

June 6, 2012

Paul Henson
U.S. Fish and Wildlife Service
Oregon Fish and Wildlife Office
2600 SE 98th Ave., Suite 100,
Portland, OR 97266.

Dear Mr. Henson,

On behalf of the Society for Conservation Biology,¹ The Wildlife Society,² and the Ornithological Council,³ we offer the following comments on the U.S. Fish and Wildlife Service's proposed Barred Owl removal experiments in the Pacific Northwest forests. Barred Owls (*Strix varia*) are native to eastern North America, but over the last 80 years have spread into the forests of the Pacific Northwest (Dark 1998). In recent years, evidence has begun to indicate that Barred Owls are able to outcompete the Northern Spotted Owl (*Strix occidentalis caurina*), a species listed as threatened under the Endangered Species Act (Gutiérrez 2007).

Recognizing the potential threat that Barred Owls may represent to the survival and recovery of the Northern Spotted Owl (NSO), the 2011 revised recovery plan identified Barred Owl management and control as a key strategy for recovering the NSO. On February 28, 2012, concurrently with the publication of revised critical habitat for the NSO,⁴ the U.S. Fish and Wildlife Service (FWS) published a Draft Environmental Impact Statement (DEIS) on the *Experimental Removal of Barred Owls to Benefit Threatened Northern Spotted Owls*.⁵ In the past, our organizations have supported careful, experimental removals of Barred Owls given the declining conservation status of NSO as one means of reducing the overall stressors contributing to the decline of the NSO. Accordingly, we support the FWS's decision to move forward with the DEIS to evaluate Barred Owl control in a scientifically credible manner, and as humanely as possible. As will be discussed in greater detail below, we support Alternative 7 within the DEIS

¹ SCB is an international professional organization whose mission is to advance the science and practice of conserving the Earth's biological diversity, support dissemination of conservation science, and increase application of science to management and policy. The Society's 5,000 members includes resource managers, educators, students, government and private conservation workers in over 140 countries.

² The Wildlife Society was founded in 1937 and is a non-profit scientific and educational association of over 11,000 professional wildlife biologists and managers, dedicated to excellence in wildlife stewardship through science and education. Our mission is to represent and serve wildlife professionals—the scientists, technicians, and practitioners actively working to study, manage, and conserve native and desired non-native wildlife and their habitats worldwide.

³ The Ornithological Council is a consortium of the twelve major societies of ornithologists in the Western Hemisphere. We provide timely information about birds to help ensure scientifically-based decisions, policies, and management actions.

⁴ *Revised Critical Habitat for the Northern Spotted Owl*, 77 Fed. Reg. 14,062, Mar. 8, 2012

⁵ *Experimental Removal of Barred Owls to Benefit Threatened Northern Spotted Owls Draft Environmental Impact Statement* (hereafter "DEIS"). Available at: <http://www.fws.gov/oregonfwo/Species/Data/NorthernSpottedOwl/BarredOwl/Documents/DraftEIS.ExpRemoval2.20.12.pdf>

because it represents the most scientifically rigorous evaluation of the effects of Barred Owl removals across the greatest spectrum of habitats throughout Pacific Northwest.

The DEIS has identified seven possible alternatives for how FWS might move forward with Barred Owl removal experiments based on an array of scientific and technical considerations. The alternatives range from one to eleven study areas where experimental removals might occur.⁶ Under the FWS's proposed approach, each study area would be divided into two comparable segments, in which Barred Owls are removed from the treatment area but not from the control area, and then NSO populations are measured in both areas using the same methodology. These types of studies can provide even stronger conclusions when pretreatment data are available. Therefore, in those areas where pretreatment data are not available, the FWS has provided sub-alternatives where the agency may/may not collect pretreatment data prior to Barred Owl removals. FWS has also presented alternatives based on two possible study approaches for the Barred Owl removals: (1) demographic studies following individually marked owls to assess survival; and (2) occupancy studies to assess the presence or absence of NSO based on auditory surveys without identifying individual owls. Finally, the FWS has presented alternatives with respect to the methods used to remove Barred Owls, lethal control and live trapping/relocation. Depending on the research study methods, number of study areas, and pretreatment data collection, such experiments will take place over 3-10 years.

Based on the information presented in DEIS, we support Alternative 7, which includes the most study areas of all of the alternatives (11 study areas) over the longest period of time (10 years), uses a combination of demographic and occupancy studies, collects pretreatment data, and uses both lethal control and live trapping depending on the study location.⁷ As the DEIS acknowledges, for an experiment to be scientifically meaningful, the design requires replication because a single study area may not be representative of effects of Barred owl removal in other parts of the NSO's range. Alternative 7 evaluates Barred Owl control activities across the entire range of the NSO in 11 study areas. No other alternative presented has more than three study areas. While a study across multiple sites means greater total costs and more complexity, it represents a fuller range of conditions experienced by the NSO, allowing for better management prescriptions in different habitat types. Conducting demographic studies provides FWS with a greater ability to detect differences between the treatment and control populations, and together with pretreatment data, allows for more sophisticated management decisions. Alternative 7 is also preferable because it involves a combination of humane lethal control and live trapping so as to evaluate the effectiveness of each technique, and potential incidental take of non-target species.

The Service is to be commended for this thorough, yet succinct, DEIS and for the thoughtful approach to the experimental design alternatives. However, we note that in the DEIS, the FWS has not identified a preferred alternative, which is a recommended practice for agencies to follow in the Council of Environmental Quality's (CEQ) regulations that implement NEPA.⁸ And perhaps for this reason, many of the details of the study plan for whichever alternative is

⁶ DEIS at 2-39.

⁷ DEIS at 2-36.

⁸ See 40 C.F.R § 1502.14(e) (the agency shall "identify the agency' preferred alternative if one or more exists, in the draft statement, and identify such alternative in the final statement").

ultimately selected have yet to be developed. Because these details are not fully discussed, and given the number of Barred Owls to be removed, the geographic scale, and the temporal duration of each alternative, we believe that an independent peer-review of the exact details of the final experimental design chosen by FWS is warranted. Given the scope of the potential management decisions to be made on the basis of the data generated in this study, it is critically important that the study design be subjected to independent assessment by biologists with expertise in the components of the study. It is unlikely that the FWS would undertake a second study of this nature and scope; therefore, it is all the more critical to get the best possible study design. Waiting for pre-publication, or even post-publication reviews would not be a prudent approach because, if study design turned out to contain significant flaws, then basing management decisions on the results would be questionable at best. Specifically, components of the study design that should be peer reviewed include: (1) thoroughness of literature review, (2) basis of underlying assumptions, (3) statistical design, (4) ability/capacity to carry out planned control activities, and (4) whether the methods generate the data needed to answer the study questions. To further expand upon this last point with an example, if the study design calls for removal of only a percentage of the Barred Owls on the study site, will it be possible to detect an effect, and if so how long will it take for an effect to be detected?

Evaluating these experimental removals right the first time around is critical if the FWS hopes to use the information as the basis of its management decisions. We therefore recommend an independent peer review of the scientific methodologies proposed. However, we also recognize the potential difficulty of conducting a peer-review at this stage, given the timeline of the DEIS. Therefore, the best approach would be to include an expedited peer-review of the preferred alternative in the final environmental impact statement, as a mitigation measure as contemplated by the CEQ regulations.⁹ Peer-review makes it more likely that this experiment will not have to be repeated, and will ensure that the owls killed were not eliminated needlessly, both of which meet the mandate of CEQ's regulations to minimize "impacts by limiting the degree or magnitude of the action and its implementation."

Finally, to ensure that Barred Owl removal is as humane as possible, we recommend that the FWS comply with the Animal Welfare Act (AWA).¹⁰ Compliance with this law will ensure that "animal pain and distress are minimized, including adequate veterinary care with the appropriate use of...euthanasia."¹¹ Given that (1) all federal research facilities, which is defined to include agencies, must comply with the AWA,¹² and (2) that the Department of Interior Scientific Integrity Policy states that all employees, volunteers, contractors, cooperators, and partners will "adhere to the laws and policies related to protection of natural and cultural resources and to research animals and human subjects *while conducting science and scholarship activities*,"¹³ we believe that FWS is required to follow the AWA with respect to Barred Owl removal activities. We realize that FWS does not have a functioning Institutional Animal Care and Use Committee (IACUC) within the Pacific Northwest Region. Given that much of the proposed work will take place on lands managed by the National Park Service, it may be advisable to ask that agency's

⁹ 40 C.F.R. § 1508.20.

¹⁰ 7 U.S.C. § 2131 *et seq.*

¹¹ 7 U.S.C. § 2143(a)(3)(A)

¹² 7 U.S.C. § 2132(o); 7 U.S.C. § 2144

¹³ DOI Manual Part 305, Chapter 3, effective 28 January 2012 (emphasis added).

IACUC to undertake the required review. We greatly appreciate the FWS's sensitivity to the ethical aspects of this study, but only a formal review as required under the Animal Welfare Act would fully satisfy the FWS's ethical and legal obligations.

In conclusion, we strongly support the FWS's statement in the related critical habitat proposal for the NSO that, *only* upon the conclusion of the Barred Owl removal experiments, will FWS decide "how barred owls would be managed in the long term."¹⁴ This is a quintessential example of an informed decision making process for a difficult and complex question. But, we continue to stress that FWS must not lose sight of the primary reasons the NSO was listed in the first place—the destruction of its old-growth forest habitat. Although it may be necessary as one tool for the conservation of the NSO, Barred Owl removal should not be used as a substitute for NSO habitat protection. Continued habitat destruction and habitat degradation will most certainly magnify the threat from the current Barred Owl invasion by increasing competitive interactions as populations of both species are packed into smaller and smaller areas of optimal or even suitable habitat. We support FWS' continuing emphasis on the use of best available science and the scientific method in Barred Owl removal experiments. And we look forward to reviewing the scientific conclusions from the Barred Owl removal experiments in the years to come.

Sincerely,

Paul Krausman, CWB
President
The Wildlife Society

Ellen Paul
Executive Director
Ornithological Council

John Fitzgerald
Policy Director
Society for Conservation Biology

Literature Cited

Dark et al. 1998. The Barred Owl (*Strix varia*) invasion in California. *Auk* 115:50–56.

Gutiérrez et al. 2007. The invasion of barred owls and its potential effect on the spotted owl: a conservation conundrum. *Biological Invasions* 9:181–196.

¹⁴ *Revised Critical Habitat for the Northern Spotted Owl*, 77 Fed. Reg. at 14,066.