REGION 8
DENVER, CO 80202

October 20, 2023

Ref: 8ORA-N

James Statezny, District Ranger
c/o Kevin Thompson
Yampa Ranger District
Medicine Bow-Routt National Forest and Thunder Basin National Grassland
300 Roselawn Avenue/P.O. Box 7
Yampa, Colorado 80483

Dear District Ranger Statezny:

The U.S. Environmental Protection Agency Region 8 has reviewed the U.S. Department of Agriculture Forest Service scoping notice for the South Routt Fuels Reduction Project (Project) on approximately 10,917 acres in the Yampa Ranger District of the Medicine Bow-Routt National Forest and Thunder Basin National Grassland (Forest). A portion of the project area is located on the Arapahoe National Forest, which is also administered and managed by the Yampa Ranger District. 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 addressing during the NEPA process.

The Forest encompasses approximately 2.9 million acres in the states of Wyoming and Colorado, and the Project will take place in Colorado, approximately three miles northeast of Yampa in Routt County, and extending to approximately seven miles west of Kremmling in Grand County. The scoping notice indicates that an Environmental Assessment (EA) will be prepared for the Project, which seeks to reduce fuels to improve public and firefighter safety, protect key infrastructure, and improve forest health and regeneration. The Project also proposes management actions to improve the forest transportation system by adding approximately two miles of Maintenance Level 1 roads, decommissioning up to 96 miles of Maintenance Level 1 roads, and removing or improving five poorly functioning culverts. Project activities include road decommissioning, fuel treatments, forest vegetation improvements, roadless area management, road maintenance, road improvements/construction, travel management, timber sales, and watershed improvements.

The responsible official for the Forest anticipates seeking a request for an “emergency situation determination” under Section 40807 of the Infrastructure Investment and Jobs Act for lands in the Project area. This would authorize the Secretary of Agriculture to determine that an emergency situation exists on the Forest, for which immediate implementation of “authorized emergency

action(s)" are necessary to protect human health and safety and/or to mitigate threats to natural resources on National Forest System land or adjacent land. Projects authorized under this emergency authority are not subject to the pre-decisional objection process under Title 36 Code of Federal Regulations Part 218. Also, any required NEPA documents are only required to include the proposed agency action and a no action alternative.

We appreciate the opportunity to provide recommendations for the EA at this early stage of project planning. Our enclosed comments are intended to assist the Forest with identifying potentially significant impacts which should be avoided to justify the Finding of No Significant Impacts (FONSI), including impacts to water resources, soils and vegetation, wetlands, air quality, and climate change.

Thank you for the opportunity to comment. If you would like to discuss our comments, please contact me at (303) 312-6155 or mccoy.melissa@epa.gov. You may also contact Jody Ostendorf, Lead Reviewer for this EA, at (303) 312-7814 or ostendorf.jody@epa.gov.

Sincerely,

MELISSA MCCOY

Digitally signed by MELISSA MCCOY
Date: 2023.10.20 15:52:00 -06'00'

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

Enclosure

Enclosure – EPA's Detailed Scoping Comments on the South Routt Fuels Reduction Project

Background

As the Forest conducts the impact analysis and develops project design features, Best Management Practices and monitoring plans, EPA offers the following recommendations for inclusion in the EA:

- Area management objectives regarding high severity wildfire risk, public and infrastructure safety, and forest regeneration and restoration;
- Resource objectives and site-specific baseline conditions, including vegetation cover and condition, soil conditions, watershed conditions, water quality, sediment loads, wetland and riparian health, wildlife and fish population and habitat health, climate change, and air quality;
- Site-specific impacts on baseline resource conditions that may result from Project activities and how those activities will bring the Forest into compliance with the Routt National Forest Land and Resource Management Plan, as revised in 1997, the National Cohesive Wildland Fire Management Strategy, and Travel Management Regulations;
- Site-specific ecological history, including mountain pine beetle infestation and wildfire histories;
- Management history, including vegetative treatments, invasive species control, and prescribed burns; and
- Monitoring plan that will be used to assess how well the Project addresses concerns with each resource category expected to be impacted.

Water Resources

EPA considers protection of water resources to be among the most important issues to be addressed in any NEPA analysis for fuels treatment activities. The Project is likely to have adverse impacts to water quality, including surface waters, wetlands, streams, riparian areas, and their supporting hydrology. We recommend that the EA include the following information:

Existing Conditions

- Maps and summaries of project area waters, including streams, tributaries, lakes, springs, seeps, and wetlands. The summary should include 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 as outlined in the Forest Plan;
- 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;
- Types, functions, conditions, and acreages of wetlands, riparian areas, springs, and seeps;
- A map and list of Clean Water Act impaired or threatened waterbody segments within or downstream of the Project area, included their designated uses and the specific pollutants of concern. The Colorado Department of Public Health and Environment (CDPHE) can identify any CWA Section 303(d) listed waterbodies that could be affected by the Project; and
- Maps depicting the location of sensitive groundwater resources such as sole source aquifers (available from EPA's 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

EPA recommends the Forest: (a) analyze potential impacts to waterbodies within and downstream of the project area, and (b) coordinate with CDPHE 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 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 CDPHE 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-

[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).

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, associated monitoring, and any modeling conducted, we recommend the NEPA document include an assessment of the proposed action'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 can adversely impact water quality by increasing turbidity and plugging filters and other treatment systems, which can increase the 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 CDPHE, 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.

Mountain Pine Beetle Epidemic

The scoping notice indicates that the Project area is within the largest mountain pine beetle epidemic recorded in the contiguous lodgepole pine forests in Colorado and southern Wyoming. In some portions of the proposed project area, beetle activity resulted in over 85 percent tree mortality. 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 may 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.

Potential Impacts to Fen Wetlands

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 Colorado, 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 consistent with the Clean Water Act Section 404 regulatory program, we strongly recommend that the proposed action include requirements to avoid and minimize both direct and indirect impacts to these effectively irreplaceable resources. This is particularly important considering that the Forest decision maker is requesting an emergency planning situation which will preclude the need to analyze a reasonable range of alternatives, beyond the proposed action, for the Project.

Roads and Skid Trails

The scoping notice indicates that two miles of new roads will be constructed for this project, and it is unclear whether some existing roads and motorized trails would be maintained or reconstructed for access during project activities. 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. We recommend the NEPA document summarize similar past and ongoing activities and their impacts, 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;

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

- 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 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

Fuels reduction treatments proposed in the Project area are located within and adjacent to the Stagecoach, East Gore, and Red Dirt wildland-urban interfaces (WUIs). While we recognize that fuel reduction treatments such as prescribed fire can have ecological benefits in restoring forest health, these activities have the potential to cause degradation of air quality and Air Quality Related Values (AQRVs). Examples of potential air emissions from the Project activities include air pollutants from prescribed burning, emissions from fuel burning equipment and re-entrained dust from vehicles traveling on paved and unpaved roads, and use of heavy-duty diesel equipment. Due to the high use nature of the area, and its proximity to WUIs, EPA recommends that the EA evaluate whether project activities could affect air quality and what measures may be needed to mitigate any significant impacts. The Yampa Ranger District is the southern-most district of the Medicine Bow–Routt National Forests & Thunder Basin National Grassland with nearly 400,000 acres of varied terrain including sagebrush flats, forested mountains, and alpine tundra. It is known as the Gateway to the Flat Tops Wilderness and accesses the Sarvis Wilderness and Silver Creek Wilderness areas. The project is surrounded by Class I areas including Flat Tops Wilderness, Mount Zirkel Wilderness, Eagles Nest Wilderness, Rawah Wilderness, and Rocky Mountain National Park. The Clean Air Act provides these Class I areas special protection for air quality and AQRVs, including visibility.

Existing Air Quality and AQRVs

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 CDPHE to establish representative design values (background pollutant

concentrations) based on the most recent monitoring data representative of the Forest. Data are also available from EPA at the design values webpage.[3] Monitoring locations and data can be accessed through EPA's outdoor air monitor webpage,[4] and through the EPA's Air Quality System (AQS) for AQS users.[5]

We recommend characterizing trends in visibility in Class I areas and adjacent sensitive receptors such as WUI communities. Data are available through the IMPROVE monitoring network and information prepared by the Federal Land Managers (FLMs). We suggest working with CDPHE and the FLMs regarding existing AQRVs in the areas they manage. Information is also available online at:

- 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

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 the FLMs and websites bulleted above. Areas that may be relevant include but are not limited to the Class I areas listed, above. An example of the type of information we recommend including in the analysis is provided below for Rocky Mountain National Park.

> "Wet nitrogen deposition levels create poor condition for ecosystem health at Rocky Mountain NP. This is based on the 5-year average (2017–2021) estimated 1.1 to 4.1 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 (4.1 kg/ha/yr) is used. Ecosystems in the park were rated as having very high sensitivity to nitrogen-enrichment effects relative to all Inventory & Monitoring parks (Sullivan et al. 2016a; Sullivan et al. 2016b). Nitrogen-enrichment effects may include disruption of soil nutrient cycling and reduced biodiversity of some plant communities, including alpine, arid, and grassland plants at the park."[7]

Air Quality and AQRV Impact Analysis

To better understand the Project effects, EPA recommends that the NEPA document describe management activities and estimate the emission-generating activity and potential air quality impacts. To accomplish this, we recommend that the Forest estimate the acreage to be treated per year and the amounts and types of material to be combusted, the method of combustion (e.g., pile burning), and the types of emissions-generating equipment needed. Emission factors may then be used to estimate emissions from planned activities. Based on this information, we recommend preparing an emission

[3] https://www.epa.gov/air-trends/air-quality-design-values
[4] https://www.epa.gov/outdoor-air-quality-data/interactive-map-air-quality-monitors
[5] https://www.epa.gov/aqs
[6] https://nadp.slh.wisc.edu/committees/tdep/
[7] https://www.nps.gov/subjects/air/park-conditions-trends.htm?tabName=summary&parkCode=ROMO&paramCode=Nitrogen%20Deposition&startYr=2009&endYr=2021&monitoringSite=CO98%20(NADP-NTN)&timePeriod=Summary; available from National Park Service's main page at: https://www.nps.gov/subjects/air/park-conditions-trends.htm

inventory to inform a discussion of the pollutants generated from Project activities. Once the Forest has an emissions inventory, the EA can discuss the direct, indirect, and cumulative impacts associated with the Proposed Action to air quality. By disclosing how activities may affect air quality, the Forest can identify measures to prevent significant impacts, such as the implementation of design features and placing limits on how much activity and burning can occur in specific locations.

Pile Burning

The scoping notice states that prescribed burns would only be used to burn piles. In that case, we recommend the NEPA document describe any potential short-term air quality impacts associated with this treatment type. For an example of 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 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 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 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

[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

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 does not indicate whether tribal consultation will take place. The Medicine Bow-Routt National Forests & Thunder Basin National Grassland are located on the ancestral lands of many Native American Tribes that have stewarded them for time immemorial, originating in the distant past. These tribes include the Cheyenne and Arapaho Tribes, Cheyenne River Sioux Tribe, Chippewa-Cree Tribe, Crow Creek Sioux Tribe, Kiowa Tribe of Oklahoma, Crow Nation, Eastern Shoshone Tribe, Kiowa Tribe of Oklahoma, Fort Peck Assiniboine and Sioux Tribe, Lower Brule Sioux Tribe, Northern Arapaho Tribe, Northern Ute Tribe, Oglala Lakota Nation, Rosebud Lakota Tribe, Sisseton-Wahpeton Oyate Tribes, Southern Ute Tribal Council, Standing Rock River Sioux, Three Affiliated Tribes (Mandan, Hidatsa and Arikara Nation), Ute Mountain Ute Tribe, Yankton Sioux, and Santee Sioux Nation. The USDA Forest Tribal Connections Map[9] is a tool to learn about the many tribes that have cared for our nation's forests and grasslands for millennia and still maintain strong historical and spiritual connections to the land.

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*[10] and in Executive Order 13175, *Consultation and Coordination with Indian Tribal Governments* (November 6, 2000).[11] 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

[9] https://www.arcgis.com/apps/webappviewer/index.html?id=fe311f69cb1d43558227d73bc34f3a32
[10] 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/)
[11] 65 FR 67249; 11/09/2000

the document *Tribal Consultation: Best Practices in Historic Preservation*,[12] published by the National Association of Tribal Historic Preservation National 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,[13] *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 proposed action.

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

[12] 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.

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

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 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 (EJ)

Executive Order 14096, *Revitalizing our Nation's Commitment to Environmental Justice for All*, supplements the foundational efforts of Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations,* and strengthens the federal government's commitment to provide meaningful opportunities for engagement of EJ communities. The government-wide approach in Section 3 of EO 14096 requires each agency to "identify, analyze, and address disproportionate and adverse human health and environmental effects (including risks) and hazards of Federal activities, including those related to climate change and cumulative impacts of environmental and other burdens on communities with environmental justice concerns." Executive Order 13985, *Advancing Racial Equity and Support for Underserved Communities Through the Federal Government,* also sets expectations for a whole-of-government approach to advancing equity for all. Consistent with those executive orders and CEQ's Environmental Justice Guidance Under NEPA,[14] 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.

[14] https://www.epa.gov/environmentaljustice/environmental-justice-and-national-environmental-policy-act

- 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 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.[15] 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[16]). 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

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

[16] 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/

Environmental Justice Mapping and Screening Tool Technical Documentation document for a discussion of these and other issues.[17]

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 the proposed action 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. § 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.

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

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

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 Program

It will be important for the NEPA document 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. 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 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 proximity to WUI's 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.