

Unavoidable/Residual Impacts

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Note: In response to stakeholder comments concerning the term “residual impact,” the term “unavoidable” has been added since the September 2015 workshops.



Topics

- What Are Unavoidable/residual Impacts?
- How Was the Proposed List of Unavoidable/Residual Impacts Created?
- Proposed List of Unavoidable/Residual Impacts from NEPA Documents: Highlights
- Additional Stakeholder Impacts/Issues
- Small Group Discussion: *Is there anything that should be added to the unavoidable/residual impacts lists?*



What Are Unavoidable/Residual Impacts?

- *Major unavoidable environmental impacts that cannot be fully mitigated by established avoidance and minimization measures and best management practices (BMPs).*
- What are avoidance and minimization measures, and BMPs?
 - **Avoidance measures:** Siting or designing projects so as to avoid impacts, or identifying areas off limits to development, e.g. the Teshekpuk Lake Special Area.
 - **Minimization measures:** Steps taken to reduce impacts, such as required onsite mitigation measures, BMPs, and other stipulations, e.g., reducing non-essential aircraft traffic.
 - **BMPs:** Required mitigation measures for avoiding, minimizing, rectifying, and reducing or eliminating impacts over time. BMPs for oil and gas in the NPR-A are identified in BLM's Integrated Activity Plan.



How Was the Proposed List of Unavoidable/Residual Impacts Created?

From NEPA documents:

- 2014 GMT-1 Supplemental Environmental Impact Statement (SEIS)
- 2013 NPR-A Integrated Activity Plan EIS

And recent stakeholder input:

- Regional Mitigation Workshop held in Fairbanks March 31-April 1, 2015
- Meeting with BLM and Community of Nuiqsut held May 30, 2015



How Were the NEPA Unavoidable/Residual Impacts Determined?

For each resource type, unavoidable/residual impacts were determined by considering the following criteria:

- **Intensity**
- **Duration**
- **Context**
- **Geographic Extent**

Based on these criteria, the unavoidable/residual impact to each resource was determined to be **negligible, minor, moderate, or major.**



Identified NEPA Unavoidable/Residual Impacts (Summary)

Major Impacts

- Sociocultural Systems
- Subsistence
- Environmental Justice

Moderate Impacts

- Air Quality
- Vegetation and Wetlands
- Molting and Brood Rearing Geese
- Threatened and Endangered: Spectacled Eider
- Public Health
- Cultural Resources
- Land Use and Ownership



Unavoidable/Residual Impacts: Sociocultural Systems

- **Information processing and other tensions related to the permitting process**
 - Anxiety and intra-community conflict over the continuous overload of bureaucratic and legal processes
 - Too much time required, inadequate resources to track processes
- **Devaluation of the Cultural Landscape**
 - Cultural, spiritual, or other personal values placed on families' camping, hunting, and fishing sites are substantially diminished.
- **Disruption to subsistence use area, resources, and activities**
 - Subsistence hunting and harvesting activities are central to the cultural identity and social cohesion of communities.
- **Major cumulative impacts**
 - Negative sociocultural impacts associated with development will likely continue to match or outweigh the benefits of development.



Unavoidable/Residual Impacts: Subsistence

▪ **Resource Availability**

- Aircraft traffic is the most commonly reported impact.
- Noise, traffic, odors, and infrastructure associated with the project could affect the availability of key resources such as caribou, waterfowl, and furbearers.
- Impacts could lead to increased time, costs, effort, and risks for harvesters.

▪ **User Access**

- Restricted access to subsistence areas is a primary impact.
- Physical problems using or crossing the roads and under pipelines restrict access.

▪ **User Avoidance**

- Subsistence harvesters often avoid development due to concerns about hunting near human or industrial activity, shooting near traffic or infrastructure, and concerns about contaminants and the health of animals near development.

▪ **Subsistence Uses of the Project Area**

- Close proximity to development increases the chances of direct impacts to fishing and hunting areas.



Unavoidable/Residual Impacts: Environmental Justice

- **Overall impacts to the community from development are expected to be long-term and high intensity.**
 - Based on findings of major impacts to sociocultural systems and subsistence.
 - Lower-income residents are more impacted by increased subsistence costs.
 - Economic benefits are a countervailing positive impact.
- **Significant cumulative environmental justice Issues**
 - Sociocultural systems impacts due to the conflict and tensions over the permitting process are expected to increase.
 - Climate change impacts the Inupiat of the North Slope disproportionately and Inupiaq subsistence activities are particularly dependent on ice, wind, and permafrost conditions.
- **Unavoidable noise and disturbance from development activities**
 - Could reduce populations or production of terrestrial mammals, water birds, and fish or subsistence users' access to these resources.
 - Would primarily affect subsistence resources and would disproportionately affect Alaska Native populations.



Additional Stakeholder Impacts/Concerns

- **Health** – Increased incidence of diseases, food issues, safety concerns, high cost of healthcare
- **Sociocultural** – Impact of outsiders, including oil workforce
- **Subsistence** – Impacts from opening up new areas, bioaccumulation of contaminants and wild food quality, airboat disturbance, non-local hunters, dust
- **Land use** – Development process, sprawl, industrial disposal sites
- **Climate change** – Effects on permafrost, coast, resilience, adaptation
- **Air quality** – Particulates, dust, flaring, and health effects
- **Water quality** – Injection wells, fracking, impacts to underground streams and high-value waterbodies, effects on fisheries
- **Soils and permafrost** – Contaminated sites
- **Transportation** – River navigation, high transportation costs
- **Terrestrial mammals** – Effects on migration and corridors, caribou calving habitat, flaring effects on lichen and caribou
- **Fish** – Water quality effects



Small Group Discussion

- *Is there anything that should be added to the unavoidable/residual impacts/issues lists?*

