund mitigation entity.

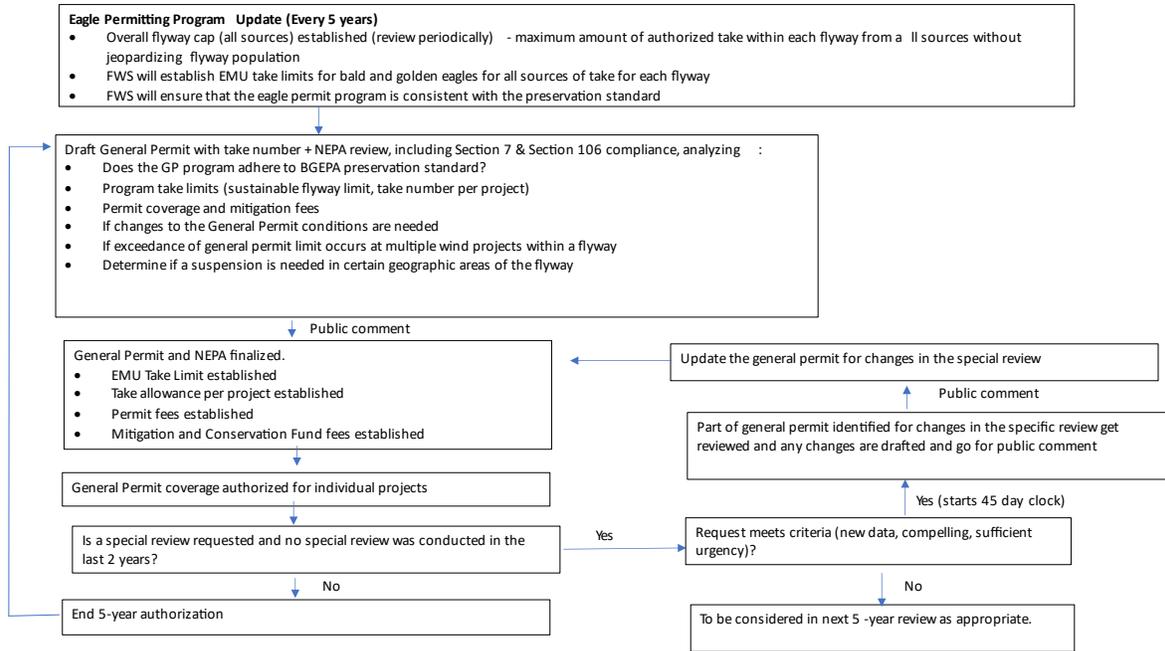
XI. Eagle Conservation Fund: Science, Research and Technology Verification and Conservation Efforts to reduce stressors to eagle populations.

- a. In addition to funding and supporting administration of the General Permit program, a portion of the NOI fees and penalties for exceedance and funds from the Mitigation Fund shall support, with the oversight of the Flyway Management Office/Coordinator and in coordination with outside entities, associated research or activities designed to better understand eagle population dynamics, including wind and non-wind energy stressors, and to improve the conservation of eagles including conservation efforts to reduce threats to eagles from other stressors such as lead and rodenticide poisoning, road kill, illegal shooting, and disease.
 - i. This includes but is not limited to gathering and analyzing demographic data; GPS tagging and tracking of eagles; validating avoidance, minimization and mitigation measures; and improving standardized monitoring requirements and risk prediction models and analysis at the flyway level.
 - ii. Survey and monitoring data collected by Covered Projects will be publicly available and may be used for such activities. Additionally, project site access or cooperation in research or data collection at the regional or local level will be provided by Covered Projects upon request provided such access or cooperation is economically feasible .

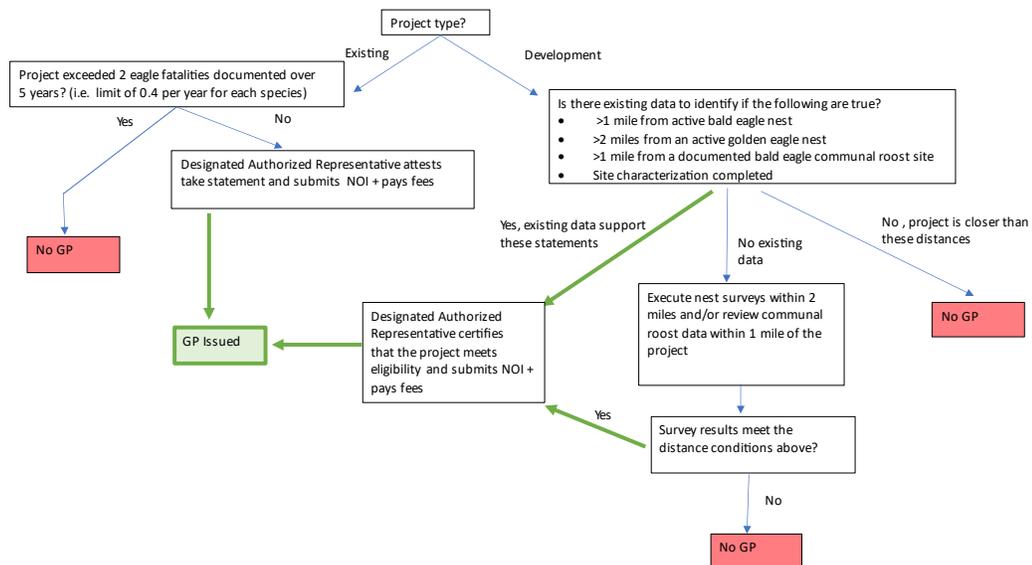
XII. Project Coverage Renewal:

- a. Covered Projects which are in full compliance with all terms and conditions of the General Permit will automatically qualify for coverage under a new General Permit for another 5-year term provided they submit an NOI for renewal, pay NOI fees and pay mitigation fees (as applicable).
- b. Covered Projects which are in full compliance with all terms and conditions of the General Permit must resubmit a NOI, pay NOI Fees and mitigation fees (as applicable) and comply with all amended terms and conditions.
- c. Covered Projects which are in full compliance with the terms and conditions of the General Permit at the time of any Amendment will not be subject to additional monitoring, mitigation, or other requirements prior to receiving coverage under a new General Permit.
- d. The Covered Project shall be deemed ineligible for renewal under future a General Permit if:
 - i. It exceeds the permit take limit by two eagles during any single project coverage term or;
 - ii. It exceeds the permit take limit by one eagle in any two project coverage terms; or
 - iii. Is non-compliant with any other term or condition of the General Permit.

Overview of general permit program



Project Eligibility



Implementation of the General Permit

