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Comments: The U.S. Environmental Protection Agency Region 8 reviewed the U.S. Department of Agriculture Forest Service's Draft Supplemental Environmental Impact Statement (SEIS) for Oil and Gas Leasing on the Little Missouri National Grassland unit of the Dakota Prairie Grasslands (Grasslands) in North Dakota (CEQ No. 20180260). In accordance with our responsibilities under Section 102(2)(C) of the National Environmental Policy Act (NEPA) and pursuant to Section 309 of the Clean Air Act (CAA), the EPA provides the enclosed comments on the Draft SEIS. Our comments include recommendations for protecting air and water resources on the Grasslands.

The Draft SEIS was prepared to analyze what, if any, changes need to be made to the decisions about oil and gas leasing on the Grasslands since the environmental review was completed for the 2001 Northern Great Plains Management Plans Revision and the subsequent 2003 record of decision. Since this time, changes to the pattern of oil and gas development and the type of operations occurring in the area warrant a revised analysis. The Draft SEIS includes an updated reasonably foreseeable development (RFD) scenario and other changes in resource conditions to determine the adequacy of existing lease stipulations. Alternative 1 continues leasing with current stipulations. Alternative 3, the USFS's Preferred Alternative, provides new and revised stipulations to comply with current law and to provide additional protections for resources of concern.

In addition to the scoping comments EPA provided to the USFS on September 29, 2015, detailed comments related to the impacts associated with the preferred alternative and potential mitigation options described in the Draft SEIS are included in the enclosure. For protection of air resources, we recommend strengthening the proposed timing limitation and other considerations to reduce predicted air quality impacts. We also provide recommendations to help avoid possible adverse impacts to surface water and groundwater resources.

Effective October 22, 2018, the EPA no longer includes ratings in our comment letters. Information about this change and the EPA's continued roles and responsibilities in the review of federal actions can be found on our website at: [https://www.epa.gov/nepa/environmental-impact;statement-rating\[shy\] system-criteria](https://www.epa.gov/nepa/environmental-impact;statement-rating[shy] system-criteria).

We appreciate the opportunity to participate in the review of this project and are committed to working with you as you prepare the Final SEIS. If you have any questions or comments, please contact me at (303) 312-6704, or Ethan Aumann of my staff at (303) 312-6773 or aumann.ethan@epa.gov.

Sincerely, Philip S. Strobel

Director, NEPA Compliance and Review Program Office of Ecosystems Protection and Remediation Enclosure

Enclosure to Dakota Prairie Grasslands Draft SEIS Comment Letter

1. Air Resources

We appreciate that the USFS worked with the EPA early in the NEPA process to develop an emission inventory and air quality analysis for this project. We found the coordination with federal and state agencies to be helpful and we welcome the opportunity to be involved in future efforts to avoid adverse air quality impacts.

The air quality analysis presented in the Draft SEIS predicts elevated nitrogen dioxide (NO₂) and particulate

matter (PM) concentrations near the emission sources, particularly during fracking and completion operations. The analysis predicts impacts to air quality related values (AQRVs) including visibility and deposition at the Theodore Roosevelt National Park. We also found that some components of the analysis do not align with the EPA's Guideline on Air Quality Modeling (Guideline), which could reduce the representativeness of the analysis. For example, the modeling excluded receptors in areas with public access, the model results were not assessed in a form consistent with the Guideline, and hazardous air pollutants were not assessed in the project area. As a result, the model may under-predict impacts or may not disclose all the potential impacts to air quality in the project area.

To address possible impacts to human health from elevated NO₂ and PM concentrations, the Draft SEIS proposes to retain a stipulation establishing a 0.25-mile buffer around developed recreation sites from May 1 to December 1. We are supportive of this proposed stipulation because the approach should reduce the potential for health impacts and address our concerns with the air quality analysis. To help ensure that the proposed stipulation is protective of human health and minimizes potential air quality impacts, we provide the following additional points for consideration:

[bull] The 0.25-mile buffer was developed based on an assumption in the model that reduced emission equipment meeting Tier 4 emission rates will be used. We did not find a corresponding stipulation that would require the use of Tier 4 engines. We recommend that the USFS consider opportunities to use Tier 4 drilling and fracturing pump engines to ensure the 0.25-mile buffer is protective. Recent Resource Management Plans (RMPs) prepared by the BLM in Montana (e.g. 2015 Miles City Office RMP) have required the use of these lower-emitting engines. Using lower emitting equipment would also be expected to reduce regional impacts that could affect AQRVs at Theodore Roosevelt National Park and other areas assessed in the analysis.

[bull] If Tier 4 engines are not required, we recommend the air quality analysis identify, and stipulations reflect, the appropriate buffer distance if Tier 2 drill rigs and fracturing pumps are used.

[bull] We understand the proposed timing limitation from May 1 to December 1 is intended to limit exposure to visitors during the peak recreation season. To reduce possible impacts to human health during the remainder of the year, we recommend the USFS implement a method for notifying visitors of the potential risk for exposure.

[bull] The proposed stipulation identifies recreation site classifications for which the timing limitation applies. We recommend including a reference to the site classification descriptions since it is unclear what existing and future recreation sites would be protected by the stipulation. To reduce possible impacts to human health in the most heavily-visited areas, we also recommend that the stipulation include a buffer for inhabited structures and the border of Theodore Roosevelt National Park.

To further reduce possible impacts to human health and air quality impacts identified in the Draft SEIS, we provide the following additional recommendations for your consideration. We often see these or similar commitments included in NEPA oil and gas projects:

[bull] We recommend that any emission reduction strategies included in the emission inventory and air quality analysis be carried forward as stipulations. One such measure is the construction of roads that have been surfaced (as with scoria) and watered or treated to reduce dust generated by traffic and wind erosion.

[bull] We recommend that the USFS consider requiring that operations use closed loop drilling, which would reduce emissions associated with heavy-duty truck trips and have co-benefits for water resources. Avoiding the use of highly variable sources of toxic air pollutants during completion and production operations, such as pit flares, is another best management practice USFS may consider.

[bull] To minimize soil disturbance and to increase opportunity for effective controls, we recommend that the

USFS consider the consolidation of facilities and pipelines to convey product, gas, and produced water:

[bull] We note that recent RMPs prepared by the BLM in Montana (e.g. 2015 Miles City Office RMP) have included a lease notice notifying the lessee or operator that prior to project-specific approval, additional air resource analysis may be required. We recommend the USFS consider whether such a lease notice is appropriate for the Grasslands.

2. Surface Water and Groundwater Resources

We thank the USFS for addressing many of the surface water and groundwater scoping comments from our September 29, 2015 letter and for providing a description of water resources in the project area. To add clarity and further protect water resources, we provide the following comments for your consideration.

Surface Water Mitigation

As described in our September 29, 2015 scoping letter, we reiterate the importance of protecting water resources in the project area. The EPA supports the USFS proposal to retain a no surface occupancy (NSO) stipulation within 0.25 miles of the Little Missouri River. We also support the controlled surface use (CSU) stipulation for water, wetlands, woody draws, riparian, and floodplains. The stipulation states: "Try to locate activities and facilities away from the water's edge and outside the riparian areas, woody draws, wetlands, and floodplains;" however, it does not specify any setback distances. It is the USFS's responsibility to determine appropriate stipulations for the Draft SEIS which can include stipulated setbacks from sensitive resources that can help prevent impacts to those resources. The Region 8 Office of Water Protection developed the following water resource setback recommendations based on a review of technical and policy literature, a review of existing state regulatory policies and requirements, and a survey of setback practices across federal land management units. This analysis revealed a range of existing setback requirements and practices. Region 8 selected setback distances based on this analysis and on best professional judgement informed by the EPA's experience in spill response and remediation and knowledge of watershed processes. The recommendations include greater setback distances for critical water resources such as drinking water sources and smaller setbacks for less critical resources such as ephemeral waters. We recognize that each federal land unit has unique attributes that may cause the USFS to apply different stipulations than those recommended here. Those attributes could include topography, soil stability, percent vegetative cover, precipitation patterns, mineral resource characteristics, or uniquely important resources.

To avoid the potential for project activities to contribute to water quality standards violations and to provide a buffer for attenuating or remediating spills and sediment runoff, we recommend the USFS include the following NSO setbacks in the final selected alternative. These setback distances are likely to be protective of planning area water resources in most circumstances. The EPA recognizes that the USFS may adjust setback distances during project permitting to reflect site-specific conditions.

[bull] Minimum 100-foot NSO setback from slopes greater than 30%;

[bull] Minimum 500-foot NSO setback for flowing waters (rivers and streams) or 100-year floodplain, whichever is greater;

[bull] Minimum 500-foot NSO setback for lakes, ponds and reservoirs, wetland and riparian areas and springs;

[bull] Minimum 750-foot NSO setback for CWA Section 303(d) impaired waters;

[bull] Minimum 1,000-foot NSO setback for state or federally designated exceptional waters; [bull]

Minimum 100-foot NSO setback for intermittent and ephemeral streams; and

[bull] NSO within Areas of Critical Environmental Concern or other valued areas where important aquatic resources may be impacted.

For examples of water resource stipulations that have been adopted in the region, we refer the USFS to the 2015 BLM Miles City Field Office RMP and 2017 Fort Berthold Programmatic Environmental Assessment (PEA) for oil and gas development.

Surface Water Characterization and Impacts

The Draft SEIS refers to North Dakota's 2012 Integrated Report for Clean Water Act 303(d) Listed Waterbodies. The EPA recommends that the USFS refer to North Dakota's 2016 Integrated Report for the latest available information on impaired waters within the project area. We also recommend that the USFS include a table in the Final SEIS listing all 303(d) impaired waters in the project area, along with the associated waterbody segment ID numbers from North Dakota's Integrated Report, designated uses, pollutant(s) and pollutant cause (known or unknown), and if a TMDL exists for that waterbody segment.

The Draft SEIS states that no direct or indirect effects to Clean Water Act Section 303(d) listed waters are expected from oil and gas project activities (Draft SEIS p. 60, Draft Watershed and Hydrology Report p. 16, 17, 23). We acknowledge that current oil and gas development may not contribute to current impairments. The EPA recommends that the Final SEIS assess whether additional impairments are possible in the future and discuss the measures that will be applied to avoid such impacts .

The Draft SEIS refers to several waterbodies impaired for E. coli. The Draft SEIS also states: "Pollution from sewage and wastewater is mainly caused by undersized wastewater treatment plants in small affected communities and development of new crew camps where sewage disposal is becoming an increasing problem" (p. 57). Improper sewage disposal from crew camps could be a potential contributor to E. coli impairment, or contamination in an unimpaired waterbody. Such contamination may pose a potential hazard to both the crew and recreational users. We recommend the USFS clarify whether crew camps may be used and, if so, how regulations and stipulations will be applied to avoid the potential impacts from sewage to impaired waterbodies.

Public Drinking Water Supply Sources and Groundwater

The Draft SEIS does not mention whether there are public water supplies on the Grasslands. If there are none, we recommend the Final SEIS clearly state that there are no public water systems or other groundwater wells (domestic, agricultural, or stock) in the project area. We also note that existing recreation sites have water on site and may qualify as noncommunity public water systems. If surface or groundwater are supplying these recreation sites with drinking water, the EPA recommends the USFS make land use decisions and apply appropriate BMPs to protect the water sources to avoid future loss or treatment. Some protective measures that are commonly seen near recreation sites include restricting activities near the well or surface water intake; proper siting and selection of toilets, wastewater pump out stations, and septic system components; and management of grazing animals to keep them away from the well or intake.

The Draft SEIS states that operators will not be using groundwater for oil and gas operations and will dispose of waste fluids by underground injection into the Dakota Group formation. The Draft SEIS explains that a combination of natural barriers and regulatory safeguards are expected to protect underground sources of drinking water (USDWs) from contamination. To clarify this discussion, the EPA recommends the Final SEIS address whether there are any recharge areas in the project area for any of the aquifers that are below the surficial aquifers. Recharge areas are where water enters the aquifer and where deeper aquifers are vulnerable to both surface contamination and surface activities that limit water infiltration. Impacts to the aquifer at its

recharge zone may affect the rest of the aquifer over time and stretch beyond the boundaries of the Grasslands. If there are recharge areas in the project area, we recommend the Final SEIS describe ways in which possible surface contamination and impacts to infiltration will be minimized. We also recommend outlining a plan for remediating future unanticipated impacts to USDWs.

Erosion and Sediment Load, Analysis

The Draft SEIS acknowledges that roads and pipelines are a likely source of sediment to waterbodies, including from disturbance to soils in upland and riparian areas. Roads and pipelines are not subject to the same NSO and CSU stipulations as well pads and may occur in a wide variety of settings, including direct stream crossings. Given the uncertainty of roadway locations and the large amount of land where erosion risk is high (Table 20), we recommend the Final SEIS assess whether current stipulations and BMPs for this sediment source are adequate to minimize direct or indirect impacts.

Water Resource Monitoring

The Draft SEIS includes a brief description of monitoring required for national BMPs and monitoring that may be required "if there is an issue (i.e. spills, reclamation)" on the Grasslands. As noted in our September 29, 2015 scoping comments, the EPA recommends that the USFS consider and discuss a water quality monitoring program in the planning area that would cover prior to, during, and after anticipated development to detect impacts to both surface water and groundwater resources.