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May 4, 2023

Ref: 8ORA-N

Emily Platt, Forest Supervisor
Helena-Lewis and Clark National Forest
2880 Skyway Drive
Helena, Montana 59601

Dear Supervisor Platt:

The U.S. Environmental Protection Agency Region 8 has reviewed the U.S. Department of Agriculture Forest Service April 2023 scoping notice for the Helena-Lewis and Clark National Forest (Forest) Forest-wide Prescribed Fire Project. In accordance with our responsibilities under Section 102(2)(C) of the National Environmental Policy Act (NEPA), we are providing scoping comments. These comments convey important questions or concerns that we recommend be addressed during the NEPA process.

The Forest encompasses approximately 2.9 million acres in the central and north-central Montana Rocky Mountains. It is comprised of island mountain ranges bisected by the Continental Divide and Missouri River and includes numerous important geographic features, special status species, three Wilderness Areas (Bob Marshall, Scapegoat, and Gates of the Mountains), and the sources of numerous municipal water supplies (e.g., Helena, East Helena, White Sulphur Springs, and Neihart). The scoping notice states the Forest is beginning an environmental analysis for a forest-wide approach to reduce forest fuels by applying prescribed fire, mechanical treatments, and hand treatments to reduce the risk of uncharacteristic wildfire. These treatments would be conducted in the four Geographic Area Groups identified in the 2021 Forest Plan: Jefferson Division Group; the Elkhorns, Big Belts, and Divide Group; the Upper Blackfoot Geographic Area; and the Rocky Mountain Range Geographic Area.

It is unclear from the scoping notice if the Forest is planning to conduct its environmental analysis as an Environmental Assessment (EA) or as an Environmental Impact Statement. The EPA is generally supportive of well-designed and properly implemented prescribed fire projects as an ecologically beneficial forest management practice. We appreciate the information in the scoping notice regarding the conditions and prioritization of project activities, included and excluded areas and activities, priority and estimated acreage by Geographic Area Groups, and the implementation process. There has been a recent trend to assess forest-wide, landscape-scale prescribed fire programs under an EA and Finding of No Significant Impact (FONSI) while implementing a condition-based management approach. This approach often lacks site-specific details important for supporting a FONSI and postpones gathering those details until after the decision notice and after formal public comment periods. We understand the Forest needs the flexibility to quickly respond to landscape concerns and needs to protect the Forest and the surrounding community. To respond to a rapidly changing climate and environment, ensure site-specific planning and analysis of the effects of proposed activities, and provide meaningful public participation during the NEPA process, we recommend the Forest develop the analysis for this project within a programmatic NEPA document and commit to tiered, site-specific NEPA analyses when the Forest plans

the proposed project activities, specific locations, and defined timing of implementation. This approach allows for responding to ever-changing environmental conditions and would also provide opportunities for the public and other agencies to better understand on-the-ground environmental conditions and formally comment on the impacts and benefits of individual treatment projects, as well as design criteria and best management practices (BMPs), within the NEPA process.

We appreciate the opportunity to provide recommendations for the NEPA document at this early stage of project planning. Our enclosed recommendations are intended to assist the Forest with identifying potentially significant impacts that will be important to ensure projects avoid under this program if it is developed as an EA/FONSI: causing or contributing to violations of Montana's water quality standards; causing or exacerbating impairment of watershed condition; impacts to irreplaceable resources such as fen wetlands; and air quality impacts that could adversely affect surrounding communities and people with respiratory conditions who may be sensitive to particulate matter. Additionally, we included recommendations for the climate change, tribal consultation, and environmental justice analyses. If we may provide further explanation of our comments, please contact me at (303) 312-6155, or Shannon Snyder of my staff at (303) 312-6335 or snyder.shannon@epa.gov.

Sincerely,

MELISSA MCCOY

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Date: 2023.05.04 12:53:02 -06'00'

Melissa W. McCoy, Ph.D., J.D.
Manager, NEPA Branch
Office of the Regional Administrator

Enclosure

Enclosure – EPA's Detailed Comments on the Helena-Lewis and Clark National Forest Forest-wide Prescribed Fire Project

Background

The following list of comments and recommendations are intended to assist in the NEPA process as the Forest conducts the impact analysis and develops project design features, BMPs and monitoring plans. There are several important topics associated with this type of project that we recommend including in the scope of the NEPA document, including:

- Area management objectives regarding high severity wildfire risk, public and infrastructure safety, and forest regeneration and restoration;
- Range of alternatives for reaching the management objectives, and a discussion of the science supporting the ability of each alternative or project action to meet the objective;
- Resource objectives and site-specific baseline conditions, including pest and disease status and trends, vegetation cover and condition, soil conditions, watershed conditions, water quality, sediment loads, wetland and riparian health, wildlife and fish population and habitat health and trends, climate change, and air quality;
- Site-specific impacts on these baseline resource conditions that would likely result from project activities associated with each alternative and a comparative assessment of how each alternative will affect attainment of resource objectives in the Forest Plan;
- Site-specific ecological history, including bark beetle, disease, and wildfire histories;
- Management history, including vegetative treatments, invasive species control, grazing, and prescribed burns;
- Monitoring plan that will be used to assess how well the selected alternative addresses concerns associated with each resource category expected to be impacted by the proposed action

Site Specificity and Programmatic NEPA

NEPA requires a "hard look" at potential environmental impacts of a proposed action and public disclosure of those impacts prior to implementation. The impacts associated with the proposed action would be expected to vary based on site-specific conditions including: vegetation community composition, soils, slopes, proximity to residences, proximity to aquatic resources, proximity to Class I airsheds, road construction needs, road maintenance status, volume and type material burned, equipment used, sensitive species habitat, etc. The Council on Environmental Quality (CEQ) NEPA regulations anticipated the need for a nimble response to an ever-changing landscape. Those regulations allow for a programmatic NEPA analysis to define the sideboards of the program, and for quicker and more efficient site-specific project analyses tiered to it. A programmatic analysis for a forest-wide project such as this would seem most consistent with CEQ's regulations and could speed the consideration and implementation of the proposal while providing the "hard look" and required opportunity for public review and input under NEPA.

Aquatic Resources

The EPA considers the protection of aquatic resources to be among the most important issues to be addressed in any NEPA analysis for vegetation and fire management activities. Most treatments contemplated under the proposed action have the potential to adversely impact aquatic resources, including surface waters, wetlands, streams, riparian areas, and their supporting hydrology. It is recommended that the NEPA document include the following water resource information.

Existing Conditions. Existing resource conditions provide the basis for an effective analysis of potential impacts. Therefore, we recommend the NEPA document include the following baseline water resource information (see additional information in sections below):

- Maps and summaries of project area waters, including streams, tributaries, lakes, springs, seeps, and wetlands. It would be helpful if the summary identified high resource value waterbodies and their designated beneficial uses (e.g., agriculture, fisheries, drinking water, recreation);
- Watershed conditions, including vegetation cover and composition, soil conditions, and areas not meeting desired future conditions;
- Surface water information, including available water quality data in relation to current standards, stream functional assessments, stream channel and stream bank stability conditions, sediment loads, and aquatic life. If the Forest determines that there are critical data gaps that should be filled before making a decision or taking action, there are various approaches to gather such data. Examples include the Bank and Nonpoint Source Consequences of Sediment (BANCS) Method for assessing bank stability conditions, nearby USGS gauges or performance routine grab samples (e.g., ISCO samplers) to determine baseline sediment loads at relevant locations, as well as EPA's Rapid Bioassessment Protocol;
- Types, functions, conditions, and acreages of wetlands, riparian areas, springs, and seeps;
- A map and list of CWA impaired or threatened waterbody segments within or downstream of the project area, including the designated uses of the waterbodies and the specific pollutants of concern. The Montana Department of Environmental Quality (DEQ) can identify or validate any CWA Section 303(d) listed waterbodies potentially affected by the project; and
- Generalized maps depicting the location of sensitive groundwater resources such as sole source aquifers (available from the EPA Sole Source Aquifer website at https://www.epa.gov/dwssa), municipal watersheds, source water protection zones, sensitive aquifers, shallow aquifers, and recharge areas.

Potential Impacts to Waterbodies. According to the Final EIS for the 2021 Forest Plan, the Forest completed the first round of watershed condition classification in the summer of 2011 and these conditions would be reassessed in the future. In summary, 103 watersheds were rated as functioning properly, 159 were rated as functioning at risk, and 34 were rated as impaired. The common sources of ratings 'at risk' or 'impaired' in the planning area were found to be from roads, grazing, and mining. Additionally, according to the Final EIS, the 2018 Montana list of impaired waterbodies indicated the planning area includes 313 miles of streams on the forest that were listed as impaired due to sedimentation/siltation; 113 miles of stream segments listed for nutrients and 277 miles listed for metals. Based on this information, we recommend the Forest: (a) analyze potential impacts to waterbodies within and downstream of the project area, and (b) coordinate with Montana DEQ if there are identified potential impacts to impaired waterbodies. It will be important to ensure this project will avoid causing or contributing to the exceedance of water quality standards (WQS) as such impacts are prohibited and would be considered a "significant" impact under NEPA.

Where a Total Maximum Daily Load (TMDL) exists for impaired waters, pollutant loads should comply with the TMDL allocations for point and nonpoint sources. Where new loads or changes in the relationships between point and nonpoint source loads are created, we recommend that the Forest work with Montana DEQ to revise TMDL documents and develop new allocation scenarios that ensure attainment of water quality standards. Where TMDL analyses for impaired waterbodies within, or

downstream of, the project area still need to be developed, we recommend that proposed activities in the drainages of CWA impaired or threatened waterbodies be either carefully managed to prevent any worsening of the impairment or avoided altogether where such impacts cannot be prevented. For projects that would take place in watersheds with streams not meeting desired future conditions, we recommend including a provision that would require actions to improve riparian, stream, and water quality conditions such as road and trail relocations, culvert improvements, road maintenance activity, or new BMPs to reduce sediment loads.

Groundwater. Groundwater is an important resource since it provides domestic and public water supply and supports environmental flows and levels in groundwater dependent ecosystems (GDEs). GDEs include fens and other wetlands fed by groundwater, terrestrial vegetation and fauna sustained by shallow groundwater, ecosystems in streams, lakes fed by groundwater, and springs. While GDEs occupy a small percentage of landscapes in the West, riparian areas and GDEs provide disproportionately large ecosystem services such as water filtration, wildlife habitat, and flood control. Forest management practices, including prescribed fire, associated roads, and heavy equipment use have the potential to impact GDEs by altering surface run-off, infiltration, evapotranspiration, sedimentation, and soil compaction. Additionally, activities associated with forest management such as equipment fueling and waste practices at man camps have the potential to introduce contaminants to GDEs and shallow aquifers. We recommend the NEPA document include a map of groundwater resources, including GDEs, and a discussion to include the following information (if available): identification of major and sensitive aquifers; location and extent of groundwater recharge areas; location of existing and potential (i.e., those that can reasonably be used in the future) underground sources of drinking water (USDW)[1]; and characterization of source water protection zones for public water systems in proximity of the project (see more information below). We also recommend identifying the shallow aquifers, including bedrock and alluvial aquifers along streams and rivers, that are located in the planning area and are sources for public water systems, domestic wells, stock wells, or GDEs. Shallow aquifers are more susceptible to contamination because there is less intervening soil to adsorb contaminants before they reach the groundwater. Shallow aquifers also commonly exchange flows with surface-water features, such as streams and lakes, and may supply groundwater to support wetlands and wildlife.

Soil Disturbance and Vegetation Changes. The potential environmental impacts of project activities may stem from vegetation loss and accelerated soil loss; soil compaction; increased surface storm flow, erosion (including bank erosion), and loading of sediment and nutrients to receiving waters; stream incision and disconnection from riparian areas and floodplains, reduced stream base flows from decreased infiltration to groundwater; and changes in water temperature associated with shade loss or channel widening. Based on the Forest's experience with the proposed types of project activities in the analysis area, we recommend the NEPA document include an assessment of each alternative's potential impacts and benefits to aquatic resources that may stem from the drivers listed above, including impacts to water quality, stream and wetland processes, and fish populations and habitat.

Public Drinking Water Supply Sources. The proposed treatments and activities could potentially impact sources of public drinking water. For example, road construction is a major source of sediment. Sediment

[1] In general, this includes aquifers with a concentration of total dissolved solids (TDS) less than 10,000 mg/L and with a quantity of water sufficient to supply a public water system. Aquifers are presumed to be USDWs unless they have been specifically exempted or if they have been shown to fall outside the definition of USDW (e.g., ≥ 10,000 mg/L TDS).

can adversely impact water quality by increasing turbidity, plugging filters and other treatment systems, and increase cost of water treatment. Suspended sediment can also carry chemical pollutants, such as phosphates, pesticides, and hydrocarbons into surface water and groundwater. States have conducted source water assessments for groundwater and surface water sources of public drinking water supplies. The EPA recommends that the NEPA document include a map, appropriate for public dissemination and in accordance with State data security requirements, showing the generalized locations of all source water assessment and protection areas associated with public drinking water supplies. Preliminary information about public drinking water sources in specific states can be obtained at: https://www.epa.gov/enviro/sdwis-search. Maps may be available from Montana DEQ, or the EPA upon request. Please note that more specific maps, available from the state, should be utilized by the Forest when locating project activities. We also recommend that the NEPA document include an assessment of potential project impacts or benefits, design criteria and mitigation options for protecting these high value drinking water resources from potential project impacts.

Beetle Epidemic. The presence and handling of beetle-killed trees has the potential to impact public water supplies if it leads to organic loading of area waterbodies that are sources of drinking water. Organic matter interacts with disinfectants used in the drinking water treatment process to form disinfection byproducts, which are a human health concern. Organic loading may also decrease oxygen levels in reservoirs leading to the release of metals such as arsenic, manganese, and iron from sediments. We recommend the NEPA document assess the potential for organic loading impacts to drinking water supplies associated with municipal watersheds.

Potential Impacts to Wetlands. We recommend the NEPA document include a description of the impacts that may result from project activities to wetlands, springs and seeps. Such impacts may include functional conversion of wetlands (e.g., forested to shrub-scrub); changes to supporting wetland hydrology (e.g., snow melt patterns, sheet flow, and groundwater hydrology); and wetland disturbance. If impacts are anticipated, we also recommend that the NEPA document describe how the Forest intends "to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands" as described in Executive Order (EO) 11990, *Protection of Wetlands*, including how wetlands will be identified and avoided, and how unavoidable impacts would be minimized and mitigated.

Discharge of dredged or fill material into waters of the United States, including wetlands, is regulated under CWA Section 404. This permit program is administered jointly by the U.S. Army Corps of Engineers (Corps) and the EPA. Please consult with the Corps to determine the applicability of CWA Section 404 permit requirements to wetlands that would be impacted by the project activities and to ensure appropriate minimization measures are applied to avoid adverse impacts to wetlands.
We recommend avoiding impacts to aquatic resources that are considered "difficult to replace" under the EPA's and the Corps' Final Rule for Mitigation for Losses of Aquatic Resources [33 C.F.R. Parts 325 and 332; 40 C.F.R. Part 230 (73 FR 19594, April 10, 2008)]. The rule emphasizes the need to avoid and minimize impacts to these "difficult-to-replace" resources and requires that any compensation be provided by in-kind preservation, rehabilitation, or enhancement to the extent practicable. We recommend restoration plans require that soil profiles and hydrology are re-established as much as possible to the original state. In addition, the EPA recommends the Forest consider the mitigation rule to protect aquatic resources even when a CWA Section 404 permit is not required.

To ensure that wetlands are protected, it may be necessary to consider exclusion of temporary roads and skid trail construction, if applicable, and vegetation treatments in areas where wetlands or riparian areas would be adversely impacted. EPA Region 8 has reviewed technical and policy literature and existing state regulatory policies and requirements developed for water resource setbacks. To avoid the potential for project activities to impact aquatic resources (including the potential to contribute to WQS violations, see below), we recommend providing a buffer for attenuating sediment runoff. We recommend buffer widths of at least 100 feet for steep slopes (5%-15%) and buffer width additions with each 1% increase of slope (e.g., 10 feet for each 1% of slope greater than 15%) in order to reduce sedimentation and maximize wildlife habitat and diversity. These setback distances are likely to be protective of water resources in most circumstances. The EPA recognizes that the Forest may adjust setback distances during project implementation to reflect site-specific conditions, including the use of larger buffers to protect sensitive aquatic resources.

Potential Impacts to Fen Wetlands. Based upon available information in the Final EIS for the 2021 Forest Plan, there are potentially fen wetlands in the project area. Fens are groundwater-fed, peat-forming wetlands that often host rare plants and animals. Fens also provide important ecological and hydrological functions by improving water quality in headwater streams, sequestering carbon, and providing base flows to streams during late summer and/or drought periods. Fen wetlands rely on permanently saturated soil conditions which slows the decomposition of organic material, and therefore fen communities are very sensitive to hydrologic alterations. With accumulation of peat occurring at rates between 4 and 16 inches per 1,000 years, these ecosystems are generally considered to be irreplaceable. The U.S. Fish and Wildlife Service (USFWS) designated fen wetlands a Resource Category 1, which is habitat that is considered unique and irreplaceable on a national basis or at the ecoregion level.[2] Further underlining the uniqueness and importance of fens in Montana, the U.S. Army Corps of Engineers revoked the use of Nationwide Permits in peatlands/fen-type wetlands to protect this unique wetland type.

When fen hydrology is disturbed and peat is exposed to aerobic conditions (e.g., due to a change or elimination of groundwater flow paths) soil microbes shift from anerobic respiration to aerobic respiration and begin to consume the organic matter within the soils. Oxidation of the organic soils can permanently alter groundwater flow paths and hydro-physical properties of the soil such that restoration relies on the development of new peat material above the impaired soils. Restoration of fens is therefore both an extremely lengthy and challenging process. The USFWS's Region 6 fen protection policy states, *"Therefore, onsite or in-kind replacement of peat wetlands is not thought to be possible. Furthermore, at present there are no known reliable methods to create a new fully functional fen or to restore a severely degraded fen."* Mitigation for fen impacts is not known to be possible on regulatory time scales, therefore impacts to fens are irretrievable.

Because fens develop over thousands of years, have unique ecological values and are irreplaceable, EPA considers any temporary or permanent impact to fens or to their groundwater source to be a "significant" impact under NEPA. We recommend the NEPA document include a description and the acreage of fens within the planning area and the potential direct and indirect impacts to fens and their groundwater supply that could result from the project. Additionally, and in accordance with the Clean Water Act Section 404 regulatory program, we strongly recommend that any alternatives analysis for Section 404 permitting include requirements to avoid and minimize both direct and indirect impacts to these effectively

[2] fws.gov/policy/501fw2.html

irreplaceable resources. Clean Water Act Section 404 serves to direct impacts away from waters of the U.S., including wetlands and other aquatic sites, and no activity shall be permitted if there is a practicable alternative which would have less adverse impact on the aquatic ecosystem [40 C.F.R. § 230.10]. It is important to note that compliance with the 404(b)(1) guidelines may involve the use of different screening criteria for alternatives as compared to NEPA, particularly related to the regulatory definitions of practicability versus reasonable [40 C.F.R. § 230.10(a)(4)]. Incorporating 404 permitting considerations into the NEPA alternatives analysis can reduce both time and effort by avoiding the need to supplement the NEPA documents with additional information.

Roads and Skid Trails. The proposed action indicates roads will not be constructed for this project, but it is unclear whether some existing roads and motorized trails would be maintained or reconstructed for access during project activities. Based upon the information in the Final EIS for the 2021 Forest Plan, there are sediment concerns in the project area. We recommend the NEPA document include a map showing project area waterbodies and identifying the existing road networks as well as a discussion of foreseeable reconstruction, maintenance, storage, and decommissioning activities by alternative. We recommend the NEPA document summarize similar past and ongoing activities, including watershed improvement projects such as culvert upgrades.

To reduce adverse impacts to watersheds, we recommend the NEPA document discuss design criteria and BMPs that will be followed to prevent negative effects to soil and water resources. For your consideration, we provide the EPA's general recommendations to protect aquatic resources from road and skid trail impacts, as follows:

- Locate roads and skid trails away from streams and riparian areas;
- Locate roads and skid trails away from steep slopes, landslide prone areas, and erosive soils;
- Minimize the number of stream crossings;
- Construct unavoidable stream crossings during periods of low flow to avoid fish spawning and incubation periods, and/or dewater relevant stream segments prior to construction;
- Provide adequate drainage and erosion control to avoid routing sediment to streams;
- Use bottomless or textured bottom culverts if possible;
- Design features to allow for natural drainage patterns;
- Consider decommissioning or rehabilitation at an equal or greater rate than new construction to prevent increases in overall watershed impacts; and
- Develop a monitoring plan and schedule to assess the effectiveness of road decommissioning after project completion.

Project Design Criteria, Mitigation and Monitoring. The project proposes various vegetative treatments to attain desired conditions. These project features emphasize the need for specific project design criteria, mitigation, and monitoring measures to reduce the potential for water resource impacts. The inspection, maintenance, and adjustment of BMPs will help protect groundwater and surface water resources. Mitigation measures to consider include the following:

- Use existing landing locations and roads when reasonable;
- Minimize landing size and design for proper drainage;
- Require re-vegetation of all disturbed areas with native seed mix within the same growing season of disturbance, and monitor re-vegetation efforts for five years to ensure success;

- Require special protections, such as buffer zones, for high quality riparian and wetland resources including springs, seeps, and fens;
- Monitor resource conditions where treatments are proposed adjacent to water resources; and
- Monitor the breakdown of hydrophobic soils following prescribed burns.

Air Quality

While we recognize that prescribed fire is a valuable tool that can have ecological benefits over other treatment techniques, these burn activities have the potential to cause degradation of air quality and AQRVs. Examples of potential air emissions associated with the proposed project activities include air pollutants from prescribed burning, emissions from fuel burning equipment such as from vehicles traveling on paved and unpaved roads and heavy-duty diesel equipment, as well as re-entrained dust from travel on paved and unpaved roads. The EPA recommends that the NEPA document evaluate whether project activities could affect air quality and what measures may be needed to mitigate any significant impacts. The project area encompasses the entire Helena-Lewis and Clark National Forest with numerous communities and sensitive areas in and surrounding the Forest. In addition to the health-based National Ambient Air Quality Standards (NAAQS) that protect ambient air quality, the Clean Air Act (CAA) provides Class I Areas special protection for air quality and air quality related values (AQRVs), including visibility. There are numerous Class I areas in the Forest, as well as directly adjacent. These areas include Bob Marshall Wilderness, Scapegoat Wilderness, Gates of the Mountains Wilderness, and Glacier National Park. The EPA's air quality assessment recommendations for the NEPA document are listed below.

Existing Air Quality and Air Quality Related Values. We recommend characterizing the existing air quality baseline for criteria pollutants and AQRVs, including visibility and resources sensitive to deposition. For criteria pollutants we recommend coordinating with the Montana DEQ to establish representative design values (background pollutant concentrations) based on the most recent monitoring data that are representative of the forest. Alternatively, data are available from EPA at their design values webpage.[3] Monitoring locations and data can also be accessed by the public through EPA's outdoor air monitor webpage,[4] as well as through the EPA's Air Quality System (AQS) for AQS users.[5]

We recommend characterizing trends in visibility in and near the Forest, in Class I areas (noted above) and in adjacent sensitive areas. Data are available through the IMPROVE monitoring network as well as information prepared by the Federal Land Managers (FLMs). We suggest working with Montana DEQ and any relevant FLMs regarding existing AQRVs in the areas they manage. Information is also available online at:

- https://www.epa.gov/outdoor-air-quality-data/interactive-map-air-quality-monitors;
- http://vista.cira.colostate.edu/Improve/;
- https://www.nps.gov/subjects/air/park-conditions-trends.htm; and
- https://www.fs.usda.gov/air/technical/class_1/alpha.php

[3] https://www.epa.gov/air-trends/air-quality-design-values#:~:text=Design%20Value%20Reports-,What%20is%20a%20Design%20Value%3F,in%2040%20CFR%20Part%2050%20.

[4] https://www.epa.gov/outdoor-air-quality-data/interactive-map-air-quality-monitors

[5] https://www.epa.gov/aqs

Existing deposition may be characterized by utilizing the National Atmospheric Deposition Program (NADP) monitoring network in conjunction with total deposition (TDEP)[6] estimates and information available from Montana DEQ, the FLMs (including Forest Service and National Park Service), and websites bulleted above. An example of the type of information we recommend including in the Draft EA is provided below for Glacier National Park.

> "Wet nitrogen deposition levels create poor condition for ecosystem health at Glacier NP. This is based on the 5-year average (2016–2020) estimated 0.9 to 5.9 kilograms per hectare per year (kg/ha/yr) range of wet nitrogen deposition compared to NPS nitrogen deposition benchmarks. To maintain the highest level of protection, the maximum of this range (5.9 kg/ha/yr) is used. Ecosystems in the park were rated as having high sensitivity to nitrogen-enrichment effects relative to all Inventory & Monitoring parks (Sullivan et al. 2016a; Sullivan et al. 2016b). The combined wet and dry nitrogen deposition at Glacier NP is estimated between 2.6 and 7.6 kg/ha/yr (see data). This amount of deposition exceeds one or more critical loads for ecosystem health. Nitrogen-enrichment effects may include disruption of soil nutrient cycling and reduced biodiversity of some plant communities, including alpine, grassland, and wetland plants at the park."[7]

Air Quality and AQRV Impact Analysis. We appreciate the higher level of detail included in the scoping notice, which identifies regions within the Forest as well as target treatment acreages within each geographic area group. We also appreciate that the notice provides an upper annual limit for prescribed fire (20,000 acres per year). To disclose the potential impacts of the proposed project we recommend the NEPA document expand on the information provided in the scoping notice to clearly explain each aspect of the project that will generate emissions as well as the location and timing of those emission sources through narrative as well as pictorial representations. Using the developed plans and acreages for treatment, we recommend the NEPA document prepare an emission inventory for prescribed fire and all equipment and activities necessary to complete the project. The emission inventory provides the foundation for understanding potential impacts to air quality and is therefore the first important step of the analysis. We recommend that the emission inventory include all emissions resulting from implementation of the project over the lifespan of the project.

EPA recommends the NEPA document assess all project-related impacts to air quality, including those that are not regulated by state air permitting. We look forward to working with Forest Service and other federal and state agencies on the approach for the air quality impact analysis after completing the emission inventory. We recommend that BLM work with Cooperators and FLMs to address the following analysis components:

- Impacts from each of the criteria pollutants (ozone, particulate matter, carbon monoxide, nitrogen oxides, sulfur dioxide and lead), including with respect to their NAAQS;
- Impacts to AQRVs in potentially impacted Class I areas and any other relevant areas identified in collaboration with Cooperating Agencies and FLMs; and
- Impacts that could result from exposure to Hazardous Air Pollutants (HAPs) based on relevant

[6] https://nadp.slh.wisc.edu/committees/tdep/

[7] NPS' current summary of the condition for nitrogen deposition at the National Park are available at: https://www.nps.gov/subjects/air/park-conditions-trends.htm?tabName=summary&parkCode=GLAC&paramCode=Nitrogen%20Deposition&startYr=2009&endYr=2020&monitoringSite=MT05%20(NADP-NTN)&timePeriod=Summary; accessible from: https://www.nps.gov/subjects/air/park-conditions-trends.htm.

health-based risk thresholds for HAPs. We are available to provide assistance with methods of analysis and appropriate characterization of available thresholds if an in-depth analysis is completed.

We support prescribed fire design criteria and monitoring requirements including: (1) incorporation of the Interagency Prescribed Fire Planning and Implementation Procedures Guide (May 2022), and (2) public notification of pending burns. We note, conformance with these guidelines should not substitute for an air quality analysis under NEPA. We recommend the Forest implement public notification procedures for each planned burn to reach remote areas that may not have access to newspapers or the internet. Disadvantaged communities can lack computer and internet resources and can be difficult to notify. If there are residents or communities with environmental justice concerns who could be impacted by smoke during burn actions, we recommend providing in-person, door-to-door notification. It may be necessary to include written notice in other languages where applicable. Effective notification is important to ensure that sensitive individuals with compromised respiratory or pulmonary systems can avoid exposure to smoke. We also recommend the Forest consult with Montana DEQ for any coordination necessary related to burns, modeling, mitigation, or other measures required under State regulations or the State Implementation Plan to address CAA requirements.

Pile Burning. It is uncertain if the proposed action includes pile burning. If it is utilized, we recommend the NEPA document describe any potential short-term air quality impacts associated with this treatment type. 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 to the Black Hills National Forest's Calumet Project Draft EIS (see the Fire and Fuels Section, p. 159). We also recommend that the NEPA document include a discussion of the burn plan process, as well as: (1) whether the Forest develops such plans for pile burns, and (2) if pile burns would be subject to the same process that is utilized for prescribed fire treatments as described in the Interagency Prescribed Fire Planning and Implementation Procedures Guide (May 2022). In some circumstances it may be appropriate to utilize equipment such as air curtain destructors (ACDs) to reduce smoke generation and promote full combustion of slash material.

Climate Change

EPA recommends the NEPA document include a discussion of reasonably foreseeable climate change impacts in the planning area—such as changes in precipitation patterns, hydrology, vegetation distribution in respective watersheds, and temperature—and the potential effect of these impacts on resources, activities, and projects in the Forest. This could help inform the development of measures to improve the resiliency of planning area resources and projects. Climate considerations should include how the shifting baseline of climate may affect the resilience of each of the alternatives evaluated, and the significance of impacts in various resource areas over time. This is consistent with the 2020 NEPA regulations as updated by the NEPA Phase 1 Final Rule (April 2022). We recommend utilizing this information to develop BMPs, monitoring, and mitigation.

On January 9, 2023, the Council on Environmental Quality (CEQ) published interim guidance to assist federal agencies in assessing and disclosing climate change impacts during environmental reviews.[8] CEQ

[8] *See* https://www.federalregister.gov/documents/2023/01/09/2023-00158/national-environmental-policy-act-guidance-on-consideration-of-greenhouse-gas-emissions-and-climate

developed this guidance in response to EO 13990, *Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis*. This interim guidance is effective immediately. CEQ indicated that agencies should use this interim guidance to inform the NEPA review for all new proposed actions and may use it for evaluations in process, as agencies deem appropriate, such as informing the consideration of alternatives or helping address comments raised through the public comment process. EPA recommends the NEPA document apply the interim guidance as appropriate, to ensure robust consideration of potential climate impacts, mitigation, and adaptation issues.

CEQ 2023 Interim Guidance, Section IV(I), 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 biogenic 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." Therefore, we recommend the Forest quantify carbon stock changes and GHG emissions associated with the project in combination with the cumulative effects of the many other ongoing and planned projects on national forests.

Consistent with EO 14008 goals, we encourage measures to provide for diverse, healthy ecosystems that are resilient to climate stressors; require effective mitigation and encourage voluntary mitigation to offset the adverse impacts of projects or actions; reduce GHG emissions from authorized activities to the lowest practical levels; identify and protect areas of potential climate refugia; reduce barriers to plant migration; and use pollinator-friendly plant species in restoration and revegetation projects. We also recommend discussing actions to improve forest adaptation to changing environmental conditions, such as selecting resilient native species for replanting. This should anticipate the effects rising temperatures may have on seeds/seedlings growth, the vulnerability of specific species under projected climate conditions in the short and longer term, and any anticipated shift of forest species to more suitable range elevations.

Consultation with Tribal Governments and Traditional Ecological Knowledge
The scoping notice states tribal consultation will take place. It is important that formal government-to-government consultation take place early in the NEPA process to ensure that all issues are adequately addressed in the NEPA document. The principles for interactions with Tribal governments are outlined in the *Presidential Memorandum on Tribal Consultation and Strengthening Nation-to-Nation Relationships*[9] and in Executive Order 13175, *Consultation and Coordination with Indian Tribal Governments* (November 6, 2000).[10] In the *Presidential Memorandum on Tribal Consultation*, the Biden Administration committed to strengthening the relationship between the Federal Government and Tribal Nations and to advancing equity for Native Americans, and required each agency to prepare and periodically update a detailed plan of action to implement the directive of Executive Order 13175. As a resource, we also recommend the document *Tribal Consultation: Best Practices in Historic Preservation*,[11] published by the National Association of Tribal Historic Preservation National

[9] 86 FR 7491; 01/29/2021 (https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/26/memorandum-on-tribal-consultation-and-strengthening-nation-to-nation-relationships/)
[10] 65 FR 67249; 11/09/2000
[11] National Association of Tribal Historic Preservation Officers. May 2005. Tribal Consultation: Best Practices in Historic Preservation. Available at http://www.nathpo.org/PDF/Tribal_Consultation.pdf.

Association of Tribal Historic Preservation Officers. Consultation for tribal cultural resources is further required under Section 106 of the National Historic Preservation Act (NHPA) (see related comment below).

In the NEPA document, summarize the results of Tribal consultation and identify the main concerns expressed by tribes, how those concerns were addressed, and what additional or continuing consultations may be warranted. We also recommend identifying any protection, mitigation, and enhancement measures identified by tribes. In collaboration with tribes, identify resources with cultural and religious significance to each Tribal community and ensure that treaty rights and privileges are addressed appropriately.

On November 15, 2021, a Presidential Memorandum,[12] *Indigenous Traditional Ecological Knowledge and Federal Decision Making,* directed federal agencies to develop robust plans for ensuring meaningful Tribal consultation on agency work that may affect Tribal Nations and the people they represent. To the extent appropriate, agencies should solicit and elevate Indigenous Traditional Ecological Knowledge (TEK) into the Tribal consultation process to better inform decision-making. In preparing the NEPA document and ensuring meaningful public involvement throughout the planning and NEPA process, the EPA recommends identifying, including, and integrating TEK into the analyses. Data can include the collection of local, regional, and traditional knowledge concerning the affected environment (including existing climate impacts), anticipated impacts from the project, as well as traditional hunting (including subsistence) and land use patterns in the area. We recommend that, in addition to reviewing any pertinent TEK currently available, additional studies and outreach be conducted as necessary to clearly identify impacts, including indirect and cumulative impacts, from the action alternatives.

Investments made in meaningful Tribal engagement at the onset of the NEPA planning effort may help avoid future project delays by identifying and addressing land use, cultural and subsistence practices that may be impacted by the proposed project in advance of implementing construction activities. We therefore recommend careful review and consideration of community feedback throughout the NEPA process.

National Historic Preservation Act. Consultation with respect to tribal cultural resources is required under Section 106 of the National Historic Preservation Act (NHPA). Historic properties under NHPA are properties that are included in the National Register of Historic Places (NRHP) or that meet the criteria for NRHP listing. Section 106 of NHPA requires a federal agency, upon determining that activities under its control could affect historic properties, to consult with the appropriate State Historic Preservation Office (SHPO)/Tribal Historic Preservation Office (THPO). Under NEPA, any impacts to tribal, cultural, or other treaty resources must be disclosed in the NEPA document. Section 106 of NHPA requires that federal agencies consider the effects of their actions on cultural resources, following the regulation at 36 C.F.R. § 800. In the NEPA document, we recommend discussing how the Forest would avoid or minimize adverse effects on the physical integrity, accessibility, or use of cultural resources or archaeological sites, including traditional cultural properties (TCPs), throughout the planning area. Clearly discuss mitigation measures for archaeological sites and TCPs. We encourage the Forest to append any Memoranda of Agreements to the NEPA document, after redacting specific information about these sites that is sensitive and protected under Section 304 of NHPA. We also recommend providing a summary of all coordination

[12] https://www.whitehouse.gov/wp-content/uploads/2021/11/111521-OSTP-CEQ-ITEK-Memo.pdf

with tribes and with the SHPO/THPOs, including identification of NRHP eligible sites and development of a Cultural Resource Management Plan.

Executive Order 13007. Executive Order 13007, *Indian Sacred Sites* (May 24, 1996), requires federal land managing agencies to accommodate access to, and ceremonial use of, Indian sacred sites by Indian religious practitioners, and to avoid adversely affecting the physical integrity, accessibility, or use of sacred sites. It is important to note that a sacred site may not meet NRHP criteria for a historic property and that, conversely, a historic property may not meet the criteria for a sacred site. It is also important to note that sacred sites may not be identified solely in consulting with tribes located within geographic proximity of the planning area. Tribes located outside the direct area of impact may also have religiously significant ties to lands within the planning area and should be included in the consultation process.

Forest-authorized projects and activities have the potential to impact cultural resources and sacred sites. In the NEPA document, we recommend addressing the existence of Indian sacred sites in the planning area that may be considered spiritual sites by regional tribal nations. We recommend the Forest conduct cultural resource inventories in coordination with representatives of the tribes. Please discuss in the NEPA document how the Forest would ensure the action alternatives would avoid or mitigate for the impacts to the physical integrity, accessibility, or use of sacred sites and cultural resources.

Environmental Justice
Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, applies to federal agencies that conduct activities that substantially affect human health or the environment. Executive Order 13985, *Advancing Racial Equity and Support for Underserved Communities Through the Federal Government*, sets expectations for a whole-of-government approach to advancing equity for all. The Federal Interagency Working Group on Environmental Justice and NEPA Committee's *Promising Practices for Environmental Justice Methodologies in NEPA Reviews* report[13] provides information on applying environmental justice methodologies that have been established in federal NEPA practice. Consistent with those executive orders and CEQ's Environmental Justice Guidance Under NEPA,[1] the EPA recommends that the NEPA document include the following:

- Identify people of color, low-income and indigenous communities within the geographic scope of the impact area that are living with EJ concerns, including the sources of data and a description of the methodology and criteria utilized.
- Engage with such communities on Forest Service decision making in a meaningful way, and with Tribal Historic Preservation Officers if cultural or historical artifacts are found in the project area.
- Assess EJ and other socioeconomic concerns for people of color, low-income and indigenous communities, including:
    - An assessment of historic, ongoing, and cumulative baseline environmental impacts, including health impacts from cumulative pollution loads, and identification of disproportionate impacts in overburdened communities.
    - A discussion of potential direct, indirect and cumulative impacts of the proposed project on the health of these communities. Assess health risks from project activities such as air emissions.
    - An evaluation of socioeconomic impacts, including the potential for additional burden on

[13] *See* https://www.epa.gov/sites/production/files/2016-08/documents/nepa_promising_practices_document_2016.pdf

local communities' ability to provide necessary public services and amenities.

- Establish mitigation measures or alternatives to avoid or reduce any adverse impacts, and involve the affected communities in developing those measures.

In obtaining data for the environmental justice scoping analysis, we strongly encourage the Forest to use EPA's EJScreen.[14] EPA's nationally consistent EJ screening and mapping tool is a useful first step in highlighting locations that may be candidates for further analysis. The tool can help identify potential community vulnerabilities by calculating EJ Indexes and displaying other environmental and socioeconomic information in color-coded maps and standard data reports (e.g., pollution sources, health disparities, critical service gaps, climate change data). EJScreen can also help focus environmental justice outreach efforts by identifying potential language barriers, meeting locations, tribal lands and indigenous areas, and lack of broadband access. For purposes of NEPA review, a project is considered to be in an area of potential EJ concern when the area shows one or more of the twelve EJ Indexes at or above the 80th percentile in the nation and/or state. However, scores under the 80th percentile should not be interpreted to mean there are definitively no EJ concerns present.

While EJScreen provides access to high-resolution environmental and demographic data, it does not provide information on every potential community vulnerability that may be relevant. The tool's standard data report should not be considered a substitute for conducting a full EJ analysis, and scoping efforts using the tool should be supplemented with additional data and local knowledge when reasonably available. Also, in recognition of the inherent uncertainties with screening level data and to help address instances when the presence of EJ populations may be diluted (e.g., in large project areas or in rural locations[15]). EPA recommends that the Forest analyze block groups, the smallest geographical unit for which the U.S. Census Bureau publishes data. We caution using larger tracts in the analysis, such as counties or cities, as these may dilute the presence of, and potential impacts to, communities of concern. EPA recommends assessing each block group within the project area individually and adding a one-mile buffer around the project area. Please see the EJScreen Environmental Justice Mapping and Screening Tool Technical Documentation document for a discussion of these and other issues.[16]

Biological Resources, Habitat, and Wildlife

We recommend the NEPA document identify and quantify which special status species and/or critical habitat might be directly, indirectly, or cumulatively affected by each alternative and mitigate impacts to these species. Please discuss the project's consistency with existing laws and regulations, including the Migratory Bird Treaty Act. We also recommend the NEPA document include mitigation measures to minimize impacts to special status species, describe the effectiveness of such measures to protect wildlife and habitat, and indicate how they would be implemented and enforced**.**

Endangered Species Act (ESA). It is unclear if Section 7 consultation will take place during the NEPA planning process or after the decision notice. Section 7(a)(2) of the ESA requires federal agencies to consult with the USFWS whenever a proposed action "may affect" listed species or destroy or adversely modify its critical habitat to ensure that the action is "not likely to jeopardize" these species. 16 U.S.C. §

[14] *See* https://www.epa.gov/ejscreen

[15] Executive Order 14008 Sections 212 and 219 addresses including rural and Native communities from an equity standpoint. See https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/27/executive-order-on-tackling-the-climate-crisis-at-home-and-abroad/

[16] *See* https://www.epa.gov/sites/default/files/2021-04/documents/ejscreen_technical_document.pdf

1536. Agencies cannot properly determine whether an action "may affect" or is "likely to jeopardize" a listed species when the consulting agencies do not know the specifics of when or where the action will be implemented, or what the site-specific impacts of the action may be. If the Forest will conduct Section 7 consultation for each site-specific treatment area project, we recommend working with USFWS during this NEPA process to ensure Section 7 consultation will cover the overall effects of the entire project at the initial stage before the project can commence, rather than segmenting project consultation.[17]

Invasive Species

The spread of invasive species and noxious weeds jeopardizes ecosystems by causing long-term damage to plant and wildlife communities, impacting water quality and quantity, and increasing wildfire risk. Forest-authorized activities have the potential to contribute to invasive spread. In the NEPA document, we recommend including measures that are consistent with Executive Order 13112 on Invasive Species. We suggest including any existing Forest direction for noxious weed management, a description of current conditions, and BMPs which will be utilized to prevent, detect, and control invasives in the planning area. Discuss measures that would be implemented to reduce the likelihood of introduction and spread of invasive species within the proposed planning area. We encourage the Forest to promote integrated weed management, with prioritization of management techniques that focus on non-chemical treatments first, and mitigation to avoid herbicide transport to surface or ground waters. Early recognition and control of new infestations is critical to stop the spread of the infestation and avoid wider future use of herbicides, which could correspondingly have more adverse impacts on biodiversity, water quality and fisheries.

Cumulative Effects

We recommend the NEPA document evaluate the effects of the alternatives when added to other past, present, and reasonably foreseeable future projects in the analysis area. Considering all the actions in this area together would help decision makers and public to understand more clearly what the cumulative impacts on environmental resources are likely to be. There are five key areas we recommend considering for the analysis:

- Resources, if any, that are being cumulatively impacted;
- Appropriate geographic area and the time over which the effects have occurred and will occur;
- All past, present, and reasonably foreseeable future actions that have affected, are affecting, or would affect resources of concern;
- A benchmark or baseline; and
- Scientifically defensible threshold levels.

Monitoring Plan

It will be important to include a monitoring program to ensure the Forest achieves desired environmental outcomes while also protecting other resources. We support a monitoring program that facilitates ongoing treatment effectiveness. The EPA recommends the NEPA document describe an effective monitoring plan for project activities. In addition to targets that specify a desired future condition, the monitoring plan should include environmental thresholds with protocols to assess whether specific thresholds are being met for each impacted resource. The EPA recommends the NEPA document describe how and with what resources the Forest will conduct the monitoring necessary to ensure the project is meeting objectives and avoiding impacts as predicted. Monitoring results may reflect a need to modify management actions. We recommend developing a list of management options to address situations where monitoring does not

[17] *See Conner v. Burford*, 848 F.2d 1441, 1457 (9th Cir. 1988).

indicate progress toward desired conditions or indicates unanticipated adverse effects on resources. For example, it may be reasonable to consider provisions for reducing treatment acreage or omitting specific locations if unanticipated resource impacts occur or monitoring does not indicate progress toward desired conditions. A need for larger buffers than usual around wetlands, streams, and lakes during treatments could also become apparent through monitoring results. We also recommend the NEPA document discuss the process that will be applied if monitoring budgets fall short of the need for this project. Typically, lack of monitoring would automatically trigger a more environmentally conservative set of mitigation measures.

We recommend including the monitoring plan in the NEPA document to allow opportunity for public input. We further recommend the monitoring plan include details regarding the timing of monitoring for water and air quality. Timely monitoring is particularly important given the high resource value and potentially broad scale of the project area. We recommend discussion of the general timing of implementing a monitoring plan as well as a monitoring schedule. Given that the project timeframe is described as long term, including regularly scheduled interdisciplinary team reviews would provide the opportunity for timely assessment of whether thresholds are being met and any need for specific corrective actions if thresholds are not being met.

General Mitigation Information

We recommend the proposed action include identification of appropriate mitigation and control measures that will be applied to project activities, including what entity will be executing the mitigation, inspection schedules, documentation procedures, and accountability processes. Where impacts are not avoidable, we recommend providing an explanation as to why these impacts are necessary to make the project feasible. With these considerations in mind, we recommend the NEPA document include the following information for each mitigation measure:

- A description of the required mitigation and its expected effectiveness;
- Designation of who will be responsible for implementing the mitigation;
- A detailed plan for monitoring of the mitigation measures to ensure timely and correct implementation as well as timely maintenance; and
- Identification of funding sources.

If adaptive management practices will be utilized, we recommend the NEPA document include the following information:

- A defined monitoring plan (see respective recommendations above);
- Specific environmental thresholds which would trigger action;
- Management alternatives and mitigation measures that would be implemented should a threshold be exceeded, and timeframes for corrective action;
- An evaluation procedure for determining the effectiveness of the implemented mitigation and further measures to take in cases of ineffectiveness; and
- A description of the mechanisms for the public disclosure of project monitoring data, its analysis, and related management decisions.