



REGION 7

LENEXA, KS 66219

May 13, 2024

Ms. Kimberly Dolatta
Range Program Manager
Nebraska National Forests and Grasslands
U.S. Forest Service
125 North Main Street
Chadron, Nebraska 69337

Dear Ms. Dolatta:

The U.S. Environmental Protection Agency Region 7, in coordination with the EPA Region 8, has reviewed the Draft Environmental Impact Statement for the Nebraska National Forests and Grasslands Undesirable Plant Management Project, in Blaine, Cherry, Dawes, Sioux, and Thomas Counties, Nebraska, and Custer, Fall River, Jackson, Jones, Lyman, Pennington, and Stanley Counties, South Dakota.

The project evaluates the environmental impacts of using biological, chemical, mechanical, and prescribed fire treatments to control undesirable plant species within the Nebraska National Forests and Grasslands. The enclosed comments were prepared in accordance with our responsibilities under the National Environmental Policy Act and Section 309 of the Clean Air Act. The DEIS was assigned the Council on Environmental Quality number 20240051.

The EPA appreciates the opportunity to review and comment on this proposed project. Our review identified areas where additional information is needed in order for the public and agency decision-makers to be able to adequately analyze potential environmental issues, and to determine appropriate mitigation measures, if needed. Those issues pertain to: the Sand Hills ecological region, water quality, peatland, bogs and fens, air quality, environmental justice, Tribal impacts, and consultation documentation. In general, if there are standard operating procedures or best management practices that the U.S. Forest Service uses that are not included in the DEIS, the EPA recommends either incorporating them by reference into the Final Environmental Impact Statement, or adding them as an appendix to the FEIS.

These comments are intended to help ensure a thorough assessment of the project's environmental impacts, adequate public disclosure, and an informed decision-making process. If you have any questions concerning our review, please contact Mike Sedlacek at (913) 551-7208 or sedlacek.michael@epa.gov.

Sincerely,

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Meghan A. McCollister

Enclosure

EPA Draft EIS Comments – USFS Undesirable Plant Management Project

Sand Hills

The Sand Hills are a region of mixed-grass prairie on grass-stabilized sand dunes in north-central Nebraska, covering just over one quarter of the state. The Sand Hills were designated a National Natural Landmark in 1984 by the National Park Service. The EPA recommends the FEIS discuss the current environmental conditions of the Sand Hills, how the alternative presented will affect the environmental conditions, and which best management practices and mitigation measures will be used, if needed, to protect the Sand Hills.¹

Water Quality

The DEIS notes that the project area contains 15 impaired water bodies (6 in South Dakota and 9 in Nebraska) for arsenic, *E. coli*, pH, temperature, total dissolved solids, and specific conductance. Given these impairments, the EPA recommends disclosing the potential water quality impacts of grazing and other forms of vegetation removal associated with the proposed action. To avoid exacerbating existing water quality impairments, the EPA recommends best management practices be implemented and mitigation measures be identified and committed to in the FEIS.

The EPA also recommends discussing the potential impacts of vegetation removal on water quality. For example, existing vegetation along riparian systems may limit sedimentation in water sources within the project area by filtering soil particles, preventing runoff and erosion, and stabilizing riverbanks.² The proposed action may eliminate or reduce these positive impacts. Vegetation removal may also increase water temperature due to a lack of shading.³ Because riparian vegetation allows for the uptake of excess nitrate and denitrification of the waterway, removal of riparian vegetation has the potential to modify water chemistry in other ways as well.⁴ The proposed action may also have additional indirect effects. For instance, if the proposed action increases forage for livestock, the project area may be able to support higher densities of livestock. In turn, higher densities of livestock can affect water quality by increasing erosion, sediment load, and nitrogen and phosphorous levels.⁵ To reduce the risk of these potential impacts, the EPA recommends including best management practices and mitigation to avoid significant impacts. Examples include:

- Limiting vegetation removal in riparian areas to ensure adequate shading, and provide erosion and runoff control, riverbank stabilization, and sediment filtering by using vegetative strips or shrubbery;
- Using best management practices on land adjacent to impaired waterbodies; and
- Incorporating water quality monitoring on impaired waterbodies.

¹ *Response of Nebraska Sand Hills Natural Vegetation to Drought, Fire, Grazing, and Plant Functional Type Shifts as Simulated by the Century Model*. See:

<https://digitalcommons.unl.edu/cgi/viewcontent.cgi?referer=https://en.wikipedia.org/&httpsredir=1&article=1144&context=natrespapers>

² <https://www.sciencedirect.com/science/article/abs/pii/B978012822976700003X>

³ https://www.kmae-journal.org/articles/kmae/full_html/2017/01/kmae160097/kmae160097.html

⁴ <https://onlinelibrary.wiley.com/doi/full/10.1111/j.1752-1688.2010.00419.x>

⁵ <https://pubmed.ncbi.nlm.nih.gov/15471806/>

Peatland, Bogs, and Fens

Page 66 of the DEIS notes the presence of peatland, bogs and fens within the project area, which are considered unique riparian ecosystems. These communities are very sensitive to hydrologic alterations and restoration is extremely challenging once function has been impaired. Bogs and fens can be destroyed in a matter of days but require hundreds, if not thousands, of years to form naturally, and both have suffered large historical losses in acreage.⁶ As the DEIS also notes on page 66, these riparian communities are rare and irreplaceable due to the slow rate of peat accumulation that occurs over thousands of years.

Peatlands, bogs, and fens are unique ecological features; the EPA recommends the DEIS include a complete inventory of these riparian communities within the project area, including a map of their locations relative to proposed treatment areas. The EPA recommends the FEIS specify the potential direct and indirect impacts to peatlands, bogs, and fens, and their groundwater supplies that could result from the project. In addition to the *Soils, Riparian, and Aquatic Design Features* section listed on pages 162-163 of the DEIS, the EPA recommends including additional project design features and best management practices within the NEPA document to protect these fragile ecosystems. Examples include:

- Conducting educational training for onsite workers regarding the sensitive nature of these systems; and
- Maintaining adjacent vegetation and soil stability.

Air Quality

The EPA recommends that the USFS quantitatively characterize existing air quality conditions and provide a quantitative estimate/air emissions inventory of air quality impacts resulting from the proposed action. The EPA recommends the FEIS describe air quality best management practices and mitigation measures to be used to avoid or reduce air quality impacts. Examples include:

- Follow best practices to minimize emissions from vegetation management activities, including prescribed fire. Practices could include reducing fuel loads prior to prescribed burning, utilization of technology as noted below to minimize air emissions from burning collected vegetation, and coordinating with other fire managers working in the region so as not to overwhelm the ability of the atmosphere to disperse the smoke. For additional information on smoke management, we recommend consulting the National Wildfire Coordinating Group Smoke Management Guide for Prescribed Fire (November 2020);
- Implement dust control plans particularly where dust is expected near occupied dwellings, sensitive vegetation, recreation sites, Class I Areas, etc.;
- Limit idling of heavy diesel equipment and transportation vehicles;
- Require heavy diesel equipment to use cleanest available engines or retrofits with diesel particulate control technology;
- Include requirements for the maintenance of engines; and
- Minimize fuel use and emissions by limiting unnecessary trips to and from the project area.

⁶ <https://www.epa.gov/wetlands/classification-and-types-wetlands#undefined>

Class I and Class II Airsheds

Several Class I and Class II airsheds are present within and near the project sites, including Badlands and Wind Cave National Parks. The EPA recommends the FEIS summarize existing current and historical air quality and air quality related values data for those areas. The EPA also recommends the FEIS evaluate whether project activities could affect air quality in those areas, and if so, determine what mitigation measures are needed to prevent or reduce air quality impacts.

Prescribed Fire

The project proposes to use prescribed fire as a form of vegetation management. These burn activities have the potential to cause periodic degradation of air quality and visibility, and can be harmful to human health.⁷ Prescribed fires can also result in soil erosion, which can affect water quality. The EPA recommends the NEPA document explain the prescribed fire planning and implementation process and provide approximate locations and an estimate of the annual acreage and total acreage proposed for prescribed fire management, as well as an overview of the types of pollutants expected to be generated, and mitigation measures to be used to reduce air quality and erosion impacts. The EPA also recommends comparing the estimated emissions resulting from prescribed fire management with an estimate of the expected emissions resulting from wildfires within the project area. The latter might be approximated based on potential wildfire size, wildfire emission factors, and the probability of wildfire occurrence, as determined by wildfire risk assessment data.⁸

The EPA recommends exploring all opportunities to reduce the total tonnage of forest material that requires prescribed burning. This may reduce air impacts as well as reduce the level of greenhouse gas released to the atmosphere. The EPA also recommends that the USFS consult with the Nebraska and South Dakota State Air Quality Programs for any coordination necessary related to burns, modeling, mitigation, or other measures required under state regulations to address Clean Air Act requirements.

Pile burning

Pile burning is proposed as a secondary fuel treatment. We recommend the NEPA document describe any potential short-term air quality impacts associated with this treatment type if it will be utilized. For an example estimation of PM_{2.5} emissions associated with pile burns, please refer to the Kootenai National Forest Starry Goat Project Draft EIS (see the *Air Quality* section, p. 113) or the Black Hills National Forest's Calumet Project Draft EIS (see the *Fire and Fuels* Section, p. 159). The EPA also recommends the NEPA document briefly describe the pile burning process, including identifying known burn pile locations. The EPA also recommends the USFS provide a list of potential best management practices and mitigation measures to use for burn piles to reduce air quality impacts.

Climate-Related Impacts and Greenhouse Gas Emissions

The EPA notes that the DEIS utilizes outdated 2016 Council on Environmental Quality guidance in its discussion of climate-related impacts and greenhouse gas emissions. The DEIS also does not include a quantitative estimate of greenhouse gas emissions associated with the project. To address both issues, the EPA recommends that the USFS follow interim guidance published by CEQ on January 9, 2023, to assist federal agencies in assessing and disclosing climate change impacts during environmental

⁷ <https://www.tandfonline.com/doi/full/10.1080/10962247.2015.1032445>

⁸ <https://wildfirerisk.org/download/>

reviews.⁹ The CEQ developed this guidance in response to Executive Order 13990, *Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis*.

Section IV(I) of the CEQ Greenhouse Gas Guidance, Special Considerations for Biological GHG Sources and Sinks states, “In NEPA reviews, for actions involving potential changes to biological GHG sources and sinks, agencies should include a comparison of net GHG emissions and carbon stock changes that are anticipated to occur, with and without implementation of the Proposed Action and reasonable alternatives. The analysis should consider the estimated GHG emissions (from plant and fossil-fuel sources), carbon sequestration potential, and the net change in relevant carbon stocks in light of the Proposed Actions and timeframes under consideration and explain the basis for the analysis.” The EPA recommends that the USFS utilize the CEQ Greenhouse Gas Guidance to analyze carbon stock changes and Greenhouse Gas Guidance emissions associated with the project in combination with the cumulative effects of any other ongoing and planned USFS projects in the region.

The EPA also recommends the NEPA document include a discussion of reasonably foreseeable climate change impacts in the project area and the potential effect of these impacts on the proposed action, such as changes in precipitation patterns, wildfire risk, hydrology, vegetation distribution in respective watersheds, and temperature. For instance, drought could impact prescribed burning, seeding, and revegetation, affecting the USFS’s ability to achieve its project objectives and desired conditions.

Environmental Justice and Children’s Health

EJScreen (<https://ejscreen.epa.gov/mapper/>) identified communities living with environmental justice concerns near the project areas in both Nebraska and South Dakota. The EPA recommends that the FEIS include information describing what was or will be done to inform these communities about the project and the potential impacts it may have on their communities, what input has been received to date from the communities, and how that input was or will be used in decision-making. Additional information may be found in:

- *Promising Practices for EJ Methodologies in NEPA Reviews* (https://www.epa.gov/sites/default/files/2016-08/documents/nepa_promising_practices_document_2016.pdf), and
- *Community Guide to Environmental Justice and NEPA Methods* (<https://www.energy.gov/sites/default/files/2019/05/f63/NEPA%20Community%20Guide%202019.pdf>).

Tribal Impacts

Tribal lands and/or Indigenous peoples may be impacted by the proposed project. The EPA recommends that the FEIS disclose all potential impacts to federally and state recognized Tribes, including impacts on-reservations, within off-reservation indigenous communities, and within lands where Tribes hold treaty rights.

Site-Specific Information

The EPA appreciates the inclusion of site-specific information for select ecological sites in the project area. In order to provide a complete picture of the ecology of the project areas, the EPA recommends,

⁹ <https://www.federalregister.gov/documents/2023/01/09/2023-00158/national-environmental-policy-act-guidance-on-consideration-of-greenhouse-gas-emissions-and-climate>

to the maximum extent possible, using maps or charts to provide an ecological description for each project area.

Consultation Documentation

The EPA recommends attaching to the FEIS document interagency consultation documents regarding historic and cultural resources, wetlands and streams, federal and state threatened and endangered species, and nation-to-nation consultation for potentially affected Tribal and state governments.