
From: Hayes, Miriam (Nicole) <mnhayes@blm.gov>
Sent: Thursday, March 7, 2019 4:10 PM
To: coastalplainAR; Sean Cottle
Subject: Fwd: [EXTERNAL] EPA comments on the Coastal Plain DEIS
Attachments: 18-0036-BLM DEIS Coastal Plain Oil and Gas Leasing.pdf

Nicole Hayes

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Bureau of Land Management
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----- Forwarded message -----

From: **Nogi, Jill** <nogi.jill@epa.gov>
Date: Thu, Mar 7, 2019 at 3:08 PM
Subject: [EXTERNAL] EPA comments on the Coastal Plain DEIS
To: mnhayes@blm.gov <mnhayes@blm.gov>
Cc: Vaughan, Molly <Vaughan.Molly@epa.gov>

Hi Nicole,

Attached please find the EPA's comments on the DEIS for the Coastal Plain Oil and Gas Leasing Program. A hard copy is going out in the mail to you, as well as to Mr. Ted Murphy. We look forward to continued engagement in EIS development as a Cooperating Agency for the project. Please don't hesitate to contact Molly or I if you would like to talk further about our comments and recommendations.

Thanks,

Jill

Jill A. Nogi, MPH | Manager

Environmental Review and Sediment Management Unit

EPA Region 10 | Office of Environmental Review and Assessment

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OFFICE OF
ENVIRONMENTAL REVIEW
AND ASSESSMENT

March 7, 2019

Nicole Hayes, Project Manager
Attn: Coastal Plain Oil and Gas Leasing Program EIS
222 West 7th Avenue, Stop #13
Anchorage, Alaska 99513

Dear Ms. Hayes:

The U.S. Environmental Protection Agency has reviewed the Draft Environmental Impact Statement prepared by the Bureau of Land Management for the proposed Coastal Plain Oil and Gas Leasing Program (CEQ No. 20180324; EPA Project Number 18-0036-BLM). Our review was conducted in accordance with the EPA's responsibilities under the National Environmental Policy Act and Section 309 of the Clean Air Act. The EPA is also supporting the BLM in the EIS development effort as a Cooperating Agency, which included reviewing and commenting on the Administrative Draft EIS in August 2018. We also provided scoping comments to the BLM on June 14, 2018.

The BLM proposes to implement an oil and gas leasing program within the 1.6 million-acre area of the Arctic National Wildlife Refuge known as the Coastal Plain, in accordance with Section 20001 of the Tax Cuts and Jobs Act of 2017. The EIS analyzes the potential environmental impacts of four leasing alternatives, each of which assumes 2,000 acres of surface disturbance, and a no action alternative. The decisions to be made through this EIS include the areas to offer for oil and gas leasing and the terms and conditions to be applied to leases and subsequent oil and gas activities. Additional site-specific NEPA analysis would be required in the future prior to authorization of on-the-ground actions.

We appreciate the opportunity to review the Draft EIS. Based on our review, one of our primary concerns is that the analysis does not adequately assess the potential cumulative impacts to air quality and air quality related values from implementing an oil and gas leasing program within the Coastal Plain. The document relies upon a qualitative, rather than quantitative, air quality analysis, and supports this decision largely upon an assertion that "... a quantitative analysis would be highly speculative and result in a worst-case scenario outcome." The EPA disagrees with this statement, as representative, quantitative analysis is commonly conducted for NEPA analyses at the oil and gas planning stage, and information is currently available to conduct such an analysis to support informed decision making for oil and gas leasing in the Coastal Plain.

Another concern is that the qualitative analysis relies upon comparison to other recent air quality analyses conducted by BLM and BOEM for oil and gas development in the Alaskan arctic region, including the Greater Mooses Tooth-2 project, stating, "Potential emissions from future development proposals are anticipated to be of a type and scale evaluated in the GMT-2 Final SEIS..." This may be true of individual projects in the Coastal Plain, but the total potential future development is assumed to be significantly larger than GMT-2, as specified in Table 3-3 (21 to 143 million barrels annually, compared to 4.6 million barrels annually by GMT-2). Consequently, the total potential emissions are expected to be far greater than GMT-2, possibly up to 30 times higher (if emissions are assumed to scale linearly with annual oil production). This difference in scope demonstrates that the DEIS is too narrowly focused on future project-specific impacts, rather than on the potential cumulative impacts of the

proposed leasing program overall. Further, as acknowledged in the DEIS, the cumulative air quality analyses conducted previously by BLM and BOEM did not include oil and gas development in the Coastal Plain, and therefore are not relevant to an analysis of the potential cumulative impacts to air quality within the program area. These issues further support our recommendation that an adequate assessment of the potential cumulative impacts to air quality and AQRVs is still needed in the EIS.

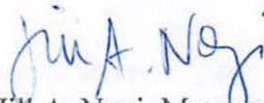
To support informed decision-making regarding areas to offer for oil and gas leasing and the terms and conditions to be applied, we continue to recommend that the EIS consider air pollutant emissions likely to occur on the leases, and the potential impacts to air quality and air quality related values from these emissions. Although additional air quality analysis may be required prior to authorization of future activity in the program area, per Required Operating Procedure 6 (pg. 2-17), such project-specific analyses would only be conducted on a case-by-case basis and would not be of an appropriate scope and scale to assess the cumulative impacts of the overarching Coastal Plain leasing program. We continue to recommend that the BLM convene an air quality technical workgroup to discuss an appropriate methodology for a quantitative air quality analysis to support this planning-level decision, beginning with development of an emissions inventory.

We are also concerned that the range of alternatives does not include leasing programs with a surface area impact of fewer than 2,000 acres. The authorizing legislation for this action, the Tax Cuts and Jobs Act of 2017, requires the Secretary of the Interior to "authorize up to 2,000 surface acres of Federal land on the Coastal Plain to be covered by production and support facilities." Section 20001 of Public Law No. 115-97 (Dec. 22, 2017) (emphasis added). We therefore believe that a range of alternatives that includes leasing programs with fewer impacted acres is appropriate and would allow for the meaningful comparative analysis called for by the Council on Environmental Quality regulations implementing NEPA.

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/epa-review-process-under-section-309-clean-air-act>.

We appreciate the opportunity to review the Draft EIS for the Coastal Plain Oil and Gas Leasing Program and look forward to working with you as you prepare the Final EIS. If you have questions concerning our comments, please contact Molly Vaughan of my staff in Anchorage, at (907) 271-1215 or vaughan.molly@epa.gov, or you may contact me at (206) 553-1841 or nogi.jill@epa.gov.

Sincerely,



Jill A. Nogi, Manager,
Environmental Review and Sediment Management Unit

Enclosure: U.S. Environmental Protection Agency Coastal Plain Oil and Gas Leasing Program Draft
EIS Detailed Comments

cc: Ted Murphy, BLM Alaska Acting State Director

**U.S. Environmental Protection Agency
Coastal Plain Oil and Gas Leasing Program Draft EIS
Detailed Comments**

Alternatives Analysis

We are concerned that the each of the alternatives assumes that surface disturbance impacts would total the 2,000-acre cap imposed by the Tax Act. This is driven in turn by the purpose and need statement, in which the BLM defined the purpose and need such that all alternatives must include 2,000 acres of surface disturbance. The language of the Tax Act, however, would appear to support both a broader purpose and need statement and a broader range of alternatives, stating that “the Secretary shall authorize *up to* 2,000 surface acres of Federal land on the Coastal Plain to be covered by production and support facilities.”¹ In addition, assuming the Tax Act mandates a 2,000-acre leasing program, a potential conflict with federal law does not necessarily render an alternative unreasonable, although such conflicts must be considered. Rather, alternatives that are outside the scope of what Congress has approved or funded must still be evaluated in the EIS if they are reasonable.² We therefore believe that the EIS should analyze a broader range of surface disturbances, up to and including 2,000 acres. This would allow for a meaningful comparative analysis of impacts and better educate both the decision maker and the public, as contemplated by the CEQ NEPA regulations.³

We also recommend that the BLM consider expanding the way in which alternatives respond to the purpose and need. For example, the alternative analysis could evaluate and disclose ways in which a volume of oil comparable to that anticipated in the reasonably foreseeable development baseline could be extracted with reduced surface impact. By doing so, a more meaningful analysis of a full range of alternatives, including mitigating measures to reduce impacts, may be possible, in accordance with NEPA.

In addition, the structure and presentation of the alternatives in the Draft EIS makes it difficult to discern differences in potential impacts among alternatives. Where quantifiable estimates exist that would distinguish among alternatives, we recommend providing this information in tables, for ease of understanding by agency decision makers and the public. For example, planning and leasing level analyses commonly distinguish the differences among alternatives by estimating number of wells, volume of oil produced, or anticipated acres of impact to various surface resources.

Air Quality

Recommendations for conducting a quantitative air quality analysis:

We continue to recommend that the BLM convene an air quality technical workgroup, in accordance with the “Memorandum of Understanding Regarding Air Quality Analyses and Mitigation for Federal Oil and Gas Decisions through the National Environmental Policy Act Process” signed by the EPA, U.S. Department of Agriculture, and U.S. Department of Interior on June 11, 2011, which applies to federal decisions relating to on-shore oil and gas planning, leasing, or field development. We recommend that the technical workgroup discuss the preparation of a quantitative air quality analysis. According to the MOU, the first step in such an analysis would be to develop an emissions inventory based upon the

¹ Section 20001 of Public Law No. 115-97 (Dec. 22, 2017), referred to as Tax Cuts and Jobs Act of 2017 (emphasis added).

² Council on Environmental Quality, *Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations* (March 23, 1981), Question 2b.

³ 40 C.F.R. § 1502.14.

reasonably foreseeable development scenario. For planning level analyses, the MOU suggests developing a range of scenarios (e.g., low, medium, high), which addresses the concern expressed in the DEIS that a quantitative analysis would be “worst-case.” We continue to recommend that the technical workgroup then use the emissions inventory to determine the appropriate next steps in the analysis.

We are aware that the BLM is making progress toward completing a North Slope Regional Air Quality Model and recommend that the technical workgroup consider whether this model could be utilized in the quantitative air quality analysis to efficiently support decision making for the Coastal Plain Leasing Program.

Future project-specific air quality modeling:

Under Required Operating Procedure 6, the BLM may require future project-specific proposals to include air quality monitoring, emissions inventory development, air quality modeling, and/or emission reduction measures. We support the future use of these tools to understand and prevent potential air quality impacts. We do not support the assertion in the DEIS that “All action alternatives are likely to be below applicable air quality standards for all phases of a future development project,” based upon reference to previous project-specific air quality modeling. Due to different meteorology in the Coastal Plain compared to previously analyzed projects, as well as the proximity of Kaktovik to the potential development, such analyses may not be representative of potential near-field impacts from specific projects. We also note that EPA comments on other oil and gas development projects, such as GMT-2, indicated that 1-hour NO₂ concentrations at the fence line were of sufficiently high levels to warrant a closer look to determine if they were above the National Ambient Air Quality Standards. For example, GMT-2 modeling demonstrated 1-hour NO₂ impacts very near to the 1-hour NO₂ NAAQS under all scenarios. Given the greater emissions expected from development in the Coastal Plain as compared to GMT-2, there is the possibility that NO₂ impacts from such Coastal Plain projects could exceed the NO₂ NAAQS or create a Prevention of Significant Deterioration increment exceedance. We recommend that the Coastal Plain EIS focus on the need for a robust air quality analysis for all future projects rather than relying upon these qualitative comparisons.

Air Quality Related Values:

The document concludes, based on past analyses, that future development projects in the Coastal Plain are unlikely to result in violation of the air quality standards and air quality related values. We recommend that this statement be amended to indicate that future projects are unlikely to significantly impact AQRVs in Class I areas. We are concerned that significant impacts to AQRVs could occur in the Arctic National Wildlife Refuge itself. The document directs attention to the nitrogen deposition impacts of the GMT-2 project on the Arctic Refuge (0.025 kilograms/hectare-year). This value significantly exceeds the 0.010 kg/ha-yr deposition analysis threshold for nitrogen, established by the Federal Land Managers in the FLAG 2010⁴ guidance document. Given that the GMT-2 project is located over 100 miles away from the Arctic Refuge, and GMT-2 emissions are much less than the total potential emissions of projects within the Coastal Plain (based on a comparison of annual oil production in Table 3-3), nitrogen deposition impacts from future development could be a concern, and warrant analysis in the EIS. We understand that high levels of acid deposition could possibly result in damage to vegetation, and the wildlife that depend on this vegetation, within the Arctic Refuge.

Our review finds that the DEIS does not identify the possibility or provide a sufficient evaluation of these potential significant impacts, and we recommend that a more robust evaluation of regional acid

⁴ Federal Land Managers’ Air Quality Related Values Work Group (FLAG), Phase I Report – Revised (2010); https://nature.nps.gov/air/pubs/pdf/flag/FLAG_2010.pdf.

deposition impacts be conducted for the proposed leasing program, based on reasonable assumptions of emissions from future projects. The evaluation should offer sufficient analysis to determine whether acid deposition impacts from oil and gas development could pose a risk to protected vegetation and wildlife within the Refuge.

Required Operating Procedures:

Required Operating Procedure 6, Item A, states that BLM may require a minimum of one year of baseline ambient air monitoring data for any pollutant of concern. We recommend the BLM consider requiring contemporaneous PSD-quality meteorological monitoring at the location of the air quality monitor. Required Operating Procedure 6, Item F, states that BLM may require mitigation measures and strategies in case an air quality analysis finds an exceedance of the NAAQS. The EPA recommends BLM expand this requirement to also include mitigation in the event an air quality analysis finds an exceedance of a PSD increment.

Other Air Quality Comments:

The document discusses the potential increase in air traffic around the city of Kaktovik. We recommend that potential impacts to air quality and health for residents of Kaktovik be addressed in the analysis.

We recommend adding a “form of standard” column to Table 3-6 Average Air Pollutant Monitoring Values, to describe how each design value was calculated.

We appreciate that the full list of hazardous air pollutants associated with oil and gas operations recommended by the EPA in our scoping comments has been identified for consideration for future project-specific air quality analyses.

In Section 3.4.11 Public Health, as part of the characterization of the affected environment, the document indicates that air quality in Nuiqsut is meeting air quality standards. As we have noted above, Kaktovik will be in closer proximity to potential development in the Coastal Plain than Nuiqsut. In addition, not all projects that have been permitted around Nuiqsut have begun development. Finally, we note that many residents of Nuiqsut continue to be concerned about air quality; the EPA is receiving an increasing number of calls expressing such concern. For these reasons, we caution against relying upon air quality data for Nuiqsut to draw conclusions about the potential impacts to air quality in Kaktovik.

In addition, the document states that “Researchers also sampled air and water for [volatile organic compounds] in Nuiqsut. Over half of the air samples included VOCs, but none exceeded federal and Alaska air quality standards.” We note that VOCs are hazardous air pollutants and as such, they are more commonly compared to risk-based concentrations developed for specific environmental media, such as air and water. In addition, it is worth noting that VOCs generally do not persist in surface water because they tend to rapidly volatilize into the air. We recommend that the EIS provide additional information regarding the method and results of the air and water VOC sampling, to clarify these statements for agency decision makers and the public.

Potential Impacts of Wastewater Disposal

Impacts from wastewater discharge:

Some waste streams associated with oil and gas development (e.g., seawater treatment plant discharges, gravel mine dewatering, and sanitary/domestic wastewater) are commonly discharged to surface waters. We therefore recommend adding “increased load of pollutants from wastewater discharges” to the list of

potential future impacts on surface waters. We appreciate that the DEIS includes discussion of possible wastewater discharges associated with oil and gas operations within the program area, in response to previous recommendations made based on our review of the Administrative Draft EIS. We continue to recommend that the EIS provide additional information regarding the potential discharges, including pollutants of concern likely to be present in the waste streams, and the potential impacts to surface waters, within the section on "Changes to Surface Water Quality."

Additionally, we recommend that the EIS include a definition for sanitary/domestic wastewater. There are definitions included for blackwater and greywater, but the document also uses the terms "sanitary" and "domestic" wastewater. The EPA and the State of Alaska each have definitions for these terms, though it may be more appropriate to use the state's definitions, as the state is the wastewater permitting authority under the Clean Water Act for the Coastal Plain.

APDES Permitting:

We recommend that the document provide references to the existing Alaska Pollutant Discharge Elimination System permits authorized by the Alaska Department of Environmental Conservation that would regulate the discharges, protect beneficial uses of the surface waters and prevent unreasonable degradation of the marine environment. Although many operations may choose to apply for a permit to dispose of wastewater via a underground injection control well or other disposal facility, there is still the chance that the operation may have to discharge under an APDES permit. Appendices D.2.3. and D.4.2. provide an overview of ADEC's authority to regulate discharges of pollutants to surface waters of the U.S. We recommend also including a list of the existing wastewater discharge permits available. For example, DEC has APDES General Permits that provide wastewater discharge authorization to oil and gas exploration, production, and development facilities in the North Slope Borough (Permit No. AKG-33-2000) and sanitary/domestic wastewater treatment facilities (AKG-57-2000 and AKG-57-3000). Facility operators can apply to DEC for authorization to discharge wastewater to surface waters of the U.S. via an existing General Permit with a Notice of Intent request for permit coverage.

Seawater Treatment Plant

While the DEIS states "Discharges of various pollutant concentrations in the future from an STP would be required to meet standards in the treatment plant's APDES discharge permit and potential mixing zone requirements," there is no discussion describing the STP, how it operates, and what purpose it serves. We recommend including this additional information in the EIS, as well as disclosing the potential impacts of the STP. Regarding the potential impacts of wastewater discharge, we note that STPs are ongoing operations resulting in at least one continuous wastewater discharge of pollutants to surface waters of the U.S., subject to NPDES/APDES permitting under the Clean Water Act. Pollutants commonly associated with seawater treatment plant operations include: total suspended solids, salinity, pH, and chlorine. Discharges can contain significant concentrations of pollutants within the vicinity of the discharge location (i.e., higher than the ambient values in the receiving surface water) that may cause or contribute to exceedances of the State of Alaska surface water quality standards, including within a mixing zone, if one is authorized.

Central Processing Facility

Aside from a brief mention in the executive summary, the DEIS does not address the potential for wastewater discharges from a central processing facility. The action alternatives considered in the analysis include the operation of at least two, and up to four, central processing facilities. We recommend that the EIS disclose information regarding the potential wastewater discharges from these

facilities, including likely contaminants of concern and the potential volume and frequency of discharges to surface waters.

Potential use of Underground Injection for Waste Disposal:

The discussion of the Reasonably Foreseeable Development Scenario in Appendix B states that “Current drilling technology is self-contained, so there are no reserve pits that could leak or pose an attractive nuisance to wildlife... Using grind and inject technology, cuttings are now crushed and slurried with seawater in a ball mill, then combined with the remaining drilling muds and reinjected into confining rock formation 3,000 to 4,000 feet underground in an approved injection well (DOI 2005). This reduces the environmental impacts of disposing of drill cuttings because it avoids the need to bury cuttings on-site or haul them to a landfill.” The discussion is presented with regard to the potential impacts of exploratory well drilling. Given that oil and gas infrastructure does not currently exist in the program area, we recommend that the EIS provide additional detail regarding where these wastes are anticipated to be injected during the exploration phase. For example, we recommend identifying the existing permitted underground injection wells in nearby oil fields and discussing their capacity to accept the additional waste from future projects in the Coastal Plain. In addition, we recommend including information on and analysis of impacts from hauling these wastes to offsite injection sites.

We note that, with regard to field development, Appendix B only briefly references the anticipated future use of underground injection wells, stating, “The potential anchor pad is expected to have a Class I or Class II disposal well, or both, which are used to dispose of industrial wastes and fluids associated with oil and gas production, respectively.” The DEIS also briefly mentions injection wells in Section 3.2.11, Solid and Hazardous Waste, stating, “Use of injection wells (Class I or Class II) in the future would be used to dispose of wastewater, produced water, spent fluids, and chemicals, as approved by the EPA, the [Alaska Oil and Gas Conservation Commission], or ADEC. Injection wells would be used to dispose of wastewater generated from the estimated field use of 2 million gallons per day. As a result, injection of wastewater reduces potential impacts on surface waters or the land by injecting wastewater deep underground into zones isolated from drinking water sources.” We recommend that the EIS include additional analysis of the anticipated need for new underground injection wells to be drilled for disposal of wastes from field operations, the likely number of wells, how fluids would be transported to disposal well sites, potential impacts associated with the wells and the transportation, and how groundwater aquifers will be protected.

Water Resources

Flood Risks:

As noted throughout the DEIS, high natural flooding during the spring break-up period is a concern throughout the proposed leasing areas. We recommend that the “Surface Water Quality” section provide additional discussion regarding how seasonal flooding is likely to impact surface water quality, including potential risks from spills during flood events. We also recommend that this section discuss the anticipated effectiveness of the various proposed lease stipulations in mitigating flood risks.

Groundwater Impacts:

We note that the discussion of potential impacts to groundwater is limited to impacts associated with future gravel mining. Elsewhere in Section 3.2.10 Water Resources, there are brief references to potential impacts to groundwater associated with water withdrawals or hydrologic impacts. For clarity, we recommend that the “Changes to Groundwater” section analyze all potential impacts to groundwater, include providing additional detail on those impacts referenced elsewhere in the section. Additional

impacts not included in the DEIS include those associated with production or injection wells or resulting from leaks or spills. Due to the active groundwater/surface water interaction in the program area, as evidenced by the large number of springs, surface activities and related impacts may also have the potential to impact groundwater quality.

Drinking Water:

The potential for impacts to drinking water are only briefly mentioned within the Water Resources chapter. We recommend that the EIS provide additional information disclosing the existing drinking water resources in the area (both surface water and groundwater sources of drinking water), including for the community of Kaktovik, and characterize the potential for impacts to the quality or quantity of those resources.

Wetlands

Vegetation types:

Our review finds the information characterizing vegetation and wetlands in Section 3.3.1 to be confusing and insufficient for assessing the potential impacts to the resources in the project area. The document briefly summarizes vegetation and wetland types in the project area, drawing information from several sources, including vegetation mapping from the Alaska Center for Conservation Science, vegetation type descriptions based on the Alaska Vegetation Classification⁵, and wetlands identification and classification from the National Wetlands Inventory, which we note is based on the Cowardin⁶ classification system. The text discussing wetland and vegetation types found in the program area, as well as the conclusions regarding potential impacts under the alternatives, are difficult to follow due to blending of information from these three sources. Further, while the DEIS acknowledges the percentage of each type of vegetation that could be impacted, it does not discuss the relevance of the vegetation types within the ecosystem. We recommend that disclosing such information in the EIS would better inform the decision-maker as to the relative impacts of the different alternatives, and whether certain vegetation types warrant increased protection from future activity in the program area.

Wetland Functions:

The DEIS states that “Relative to wetlands in temperate regions, North Slope wetlands tend to have low function for most of the hydrologic, biogeochemical, or social functions. This is because of the short, cold growing season, harsh winter conditions, remote location, low human population numbers, and the ubiquitous impermeable permafrost layer preventing groundwater flow.” The statement is unsupported by any reference or data; therefore, we recommend adding the references supporting it or removing it from the document. In the absence of wetland function or condition assessment data, or attribution for the program area, we recommend that the EIS acknowledge that the program area is largely undisturbed and that wetlands generally exist in reference-standard condition.

Comparison of Alternatives:

The DEIS presents impacts to vegetation using a narrative format to describe how impacts to vegetation types vary among alternatives, including identifying the predominant vegetation and wetland types in

⁵ Viereck, L. A., C. T. Dymess, A. R. Batten, and K. J. Wenzlick. 1992. The Alaska vegetation classification. US Department of Agriculture, Forest Serv., Pacific Northwest Research Station, Portland, Oregon. General Technical Report PNW-GTR-286.

⁶ Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Fish and Wildlife Service, Office of Biological Services, Washington, D.C., pp. 103, FWS/OBS-79/31.

areas proposed for leasing under each alternative, as well as discussing how proposed stipulations would protect various vegetation and wetland resources. We recommend summarizing the information presented here in a table, for the decision maker and the public to more easily understand how potential vegetation and wetland impacts differ among the alternatives.

Spill Prevention and Response

Section 3.4.11 Solid and Hazardous Waste includes discussion of the likelihood and consequences of spills of substances including produced fluids, oils, salt water, or other hazardous materials. We recommend that the EIS also discuss spill response measures that will be in place to mitigate the risks of spills, including strategies to communicate risks or actual emergencies to members of the public who are in the area, as well as how potential adverse impacts from spills will be mitigated by effective containment and cleanup operations.

Environmental Justice

The DEIS identifies disproportionate adverse subsistence, sociocultural, and public health impacts to multiple environmental justice communities, including Kaktovik, Nuiqsut, Arctic Village, and Venetie. In accordance with Council on Environmental Quality guidance on how to address Environmental Justice in the environmental review process,⁷ we recommend the following additional information be included in the EIS, in order to fully consider and address potential environmental justice impacts:

- Describe the efforts that have been or will be taken to meaningfully involve and inform affected communities about project decisions and impacts;
- Disclose the results of meaningful involvement efforts, such as community identified impacts;
- Disclose how potential disproportionate impacts and environmental justice issues have been or will be addressed by the BLM's decision-making process;
- Propose mitigation for unavoidable impacts that are likely to occur; and
- Include a summary conclusion, sometimes referred to as an 'environmental justice determination' that concisely expresses how environmental justice impacts have been appropriately avoided, minimized, or mitigated.

Health Impacts

While the DEIS does include discussion of potential impacts to public health, it does not include a detailed analysis, stating "This EIS does not analyze specific developments in the program area; therefore, a health impact assessment was not completed for this analysis. Health impact assessments are expected to be developed for future development projects that would require additional NEPA analysis." We note that a cumulative look at the overall health impacts of all reasonably foreseeable development in the program area would help to inform agency decision-makers and the public prior to issuance of leases. Future project-specific analyses may not be conducive to conducting such a cumulative look. We recommend that the BLM consider how best to obtain information regarding potential cumulative health impacts across the proposed leasing areas and to disclose this information in the Final EIS.

⁷ <http://ceq.hss.doe.gov/nepa/regs/ej/justice.pdf>

Reclamation

According to the DEIS, the BLM has interpreted the Tax Act as providing a temporal limit on surface development, such that “the reclaimed acreage of Federal land formerly containing production and support facilities would no longer count towards the 2,000-acre limit.” Revegetation is challenging in arctic environments, due to harsh growing conditions as well as the potential for permafrost degradation. We recommend that the EIS include additional information regarding the reclamation standard that would be applied, and how the BLM would ensure that reclamation was successful prior to authorizing additional land disturbance.

Mitigation

Chapter 2 of the DEIS lists Stipulations and Required Operating Procedures proposed to be applied to future activities in the program area under each alternative to protect sensitive resources. Where the analysis of environmental consequences in Chapter 3 identifies potential adverse impacts, we recommend that the EIS discuss the extent to which the proposed Stipulations and Required Operating Procedures will mitigate those impacts. If additional mitigation may need to be applied at the project stage to reduce impacts, we recommend that the EIS discuss available mitigation measures, including identifying any mitigation that will be required through future permitting mechanisms.

Cumulative Impacts

The DEIS includes oil and gas activities on non-federal lands among actions not included in the cumulative impacts analysis, while acknowledging that “The program area is next to State of Alaska lands and waters and contains inholdings owned by Alaska Native Corporations. Although there are no present plans to develop these non-federal lands for oil and gas, leasing in the Coastal Plain could result in exploration and development of recoverable hydrocarbons.” Therefore, to the extent information is available, we continue to recommend that the EIS include a reasonably foreseeable development estimate for development on State or Alaska Native Corporation lands within or adjacent to the program area. This will provide an improved cumulative analysis of the potential future impacts on the environment from oil and gas development in the Coastal Plain, as required by NEPA.