Data Submitted (UTC 11): 11/24/2021 11:00:00 AM
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Comments: Please see attached comment letter.

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 8

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11/24/2021

Ref: 8ORA-N

Chad Stewart, Forest Supervisor

Grand Mesa, Uncompahgre, and Gunnison National Forests 2250 South Main Street

Delta, Colorado 81416 Dear Supervisor Stewart:

The U.S. Environmental Protection Agency Region 8 reviewed the U.S. Forest Service[rsquo]s Draft Revised Land Management Plan ([ldquo]Forest Plan[rdquo]) and associated Draft Environmental Impact Statement (EIS), CEQ No. 20210116, for the Grand Mesa, Uncompahgre, and Gunnison National Forests (GMUG NFs). Our comments below are provided pursuant to our responsibilities under the National Environmental Policy Act and Section 309 of the Clean Air Act.

The GMUG NFs encompasses approximately 2.9 million acres of National Forest System land in southwestern Colorado. The USFS is revising the 1983 Forest Plan for the GMUG NFs because conditions, science, and policy have changed since that Forest Plan was approved, and a revised forest plan will provide integrated plan direction for social, economic, and ecological sustainability and multiple uses. The alternatives included in the Draft EIS are: Alternative A, the No-Action Alternative; Alternative B, a [ldquo]blended[rdquo] alternative described as a balanced approach to competing uses and values on the GMUG NFs, a modest amount of additional wilderness, and an active vegetation management program; Alternative C, an [ldquo]active management emphasis[rdquo] alternative, with fewer special area allocations, more active vegetation and fuels

management, less restrictive recreation use management, more motorized settings, and more areas allocated as suitable for timber production; and Alternative D, a [ldquo]special area emphasis[rdquo] alternative, with more special area allocations, a smaller vegetation and fuels management program, more active and restrictive recreation use management, more non-motorized settings, and fewer areas allocated as suitable for timber production. The EPA submitted scoping comments on May 31, 2018 and has been a cooperating agency during the development of the Forest Plan.

Forest Plans set overall management direction for future decisions and include the pre-determined requirements for protection of natural resources like water and air. Such requirements provide efficiency for future decisions, certainty and a level playing field for future users of the NFs[rsquo] resources, as well as a floor of protection against adverse effects to the environment. The EPA supports the protections for riparian and aquatic ecosystems in the Draft Forest Plan but is concerned that the Plan does not include specific requirements (i.e., standards or guidelines) to protect air or water resources, which creates uncertainty as to whether, how and to what degree air quality, air quality related values, watersheds, and water quality will be protected in the future. Our enclosed comments offer recommendations on measures to protect air resources, riparian and aquatic ecosystems, and water and watershed resources, as well as areas for clarification or further discussion in the EIS.

The EPA appreciates your consideration of our comments on the Draft Forest Plan and EIS. If further explanation of our comments is desired, please contact me at (303) 312-6704 or strobel.philip@epa.gov, or Melissa McCoy, lead reviewer for this project, at (303) 312-6155 or mccoy.melissa@epa.gov.

Sincerely,

Philip S. Strobel

Chief. NEPA Branch

Office of the Regional Administrator

Enclosure [ndash] EPA[rsquo]s Detailed Comments on the GMUG NFs Draft Forest Plan and EIS

1. Air Quality

The Draft Forest Plan removed much of the framework for managing air quality that was present in the earlier working draft. We recommend revising the Draft Forest Plan to include meaningful metrics (standards, guidelines, and objectives) to manage for the protection of air quality and Air Quality Related Values (AQRVs) in the GMUG NFs. There are four Class I airsheds where air quality and AQRVs should be protected from degradation and areas that have been or may be developed for mineral resources, such as oil and gas and coal. The Draft EIS acknowledges (p. 231) that future increases in fossil fuel development and production in and near the GMUG NFs may offset any gains in air quality improvement that would otherwise be expected. Due to the potential for these emissions generating activities to affect air quality and AQRVs, it is of great importance that the Forest Plan present a framework of metrics that align future actions with appropriate desired conditions.

In addition to expected impacts to air quality and AQRVs from future activities on the GMUG NFs, it appears that

existing conditions do not align with desired conditions. The Revised Draft Assessment for Air Quality indicates that many areas of the NFs, including Class I areas, are currently exceeding critical loads for nitrogen deposition; therefore, any future increase in deposition is of greater concern than it would be if total deposition were below this threshold. This is important because levels of deposition above the critical load can be expected to cause harmful ecological effects. Of particular concern, estimated nitrogen deposition is exceeding one or more critical loads at three of the NFs[rsquo] Class I areas (Maroon Bells-Snowmass Wilderness, West Elk Wilderness, and Black Canyon of the Gunnison National Park), with potentially significant contributions from oil and gas development on and adjacent to the GMUG NFs (Revised Draft Air Quality Assessment, pp. 22-24). Although the Draft EIS did not conduct an analysis of existing and future impacts possible from fluid minerals development, the Forest Plan should still provide meaningful direction in managing these lands and protecting them from undue impacts from all Forest Service decisions moving forward.

Both the Draft EIS and the Draft Assessment for Air Quality state that a potential need for change is to establish plan direction to ensure that human health standards (National Ambient Air Quality Standards, or NAAQS) and critical loads for AQRVs are not exceeded by cumulative future fossil fuels development and other activities on the NFs. Consistent with this, we recommend reinstating the previous framework with consideration of the following recommendations:

Desired Conditions

* Desired condition FW-DC-AQ-01 states that, [ldquo]Air quality related values are maintained as defined in the Clean Air Act and Forest Service air quality resource concern thresholds and/or limits of acceptable change. The overall quality of the air contributes positively to human and ecosystem health[hellip][rdquo] Forest Service-authorized activities can change air quality as well as AQRVs. Therefore, we recommend expanding this desired condition to cover air quality in addition to AQRVs. Also, since deposition currently exceeds critical loads in many areas of the GMUG NFs, we recommend modifying FW-DC-AQ-01 to not only maintain but also improve air quality and AQRVs through Forest Service actions under this plan.
* We recommend establishing a desired condition for fugitive dust resulting from unpaved roads to inform whether the guideline established to reduce road dust is effective at achieving Forest Service desired conditions. We recommend considering a desired condition that fugitive dust does not create safety, health, or nuisance conditions, or significantly impact attainment of the NAAQS or AQRVs.

Standards

*
The Draft Forest Plan no longer includes standards for air quality. Since standards provide benchmarks for achieving desired conditions, we recommend establishing standards in the Forest Plan. We specifically recommend including standards to not authorize, and to prohibit or curtail, activities on the NFs that would result in exceedance of:

* the NAAQS,
* the limit of acceptable change for visibility, in deciviews, based on the current version of the Federal Land Managers[rsquo] Air Quality Guidance or equivalent,
* critical loads for deposition based on the most current information available, or in areas where nitrogen deposition is already of concern, the limit of acceptable change based on the most current version of Federal Land Managers[rsquo] Air Quality Guidance or equivalent,
* lake acidification thresholds, by allowing no more than a 10% change from established baseline for lakes with

an acid neutralizing capacity of greater than or equal to 25 [mu]eq/l, and for lakes with an acid neutralizing capacity of less than 25 [mu]eq/l, allowing no more than 1 [mu]eq/l decrease in acid neutralizing capacity.

Guidelines

* Reinstate a guideline directing that projects on- and off-Forest seeking a Prevention of Significant Deterioration (PSD) permit, or NEPA projects (e.g., oil and gas) that could result in exceedances of AQRV thresholds, should not result in significant degradation to air quality or AQRVs.
* Guideline FW-GDL-AQ-04 provides direction on when dust suppression techniques should be employed. Currently the measure sets thresholds that do not directly relate to whether there is dust occuring and in the case of roads only requires dust suppression after high levels of dust have already been occuring. We recommend considering dust suppression for all earthmoving activities that could produce dust and minimizing fugitive road dust. The current proposal uses a visible range of less than 500 feet of sight distance due to road dust visibility impairment to trigger dust suppression. Such a guideline seems to be based on vehicle safety rather than air quality protection. There is also a concern with the enforceability of this metric since measurement would not necessarily be taken and we question whether it could it be accurately measured. We recommend considering a guideline that uses traffic levels and the potential for dust generation to proactively apply dust suppression planning and techniques that will minimize fugitive dust. Dust suppression techniques may include, but are not limited to, the application of water, other methods of soil stabilization, maintaining roads to avoid washboard like surfaces, and reducing speed limits.
* Add a guideline or management approach to reduce greenhouse gas emissions from authorized activities to the lowest practical levels.

Objectives

* Reinstate the objective that is listed in Table 35 and that was in the previous working draft of the Forest Plan, to develop and implement a monitoring framework for AQRVs in the GMUG NFs[rsquo] Class I areas and other areas with sensitive resources. We also recommend modifying the existing wording of the objective so that visibility is not characterized as a critical load. For example, reword to implement a monitoring framework for GMUG[rsquo]s Class I areas and other areas with sensitive resources that is able to characterize existing nitrogen and sulfur deposition, visibility, and acid neutralizing capacity for sensitive lakes. This is important because currently there is no direct monitoring of deposition occurring within the GMUG[rsquo]s Class I areas, three of which are estimated to be experiencing excessive nitrogen deposition (Revised Draft Air Quality Assessment, pp. 22-24).
* Add an objective to, within a selected timeframe, work with air quality regulatory agencies and Federal Land Managers to explore opportunities to reduce nitrogen and sulfur deposition to levels that do not negatively affect ecosystem function.
* Reinstate a measure to address mercury deposition. We recommend utilizing an objective to, within a selected timeframe, characterize mercury deposition on the GMUG NFs and if levels are of concern, work with air quality regulatory agencies and Federal Land Managers to explore opportunities to reduce mercury in the GMUG NFs[rsquo] sensitive lakes and reduce future mercury deposition.
* Add an objective that the Forest Service[rsquo]s oil and gas leasing analysis (to occur within three years of plan approval according to objective FW-OBJ-ENMI-06) will include analyses of air quality impacts resulting from existing and potential future oil and gas development over the life of the Forest Plan.

Management Approaches

* Add a management approach directing that where the Forest Service has been requested to approve one or more activities that would result in emissions, an air quality analysis may be required that would include an emissions inventory and may include dispersion or photochemical grid modeling and that, based on those analyses, best management practices and/or emission reduction strategies may be required to meet desired conditions, standards, and guidelines.

The Draft EIS refers to the State of Colorado[rsquo]s Smoke Management Program (Table 118 and p. 241), and states that smoke emissions from prescribed burning and wildland fire use would continue to be regulated by the Colorado Air Quality Control Division through implementation of the Smoke Management Program. We recommend also including the Interagency Prescribed Fire Planning and Implementation Procedures Guide (July 2017)1 [See https://www.nwcg.gov/publications/484.] as a planning consideration.

We also recommend including fluid mineral resource activities in the Climate Change section of Table 120, since as stated in the Draft EIS (p. 245), these activities would continue to produce the second greatest amount of greenhouse gas emissions on the GMUG NFs.

II. Riparian Management Zones and Groundwater Dependent Ecosystems

We support the desired conditions in the Draft Forest Plan for riparian management zones (RMZs) and groundwater dependent ecosystems (GDEs). We also appreciate the specific mention of fens in desired condition FW-DC-RMGD-05, the language change with respect to dynamic equilibrium in FW-DC- RMGD-04, the addition of springs to the definition of the RMZ, and the addition of FW-STND-RMGD- 10 and FW-GDL-RMGD-15. The latter two should greatly improve the Forest Service[rsquo]s ability to protect wetlands, including geographically rare and irreplaceable fen wetland ecosystems, that are critical to local and regional biodiversity, sustaining stream flows and water quality, and carbon sequestration.

The Draft Forest Plan has clarified that the RMZ only includes wetlands larger than [frac14] acre. It is not clear how large of a gap in protection results from this limitation; therefore, with consideration of the protection afforded to GDEs by FW-STND-RMGD-10 and FW-GDL-RMGD-15, we recommend clarifying the effect of this limitation. Specifically, we recommend estimating in the Final EIS the acreage and percent of wetlands, and the functions and values of those wetlands, that would be left vulnerable to degradation under this framework, so that the potential impacts to such wetlands are more clearly understood. We also note that Executive Order 11990 still applies to wetlands smaller than [frac14] acre.

As now stated, standards FW-STND-RMGD-08 and FW-STND-RMGD-10 apply to [ldquo]management activities[rdquo] and [ldquo]management actions[rdquo], respectively. In the previous working draft, the standard that is now FW-STND-RMGD-08 was stated to [ldquo]allow only those actions[rdquo] that maintain or restore riparian ecosystem conditions. We recommend clarifying that the management activities and actions referred to in these Draft Forest Plan standards include actions by third parties that are authorized by the Forest Service and over which the Forest Service has discretion or clarifying in the Final EIS which activities these standards do or do not apply to. If it is the Forest Service[rsquo]s intent to allow third-party actions over which it has discretion, such as leasable and salable mineral activities, to not maintain or restore the stated riparian conditions or to alter the hydrology of GDEs, then we urge the Forest Service to make that clear in the Final EIS and analyze the effects of that decision. We make a similar recommendation for FW-GDL-RMGD-15. We recommend clarifying that this guideline applies to third party projects or wording this guideline to ensure its application to third party projects (e.g., [ldquo]require[rdquo] projects to avoid or mitigate negative impacts to the stated ecological

services). If the Forest Service does not intend this guideline to apply to third party projects, please make that clear in the Final EIS and analyze the effects of that decision.

FW-STND-RMGD-09 provides that clear-cut harvest of desired native riparian vegetation shall not occur in RMZs. We recommend providing, in this or a separate standard, additional specificity on the vegetation management activities that would be allowed in the RMZ, with consideration of what additional restrictions on logging within the RMZ may be needed to prevent unnecessary or harmful removal of desired native vegetation. We also recommend discussing in the Final EIS how native vegetation in the RMZ is determined to be desired or not.

Guideline FW-GDL-RMGD-10 was removed from the earlier working draft of the Forest Plan. It directed that new sand and gravel pit extraction, and/or placer mining/extraction, should be located outside of the RMZ. The justification for removing this guideline was lack of authority for such restriction on placer mining, and the fact that sand and gravel pits are inherently located in RMZs. We understand this reasoning and recommend considering whether a standard or guideline for protecting certain RMZs (e.g., more ecologically sensitive or critical RMZs or RMZs upstream from public water supply intakes on classified surface water supply streams) may be warranted as well as whether a guideline or management approach for minimizing the impacts of these mining and extraction activities could be helpful in preventing unnecessary degradation of the RMZ.

Guideline FW-GDL-RMGD-12 was removed from the earlier working draft of the Forest Plan. It provided direction for locating temporary incident management facilities outside of RMZs and mitigating effects when no practical alternative exists. The justification for removing this guideline is that it was redundant with direction to follow the Watershed Conservation Practices Handbook. Due to the sensitivity of these critical ecosystems, we recommend considering if these guidelines are worth repeating/reinforcing in the Forest Plan. This could provide a warranted floor of protection specific to the needs of the GMUG NFs in the case of changes to nationwide minimum requirements in the Handbook.

III. Aquatic Ecosystems

The Aquatic and Riparian Ecosystems section of the Draft EIS (p. 115) states, [ldquo]Where a departure from ecological integrity is indicated and sufficient data are available, we discuss whether conditions are due to contemporary management or other drivers and stressors outside of Forest Service control.[rdquo] Each of the following subsections on individual aquatic or riparian ecosystems states that conditions of the ecosystem are departed from reference conditions for one or more key ecosystem characteristics.

However, none of those subsections discusses whether conditions are due to contemporary management or other drivers and stressors outside the Forest Service[rsquo]s control. Since this evaluation can be key to making decisions on management approaches, we recommend, to the extent data or observations are available, discussing the reasons for the stated departures from reference conditions, or clarifying that no such data are available for any of the ecosystems addressed in this section.

Despite the departure from reference conditions, the Draft EIS (p. 117) states, [ldquo]Current available information suggests that aquatic, riparian, and wetland ecosystems and their key characteristics generally maintain high integrity.[rdquo] It is unclear what is the basis for this conclusion; therefore, we recommend explaining how moderate departure, or departure in the case of rivers/streams and cottonwood riparian ecosystems, from reference conditions (pp. 116-117) is consistent with high ecosystem integrity.

As stated in the Draft Forest Plan, the purpose of a guideline is the basis for determining when departure from its terms is allowable; therefore, we recommend adding a purpose of [ldquo]floodplain connectivity[rdquo] to FW-GDL-AQTC-07. During rainstorms and snow melt, large wood can act as an obstacle to flowing water, forcing high flows into the nearby floodplain along with any sediment and nutrients it may be carrying, contributing to floodplain development and reducing downstream flooding. An assessment of aquatic habitat and large woody debris in the Revised Draft Assessment for Watersheds, Water, and Soil Resources (page 9, Table 4) shows that most watersheds in the GMUG NFs are either in fair or poor condition for large woody debris recruitment in aquatic ecosystems. Out of 231 watersheds, 53, or 23%, are assessed as good; 110, or 48%, are in fair condition, and 68, or 29%, are in poor condition. Due to the degraded conditions, we also recommend considering addition of an objective to carry out restoration projects to supplement large woody debris in aquatic ecosystems and restore processes that naturally replenish large wood in streams. The National Large Wood Manuel (January 2016)2 may be a helpful resource for considering such an objective [Bureau of Reclamation and U.S. Army Engineer Research and Development Center (USBR and ERDC). 2016. National Large Wood Manual: Assessment, Planning, Design, and Maintenance of Large Wood in Fluvial Ecosystems: Restoring Process, Function, and Structure. 628 pages + Appendix. Available: www.usbr.gov/pn/ and http://cwenvironment.usace.army.mil/restoration.cfm (click on [ldquo]River Restoration,[rdquo] then [ldquo]Techniques[rdquo]).]

We also note that the Draft EIS has a section on Effects on Riparian Ecosystems from Climate Variability (p.127) but does not have such a section for Aquatic Ecosystems. Since climate change is expected to have adverse effects on aquatic ecosystems that may influence how the Forest Service chooses to manage them, we recommend adding a section on Effects on Aquatic Systems from Climate Variability.

IV. Watersheds and Water Resources

The Draft Forest Plan does not include standards or guidelines for protecting watersheds, water resources or water quality. As pointed out by the Forest Service (p. 342 of Draft Forest Plan), the standard and guideline that were present in the earlier working draft, and which required that activities comply with Watershed Conservation Practices Handbook and minimize impacts to water quality and quantity, have been revised into management approaches. Due to the overriding importance of water resources and because it is more difficult to achieve desired conditions without benchmarks like standards and guidelines, we recommend reinstating these management approaches as standards. This would ensure that authorized or conducted activities would not have significant adverse effects on watershed resources, including water quality or water quantity. We also suggest considering whether it may be helpful for the Forest Service to include an objective that lays out a timeline and approach for identifying additional priority watersheds.

Ephemeral Streams

EPA is concerned with the lack of protection for ephemeral channels in the Draft Forest Plan. Ephemeral channels perform a diversity of important hydrologic, biochemical, and geochemical functions that directly affect the integrity and functional condition of higher-order waters downstream. For example, ephemeral streams provide critical hydrologic functions, including moving water, sediment, nutrients, and debris through the stream network and providing connectivity within the watershed. Ephemeral streams also serve an important role in maintaining downstream water quality by providing cycling and removal of pollutants at the interface of water, sediment and organic matter, as well as through plant species living along such streams. Their role in processing

and transport of organic matter is also critical to the productivity of downstream receiving waters. Healthy ephemeral waters with characteristic plant communities control rates of sediment deposition and dissipate the energy associated with flood flows. Ephemeral washes also provide habitat for breeding, shelter, foraging, and movement of wildlife. Many plant populations are dependent on these aquatic ecosystems and adapted to their unique conditions. The potential damage that could result from disturbance of ephemeral waters includes alterations to all these hydrologic functions that natural channels provide in ecosystems, as well as impacts to valuable habitat for wildlife.3 [See, e.g., Levick, L., J. Fonseca, D. Goodrich, M. Hernandez, D. Semmens, J. Stromberg, R. Leidy, M. Scianni, D. P. Guertin, M. Tluczek, and W. Kepner. 2008. The Ecological and Hydrological Significance of Ephemeral and Intermittent Streams in the Arid and Semi-arid American Southwest. U.S. Environmental Protection Agency and USDA/ARS Southwest Watershed Research Center, EPA/600/R-08/134, ARS/233046, 116 pp.]

Due to the numerous essential functions of ephemeral streams detailed in part above, we recommend including a standard or guideline for protection of ephemeral streams similar to that included in the 2007 Proposed Plan, which stated, [ldquo]Mechanical ground disturbance should be avoided in or immediately adjacent to ephemeral drainage features that flow in response to local storm events or snow melt.[rdquo] If the Forest Service decides not to include such a measure, we recommend analyzing in the Final EIS the resulting effects to ephemeral streams and therefore overall watershed health on the GMUG NFs, including effects to hydrologic function, water quality, aquatic habitat, and wildlife and plant species.

Geomorphic Floodplain

As described in the GMUG[rsquo]s Revised Draft Assessments, a properly functioning and hydrologically connected floodplain promotes species diversity and biological productivity in the riparian zone and stores substantial volumes of surface and shallow groundwater. The floodplain is also the area within which a stream functions to maintain its dynamic equilibrium; therefore, without specific protection, other goals of the Forest Plan may be hindered. Executive Order 11988 requires that [ldquo]Each agency shall take floodplain management into account when formulating or evaluating any water and land use plans[rdquo] and requires taking action [ldquo]to restore and preserve the natural and beneficial values served by floodplains.[rdquo] While the Draft Forest Plan acknowledges in Table 41 that Executive Order 11988 applies and includes a guideline to avoid placing facilities in the floodplain (FW-GDL-INFR-08), this guideline does not prevent or minimize all activities which could have adverse impacts on floodplain functions and values; rather, it appears focused on protecting infrastructure. We note that protection for the geomorphic floodplain was included in the 2007 Proposed Plan by including it in the definition of the [ldquo]water influence zone.[rdquo] We appreciate why the Forest Service may not wish to include it in its definition of the RMZ, and so recommend that the Forest Plan include one or more specific standards or guidelines for protection and restoration of the natural and beneficial values served by floodplains.

Water Quality

We recommend including in the Forest Plan a standard or guideline for situations where a Clean Water Act (CWA) total maximum daily load (TMDL) has been established for impaired waters in an area of potential impacts. We recommend that the measure require that pollutant loads comply with the TMDL allocations for point and nonpoint sources, or if new loads or changes in the relationships between point and nonpoint source loads are created, that the Forest Service will work with the Colorado Department of Public Health and Environment to

revise TMDL documents and develop new allocation scenarios that ensure attainment of water quality standards. Where TMDL analyses for impaired water bodies within or downstream of a planning area still need to be developed, we recommend that proposed activities in the drainages of CWA impaired or threatened water bodies be either carefully managed to prevent any worsening of the impairment or avoided altogether where such impacts cannot be prevented.

Groundwater

If shallow aquifers are present and could be impacted by future Forest Service-authorized project activities, then we recommend the Forest Plan include appropriate standards and guidelines to address siting of facilities and mineral activities to protect these vulnerable resources, including water wells. We also recommend that the Forest Service require best management practices such as: establishing proper equipment and vehicle fueling and maintenance practices; providing well-maintained toilets, including secondary containment pans under portable toilets where possible; inspecting vehicles, equipment and storage tanks regularly for leaks; and developing a spill plan. Several of the management measures and design criteria contained in the Forest Service's National Core BMP Technical Guide and the Watershed Conservation Practices Handbook may provide a co-benefit of protecting shallow aquifers; however, we recommend considering if these guidelines are worth repeating/reinforcing in the Forest Plan. This could provide a warranted floor of protection specific to the needs of the GMUG NFs in the case of changes to nationwide minimum requirements in the Handbook.

V. Soil Resources

We recommend expressing FW-GDL-SOIL-02 in a form that doesn[rsquo]t restrict this measure[rsquo]s applicability to solely vegetation management activities since vegetation management activities are not the only type of activity that can create detrimental soil conditions. As currently stated, this guideline appears to allow various types of activities, such as mineral extraction, trail building, ski area construction activities, and livestock grazing, to result in unlimited amounts of ground cover loss, detrimental soil displacement, erosion, and compaction.

FW-GDL-SOIL-05 provides that new surface-disturbing management activities should not occur on landslide-prone areas. In addition to landslide-prone areas, we recommend avoiding or minimizing new surface-disturbing activities in areas with fragile/sensitive, including severely erodible, soils. Without such direction, it may be difficult to achieve the desired condition for soil resources, FW-DC-SOIL-01.

FW-GDL-SOIL-06 provides that project activities should provide sufficient effective ground cover. We recommend providing more clarity on what amount of ground cover is considered sufficient or how that amount will be determined on a site-specific basis. We also recommend clarifying the timing of this requirement, as it is not currently clear whether this guideline requires keeping sufficient ground cover in place during project activities or reestablishing sufficient ground cover after an activity has taken place.

VI. Energy and Mineral Resources

As described in the Draft EIS, there are approximately 600 abandoned mine sites that have been inventoried and evaluated in the GMUG, 800 mine-related features such as waste rock dumps and mill tailings piles that could negatively affect environmental resources, and 49 to 60 miles of streams the GMUG boundaries that do not meet water quality standards due to metal concentrations likely related to historic mining activities. Due to this ongoing threat to water resources, we recommend including standards or guidelines to minimize water quality impacts from future projects that may disturb mining waste and workings. We also recommend identifying priority areas for remediation.

To assist in reaching ecological reclamation goals, we recommend adding to FW-STND-ENMI-03 a requirement for either 1) establishing baseline conditions through pre-project reconnaissance and using this information to inform the approach to reclamation, or 2) using a reference-based approach to establish performance standards for the demonstration of reclamation success.

VII. Rangelands, Forage, and Grazing

The desired conditions for bare soil and vegetation cover in FW-DC-RNG-02 and the standards for livestock utilization and the Grazing Response Index in FW-STND-RNG-08 are restricted to [ldquo]key areas.[rdquo] A key area is defined in the Forest Plan[rsquo]s glossary as [ldquo][a] relatively small portion of a range selected because of its location, use or grazing value as a monitoring point for grazing use. It is assumed that key areas, if properly selected, will reflect the overall acceptability of current grazing management over the range.[rdquo] We recommend describing in the Final EIS how the Forest Service ensures that these small areas accurately reflect the condition of the larger range.

Guidelines FW-GDL-RNG-14 and FW-GDL-RNG-15 were removed from the earlier working draft of the Forest Plan. They provided direction for avoiding concentrated use of livestock in montane meadows and riparian management zones. The justification is that these guidelines were redundant with direction to follow the Watershed Conservation Practices Handbook. Due to the importance of such measures for protecting these critical ecosystems, we recommend considering if these guidelines are worth repeating/reinforcing in the Forest Plan. This could provide a warranted floor of protection specific to the needs of the GMUG NFs in the case of changes to nationwide minimum requirements in the Handbook.

FW-GDL-RNG-09 and FW-GDL-RNG-12 refer to the Watershed Condition Practices Handbook. This should be corrected to the Watershed Conservation Practices Handbook.

VIII. Monitoring

We appreciate that the Draft Forest Plan adds a measure to monitor the implementation status of national core best management practices for water quality management. We recommend also monitoring the effectiveness of implementing those best management practices to the extent this is not reflected by other indicators and measures of the monitoring plan. We also recommend including monitoring for

FW-OBJ-WTR-04, an objective to trend at least 15 percent of subwatersheds toward improved watershed conditions over the life of the plan.

Since management should be informed by, and adapt to, information on actual conditions on the ground, we are concerned by the scarcity of adaptive management actions for the monitoring questions addressing soils, watersheds, and aquatic, wetland, and riparian ecosystems (Tables 23 and 24 of the Draft Forest Plan, Monitoring Questions 9 and 10). There is one adaptive management action in response to monitoring for desired condition FW-DC-RMGD-01 ([ldquo]Revise allotment management plans to address streambank issues where needed[rdquo]). While this is an important management action, it is focused on the long term and restricted to streambank issues; therefore, we recommend adding an adaptive management action to revise annual operating instructions when needed to address degradation of the stream channel, streambank, riparian management zone, or GDEs. This would be consistent with the first management approach in the Rangelands, Forage, and Grazing section of the Forest Plan.

Adjusting annual operating instructions and allotment management plans also appears to be an appropriate potential adaptive management action in response to failure to meet other desired conditions, including FW-DC-SOIL-01, FW-DC-WTR-03, and FW-DC-AQTC-01. We also recommend identifying additional adaptive management actions to address the plan components addressed in these tables of the monitoring plan, including FW-DC-RMGD-01, FW-DC-SOIL-01, FW-DC-WTR-03, FW-DC-AQTC- 01, and FW-DC-AQTC-02. Such actions could include specific types of restoration projects (e.g., increasing large wood and large wood recruitment), exploring acquiring instream flow rights, and adjusting recreation management.

IX. Executive Order 14008

Executive Order 14008, Tackling the Climate Crisis at Home and Abroad, instructs federal agencies to deploy their full capacity to combat the climate crisis by implementing a Governmentwide approach that, among other things, reduces climate pollution in every sector of the economy; increases resilience to the impacts of climate change; protects public health; and conserves our lands, waters, and biodiversity. It also requires agencies to work toward the goal of conserving at least 30 percent of our lands and waters by 2030. We recommend considering these directions when selecting a final alternative.