



Bighorn Audubon Society  
P.O. Box 535  
Sheridan, Wyoming 82801  
<https://www.bighornaudubon.com>



ROCKIES

215 W. Oak Street, Suite 2C  
Fort Collins, CO 80521  
<https://rockies.audubon.org>

August 22, 2022

**Notice of Objection: Draft Record of Decision Invasive and Other Select Plant Management for the Bighorn National Forest**

Attn: Andrew K. Johnson  
USDA Forest Supervisor Big Horn National Forest  
Reviewing Officer USDA Rocky Mountain Region Forest Supervisor or Reviewing Officer

Thank you for the opportunity to submit a Notice of Objection to the Draft Record of Decision for the Invasive and Other Select Plant Management for the Bighorn National Forest. This objection is being submitted jointly by Bighorn Audubon Society (BAS) and Audubon Rockies, with BAS serving as the primary point of contact.

The Bighorn Audubon Society (BAS) and Audubon Rockies (regional office of National Audubon Society) understand that U.S. Forest Service (USFS) management is faced with extraordinarily difficult tasks in the ever-changing multiple western forest issues including invasive species and forest fires. We appreciate the USFS staff's hard work and dedication to the Bighorn National Forest. However, we object to the Draft Record of Decision for Invasive and Other Select Plant Management regarding these issue categories: Vegetation – sagebrush; Adaptive Management; Cumulative impacts; Invasive Species; Vegetation – larkspur; and Wildlife. A brief discussion of our specific reasons for the objection and our recommendations to address the issues of concern are below and attached.

- 1. We object to the treatment of up 76,500 acres of the 163,000 acres of mountain big sagebrush in the Bighorn National Forest (BNF) over the span of this 15-year project.**

Sagebrush habitat is one of the most imperiled ecosystems in North America and has received increasing public attention over the past decade, including significant financial resources from states and federal agencies to address its declining condition. The Environmental Impact Statement (EIS) and draft Record of Decision (ROD) for the BNF's proposed treatment of

76,500 to 163,000 acres in the BNF does not disclose the importance of this ecosystem or conflicting goals including from the U.S. Fish and Wildlife Service.

*Inconsistency in U.S. Government's Ecological Goals:*

“Through the Bipartisan Infrastructure Law, the U.S. Fish and Wildlife Service was appropriated \$50 million - \$10 million per year for the next five years - to expand work with partners to conserve the sagebrush ecosystem.”<sup>1</sup>

The Bighorn National Forest EIS and Draft ROD proposes annual treatment of up to “5,100 acres of mountain big sagebrush using a combination of manual treatments, mechanical treatments, biological treatments, cultural treatments, and aerial and ground-based application of herbicide; treatments will be implemented over the life of the project.” The Department of Agriculture goal appears to be in contradiction to efforts being pursued by the Department of Interior.

*Need for Transparency:*

The BNF are managing a valuable public resource, and thus we believe that in order to address the importance of sagebrush habitat to birds and other wildlife the BNF must provide and disclose to the public prior to sagebrush treatment maps and details regarding the specific areas targeted for treatment and the impact treatment will have on these sagebrush obligates. The BNF must comply with the National Forest Management Act monitoring requirements. Specifically, we request:

- A survey team trained in bird identification and monitoring must identify, disclose and assess any species and numbers of nesting and migrating birds that are using the sagebrush and larkspur habitat.
- An assessment and monitoring should be required before, during and after treatment.
- The BNF implementation meetings must be open and accessible to the public, with ability for public input and understanding of maps, monitoring and biological data.

*Risks/Flaws:*

Wyoming sagebrush is not included in this treatment plan. However, we have concerns that pretreatment monitoring will not be sufficient to avoid misidentification of this non-target species. Per the Draft ROD, “Wyoming big sagebrush is a different variety of sagebrush and its health and distribution is of concern in areas not found on the Bighorn National Forest. It is not a variety of sagebrush that is or will be targeted for treatment by this decision”.

- We request specific assurances that the on-the-ground staff that is applying treatments can differentiate between mountain big sagebrush and Wyoming sagebrush. Please make details of those assurances public.
- To minimize risk of misapplication, BNF should have maps of where mountain big sagebrush and Wyoming sagebrush are located within the Forest. Please make copies of those maps available to the public.

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<sup>1</sup> <https://www.doi.gov/pressreleases/9-million-president-bidens-bipartisan-infrastructure-law-awarded-sagebrush-projects>

**2. We object to the BNF’s failure to consider a wider range of alternatives that would require modifying grazing practices in order to limit the need to treat sagebrush/grassland ecosystems. Various experts agree.**

In comments on the EIS the Environmental Protection Agency (EPA) stated, “Aside from the discussion of allowing treatment areas to rest before returning to grazing post-treatment, the Draft EIS does not discuss additional changes to livestock grazing protocols in the BNF that could be incorporated to avoid disruption or restoration of the natural vegetation regime with minimal mechanical, chemical, or biological interventions. We recommend that the Final EIS evaluate if there are additional modifications or best practices the BNF can adopt for livestock grazing to lessen the overall need for human interventions in the management of mountain big sagebrush over the next 15 years.”

BNF responded: “The Forest Service added an Alternative Considered but Eliminated from Detailed Study regarding modification of grazing practices to limit the need to treat sagebrush/grassland ecosystems.”

- Please provide an explanation as to why this alternative was eliminated.

As this proposed project has unfolded, BAS has engaged retired professionals with the BNF, the Wyoming Game and Fish Department, Bureau of Land Management (BLM) and Conservation District personnel.

- Please review and respond to the ATTACHED. These are a compilation of comments from these experts, which strongly support the need to evaluate, use and address grazing practices that would eliminate or minimize the need to remove and/or treat thousands of acres of mountain big sagebrush and larkspur from the BNF.

**Thus, we request the BNF implement actions regarding grazing practices that will reduce, minimize or eliminate the need to remove thousands of acres of mountain big sage and larkspur from the BNF.**

**3. We object to the lack of clarity and contradiction on the plan’s goals and desired conditions**

The BNF stated “goal to treat up 5,100 acres of mountain big sagebrush is to mimic historic disturbance patterns in mountain big sagebrush ecosystems prior to the introduction of fire suppression.” However, prior to the introduction of fire suppression, historic conditions, as per a Forest Service database state that “most fires were likely small (less than ~1,200 acres (500 ha)), and large fires (>24,000 acres (10,000 ha)) were infrequent. Historically, large fires in big sagebrush were most likely after one or more relatively wet years or seasons that favored growth of associated grasses, allowing fine fuels to accumulate and become more continuous.”

These fire disturbances may only have occurred as much as 15-25 years on mountain big sagebrush communities, and as few as 40-80 years. Also please note “The distribution of mountain big sagebrush has been reduced since European-American settlement, and is likely to

be further reduced, due to a variety of causes including conifer establishment, spread of nonnative plants, livestock grazing, and climate change.”<sup>2</sup>

- Please provide information on why the Desired Future Condition was removed from the 2005 FEIS Plan as of July 2022 “*Appendix H Desired Future Condition - retired to the administrative record.*”

#### **4. We object to the failure to implement recommendations from USFWS to protect birds.**

The EIS and Draft ROD states that there will be collateral damage to bird species, but the supporting documents and analysis do not address the U.S. Fish and Wildlife Services (USFWS) consultation recommendations. The “Invasive and Other Select Plant Management Environmental Impact Statement Biological Evaluation, Bighorn National Forest,” final January 10, 2022, included USFWS, Wyoming Ecological Services Field Office, Consultation dated October 19, 2021

- We request that the ROD adopt the USFWS recommendations. These include:
  - The USFWS Ecological Services noted that the accuracy of species list should be verified after 90 days, and at regular intervals during project planning and implementation.
  - Also recommended U.S. Forest management consider migrating birds and abide by the Migratory Bird Treaty Act, and that “project activities should avoid, to the extent possible, sensitive periods and habitats to conserve healthy populations of migratory birds.”

The BNF Project Summary to USFWS for consultation included in the BNF Biological Evaluation states, “it is estimated that 500-2,000 acres of sagebrush could potentially be treated annually depending on where we are in terms of desired conditions. The BNF summary in the consultation does not say that the plan calls for up to 5,100 acres to be treated, nor does it state that mountain big sagebrush will be treated via aerial application.

The USFWS states: “Although it is important to try to avoid and minimize impacts to all birds, efforts should be made in particular, to avoid and minimize the birds on this list...” There are several species that breed and/or migrate through the BNF.

- As per NEPA requirements, we request that BNF implement a specific plan to minimize impacts to birds and that the BNF identify and disclose the plan that is accessible to the public.

The EIS and Draft ROD and the underlying documents for the proposed action fail to comply with NEPA because they do not inform the public or provide required information on the long-term effects on bird populations.

- Please make available to the public, details pertaining to the sources of data discussed and included in the Biological Evaluation.

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<sup>2</sup> <https://www.fs.fed.us/database/feis/plants/shrub/arttriv/all.html>

- Similarly, please disclose and share studies and data on long-term effects to birds, in particular the effects from chemical treatments.

The Draft ROD acknowledges unavoidable adverse effects, and the Biological Evaluation states that herbicides and other treatments of mountain big sagebrush as well as other native plants such as larkspur may negatively impact birds and other wildlife species but then states that the long term effects will be beneficial. Under NEPA, the BNF must provide the studies and data you relied upon to make this claim.

- Please provide and disclose to the public, specific data and studies on the long-term effects on wildlife from the chemicals that will be used and the habitat that will be lost.

The Biological Evaluation states: “The alternatives may result in effects in the short-term on sagebrush obligate species, including direct mortality, habitat reduction or alteration, and the loss or contamination of food resources. Implementation of resource protection measures would avoid or minimize effects on these species to the greatest extent practicable, particularly those measures related to greater sage-grouse and pre-treatment considerations for nesting birds. Long-term effects of the alternatives would result in the alteration of the composition and structure of mountain big sagebrush ecosystems within Bighorn National Forest, with the intended purpose to mimic historical landscape characteristics and disturbance regimes, which may result in long-term beneficial effects on sagebrush obligate species”.

- Please make available to the public, documentation and studies that support the above statement:

**In order to comply with NEPA, we ask the BNF to minimize the impacts to birds and wildlife by reducing the acres of sagebrush that will be treated and by requiring baseline monitoring before treatment on species in an area and then implementing adaptive management to specifically address, mitigate and reduce the impacts on birds and other wildlife.**

Recommendations in the Biological Evaluation are to avoid treatment during breeding season.

- We applaud the BNF for these considerations and request that BNF also require avoidance of any treatments during both the bird breeding season and during migration, according to USFWS recommendations.

“During the annual implementation meetings, the Implementation Team should consider conducting pre-application surveys for nesting birds or avoiding herbicide treatment during nesting season, based on project location and species present, to protect nesting songbirds. Initial avoidance dates to consider are from April 16 to July 15, unless site-specific Interdisciplinary Team input recommends a more appropriate range of dates to provide the same protection.” And continues “Avoid herbicide application in designated big game crucial winter and winter-yearlong range from November 15 to April 30 and in designated big game parturition areas from May 1 to June 20, unless biologists know parturition is complete in proposed treatment area.” Page 29 in Draft ROD.

- We request that at the BNF and the Interdisciplinary Team should require (not just consider) pre-application surveys for nesting birds and also avoid any herbicide treatment during nesting and migration seasons.

**5. We object to the treatment of native plant Duncetop Larkspur. Considered noxious (to cattle), it is critical to Broad-tailed Hummingbirds and other pollinators. The plan calls for treating 10 -20 acres at a time within a 200-to-500-acre drainage area.**

We request clarification on the following two points:

- How often various acres will be treated within any given time frame.
- Whether these 10-20 acre areas are going to be treated with aerial application of herbicides, and if so the impact this would have on other native plants and on pollinators

Furthermore, we request that:

- BNF staff provide maps, made available to the public, that illustrate the location of these proposed treatment areas.
- BNF should collect baseline data on these areas for bird species and post monitoring for comparison and to understand impacts.
- No treatment be permitted during bird breeding and migration seasons.

**6. We object to the potential adverse effects on other species, in particular Monarch Butterflies.**

Over the past two decades, Monarch Butterfly numbers in North America have declined, prompting the U.S. Fish and Wildlife Service (USFWS) to join state agencies, tribes, other federal agencies and non-government groups to identify threats to the Monarch and take steps to conserve monarchs throughout their range. In December 2020, after an extensive status assessment of the Monarch Butterfly, the USFWS determined that listing the butterfly under the Endangered Species Act is warranted but precluded at this time by higher priority listing actions. In July 2022, the monarch butterfly was officially designated as endangered by the International Union for Conservation of Nature.

“Breeding Monarchs are restricted to the lower elevations of the Bighorn National Forest where milkweed grows. Migrating monarchs will also fly over Bighorn National Forest. Monarchs can be found breeding in the summer and migrating in late spring and early fall across the Bighorn National Forest (USFS n.d.). Although the larval stage of the species is dependent on milkweed, the adult forages in a wide range of floral species for nectar.”

- Given the precarious future for Monarch butterflies, we request that the BNF map and assess potential Monarch breeding and migration areas and avoid treatment in these areas during Monarch breeding and migration.

**7. We object to the lack of publicly available scientific data on BNF bird surveys and monitoring information.**

Monitoring is intended to provide information used in an adaptive management framework. In a recent publication out of the U.S. Department of Agriculture, experts (including respected U.S. Forest Service staff) noted the following:

“[Monitoring programs] can increase our understanding of how interactions among resilience to disturbance, resistance to invasive species, and “change agents” including management actions influence resource conditions (or status) and trends and outcomes of conservation and restoration actions. This type of monitoring information provides the basis for adaptive management. The overarching goal of an integrated monitoring and adaptive management program is to reduce the uncertainty in the effectiveness of management actions over time by improving management objectives and strategies to increase the effectiveness of those actions.”<sup>3</sup>

The BNF 2005 FEIS notes the commitment to monitoring efforts:

“Publish and Distribute the Annual Monitoring Report: Resource managers will write, acquire approval by the Forest Supervisor, and distribute the annual monitoring report that summarizes information collected and the relevant evaluations. Monitoring for Management Indicator Species is also required at the Forest level.” [Chapter 4]

Unfortunately, this information is not readily available to the public. When we previously asked for this during earlier commenting opportunities, we were provided the following formal response - “data request is outside of the scope of this process, but data can be obtained through the Freedom of Information Act request”.

- We request that in order to comply with NEPA and the National Forest Management Act, BNF should make all studies and monitoring easily and readily available to the public and should discuss this and utilize this information when making decisions on treatment areas.

Additionally, these previous monitoring reports can help the Interdisciplinary Team determine the efficacy of proposed monitoring design for this new proposed management approach. Of note, the Wyoming Game & Fish Department has noted that “[a]daptive management is only as good as the monitoring that informs it.”<sup>4</sup>

- We request that previous monitoring reports be made available to the Interdisciplinary Team in a timely manner, so as to help inform effective monitoring designs going forward.

With the proposed use of new treatments on the landscape, we remain concerned about the lack of public information on past monitoring programs or plans for current and future monitoring of bird populations and how the effects of the herbicides will be monitored. We acknowledge that the Draft ROD states that “Monitoring would be a critical component of mountain big sagebrush treatment. Monitoring would occur pre-treatment to determine site conditions and post-treatment to ensure treatment is effective in moving toward desired conditions.” Lack of public transparency remains a serious concern, especially in regard to the effects of herbicides.

- Annual monitoring reports must be made accessible to the public

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<sup>3</sup> <https://www.fs.usda.gov/treearch/pubs/58385>

<sup>4</sup> <https://www.fs.usda.gov/project/?project=57457> “Response to Comments”

- Clarification is needed as to the known effects of herbicides on birds, habitats and food sources. If this cannot be provided, we request justification of use of this herbicide when safety and indirect impacts cannot be assured.

**8. We object to lack of adaptive management and amendments to address ecological changes in the BNF Plan, including recognition of the dramatic loss of birds and steps to minimize this.**

It is important to recognize that there has been a loss of 3 billion birds since 1970. Birds that rely on sagebrush plants for nesting and raising young are one of the bird communities in North America experiencing the steepest population declines.<sup>4,5</sup> Declines have been largely attributed to loss of sagebrush and degradation of sagebrush habitats due to human activities.<sup>6</sup> Sagebrush removal has resulted in sagebrush ecosystems becoming one of the most imperiled ecosystems in North America.<sup>6</sup>

Under the National Forest Management Act, forest plans must be revised every 15 years. The BNF Forest Plan is from 2005. Although we understand Congress may give the USFS a waiver, amendments to the (2005) plan should be made to adjust for changing ecological conditions. Adaptive management practices are adjusting to invasive plant species treatment but appear to be lacking for rangeland management and lacking the best available science for addressing loss of bird populations and other wildlife habitats.

- We respectfully request that the BNF implement a specific plan to minimize the impacts to bird populations and wildlife habitat before implementing and authorizing treatments on sagebrush, larkspur or other important bird and wildlife habitat.

**9. We object to the failure of the BNF to address our question and disclose whether invasive species are more prevalent where livestock graze.**

We understand invasive species have been brought into the Bighorn National Forest via various actions, but we are still concerned that invasive species are most prevalent where livestock graze.

In the BNF response to our comments: “The Forest Service does not have a full inventory of all locations of invasive species. The best available information regarding invasive species locations is weed treatment information provided by the four Weed and Pest Districts. “

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<sup>4</sup> Sauer, J. R., W. A. Link, J. E. Fallon, K. L. Pardieck, and D. J. Ziolkowski, Jr. 2013. The North American Breeding Bird Survey 1966-2011: Summary Analysis and Species Accounts. North American Fauna 79: 132. <https://doi.org/10.3996/nafa.79.0001>

<sup>5</sup> Rosenberg, K. V., J. A. Kennedy, R. Dettmers, R. P. Ford, D. Reynolds, J. D. Alexander, C. J. Beardmore, P. J. Blancher, R. E. Bogart, G. S. Butcher, A. F. Camfield, et al. 2016. Partners in Flight Landbird Conservation Plan: 2016 Revision for Canada and Continental United States. Partners in Flight Science Committee.

<sup>6</sup> Knick, S. T., D. S. Dobkin, J. T. Rotenberry, M. A. Schroeder, M. Van Heagen, and C. van Riper III (2003). Teetering on the Edge or Too Late? Conservation and Research Issues for Avifauna of Sagebrush Habitats. The Condor 105:611–634.



And “maps have been added identifying where invasive species have been treated over the past 10 years.”

- Clarification is needed as to whether these areas are used by livestock and to what degree.

We understand that livestock grazing has a place in the BNF. However, we believe effective management by the BNF should include analyses on where the invasive species are located on the forest and use appropriate, targeted livestock grazing practices to reduce the spread of invasive species.

- We request BNF should provide a map that illustrates location of invasive species in the forest and present a management plan that incorporates targeted livestock grazing practices to reduce the spread of these invasive species.

The BNF is using a 1960 policy on treating mountain big sagebrush which seems questionable in its adaptation to current conditions.

In the Draft ROD 8.0 Meeting Existing Law, Regulation and Agency Policy for Treating Mountain Big Sagebrush “My (*Mr. Johnson*) decision is consistent with law, regulation, and agency policy to treat mountain big sagebrush. Several regulations and policies provide for control of mountain big sagebrush. --The Multiple-Use Sustained-Yield Act of 1960”.

**10. We object to the proposed increase applications of herbicides in the BNF for human, native plant and wildlife health and safety reasons and the great potential for “unavoidable adverse effects”**

Per the Draft ROD Mr. Johnson states, “I recognize that there are potential health risks associated with herbicide use – both ground based and aerial – under my decision.” With this planned increase of applications, including techniques new to the Forest (aerial spraying) the likelihood of increased accidents seems apparent. In this unfortunate age of staffing issues, the BNF is not immune.

- We request that Implementation Team meetings include reporting by the Interdisciplinary Team of any spills or accidents and provide public this information and on what actions the BNF is taking to avoid exposures, spills, drifts, or accidents with herbicide use.

The BNF is the primary watershed for the communities around the BNF. We are concerned about the impacts to water quality in streams, lakes, ponds, and wetland areas. The majority of herbicides proposed for use are toxic to aquatic life and could have ripple effects on the food chain.

- Clarification is needed and should be made publicly available, as to whether any of the proposed herbicides contain PFAS chemicals. Please detail what specific measures the BNF will take to ensure water quality on the forest is not polluted by the herbicides that will be used.

Thank you for the opportunity to submit these objections and we hope they are productive and helpful. Given the economic and ecological value of the BNF, the actions proposed with this project have understandably garnered considerable public attention. We respectfully request a meeting with Mr. Johnson and other appropriate Bighorn National Forest Service officials to discuss these issues further.

Sincerely,

JoAnne Puckett, President  
Bighorn Audubon Society  
P.O. Box 535  
Sheridan, Wyoming 82801  
[bighornaudubon@gmail.com](mailto:bighornaudubon@gmail.com)

Daly Edmunds, Director of Policy & Outreach  
Audubon Rockies (WY, CO, UT)  
215 W. Oak Street, Suite 2C  
Fort Collins, CO 80521  
[Daly.Edmunds@audubon.org](mailto:Daly.Edmunds@audubon.org)

Submitted on behalf of Bighorn Audubon Society and Audubon Rockies, respectively.