

Alaska Community Action on Toxics - Alaska Soles Broadband/Great Old Broads for Wilderness - Alaska Wildlife Alliance - Alaska Wilderness League - Audubon Alaska Brooks Range Council - Center for Biological Diversity – EARTHWORKS - Fairbanks Climate Action Coalition - National Parks Conservation Association - Native Movement Northern Alaska Environmental Center - Sierra Club - The Wilderness Society - Trustees for Alaska - Winter Wildlands Alliance

Sent via e-mail

November 4, 2022

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Re: Scoping Comments for the Supplemental Environmental Impact Statement for the Proposed Ambler Mining District Industrial Access Road

Dear Ms. Huber:

On behalf of the above-listed organizations and our members, we provide the attached comments on the Bureau of Land Management’s (BLM) scoping process for the Supplemental Environmental Impact Statement (SEIS) for the Proposed Ambler Mining District Industrial Access Road (Ambler Road). There are numerous legal, policy, and resource issues that BLM, National Park Service (NPS), and the U.S. Army Corps of Engineers (Corps) failed to adequately address in prior authorizations for this proposal that should be addressed as part of this SEIS process.

This complex and far-reaching infrastructure proposal will have significant impacts across a broad region. Many of those impacts, as well as appropriate mitigation measures to address those impacts, were not adequately considered as part of the previous authorizations for this project. As a result, there are two pending lawsuits challenging those prior authorizations.¹ Those lawsuits underscore the wide range of legal violations that occurred in the federal permitting process for the Ambler Road, including violations of the National Environmental Policy Act (NEPA), the Clean Water Act (CWA), the Alaska National Interest Lands Conservation Act (ANILCA), the Federal Land Policy and Management Act (FLPMA), and the National Historic Preservation Act (NHPA). On February 22, 2022, the federal government filed motions with the court acknowledging some of the legal errors with the process to date and

¹ *N. Alaska Envtl. Ctr. v. Haaland*, Case No. 3:20-cv-00187-SLG (Alaska D. Ct. Feb. 22, 2022); *Alatna Vill. Council v. Heinlein* Case No. 3:20-cv-00253-SLG (Alaska D. Ct. Feb. 22, 2022).

requesting that the court remand the BLM and NPS's decisions to those agencies to correct deficiencies with the NHPA analysis and the ANILCA Section 810 subsistence analysis, and to provide the opportunity for the agency to do a supplemental NEPA analysis to address the deficiencies in the prior environmental review.² Those acknowledged deficiencies included problems with the adequacy of the agencies' analysis of impacts to subsistence and other resources, such as aquatic resources and caribou. While we expect BLM and NPS will address at least those legal problems on remand, there are also far broader, fundamental problems with the authorizations to date for this project. BLM needs to carefully consider and address the substantial gaps and problems with the agencies' prior analysis of this complex project as part of this remand process.

The proposed Ambler road would cross a vast roadless area in the southern Brooks Range, cut across the country's second largest national park, and disrupt an area relied upon by many rural communities to sustain their way of life. Each year, 250,000 Western Arctic caribou migrate across the wild landscape, covering 2,700 miles a year on one of the Earth's longest land migrations — the distance from Seattle to New York. Here, the land stretches for hundreds of miles uncrossed by roads, railways, or any sign of the industrial world. People have lived in the Brooks Range for thousands of years, and still depend upon hunting for caribou and moose, fishing for salmon and sheefish, and carefully balance human need with healthy sustainable wildlife populations.

Our organizations are deeply concerned about the direct, indirect, and cumulative effects of the proposed road, development of the Ambler mining district, and the lack of analysis in the prior EIS. Building this road will create heavy truck traffic through a large, wild area that will result in noise pollution and dust, impair wilderness recreation, disturb wildlife, destroy wetlands, and permanently alter rural lifestyles dependent on traditional food resources like fish and caribou. BLM, NPS, and the Corps previously failed to consider widespread public opposition to this project and the full range of negative environmental impacts. In addition, the previous authorizations did not include a sufficient range of mitigation measures to avoid and minimize impacts to important historical and ecological resources, particularly wetlands. There are numerous relevant resource issues that were either not addressed at all or were inadequately addressed.

As the lead agency, BLM must ensure this process complies with NEPA, FLPMA, and other legal and permitting requirements. BLM's efforts to date fall far short of what is required. BLM should proceed cautiously, ensuring that the agency takes sufficient time to engage the public, the scientific community, and communities who will be most impacted by this decision. A core purpose of NEPA is to ensure public participation and involvement in agency decisions.³ The timeline for this process should be driven by the goal of ensuring robust public input, allowing time for meaningful government-to-government consultation, and recognition of the

² Defs.' Mot. for Voluntary Remand, *N. Alaska Envtl. Ctr. v. Haaland*, Case No. 3:20-cv-00187-SLG (Alaska D. Ct. Feb. 22, 2022) (ECF No. 113) [hereinafter NAEC Remand Mot.]; Defs.' Mot. for Voluntary Remand, *Alatna Vill. Council v. Heinlein* Case No. 3:20-cv-00253-SLG (Alaska D. Ct. Feb. 22, 2022) (ECF No. 111) [hereinafter AVC Remand Mot.].

³ 40 C.F.R. §§ 1500.2(d), 1506.6.

need to use the best scientific information — not by politically driven, rushed timelines aimed at rubber stamping this project and repeating the mistakes of the past.

A 45-day comment period during the fall was not sufficient to meet BLM's obligation to provide for robust participation by the public, given the sensitive resources, the number of problems with the prior authorization process, and the complexity of the issues this new process will involve. Despite raising these concerns, BLM never provided a response to requests to extend the public comment period or even a response to follow-up inquiries regarding such requests. Moreover, BLM also indicated in its scoping notice that it would be conducting public meetings as part of the public comment period, and yet BLM never provided any public hearing opportunities either in communities or through online means. We understand that very few people in the most impacted communities even knew that there was a new SEIS process underway for the Ambler Road, let alone were aware of this opportunity for public comment. This reflects an unacceptable lack of public engagement and clarity by BLM and the other federal permitting agencies. The federal agencies need to do better, and must ensure there is ample outreach occurring to the most impacted communities so the individuals who will be most impacted by this process have meaningful opportunities to understand and weigh in on this highly impactful project.

It is also vitally important that both the Corps and NPS engage in this process and clarify the steps they will take to rectify the problems with the original permitting process. Given the seriousness of the legal problems to date with this project, all of the agencies should rescind their prior authorizations, including the BLM and NPS rights-of-way and the CWA 404 permit. As a threshold issue, the agencies previously authorized two very different versions of the project, due to the Alaska Industrial Development and Export Authority (AIDEA) submitting a substantially modified permit application to the Corps part way through the process. To comply with ANILCA, the agencies should require AIDEA to submit complete and consistent applications to all the agencies and the agencies need to make a unified decision. The agencies must also consider mitigation, different alternatives, and other measures to address the serious impacts of this proposal. Suspending, rather than rescinding, the rights-of-way is insufficient to ensure that the agencies are fully able to consider and incorporate important information into their decision-making process. It is contrary to NEPA for the agencies to consider information after-the-fact; the purpose of NEPA is to ensure the agencies consider relevant information *prior* to making a decision. NPS also already acknowledged in the pending lawsuits that there are legal problems with the subsistence analysis done to date. NPS should rescind its own underlying authorizations and redo the separate Environmental and Economic Analysis to address the legal deficiencies with that analysis and ensure it complies with ANILCA.

Overall, this project is likely to have far-reaching, negative impacts to subsistence, wildlife, vegetation, permafrost conditions, and water resources across a vast region. Despite this, AIDEA has still not provided sufficient information for BLM and other agencies, as well as the public, to fully assess and understand the proposed project. As a result, the prior analyses and authorizations lacked information critical to fully determining impacts, failed to evaluate a reasonable range of alternatives, and did not comply with numerous statutory requirements. On remand, the agencies need to rescind the prior authorizations, require AIDEA to submit a complete permit application to all the agencies, require AIDEA to provide missing baseline

information, and address the numerous other legal deficiencies with the prior permitting process as detailed in the attached comments.

In sum, we are deeply concerned about the significant impacts from the Ambler Road to the resources and values in the southern Brooks Range, as well as the lack of a meaningful impacts analysis. These issues must be rectified as part of this Supplemental EIS process.

If you have any questions or wish to clarify anything in our comments, please do not hesitate to contact Suzanne Bostrom at (907) 433-2015 or by e-mail at sbostrom@trustees.org. Thank you for your prompt attention to our comments.

Sincerely,

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THERE ARE NUMEROUS LEGAL AND SUBSTANTIVE PROBLEMS THE AGENCIES SHOULD ADDRESS ON REMAND.

I. THE AMBLER PERMITTING PROCESS TO DATE HAS BEEN DEEPLY FLAWED.

The southern Brooks Range and Gates of the Arctic National Park and Preserve (Gates of the Arctic or Gates) are iconic areas of Alaskan wilderness. The region and its rivers provide habitat for numerous fish and wildlife species, including salmon, sheefish, caribou, birds, and moose. The region is home to the Western Arctic Caribou Herd, the largest herd in Alaska. Caribou are an important component of the ecosystem of Gates of the Arctic, and for subsistence users across Western Alaska. Fisheries are highly important to the area's ecosystem and communities, with salmon and other species using both large rivers and small tributaries. The area is home to rural communities and also offers exceptional wilderness recreation experiences.

Mining companies have explored the Ambler Mining District for decades. There are known mineral deposits in the region, as well as mining claims along the Ambler Road corridor. Trilogy Metals has been conducting exploration and intends to develop a mine in the Ambler Mining District that it would access via the Ambler Road. Trilogy Metals indicated they plan to move forward imminently with their CWA Section 404 permit and the permitting process for the first major mine in the region at the Upper Kobuk Mineral Deposit.⁴ Other companies, such as Valhalla Metals, are also working to advance additional mines in the region.⁵

In 2015, pursuant to Title XI of ANILCA, AIDEA submitted a consolidated application to BLM, NPS, the Corps, and the U.S. Coast Guard for the Ambler Road.⁶ AIDEA requested authorizations to construct and operate an all-season, industrial-access road for exploration and development of the Ambler Mining District, which it proposed to construct in three phases.⁷ The road would permanently fill over 2,000 acres of wetlands and cross over 2,900 waterbodies. It would require 29 bridges, with 11 large bridges crossing major rivers, including the Kobuk Wild and Scenic River. The project would discharge between 8.4–11 million cubic yards of fill into wetlands permanently, and over 47 miles (250,000 feet) of stream channels would be permanently impacted.

⁴ Trilogy Metals, Inc., News Release: Trilogy Metals Announces the 2022 Program and Budget for the Upper Kobuk Mineral Projects and Provides Update on Arctic Permitting (Jan. 11, 2022), *available at* https://trilogymetals.com/site/assets/files/5772/2022-01-11_tmqpr_2022_ambler_metals_budget_-_final.pdf.

⁵ Shane Lasley, *Alaska-Focused Valhalla Metals Lists on TSX-V, Raises C\$10.2M*, North of 60 Mining News (Sept. 20, 2022), <https://www.miningnewsnorth.com/story/2022/09/23/news/van-nieuwenhuysse-welcome-to-valhalla/7569.html> (last visited Oct. 5, 2022).

⁶ AIDEA, Ambler Mining District Industrial Access Project Corridor SF299 Supplemental Narrative 1–2 (2015) [hereinafter 2015 SF299 Application].

⁷ 1 Bureau of Land Mgmt., Dep't of the Interior, Ambler Road: Final Environmental Impact Statement 1-2 to -3 (2020) [hereinafter FEIS].

The agencies initially deemed AIDEA’s application incomplete under their respective statutory requirements.⁸ AIDEA submitted a Revised Application in 2016.⁹ The Revised Application still lacked detailed, site-specific information about the design or location of the Ambler Road, or baseline information about hydrology, wetlands, air quality, permafrost, and other resources because AIDEA had done little design work or field studies.¹⁰ Despite this, the agencies moved forward with their environmental review processes. In February 2017, BLM began the NEPA process for the Ambler Road.¹¹ NPS also began developing an Environmental and Economic Analysis (EEA) for the portion of the road crossing Gates of the Arctic, as required by ANILCA.¹²

AIDEA proposed to construct the road in three phases over several years.¹³ Phase I would be a seasonal gravel “pioneer road” that would be upgraded in Phase II to a single-lane, gravel-surface road with year-round access.¹⁴ Phase III would expand the single-lane gravel road into a two-lane gravel road.¹⁵ AIDEA’s application sought to construct all three phases, identifying Phase III as the completed project.¹⁶ The road would require over 40 gravel mines (also referred to as material sites) — some of which may contain naturally occurring asbestos — to provide the material for the road, as well as airstrips, maintenance stations, and camps.¹⁷

In August 2019, BLM released the draft environmental impact statement (DEIS) for the project,¹⁸ the Corps publicly noticed the 404 permit,¹⁹ and NPS released its draft EEA.²⁰ BLM’s draft EIS considered a no-action alternative and three action alternatives: Alternatives A (AIDEA’s proposal), B (nearly identical to A, but with a southern route through Gates), and C

⁸ SF299 Deficiency Letter from BLM 1–4 (Jan. 21, 2016); SF299 Deficiency Letter from NPS 1–7 (Jan. 22, 2016).

⁹ AIDEA, Ambler Mining District Industrial Access Project Revised SF299 Consolidated Application (2016) [hereinafter 2016 AIDEA Application].

¹⁰ See, e.g., Alaska Industrial Dev. & Export Auth., Ambler Access Project Pre-Construction Phase Plan 1–5 (Mar. 2021) [hereinafter Pre-Construction Plan].

¹¹ Notice of Intent, 82 Fed. Reg. 12119 (Feb. 28, 2017).

¹² Extension of Time for Preparation of an Environmental and Economic Analysis, Gates of the Arctic National Preserve, 82 Fed. Reg. 12121 (Feb. 28, 2017); ANILCA § 201(4)(d), Pub. L. No. 96-487, 94 Stat. 2371 (Dec. 2, 1980).

¹³ 2016 AIDEA Application at 3–6.

¹⁴ *Id.* at 3–5.

¹⁵ *Id.* at 4.

¹⁶ *Id.* at 6.

¹⁷ 1 Bureau of Land Mgmt., Dep’t of the Interior, Ambler Road: Draft Environmental Impact Statement 2-4, 2-9 (2019) [hereinafter DEIS]; 1 *id.* App. E at E-16.

¹⁸ 1 DEIS (cover page).

¹⁹ U.S. Army Corps of Eng’rs, Public Notice of Application for Permit POA-2013-00396, at 1 (Sept. 13, 2019).

²⁰ Nat’l Park Serv., U.S. Dep’t of the Interior, Ambler Mining District Access Project at Gate of the Arctic National Park and Preserve: Environmental and Economic Analysis (August 2019) [hereinafter Draft EEA].

(road routed south around Gates).²¹ The action alternatives all followed AIDEA's phased approach, with construction of Phase III as the final stage.²²

In comments on the DEIS, numerous organizations and individuals, including the signatories to this letter, criticized the agencies' failure to adequately analyze the full range of impacts from the project.²³ Groups explained that AIDEA's application lacked critical information, including project design and location details, and that the DEIS failed to adequately analyze AIDEA's phased construction approach.²⁴ Groups also criticized the EIS's failure to obtain or consider baseline information necessary to analyze the direct, indirect, and cumulative impacts.²⁵ Multiple commenters, including the Environmental Protection Agency (EPA), noted there was also insufficient information for the Corps to do its analysis under the CWA.²⁶

In March 2020, BLM issued the final EIS (FEIS) in cooperation with the Corps.²⁷ The FEIS stated the agencies would do additional studies, data collection, and design work after project approvals as part of an unspecified "design/permitting" phase.²⁸ This to-be-determined information included "documenting the road location and construction details."²⁹ The FEIS focused on Phase III for its impacts analysis.³⁰

In July 2020, BLM and the Corps issued a joint Record of Decision (JROD) approving the right-of-way and 404 permit.³¹ The same day, NPS released its final EEA and approved the right-of-way through Gates.³² BLM's and NPS's decisions approve AIDEA's proposed action

²¹ 1 DEIS at 2-3 to -4.

²² *Id.* at 2-3 to -5.

²³ *See, e.g.*, Letter from Alaska Community Action on Toxics et al., to Tina McMaster-Goering, BLM, re: Comments on the Ambler Mining District Industrial Access Road Draft Environmental Impact Statement (Oct. 29, 2019) [hereinafter Coalition DEIS Comments]; Letter from Tanana Chiefs Conference to Tina McMaster-Goering, BLM, re: Comments on Draft EIS, Preliminary ANILCA Section 810 Evaluation, Health Impact Assessment, NHPA 106 Consultation, and Draft EEA for the Proposed Ambler Road Project (Oct. 29, 2019).

²⁴ Coalition DEIS Comments at 5-7.

²⁵ *Id.* at 24-29.

²⁶ *See, e.g.*, Env'tl. Prot. Agency, Comments on PN POA-2013-00396 (Oct. 29, 2019) [hereinafter 2019 EPA Comments].

²⁷ Notice of Availability of the FEIS, 85 Fed. Reg. 17353 (Mar. 27, 2020).

²⁸ *See, e.g.*, 3 FEIS App. Q at Q-11, Q-13, Q-24; *id.* App. N at N-30, N-32.

²⁹ 3 *Id.* App. N at N-5.

³⁰ 1 FEIS at 3-2.

³¹ U.S. Dep't of the Interior, Bureau of Land Mgmt., & U.S. Army Corps of Eng'rs, Joint Record of Decision: Ambler Road Environmental Impact Statement 1-19 (July 2020) [hereinafter JROD].

³² Nat'l Park Serv., U.S. Dep't of the Interior & U.S. Dep't of Transp., Record of Decision: Ambler Mining District Access Project at Gate of the Arctic National Park and Preserve: Environmental and Economic Analysis (July 2020) [hereinafter EEA ROD] (adopting the Northern Alignment as described in the EEA for the Proposed Amber Mining District Industrial Access Project).

(Alternative A), authorizing the northern route through Gates with buildout to Phase III.³³ BLM deferred approving the gravel mines, airstrips, and other facilities because AIDEA did not provide site-specific plans for those project components.³⁴

The JROD disclosed that AIDEA submitted another revised permit application to the Corps in February 2020 — after publication of the DEIS, but before issuance of the FEIS.³⁵ The Corps never released that revised application for public review or comment. AIDEA substantially modified its project proposal in the revised application, which proposed to construct the road to Phase II, but not Phase III.³⁶ The revised application also modified AIDEA’s proposal to request approval of only 15 gravel mines, despite the acknowledged need for over 40 mines, as well as access roads, 4 maintenance stations, 12 communication towers, 3 aircraft landing strips, and a fiberoptic cable.³⁷ The Corps approved the revised project in the JROD,³⁸ and issued its 404 permit consistent with that decision.³⁹

In contrast, BLM and NPS issued rights-of-way for Alternative A as described in the FEIS and AIDEA’s 2016 permit application.⁴⁰ As a result, BLM’s and the Corps’ decisions within the JROD were not consistent and the agencies ultimately authorized two very different versions of the project. In January 2021, BLM issued a 50-year right-of-way to AIDEA authorizing construction of Phases I through III.⁴¹ It did not authorize construction of any gravel mines, construction camps, or maintenance stations.⁴² BLM’s right-of-way allows AIDEA to submit future “plans of development” to BLM before constructing the various phases.⁴³ These yet-to-be-developed plans would “describe in detail the construction, operation, maintenance, and termination of the right-of-way.”⁴⁴ BLM’s right-of-way allows AIDEA to defer its submittal of significant, additional baseline and other information long after the NEPA process concludes.⁴⁵ NPS also issued a right-of-way to AIDEA authorizing the Ambler Road.⁴⁶ The NPS right-of-way authorizes all three construction phases, similar to the BLM right-of-way, despite

³³ JROD Introduction at 11; EEA ROD at 10.

³⁴ JROD at 13 (Decision Summary); *id.* at 25; Bureau of Land Mgmt., Right-of-Way Grant: F-97112 (Jan. 5, 2021) [hereinafter BLM ROW].

³⁵ JROD at F-3

³⁶ *Id.*

³⁷ *Id.* at F-3 to -4.

³⁸ *Id.* at 20–21.

³⁹ U.S. Army Corps of Eng’rs, Department of the Army Permit No. POA-2013-00396, at 1 (2020) [hereinafter 404 Permit].

⁴⁰ JROD at 19–20, 32; EEA ROD at 6.

⁴¹ BLM ROW at 1–2.

⁴² *Id.*

⁴³ *Id.* at 6–7.

⁴⁴ *Id.* at 6.

⁴⁵ *See, e.g.*, BLM ROW at 5, 8–11.

⁴⁶ Nat’l Park Serv., U.S. Dep’t of the Interior, Right-of-Way Permit for Alaska Industrial Development & Export Authority, Right-of-Way Permit No. RW GAAR-21-001, at 1–8 (Jan. 5, 2021) [hereinafter NPS ROW].

the Corps only authorizing a more limited version of the project.⁴⁷ The NPS right-of-way contains terms similar to BLM's right-of-way, deferring the submission of extensive amounts of baseline and other project information to the future.⁴⁸

Two lawsuits were ultimately filed challenging those prior authorizations — one on behalf of 11 conservation organizations (many of whom are signatories to this letter) and the other on behalf of Tanana Chiefs Conference and five tribal councils.⁴⁹ Those lawsuits underscore the wide range of legal violations that occurred in the federal permitting process for the project, including violations of NEPA, the Clean Water Act, ANILCA, FLPMA, and the NHPA.

On February 22, 2022, the federal government filed motions with the federal District Court acknowledging some of the legal errors with the process to date and requesting that the court remand BLM's and NPS's decisions to the agencies to correct deficiencies with the NHPA analysis and the ANILCA Section 810 subsistence analysis. Those acknowledged deficiencies included problems with the adequacy of the agencies' analysis of impacts to subsistence and other resources, such as aquatic resources and caribou. BLM and NPS also indicated they would prepare a supplemental NEPA analysis to address the deficiencies in the prior environmental review.⁵⁰ The court ultimately granted BLM's and NPS's motion for voluntary remand.

While BLM and NPS acknowledged they would address at least some of the legal problems on remand, there are also far broader, fundamental problems with the authorizations to date for this project than what they previously acknowledged. The Corps also has not provided any indication whether and how they will engage in the remand process, despite the serious legal problems that extend to their decision and the supporting NEPA analysis as well. As detailed in these comments, all of the agencies — including the Corps — need to carefully consider and address the substantial gaps and problems with the prior analyses and decisions for this complex project as part of this remand process.

II. BLM NEEDS TO PROVIDE AMPLE OPPORTUNITIES FOR PUBLIC ENGAGEMENT AS PART OF THE REMAND PROCESS.

To achieve NEPA's goal of ensuring public participation, the statute requires federal agencies to “[e]ncourage and facilitate public involvement in decisions which affect the quality of the human environment.”⁵¹ “Accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA.”⁵² BLM must ensure that its process to consider the impacts of the proposed Road to Ambler allows for robust participation by the interested public.⁵³

⁴⁷ *Id.* at 3, 5.

⁴⁸ NPS ROW Ex. C at 1–22.

⁴⁹ *N. Alaska Env'tl. Ctr.*, Case No. 3:20-cv-00187-SLG; *Alatna Vill. Council*, Case No. 3:20-cv-00253-SLG.

⁵⁰ NAEC Remand Mot.; AVC Remand Mot.

⁵¹ 40 C.F.R. § 1500.2(d).

⁵² *Id.* § 1500.1(b).

⁵³ *Id.* § 1503.1(a)(4).

The agency must also review all comments received during this NEPA process. We understand that the agency has made statements suggesting that only “substantive” comments would be reviewed and considered as part of the process; however, all comments from the public must be reviewed to ensure BLM is considering all input, including any statements of opposition to this project, which reflect on the agency’s obligation to consider the no-action alternative. While BLM may only provide responses to substantive comments, this does not alter the agency’s obligation to review all comments received. We would also strongly discourage the agency from making such representations to the public, as it tends to discourage public participation in what can already feel like a very technical process.

Ensuring that the public has sufficient time to receive and review all of the documents and understand their relationship to what is being proposed is essential to the public’s ability to analyze and provide meaningful comments to the agency on the project. Rushing the analysis and public review is not consistent with BLM’s obligations when considering a project as important and massive as the Road to Ambler. Careful public scrutiny of AIDEA’s proposal is a necessary and important part of the NEPA process.

BLM must ensure adequate time and opportunity to engage the public in each step of this process.⁵⁴ A 45-day comment period during the fall was insufficient to meet BLM’s NEPA obligations to provide robust participation by the interested public, given the sensitive resources at issue, the number of problems with the prior authorization process, and the complexity of the issues and analysis required.⁵⁵ Although multiple comment period extension requests went into BLM, BLM never extended that comment period and provided a response to those extension requests only two day before the due date.

Additional time would have allowed the public time to review the many documents BLM is relying on for its analysis and to fill in information and analysis gaps. This is a massive project with many interrelated pieces the public needs time to consider. BLM previously proposed several road routes and three different phases of road construction, all of which need to be carefully reconsidered by the public, along with other potential alternatives. The road may cross 2,900 streams, 1,794 acres of wetlands, and 11 major rivers. These water crossings alone have the potential to significantly degrade waters in the area and impact a wide range of other resources and values. The draft EEA is meant to evaluate the impacts of the portion of the road that crosses through Gates of the Arctic National Park and Preserve, which will also be significant. Moreover, the public must also carefully consider the mining impacts associated with development of the Ambler Mining District, which is the express purpose of this road. The public also needs sufficient time to identify missing information and analysis gaps and provide that important information. Allowing the public ample time to gather information and provide analysis is essential.

BLM should proceed cautiously, ensuring that the agency takes sufficient time to engage the public, the scientific community, and communities who will be most impacted by this decision. Given the complexity of the issues involved, the issuance of this document during the

⁵⁴ *Id.* §§ 1500.2(d), 1506.6.

⁵⁵ *Id.* § 1503.1(a)(4).

fall when many key staff are unavailable for much of the comment period and when many local communities are engaged in subsistence activities, a longer public comment period was justified.

BLM failed to adequately engage the communities that would be most impacted by this project as part of this public comment period. Many community members were unaware that there was a public comment period for scoping on the SEIS, and there is a significant amount of misinformation in the communities about the status of this project. BLM and the other agencies need to actively engage with communities to ensure they have adequate information and opportunities to weigh in on this project. BLM also indicated it would be holding public meetings during this scoping period, but never apparently held any meetings, even online. As this process proceeds, BLM needs to do better by the public and communities to ensure there are opportunities to learn about and weigh in on this project.

The federal government in its latest status report in the pending lawsuits indicated it anticipates the draft SEIS will be available in the second quarter of 2023. However, as detailed throughout these comments, there is vital project design and baseline information that has yet to even be developed or provided to the agencies. Release of an SEIS on that timeline would not be consistent with the broader need to address those information gaps on remand. The agencies need to ensure they have that information and are in a position to address the numerous information gaps as part of this remand process.

In addition, the purpose of an EIS is to “provide full and fair discussion of significant environmental impacts and [to] inform decisionmakers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment.”⁵⁶ However, BLM previously adhered to arbitrary page limits and incorporated numerous documents by reference or into appendices, resulting in a disjointed analysis that was hard for the public to follow. Many important facts about the project that bear on its environmental impacts are buried in appendices. This approach resulted in less transparency in the analysis, more mistakes, and missing key data and analysis, as explained in detail below. BLM has also referred to or incorporated by reference numerous documents into its current analysis as a way of further truncating its analysis in the final EIS. However, BLM often did so without any clear indication of how the analysis in the previous document applied in the context of the current proposal before the agency. This was improper and deprived the public of the ability to fully understand and comment on BLM’s analysis and the potential impacts of the proposed road. Finally, because BLM has not considered the full scope of impacts in the draft EIS, such as cumulative impacts from future development, meaningful mitigation measures, and meaningful analysis of differing impacts among alternatives, the public was previously deprived of the ability to properly review and comment on these issues.

⁵⁶ 40 C.F.R. § 1502.1.

III. THE SCOPE OF THE SEIS AND THE AGENCIES' REMAND PROCESS SHOULD BE BROAD.

A. The Agencies Should Address the Numerous Problems with the Prior EIS.

To achieve NEPA's goals, the statute requires federal agencies to "[e]ncourage and facilitate public involvement in decisions which affect the quality of the human environment."⁵⁷ To help guarantee public participation and informed decisions, the language of an EIS must be "clear," "be written in plain language," and be presented in a way that "the public can readily understand."⁵⁸ It must also be "supported by evidence that the agency has made the necessary environmental analyses."⁵⁹ "The information must be of high quality" because "[a]ccurate scientific analysis . . . and public scrutiny are essential to implementing NEPA."⁶⁰ An EIS that fails to enable meaningful public review and understanding of the agency's proposal, methodology, and analysis of environmental consequences violates NEPA.⁶¹

BLM and NPS acknowledged in their remand motions in both of the pending lawsuits that there were problems with the subsistence analysis done to date, including the analysis of caribou and aquatic impacts, as well as issues with the agencies' compliance with the NHPA. However, the problems with the prior authorizations and analyses extend far beyond those acknowledgements. As outlined throughout these comments, there were deep, fundamental problems with the prior process and analysis that should be addressed as part of this remand process. These problems indicate the scope of this remand process should be broad and should include engagement by the Corps, which has yet to provide any indication of whether and how it will engage in this process, despite the serious issues related to their permit and the same underlying NEPA analysis.

These problems with the prior permitting process included, but were not limited to, the fact that the prior EIS failed to include key information about the project, failed to analyze a reasonable range of alternatives, and failed to take a hard look at the impacts of the proposed project. First, the prior EIS was missing key information about the proposal. There were numerous gaps in information and analysis that hindered the public's and agencies' ability to review this project. Certain highly significant issues that affect important resources and uses of the project area, such as quantitative impacts to air quality, water quality, and wetlands functions, were largely missing from the prior EIS. Many issues, such as impacts to wetlands, wildlife,

⁵⁷ 40 C.F.R. § 1500.2(d).

⁵⁸ *Earth Island Inst. v. U.S. Forest Serv.*, 442 F.3d 1147, 1160 (9th Cir. 2006); 40 C.F.R. § 1502.8; *see also Or. Env'tl. Council v. Kunzman*, 817 F.2d 484, 493 (9th Cir. 1987) ("An EIS must be organized and written so as to be readily understandable by governmental decisionmakers and by interested non-professional laypersons likely to be affected by actions taken under the EIS.").

⁵⁹ 40 C.F.R. § 1502.1; *see also id.* at § 1502.8.

⁶⁰ *Id.* at § 1500.1(b).

⁶¹ *See, e.g., Cal. ex rel. Lockyer v. U.S. Forest Serv.*, 465 F. Supp. 2d 942, 948-50 (N.D. Cal. 2006) (finding a national monument management plan "incomprehensible" and that the corresponding EIS violated NEPA where it contained conflicting and confusing statements regarding applicable management standards).

wilderness and recreation, vegetation and permafrost, public health, archaeological resources both from the road itself and the associated mines in the Ambler District, were only partially addressed, with key elements of the EIS analysis missing, incomplete, inaccurate, inconsistent with the best available science, or otherwise inadequate. Our comments address these and numerous other serious deficiencies below. The significant and numerous information and analytical gaps render BLM's prior EIS "so inadequate as to preclude meaningful analysis" and review by the public.⁶² These problems necessitate development of a robust SEIS that addresses the numerous gaps in information and analysis.

There were also inconsistencies in what the agencies ultimately authorized since AIDEA submitted a revised permit application to only the Corps, which resulted in the Corps authorizing a different version of the project from the other agencies. This fundamental inconsistency, as well as the broader lack of information about the project and what was being proposed, necessitates the submission of a new unified permit application from AIDEA, consistent with ANILCA. The agencies need to rescind the prior inconsistent authorizations as a first step to addressing these inconsistencies.

BLM's failure to analyze a reasonable range of alternatives should be addressed as part of the SEIS process. NEPA requires that an EIS analyze a range of reasonable alternatives. The analysis of alternatives is the "heart" of an EIS.⁶³ An agency must "[r]igorously explore and objectively evaluate all reasonable alternatives" to a proposed action.⁶⁴ Consistent with NEPA's basic policy objective to protect the environment, this includes more environmentally protective alternatives.⁶⁵ It also includes reasonable alternatives submitted by the public at scoping.⁶⁶ "The existence of a viable but unexamined alternative renders an [EIS] inadequate."⁶⁷ The "touchstone" of the inquiry is "whether an EIS's selection and discussion of alternatives fosters informed decision-making and informed public participation."⁶⁸

As discussed in more detail below, the draft EIS's range of alternatives is inadequate for multiple reasons. BLM failed to consider reasonable alternatives suggested during scoping and by cooperating agencies, such as rail access, requiring AIDEA to build its Phase III road at the outset, or only authorizing a more limited version of the road. Importantly, the new and revised

⁶² See 40 C.F.R. § 1502.9(a).

⁶³ *Id.* at § 1502.14.

⁶⁴ *Id.* at § 1502.14(a); see also 42 U.S.C. § 4332(2)(E) (agencies must "study, develop and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources").

⁶⁵ 40 C.F.R. § 1500.2(e) (agencies must "[u]se the NEPA process to identify and assess reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions upon the quality of the human environment"); see also, e.g., *Kootenai Tribe of Idaho v. Veneman*, 313 F.3d 1094, 1121–22 (9th Cir. 2002) (citing cases), *abrogated on other grounds by The Wilderness Soc'y v. U.S. Forest Serv.*, 630 F.3d 1173, 1178–80 (9th Cir. 2011) (en banc).

⁶⁶ See 40 C.F.R. §§ 1501.7, 1502.1.

⁶⁷ *Mont. Wilderness Ass'n v. Connell*, 725 F.3d 988, 1004 (9th Cir. 2013) (quotations and citation omitted).

⁶⁸ *Id.* at 1005 (quotations and citation omitted).

alternatives that will be necessary to remedy these significant gaps will not be “minor variation[s]” of the existing alternatives that are “qualitatively within the spectrum of alternatives that were discussed in the draft.”⁶⁹ To remedy the inadequate range of alternatives, a revised draft EIS is necessary.

Finally, NEPA dictates that BLM take a “hard look” at the environmental consequences of a proposed action, including its direct, indirect, and cumulative effects.⁷⁰ The required hard look encompasses effects that are “ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative.”⁷¹ As detailed below, the numerous and significant gaps in information, analysis, and alternatives rendered the prior EIS impacts analysis invalid. In particular, the agencies lacked necessary baseline data to even allow for such an impacts analysis to take place. As the Ninth Circuit has explained, “without establishing the baseline conditions . . . , there is simply no way to determine what effect the proposed [action] will have on the environment and, consequently, no way to comply with NEPA.”⁷² As reflected by AIDEA’s most recent fieldwork applications, much of the key baseline information necessary to understand the impacts of this project has yet to even be gathered and AIDEA has yet to design this project to a stage that is sufficient to truly understand what is being proposed. All of this reflects that this project never should have been authorized in the first place. Many other elements of the impacts analysis in the FEIS are incomplete, unsupported by the best available science, or otherwise inadequate, as explained in detail below. The deficient impacts analysis renders the prior EIS so inadequate as to preclude meaningful review. The SEIS should take a hard look at the full range of impacts from this project, and the agencies should ensure that they have adequate baseline and other information about the project to engage in a meaningful analysis of those impacts.

B. NPS Should Address the Problems with Their EAA and Right-of-Way Authorization on Remand.

NPS acknowledged in the motion for remand that there were problems related to the subsistence analysis and suspended its own right-of-way authorization. However, it is unclear whether and how NPS plans to update the prior EEA to account for the analytical and other information gaps that are reflected in it. Because the problems with the prior process relate not only to problems with the subsistence analysis, but more deeply to the overall information and analysis of the project, NPS should reopen its EEA process, update its analysis to address problems with the prior decision, and ensure it is acting on complete information about this project.

⁶⁹ Council on Env'tl. Quality, *Forty Most Asked Questions Concerning CEQ's NEPA Regulations*, 46 Fed. Reg. 18,026, 18,035 (Mar. 23, 1981) (as amended) (hereinafter *Forty Most Asked Questions*).

⁷⁰ *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 348 (1989); 42 U.S.C. § 4332(2)(C); 40 C.F.R. §§ 1502.16, 1508.7, 1508.8.

⁷¹ 40 C.F.R. § 1508.8.

⁷² *Half Moon Bay Fisherman's Mktg. Ass'n v. Carlucci*, 857 F.2d 505, 510 (9th Cir. 1988).

The EEA suffers from many of the same problems as the EIS. NPS is not exempt from having to comply with the requirements of Title XI of ANILCA, as well as the statutory provisions specific to any right-of-way that might be granted across Gates of the Arctic.⁷³ Those provisions require NPS analyze the environmental, social, and economic impact of the right-of-way, including the impact on wildlife, fish, and their habitat, and rural and traditional lifestyles including subsistence activities, as well as measures that should be instituted to avoid or minimize negative impacts and enhance positive impacts.⁷⁴ Despite that, the EEA failed to adequately address a wide range of impacts or ways to minimize those impacts, including but not limited to impacts to caribou and other wildlife, fish, wetlands and water resources, subsistence, cultural and archaeological resources, and recreation. Contrary to ANILCA, the EEA also failed to include a robust economic analysis that also accounts for socioeconomic harms to the communities.

NPS also failed to include adequate terms and conditions in the right-of-way across Gates of the Arctic, in violation of ANILCA. The lack of project design or other baseline information adequate to support a decision is reflected on the face of the right-of-way. NPS failed to incorporate requirements designed to prevent damage to the environment, “including the minimum necessary width.”⁷⁵ In the right-of-way, NPS indicated that AIDEA is still “in the pre-construction stage of the project, with field studies, engineering, and design to be undertaken next.”⁷⁶ Because AIDEA had yet to identify the actual location of the road corridor, NPS authorized a “Conceptual Alignment,” which it defined as a 250- to 400-foot corridor.⁷⁷ NPS indicated the constructed road corridor would be 100 feet wide and located somewhere within the Conceptual Alignment.⁷⁸ NPS also authorized all three phases of the road,⁷⁹ despite AIDEA’s amended Corps application that removed Phase III to reduce impacts.⁸⁰

NPS’s authorization of an extremely wide “conceptual” right-of-way corridor did not meet ANILCA’s requirement for the agency to issue rights-of-way for the minimum necessary width. As written, the right-of-way provides AIDEA with an open-ended pass to determine and modify the location of the road within a broad area and without the agency ensuring in advance that it has only authorized the minimum necessary width. It is unclear how NPS determined the Conceptual Alignment corridor was the minimum footprint or was sufficient to protect resources when AIDEA has yet to do the field work to identify the road location and project design. The fact that the Corps only authorized Phase II of the project indicates that NPS should have also only authorized Phase II — and therefore potentially a narrower and less impactful right-of-

⁷³ 16 U.S.C. § 410hh(4)(a); 16 U.S.C. § 3164.

⁷⁴ *Id.* § 410hh(4)(a).

⁷⁵ *Id.* § 3167(a)(4).

⁷⁶ NPS ROW at 2.

⁷⁷ *Id.*; EEA ROD at 5

⁷⁸ NPS ROW at 2.

⁷⁹ *Id.* at 3–4.

⁸⁰ Alaska Industrial Dev. & Export Auth., U.S. Army Corps of Engineers Application for Dep’t of the Army Permit (Jan. 5, 2020) [hereinafter Revised 404 Permit Application].

way.⁸¹ NPS’s failure to incorporate requirements to minimize the footprint of the right-of-way and impacts on Gates of the Arctic is contrary to ANILCA.

NPS also failed to incorporate adequate terms more broadly into the right-of-way to control or prevent damage to the environment or ensure the right-of-way would be compatible with the purposes of Gates of the Arctic “to the maximum extent feasible.”⁸² Gates of the Arctic’s purposes include maintaining wilderness values, providing for continuing recreation opportunities, and protecting habitat for fish and wildlife.⁸³ Rather than incorporating adequate terms in the right-of-way to protect these purposes, NPS included an open-ended provision for AIDEA to complete its plan of development for each phase, and provide information for at least 27 subject areas, at a later point in time.⁸⁴ The right-of-way stated AIDEA would need to submit plans for construction, operation, maintenance, and termination of the right-of-way and related facilities for each road phase after right-of-way issuance.⁸⁵ This illustrates AIDEA had yet to complete its project designs or gather baseline information for permafrost, stream crossings, asbestos, air quality, and more.⁸⁶ The right-of-way also only requires AIDEA to “take reasonable efforts” to ensure facilities are built and operated in a way that protects scenic, cultural, fish, and wildlife values.⁸⁷

Listing future plans and calling them “terms and conditions” does not satisfy ANILCA’s requirement that NPS include enforceable terms and conditions in its right-of-way for restoration and reclamation, to ensure activities will not violate air and water quality standards, or to ensure the protection of the environment and Gates of the Arctic’s purposes.⁸⁸ NPS should rescind the right-of-way authorization and redo the EEA and its analysis prior to making a new decision.

IV. THE AGENCIES STILL LACK SUFFICIENT INFORMATION TO SATISFY PERMITTING REQUIREMENTS AND ALLOW FOR MEANINGFUL PUBLIC PARTICIPATION.

A. The Agencies Still Lack Necessary Information About This Project.

The process to date has not been sufficient to support the authorizations for such a massive, damaging proposal. As an initial matter, there is still insufficient and at times conflicting information about how the proposed road will be constructed and operated to support issuance of the permits. Despite the fact that this would be a massive infrastructure project, the draft EIS provides scant information about the project design and essentially zero site-specific

⁸¹ See 16 U.S.C. § 3161(c) (explaining intent “to minimize adverse impacts” of siting TSUs).

⁸² *Id.* § 3167.

⁸³ ANILCA § 201(4)(a).

⁸⁴ NPS ROW, Ex. C at 7.

⁸⁵ *Id.*

⁸⁶ *Id.*; cf. *Or. Nat. Desert Ass’n v. Jewell*, 840 F.3d 562, 571 (9th Cir. 2016) (stating agency could not do analysis without baseline information).

⁸⁷ NPS ROW, Ex. C at 4.

⁸⁸ 16 U.S.C. § 3167.

information about the proposal and how it could impact a wide range of resources along the road corridor.

As a threshold matter, AIDEA has not — even still — designed the project to a level where there is adequate information about the site-specific locations of various infrastructure elements to engage in a robust analysis for purposes of NEPA. This is reflected throughout the decision documents for this project. By the time this project was permitted, AIDEA acknowledged there was still only a “conceptual level of design and development” for this project.⁸⁹ Estimates at the time indicated AIDEA’s construction plans for the project were only around 7–10% complete.⁹⁰

The face of the rights-of-way further reflect the severe lack of information about the project at the time it was authorized. BLM’s right-of-way requires the submission of a broad range of baseline and project design information at a future point in time since so much information was not previously provided as part of the permitting process.⁹¹ BLM only required AIDEA to complete its plan of development and submit information on key resources and design elements at an unspecified later point in time.⁹² Similarly, NPS’s right-of-way grant is for a “Conceptual Alignment” that will need to be narrowed down at a later point in time because the actual corridor “ha[d] not yet been identified.”⁹³ Similar to BLM’s right-of-way, NPS also required the later submission of complete information about the project and impacted resources, including on permafrost, stream crossings, air quality, culverts, NHPA Section 106 plans, and more.⁹⁴ As discussed later in these comments, there was also extensive baseline information necessary to inform the design and impacts analysis for the project that AIDEA did not provide prior to the agencies authorizing this project; AIDEA is only now trying to gather that information and to conduct studies that should have occurred prior to the agencies issuing any authorizations. The agencies should rescind the prior authorizations and ensure that they have adequate information about the project to adequately analyze the impacts and ways to address them in the SEIS.

There were also conflicting versions of the permit application that were submitted to the agencies, with the Corps later receiving a modified application for the project. This made it fundamentally unclear what precisely was authorized by the agencies as part of the prior process. The agencies need to require a uniform application from AIDEA to ensure they are reviewing consistent versions of the project.

There are numerous gaps in information about the project in the FEIS that also need to be addressed in the SEIS. AIDEA’s proposed construction phases are mentioned in the FEIS, but the information provided is as brief as it is vague. As described in more detail below, BLM also lacks key baseline information, which in turn led to a wholly lacking baseline analysis in the

⁸⁹ Ltr. from AIDEA to Tim. LaMarr, BLM (Apr. 16, 2019).

⁹⁰ *See, e.g.*, Email from Adam Freeburg, Archeologist, NPS, to Crystal Glassburn (Aug. 8, 2019).

⁹¹ BLM ROW.

⁹² *Id.* at ex. A at 6–7.

⁹³ NPS ROW.

⁹⁴ *Id.* ex. C at 7–8.

FEIS. The prior EIS essentially indicated that because the project's impacts are so massive, spread out over so many miles, and impact so many resources, the agency did not complete an adequate baseline analysis for the affected resources. This information is essential to BLM's and other agencies' abilities to fully analyze this project and comply with NEPA. BLM needs to obtain this missing information and include an adequate baseline analysis in the SEIS.

The FEIS provides only high-level statements that this will be a one-lane pioneer road that will ultimately become a 2-lane gravel road, but gives no clear indication of the timeline or material sources for this buildout and indicates there may even be overlap between different phases. Later changes to the road size, and changes to the sizes of culverts to account for AIDEA's phased approach, could significantly degrade the environment and have severe adverse impacts to the hydrology of the region. Details regarding this phased approach are wholly lacking in the FEIS. As a result, BLM and other agencies have failed to analyze the actual impacts of this project. This is contrary to NEPA and raises serious questions about the prior authorizations for this project.

There are a number of additional, substantial gaps in what BLM has considered in the EIS and basic information about the road proposal and corridor. For instance, there is no explanation regarding when AIDEA will consider using insulation which would reduce the amount of gravel needed for the project by more than half, or any analysis of the impacts of different types of insulation.⁹⁵ This is a significant concern, given the risks of permafrost degradation, particularly from Phase I of the project. Those permafrost impacts, as well as ways to mitigate those impacts, were not adequately addressed in the prior FEIS. BLM needs to analyze the actual design proposal and effectiveness of any mitigation measures at this stage. The FEIS further lacks critical information on the location and sizing of culverts, quantitative impacts on fill in wetlands, and contains no wetlands delineation for Alternative Route C, making a complete assessment of the three alternatives impossible.

AIDEA's application and the FEIS also lack important information about quantity or quality of gravel available for the project⁹⁶ and the types of soil along the right-of-way,⁹⁷ which are important basic considerations for the road design. To the extent AIDEA's application identified potential gravel mine sites, it is clear from AIDEA's subsequent baseline study work that AIDEA had yet to do the sampling required to determine the correct locations of those proposed gravel mines. That complete lack of site-specific information about the gravel mine locations is in part why there was a significant disconnect between BLM's and the Corps' authorizations for this project, with BLM not authorizing them in the prior decision because of the lack of site-specific information and the Corps authorizing them despite the lack of site-specific information. BLM and the Corps need to obtain complete site-specific information about the proposed gravel mines and analyze them as a connected action in the SEIS.

⁹⁵ See Eng'g Evaluation of the Ambler Road draft Env'tl. Impact Statement (EIS) prepared for Trustees for Alaska 1 (Oct. 17, 2019) [hereinafter Engineering Report].

⁹⁶ *Id.* at 6.

⁹⁷ *Id.* at 3

BLM must analyze the impacts of all the potential gravel mines, and impacts from ongoing construction efforts during the gradual “build-out” contemplated. As discussed in more detail later on in these comments, the FEIS failed to do so. The FEIS states that an additional 2 inches of gravel will be added over the entire road length annually for the 50-year life of the road.⁹⁸ This is an enormous amount of gravel, but continued gravel mining operations are barely mentioned in the FEIS. Continual gravel mining and road maintenance means long-term disturbance, as blasting will need to occur every year, and laying and grading gravel will involve the use of heavy equipment traversing the road. This will continue for the entire road length for the life of the road. Because of the lack of site-specific information and analysis of gravel mines in the FEIS, BLM needs to include a full analysis of the impacts continuous gravel mining will have on the region in the SEIS. BLM also needs to obtain additional site-specific information on where the gravel mines will be located, their size, and order of development. BLM should ensure that the locations are not merely hypothetical and that the agency adequately analyzes the impacts from gravel mining as a connected action.

There is no information on how much water will be necessary for the proposed project. Presumably, AIDEA must use ice roads to transport materials, however, a description of these activities and ice road construction and maintenance is wholly absent from the application. There is no information in the project description regarding ice roads during the duration of construction for the project, nor on the length, location, or timing of these ice roads. In fact, there is no quantification of water use whatsoever in the EIS. The FEIS merely states:

[w]ater access points would be located along the routes at rivers and lakes to provide water for construction activities, maintenance (dust control), and potable water supply for maintenance or fueling stations. . . . Water for construction and maintenance of any ice roads (stream and river crossings) and pads, and domestic use at the construction camps during construction activities would be withdrawn from lakes or large rivers near the construction activities.⁹⁹

This project should not have been permitted without this critical information regarding the quantities of water that will be required, under any alternative.

Additionally, the FEIS states that AIDEA will construct an unknown number of airstrips, and only provides vague statements regarding the number of flights anticipated during construction.¹⁰⁰ There is no site-specific information on the specific airstrips and how they might impact the specific areas where they are being proposed, no information on how many flights are anticipated during operation and maintenance, and no information on how these airstrips will be utilized or could cause impacts after construction.¹⁰¹ To properly evaluate environmental and social impacts, BLM must know the location and projected amount of aircraft traffic at the new airstrips being contemplated. Aircraft may have negative impacts on wildlife and subsistence in a

⁹⁸ See 1 FEIS at 2-8.

⁹⁹ *Id.* at 3-30 (again, this is not in the project description section of the EIS, but must be found in the environmental consequences section).

¹⁰⁰ *Id.* at 2-8.

¹⁰¹ *Id.*

broad geographic area, depending upon flight patterns. All this information is critical to determining impacts and needs to be obtained and analyzed as part of the SEIS.

Furthermore, BLM should provide accurate projected levels of traffic on the road throughout the project life to adequately assess impacts from the road. The FEIS does not provide this needed information. The FEIS states that “the maximum project annual average daily traffic could be 168 trips per day, year round, when other mines are in production. Double-trailer ore loads on the Ambler Road would be split and become single-trailer loads for transport on the Dalton Highway and other public roads”¹⁰² BLM refers to Appendix H to provide road and vehicle use information, but then does not actually describe how BLM or AIDEA obtained these vehicle numbers. Moreover, there appears to be no calculation of traffic related to construction efforts.

The lack of substantive information in AIDEA’s permit application, FEIS, and supporting documents reflect the serious legal problems with the prior authorizations. Those authorizations should be rescinded and the agencies should obtain this information to ensure it can address these problems in the SEIS.

B. The Agencies Previously Failed to Obtain Necessary Baseline Information.

NEPA requires that agencies analyze a project’s impacts before it is approved. The purpose of NEPA’s requirement that an EIS be prepared for any action that may significantly affect the environment is to obviate the need for speculation, and to ensure that available data is gathered and analyzed prior to the implementation of the proposed action.¹⁰³ The agencies failed to obtain and analyze necessary baseline information prior to authorizing the project. Under NEPA, the agencies must “describe the environment of the area(s) to be affected . . . by the alternatives under consideration.”¹⁰⁴ “Without establishing the baseline conditions . . . there is simply no way to determine what effect the [action] will have on the environment, and consequently, no way to comply with NEPA.”¹⁰⁵ The lack of an adequate baseline assessment is fatal under NEPA: “[O]nce a project begins, the pre-project environment becomes a thing of the past and evaluation of the project’s effect becomes simply impossible.”¹⁰⁶ The duty to fully analyze all baseline conditions applies to all potentially affected resources. This includes but is not limited to surface and groundwater, air quality, wildlife, recreation, cultural, and economic resources. BLM cannot meet its NEPA obligations by foregoing collection of baseline data, and, instead, “anticipat[ing]” that the impacts of a proposed decision will be insignificant.¹⁰⁷

Here, the agencies pointed to future, yet-to-be-conducted baseline studies for multiple resources instead of obtaining that information to inform their NEPA analysis now. For example,

¹⁰² *Id.* at 2-6.

¹⁰³ *LaFlamme v. FERC*, 852 F.2d 389, 400 (9th Cir. 1988).

¹⁰⁴ 40 C.F.R. § 1502.15.

¹⁰⁵ *Carlucci*, 857 F.2d at 510; *see also Or. Nat. Desert Ass’n*, 840 F.3d at 568–71.

¹⁰⁶ *N. Plains Res. Council, Inc. v. Surface Transp. Bd. (N. Plains)*, 668 F.3d 1067, 1083 (9th Cir. 2011) (internal quotations omitted).

¹⁰⁷ *Carlucci*, 857 F.2d at 510.

although the FEIS states that the project will require over 40 gravel mines and associated infrastructure, there is no baseline assessment of these sites; that assessment is deferred to the future.¹⁰⁸ The FEIS noted that field studies and exploration work necessary to determine the design and gravel needs would occur post-permitting.¹⁰⁹ AIDEA claimed it identified potential gravel mine sites, but in fact had yet to conduct “[g]eotechnical investigations ... on the specific sizes, grades, and actual quantities” to verify those sites would in fact be the locations of the actual gravel mines.¹¹⁰

BLM acknowledged it was unknown whether there were sufficient volumes of asbestos-free gravel along the corridor and that potential sites would be tested in the future.¹¹¹ The FEIS discusses the high likelihood of encountering naturally occurring asbestos (NOA): “The potential for encountering NOA exists for all of the proposed action alternatives,” but “the exact details of the amounts and locations of NOA are not known.”¹¹² The FEIS also relied inappropriately on mitigation measures that will be developed in the future to assert that there will be little risk from asbestos releases.¹¹³ The agencies also allowed AIDEA to defer identifying areas of potential acid rock drainage (ARD) at these potential mine sites.¹¹⁴ These field studies and investigations are the exact type of critical information that should have been collected in a baseline assessment and considered in the prior EIS.¹¹⁵

The agencies approved the Ambler Road despite acknowledging that future baseline studies were needed to assess impacts to numerous resources. The agencies stated that “[g]eotechnical field studies and detailed thermal modeling would be completed” to identify the “presence, extent and stability” of permafrost, and that information would then be used to determine the project design and location in the future — after the agencies approved the rights-of-way and 404 permit.¹¹⁶ The agencies also required AIDEA to identify rare plants at a later time.¹¹⁷ For archaeological, historical, and cultural resources, the agencies relied on future baseline studies and surveys to determine the locations of those resources.¹¹⁸

¹⁰⁸ 1 FEIS at 3-14 to -15.

¹⁰⁹ *Id.*

¹¹⁰ *Id.*

¹¹¹ *Id.*

¹¹² *Id.* at 3-9 to -10.

¹¹³ *Id.*

¹¹⁴ JROD App. F at F-13–14.

¹¹⁵ *See N. Plains*, 668 F.3d at 1083.

¹¹⁶ JROD App. C at C-3; 3 FEIS App. Q at Q-11; 1 FEIS at 2-10; 1 FEIS at 3-5; 1 FEIS at 3-16 (“Locations of [gravel mines] and access roads should be chosen and designed based on site-specific geotechnical explorations....”); Agency Comment/Response Matrix for the Preliminary DEIS Review 4 (Aug. 16, 2019) [hereinafter PDEIS Agency Response Matrix] (“Site-specific information on current and future thaw subsidence risk does not exist.”).

¹¹⁷ 3 FEIS App N at N-25.

¹¹⁸ 1 *Id.* at 3-160.

The FEIS further indicated that AIDEA “would document conditions of fish, birds, and key wildlife species prior to construction to establish a baseline” for those resources.¹¹⁹ The FEIS stated that “[f]urther field study would be necessary to identify all streams and [o]ther aquatic habitats in the study area and determine potential fish use.”¹²⁰ Because of these information gaps, BLM included a mitigation measure to document fish and wildlife conditions prior to construction to establish a baseline.¹²¹

AIDEA is only now filling these significant data gaps — after the agencies conducted their NEPA review and issued their approvals — as evidenced by AIDEA’s subsequent fieldwork proposals for its “pre-construction phase.”¹²² In AIDEA’s 2021 fieldwork plan, AIDEA acknowledged it still needs to collect environmental, geologic, topographic, meteorological, hydrologic, biological, and cultural resources data to complete the project’s engineering and design.¹²³ Similarly, in 2022 AIDEA again proposed to conduct a substantial fieldwork program for the purposes of gathering additional baseline data to inform the design of the project. That program was slated to include additional cultural resource surveys; geotechnical investigations to determine subsurface conditions and soil characteristics along the alignment; surveys to assess the viability of material sites; hydrology investigations to assess drainage, culvert placement, and bridge design; stream studies at bridge sites, land surveying; surveys to analyze fish habitat, water quality, species presence, or critical spawning area data; and wetland investigations.¹²⁴ AIDEA also indicated it would be doing work to “[e]stablish project design criteria” and “advance preliminary engineering to 35% design.”¹²⁵

The agencies’ reliance on post-EIS, future studies to satisfy their assessment of baseline conditions violated NEPA and needs to be corrected as part of the remand process. The agencies need to address these serious gaps as part of this remand and SEIS process, and should not begin drafting any new EIS to evaluate the Ambler Road until studies like those described in AIDEA’s fieldwork plans are completed and the agencies have sufficient baseline data and project design information to evaluate this project.

¹¹⁹ 3 FEIS App. N at N-30; *id.* App. Q at Q-11.

¹²⁰ 1 FEIS at 3-67 (needing additional data collection to document all streams); *id.* at 3-80 (requiring additional surveys documenting fish presence); *id.* at 3-87 (stating AIDEA would collect additional information for the fen).

¹²¹ 3 FEIS App. Q at Q-11.

¹²² Pre-Construction Plan at 1–5.

¹²³ *Id.* at 1; *id.* at 2 (noting the number, locations, sizes, and footprints of gravel mines and their access roads are to-be-determined); *id.* (determining areas of thaw-sensitive permafrost); *id.* at 3 (describing fish habitat studies because “[m]ost of the rivers and streams within the easternmost 50 miles of the Project have little or no data regarding fish habitat and water quality, fish species present, or critical spawning areas”); *id.* at 2–3 (indicating AIDEA would obtain data necessary to design waterway crossings); *id.* at 4 (describing cultural resource studies because “[l]arge portions of the Project have not been inventoried”).

¹²⁴ AIDEA, PowerPoint Presentation re: Ambler Access Project Update (Mar. 17, 2022); AIDEA, Ambler Access Project: Draft 2022 Annual Work Plan (Feb. 2022) [hereinafter 2022 Field Work Plan].

¹²⁵ *Id.*

In the prior EIS, BLM also relied inappropriately on future, yet-to-be determined mitigation measures (such as the collection of additional information or future design work for the project) to downplay the impacts of the project and excuse the agencies' lack of baseline data at the outset. But such future mitigation or promises that the project will be designed in the future to account for yet-to-be collected data cannot be used to excuse the lack of detailed baseline information and analysis. Mitigation measures, while necessary, were not alone sufficient to meet the BLM's NEPA obligations to determine the projected extent of the environmental harm to enumerated resources *before* this project is approved. Mitigation measures may help alleviate impact *after* construction, but do not help to evaluate and understand the impact before construction. Baseline information before approval is required so that the agency "can understand the adverse environment effects *ab initio*."¹²⁶

Further, the FEIS failed to clearly identify where information was missing, as required by NEPA. For the purpose of evaluating significant impacts in the EIS, if there is incomplete information relevant to reasonably foreseeable significant adverse impacts and the information is "essential to a reasoned choice among alternatives and the overall costs of obtaining it are not exorbitant," the information must be gathered and included in the EIS.¹²⁷

If information essential to reasoned choice is unavailable or if the costs of obtaining it are exorbitant (excessive or beyond reason), BLM must make a statement to this effect in the EIS. BLM must discuss what effect the missing information may have the agency's ability to predict impacts to the particular resource. If the information relevant to reasonably foreseeable significant adverse impacts cannot be obtained because the overall costs of obtaining it is exorbitant or the means to obtain it are not known, BLM must include within the EIS: (1) a statement that such information is incomplete or unavailable; (2) a statement of the relevance of the incomplete or unavailable information to evaluating reasonably foreseeable significant adverse impacts on the human environment; (3) a summary of existing credible scientific evidence which is relevant to evaluating the reasonably foreseeable significant adverse impacts on the human environment, and (4) the agency's evaluation of such impacts based upon theoretical approaches or research methods generally accepted in the scientific community.¹²⁸ For the purposes of this section, "reasonably foreseeable" includes impacts that could have catastrophic consequences, even if their probability of occurrence is low, provided that the analysis of the impacts is supported by credible scientific evidence, is not based on pure conjecture, and is within the rule of reason.¹²⁹

This requirement helps "insure the professional integrity, including scientific integrity, of the discussions and analyses" in an EIS.¹³⁰ It also ensures that the agency has necessary information before it makes a decision, preventing the agency from acting on "incomplete

¹²⁶ *Gifford Pinchot Task Force v. Perez*, 2014 WL 3019165 (D. Or. 2014).

¹²⁷ 40 C.F.R. § 1502.22(a); *see also* 43 C.F.R. § 46.125.

¹²⁸ 40 C.F.R. § 1502.22.

¹²⁹ *Id.* § 1502.22(b).

¹³⁰ *Id.* § 1502.24.

information, only to regret its decision after it is too late to correct.”¹³¹ “[T]he very purpose of NEPA’s requirement that an EIS be prepared for all actions that may significantly affect the environment is to obviate the need for [] speculation by insuring that available data is gathered and analyzed prior to the implementation of the proposed action.”¹³² Accordingly, NEPA’s missing information regulation “clearly contemplates original research if necessary.”¹³³

Groups previously identified a substantial amount of baseline data that was missing or out of date and that BLM needed to obtain and address before the agency could meaningfully evaluate and comply with DOI’s numerous statutory mandates for permitting this project. BLM’s failure to address or obtain this lacking information rendered the prior FEIS deficient. Additional information is required in many critical areas to fully evaluate the impacts of the proposed road and develop necessary mitigation measures and should be gathered as part of this remand process before the agencies prepare any SEIS for the proposed project. These areas include, but are not limited to:

- Baseline air quality data for the project area;
- The anticipated amount of water required for construction, operation and maintenance of the project;
- A survey of cultural resources along the entire project route;
- Information on foreseeable mining activities in the region;
- Site-specific information on the full range of water resources that will be impacted, including information on water quality and water patterns (water inflows and outflows; base, flood, and peak flows; annual and seasonal cycles, and water temperatures for surface and groundwater) for all the rivers, streams, and wetlands;
- Site-specific baseline information on permafrost, soil conditions, groundwater flows, and other geotechnical information across the full length of the project; and
- Site-specific information about fish species presence across the project area.

In an attempt to justify its failure to obtain and analyze baseline data for potentially affected resources, the FEIS previously stated for nearly all affected resources that key baseline information was not essential to making a reasoned choice among alternatives. The FEIS made these statements for a broad range of resources, including but not limited to: asbestos (1 FEIS 3-10); surface and groundwater resources (1 FEIS 3-23); water quality (1 FEIS 3-24); rare plants and ecosystems (1 FEIS 3-50 to -51); sheefish (1 FEIS 3-78); birds (1 FEIS 3-81); caribou (1 FEIS 3-87); moose (1 FEIS 3-92); and bears (1 FEIS 3-93). In the FEIS, BLM makes a generalized statement that:

Where information was relevant and essential and the costs were not

¹³¹ *Churchill Cnty. v. Norton*, 276 F.3d 1060, 1072–73 (9th Cir. 2001) (quoting *Blue Mountains Biodiversity Project v. Blackwood*, 161 F.3d 1208, 1216 (9th Cir. 1998)).

¹³² *Found. for N. Am. Wild Sheep v. U.S. Dep’t of Agric.*, 681 F.2d 1172, 1179 (9th Cir. 1982).

¹³³ *Save Our Ecosystems v. Clark*, 747 F.2d 1240, 1249 (9th Cir. 1984).

exorbitant, that information was collected (e.g., wetland delineation, updated engineering for Alternative C, economic analysis, etc.). As required by 40 CFR 1502.22, this EIS makes clear to the reader where information is lacking, explains the relevance of the information, and summarizes the existing credible scientific evidence that does exist and is relevant to evaluating reasonably foreseeable significant adverse impacts on the human environment.¹³⁴

However, this is not the case for the many resource areas listed above and described in more detail below in our resource-specific comments. BLM cannot rely on conclusory statements to avoid the requirements of 40 C.F.R. § 1502.22.

BLM cannot simply say, without any evidentiary support, that baseline data/analysis is not essential to making a reasoned choice among alternatives. Nor can BLM simply say that doing the required studies would be “exorbitant” without providing any cost figures or evidentiary support. BLM’s position is that because the length of the Ambler Road, and the massive extent of its impacts, are so large, this somehow justifies the refusal to consider the baseline conditions (and impacts, as noted herein). Yet the fact that the impacts from the Road are so significant, and adversely affect so many critical resources, requires BLM to fully understand all of the environmental ramifications of the project — not use the massive size of the project as an excuse to limit its analysis.

The agencies’ decisions to forego collecting this data as somehow being unnecessary are also directly contradicted by the decisions themselves and AIDEA’s efforts to collect much of this information after-the-fact to further design the project. As noted above, AIDEA is only now trying to collect much of this information to inform what the project design will actually be and has acknowledged the project even now is not yet even 35% designed. Even the rights-of-way from BLM and NPS require the submission of extensive amounts of additional information and a complete plan of development at a later point in time since that information — which was actually essential to the agencies’ ability to analyze this project — was missing. There simply was not enough baseline and project information to meaningfully inform the prior analysis, and the agencies never should have authorized this project without that key information. Because of these serious problems, the prior authorizations for this project should be rescinded and the agencies should require submission of a complete project application and baseline information prior to completing the SEIS.

The lack of any analysis or detail about many of the supposed mitigation measures to protect these resources only further underscores how BLM arbitrarily dismissed the need for all this information at this stage. Many of these mitigation measures require additional information about the baseline and site-specific conditions of the project for their design and for an adequate analysis of whether they will be effective enough to prevent serious degradation.¹³⁵ Rather than

¹³⁴ 1 FEIS at 3-3.

¹³⁵ See, e.g., *id.* at 3-12 (indicating additional geotechnical information and studies “during design” would be needed to identify and avoid areas particularly sensitive to thaw settlement); *id.* 3-67 (indicating field studies would be necessary to identify all streams and aquatic habitats in the project).

obtaining that information at this stage to inform its analysis, BLM instead just says it will wait until some unclear point in a future design/permitting phase to design the mitigation measures related to a slew of potential impacts and project elements, including permafrost mitigation measures, culverts, bridges, other measures to minimize aquatic and fish impacts, and more.¹³⁶ But because the agency issued a right-of-way for the Ambler Road, the BLM made an irretrievable commitment of resources; as such, it cannot defer obtaining this information, which is necessary to analyze the impacts of this project and to develop appropriate mitigation measures.

The agencies' prior failure to obtain baseline and project information that was clearly necessary to analyze the impacts of this project and inform potential project designs and mitigation measures was directly contrary to NEPA. That information was critical to ensure the agencies complied with all legal requirements, including the Corps' obligations under the CWA, minimized all adverse environmental impacts, and was in the public interest under FLPMA and the CWA. On remand, the agencies should rescind the prior authorizations for this project in light of these significant deficiencies, should ensure that they obtain this missing information, and should update the NEPA analysis to take that crucial information into consideration.

V. THE PRIOR EIS FAILED TO COMPLY WITH NEPA.

NEPA is “our basic national charter for protection of the environment.”¹³⁷ NEPA's analysis and disclosure goals are two-fold: (1) to ensure informed agency decision making, and (2) to ensure public involvement.¹³⁸ NEPA requires that federal agencies prepare a detailed EIS for any major Federal action that may significantly affect the quality of the human environment.¹³⁹ By focusing the agency's attention on the environmental consequences of its proposed action, NEPA “ensures that important effects will not be overlooked or underestimated only to be discovered after resources have been committed or the die otherwise cast.”¹⁴⁰ NEPA “is not designed to postpone analysis of an environmental consequence to the last possible moment;” it is “designed to require such analysis as soon as it can reasonably be done.”¹⁴¹

BLM and the Corps failed to comply with NEPA in multiple respects in the prior decision-making process. As discussed above, BLM and the Corps are still lacking the site-specific information about the project and the baseline conditions, necessary for the agencies to engage in a meaningful site-specific review of the impacts and any potential mitigation measures. The agencies need to obtain that information and incorporate it into the SEIS prior to

¹³⁶ See, e.g., *Id.* at 2-10 to -16 (indicating for nearly all of the mitigation measures related to mitigation of impacts to water resources, groundwater, permafrost, fish, and multiple other resources that “[d]esign features related to this mitigation would be determined during the design/permitting phase and would be incorporated into ROW authorization and permit stipulations” at that time); 3 *id.* at N-32, Q-25 to -26.

¹³⁷ 40 C.F.R. § 1500.1(a).

¹³⁸ *Robertson*, 490 U.S. at 349.

¹³⁹ 42 U.S.C. § 4332; 40 C.F.R. § 1508.18(b)(4).

¹⁴⁰ See also *Marsh v. Or. Nat. Res. Council*, 490 U.S. 360, 371 (1989).

¹⁴¹ *Kern v. U.S. Bureau of Land Mgmt.*, 284 F.3d 1062, 1072 (9th Cir. 2002).

making any new decisions. There are also other major problems with the prior EIS, including the agencies' failure to conduct a site-specific analysis of the Ambler Road's impacts; failure to consider a reasonable range of alternatives; failure to consider connected actions; failure to adequately analyze the project's direct, indirect and cumulative impacts, including public use of the road; and failure to properly evaluate mitigation measures.

A. BLM Failed to Conduct an Adequate Site-Specific Evaluation of This Project.

NEPA emphasizes “coherent and comprehensive up-front environmental analysis to ensure informed decision making” and that “the agency will not act on incomplete information, only to regret its decision after it is too late to correct.”¹⁴² NEPA requires that agencies evaluate the environmental consequences of a project at an early stage of the planning process.¹⁴³ While agencies can “defer detailed analysis until a concrete development proposal crystallizes the dimensions of a project’s probable environmental consequences,”¹⁴⁴ agencies are required to undertake site-specific analysis. There are some contexts, such as planning processes, where an agency may be able to do a programmatic-level analysis and defer conducting a site-specific analysis; however, the agency cannot defer doing that site-specific analysis if it is going to make an irretrievable commitment of resources. As the Ninth Circuit explained, the key inquiry is not “*whether* the project’s site-specific impact should be evaluated in detail, but *when* such detailed evaluation should occur.”¹⁴⁵ Agencies are required to fully evaluate site-specific impacts once “a critical decision has been made to act on site development.”¹⁴⁶ An agency reaches the threshold triggering site-specific review when it “proposes to make an irreversible and irretrievable commitment of the availability of resources to a project at a particular site.”¹⁴⁷

The FEIS acknowledged that it made an irretrievable commitment of resources.¹⁴⁸ The agencies already granted the rights-of-way and the CWA 404 permit. Despite this, the agencies failed to conduct a site-specific analysis of the impacts of this project. As discussed throughout these comments, BLM did not previously identify or address the significant gaps in baseline information about the region; did not have complete information about the design and plan of construction for this project; did not analyze with any level of specificity the full range of impacts this project will have on land, water, wildlife, subsistence, recreation, or other values; did not analyze a reasonable range of alternatives; and did not adequately evaluate mitigation measures for this project.

¹⁴² *Blue Mountains Biodiversity Project*, 161 F.3d at 1216 (quoting *Marsh*, 490 U.S. at 371).

¹⁴³ *Id.*

¹⁴⁴ *Block*, 690 F.2d at 761.

¹⁴⁵ *Id.* (emphasis added).

¹⁴⁶ *Friends of Yosemite Valley v. Norton*, 348 F.3d 789, 800 (9th Cir. 2003) (quoting *N. Alaska Env'tl. Ctr. v. Lujan (NAEC)*, 961 F.2d 886, 890–91 (9th Cir. 1992)); *State of Cal. v. Block*, 690 F.2d 753, 761 (9th Cir. 1982) (“The standards normally applied to assess an EIS require further refinement when a largely programmatic EIS is reviewed.”).

¹⁴⁷ *Block*, 690 F.2d at 761.

¹⁴⁸ 1 FEIS at 3-164 to -165.

Rather than engaging in a meaningful site-specific analysis of the project impacts and potential mitigation measures, the agencies appear to be waiting until some unspecified, future “design/permitting phase” to develop many of the mitigation measures for this project.¹⁴⁹ The rights-of-way themselves reflect the substantial information gaps the agencies did not address prior to approving this project. BLM’s right-of-way requires the submission of a broad range of baseline and project design information at a future point in time since so much information was not previously provided as part of the permitting process.¹⁵⁰ Contrary to FLPMA, BLM allowed AIDEA to complete its plan of development and submit information on key resources and design elements at an unspecified later point in time.¹⁵¹

BLM and the other agencies never should have approved this project without conducting a site-specific analysis. The prior EIS is not sufficient to support BLM’s or any other agencies’ NEPA obligations for this proposal. BLM needs to conduct a robust site-specific analysis of this proposal as part of the SEIS. Because BLM is still lacking sufficient information to conduct a site-specific analysis and because of the substantial gaps in AIDEA’s application, baseline information, and other information, BLM and the other agencies should rescind the prior authorizations and should not reapprove this project prior to obtaining sufficient information on which to base that site-specific analysis.

B. BLM’s Purpose and Need Statement Is Unreasonably Narrow.

BLM should not limit its consideration of alternatives based on an arbitrarily set purpose and need statement. The EIS must provide a description of the underlying need and purpose to which the agency is responding in proposing the alternatives and the proposed action.¹⁵² The final EIS states that “[t]he purpose of the BLM action is to issue a right-of-way grant which provides for: (1) technically and economically practical and feasible year-round industrial surface transportation access in support of mining exploration and development, and (2) construction, operation, and maintenance of facilities associated with that access.”¹⁵³

It is alarming that BLM added “economically practical” as a requirement for its prior decision. There is no requirement under NEPA or FLPMA that a federal action to issue a right-of-way expressly consider economic practicability. The requirements for BLM under FLPMA are clear: BLM must not issue a ROW that will do unnecessary damage to the environment.¹⁵⁴ CEQ states that “[r]easonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant.”¹⁵⁵ While economics are a consideration in alternatives analysis, it should not be the main driver behind the BLM’s purpose and need statement. By having a purpose and need that is so focused toward economic factors, BLM may reject reasonable

¹⁴⁹ See, e.g., 1 FEIS at 2-10 to -16; 3 FEIS at N-32, Q-25 to -26.

¹⁵⁰ See BLM ROW.

¹⁵¹ *Id.* at ex. A at 6–7.

¹⁵² 40 C.F.R. § 1502.13.

¹⁵³ 1 FEIS at 1-3.

¹⁵⁴ See generally 43 U.S.C. § 1764 (1996).

¹⁵⁵ Forty Most Asked Questions.

alternatives that are more protective of the environment because they are less economically desirable to the applicant.

There is also no reason why access to the Ambler mining district must be “year-round industrial surface transportation.” This purpose and need statement needlessly precludes access via ice road, aircraft or barge, which might otherwise be reasonable and less environmentally damaging. Indeed, the final EIS failed to consider any alternative other than a gravel road extending east from the Ambler Mining District, constructed in three phases. The SEIS should include a broader purpose and need to allow the agency to consider various means of access to the Ambler Mining District for purposes of development.

Additionally, it is entirely unclear why “facilities” associated with access to the Ambler Mining District are incorporated into BLM’s purpose and need statement for its right-of-way. As discussed in more detail below, BLM has independent legal obligations surrounding any authorizations of gravel mines, which are considered part of the facilities for this project. Moreover, camps and other facilities associated with this project are largely located off of BLM-managed lands, so it is entirely unclear why the BLM’s purpose and need is based upon the construction of these facilities. Further, we note that it is not clear how AIDEA’s proposed action — to build and maintain a seasonal pioneer road for an indeterminate amount of time prior to constructing Phase III — can meet BLM’s purpose and need for “year-round industrial surface transportation access.”

BLM’s failure to properly define the Ambler road’s purpose and need will necessarily preclude consideration of a reasonable range of alternatives. The SEIS must give “full and meaningful consideration to all reasonable alternatives” to the action.¹⁵⁶ The alternatives considered should not be entirely driven by AIDEA’s preferences.¹⁵⁷ BLM must use its independent judgment to define the purpose and need for the project and should not limit its consideration of alternatives based on an arbitrarily set purpose and need statement. This requires the BLM to critically evaluate the purpose and need.¹⁵⁸

BLM should recraft its purpose and need statement in the SEIS to more closely reflect the requirements under FLPMA and NEPA, and to ensure that it does not rule out potential alternatives or important mitigation measures based on an overly restrictive purpose and need statement.

C. BLM’s Alternatives Analysis in the FEIS Was Inadequate.

The final EIS failed to meet BLM’s legal obligation — and NEPA’s core mandate — to study in depth and disclose the environmental consequences of reasonable alternatives to

¹⁵⁶ 42 U.S.C. § 4332(2)(E); 40 C.F.R. § 1508.9(b).

¹⁵⁷ See Forty Most Asked Questions, at Question 2a. (“[T]he emphasis is on what is ‘reasonable’ rather than on whether the proponent or applicant likes or is itself capable of carrying out the particular alternative.”).

¹⁵⁸ See *Friends of the Earth v. Hintz*, 800 F.2d 822, 835–36 (9th Cir. 1986) (recognizing the agency must rely on information provided by the applicant but must not do so “uncritically”).

AIDEA's preferred course of action. NEPA requires that an EIS include "alternatives to the proposed action."¹⁵⁹ The analysis of alternatives is the "heart" of an EIS.¹⁶⁰ An agency must "[r]igorously explore and objectively evaluate all reasonable alternatives" to a proposed action.¹⁶¹ The purpose of the alternatives requirement is to analyze a variety of impacts and present a range of choices to the decision maker.¹⁶² The "touchstone" of the inquiry is "whether an EIS's selection and discussion of alternatives fosters informed decision-making and informed public participation."¹⁶³ Accordingly, an EIS must include an evaluation of "all reasonable alternatives," and provide the decision maker with a "range of alternatives" from which to choose.¹⁶⁴ Consistent with NEPA's basic policy objective to protect the environment, this includes more environmentally protective alternatives.¹⁶⁵ It also includes reasonable alternatives submitted by the public at scoping.¹⁶⁶ "The existence of a viable but unexamined alternative renders an [EIS] inadequate."¹⁶⁷ In defining what is a "reasonable" range of alternatives, NEPA requires consideration of alternatives "that are practical or feasible" and not just "whether the proponent or applicant likes or is itself capable of carrying out a particular alternative"; in fact, "[a]n alternative that is outside the legal jurisdiction of the lead agency must still be analyzed in the EIS if it is reasonable."¹⁶⁸

The range of alternatives in the final EIS was woefully inadequate. The FEIS's range of reasonable and practicable alternatives included the no action alternative and three action alternatives. However, the action alternatives only differed on the specific route for the road. All three alternatives are simply versions of where to lay gravel in order to connect the Ambler Mining District to the Dalton Highway. Two alternatives provided for a nearly identical road route, with the only difference being where the road passes through Gates of the Arctic. Alternative C, the diagonal route to the Elliott Highway, would extend from the Elliott Highway and would head northwest toward Hughes, Hogatza, and Kobuk and enter the Ambler Mining District from the south. No alternative considered rail, air, or water transport options or routes that would not ultimately connect to the Dalton Highway.

BLM asserted in the FEIS that it considered the environmental tradeoffs of the various alternatives as part of its screening process, which is described in BLM's Alternatives Memo,

¹⁵⁹ 42 U.S.C. § 4332(2)(C)(iii).

¹⁶⁰ 40 C.F.R. § 1502.14.

¹⁶¹ *Id.* § 1502.14(a).

¹⁶² *Id.* §§ 1502.14, 1505.1(e).

¹⁶³ *Block*, 690 F.2d at 767 (citation omitted).

¹⁶⁴ 40 C.F.R. §§ 1502.14(a), 1505.1(e).

¹⁶⁵ *Id.* § 1500.2(e) (agencies must "[u]se the NEPA process to identify and assess reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions upon the quality of the human environment"); *see also, e.g., Kootenai Tribe of Idaho*, 313 F.3d at 1121-22 (citing cases), *abrogated on other grounds by The Wilderness Soc'y v. U.S. Forest Serv.*, 630 F.3d 1173, 1178-80 (9th Cir. 2011) (en banc).

¹⁶⁶ *See* 40 C.F.R. §§ 1501.7, 1502.1.

¹⁶⁷ *Mont. Wilderness Ass'n*, 725 F.3d at 1004 (quotations and citation omitted).

¹⁶⁸ Forty Most Asked Questions, at Questions 2A, 2B; *see also*, 40 C.F.R. §§ 1502.14, 1506.2(d).

developed in September 2018.¹⁶⁹ It is clear from this memo that BLM improperly weighed the costs to the applicant, and thus avoided consideration of alternatives that may be less environmentally damaging. BLM used its “screening process” to improperly eliminate alternatives in advance of doing an adequate NEPA analysis. Further, BLM failed to consider a number of reasonable options raised by the public in scoping comments, and should include a broader consideration of alternatives in the SEIS. Additionally, because the prior description of the no action alternative did adequately characterize the environmental baseline for comparison, the prior analysis did not have a meaningful comparison point for evaluating the action alternatives. BLM should not rely on the Alternatives Memo as part of the SEIS remand process and should start from scratch. BLM must comply with its legal obligations under NEPA to consider a reasonable range of alternatives in the SEIS and should address the prior deficiencies with its alternative analysis as part of this remand process.

1. BLM’s Alternatives Screening Process Was Flawed.

As noted above, the project purpose cannot be defined in a manner that “unduly restrict[s] a reasonable search for potential practicable alternatives.”¹⁷⁰ Because the agencies previously defined the purpose for this project too narrowly, the range of alternatives unduly restricted the agencies’ consideration of other potential reasonable and practicable alternatives. By restricting its consideration of alternatives to only those that AIDEA would consider “economically practicable,” BLM improperly eliminated alternatives that should have been analyzed. This is especially alarming given the flaws in the cost projections for AIDEA’s Proposed Route. AIDEA’s cost estimates for even its preferred alternative have been highly misleading and appear to have been skewed in favor of that preference. In the SEIS, BLM should take a broader view of what alternatives are practicable to ensure it is considering a range of options with the potential to reduce this project’s impacts.

In the original decision-making process, BLM failed to adequately consider alternatives to AIDEA’s proposed routes and instead relied on outdated alternatives considered by the Alaska Department of Transportation and Public Facilities (DOT&PF) conducted in approximately 2011.¹⁷¹ Alaska DOT&PF had examined multiple routes (corridors) before the project was transferred to AIDEA.¹⁷² This work consisted of identifying corridors, but BLM does not provide any information on the process DOT&PF undertook to evaluate the environmental trade-offs of these routes. The alternatives DOT&PF examined, as described in BLM’s Alternatives Memo, were the following:

- Original Brooks East Corridor – Road

¹⁶⁹ U.S. DOI BLM, Ambler Road Environmental Impact Statement Alternatives Development Memorandum (Sept. 2018) [hereinafter BLM Alternatives Memo].

¹⁷⁰ See *Sierra Club v. Flowers*, 423 F. Supp. 2d 1273, 1353 (S.D. Fla. 2006) (citing *Old Cutler Bay* Permit 404(q) Elevation (Sept. 13, 1990)); *Sylvester v. U.S. Army Corps of Eng’rs*, 882 F.2d 407, 409 (9th Cir. 1989) (“[A]n applicant cannot define a project in order to preclude the existence of any alternative sites and thus make what is practicable appear impracticable.”).

¹⁷¹ BLM Alternatives Memo at 8.

¹⁷² *Id.* at 29.

- Kanuti Flats Corridor – Road
- Elliott Highway Corridor – Road
- Parks Highway Railroad Corridor – Rail
- Delong Mountain Transportation System Port Corridor – Road or Rail
- Cape Blossom Corridor – Road or Rail
- Selawik Flats Corridor – Road or Rail
- Cape Darby Corridor – Road or Rail¹⁷³

BLM has insufficient information to screen out these alternatives at this stage. In particular, the Alternatives Memo expressly states that “[a]vailable wetlands data was reviewed and determined by the BLM and the Corps to be insufficient for screening purposes due to its coarseness and inaccuracy.”¹⁷⁴ It is not clear how BLM was able to weigh the environmental tradeoffs of these potential alternatives in the absence of data that would have been critical to evaluate the wetland impacts. This also raises questions as to whether any of the alternatives considered in the FEIS could qualify as the Least Environmentally Damaging Practicable Alternative for purposes of the Corps’ 404 permit, discussed further below.

2. *BLM Should Consider a Broader Range of Alternatives in the SEIS.*

The alternatives analysis is utterly lacking because it functionally only has two action alternatives — one action alternative with differences in routing through Gates of the Arctic, and one other with a southern route. This does not satisfy NEPA’s requirements for a reasonable range of alternatives.¹⁷⁵ A reasonable range of alternatives must include more than just a few minor variants on where the Ambler Road is ultimately placed.

A reasonable range of alternatives should have evaluated a range of alternatives, including rail access; seasonal ice road access; construction of only one phase of the road (i.e., not a multi-phase project and a version with no damaging pioneer road); aircraft access; barge access; and other alignments coming from the west.

BLM acknowledged in its Alternatives Memo that, based on input from its cooperating agencies, alternatives involving the use of rail modes appeared to be reasonable for further consideration, and that rail access to the Dalton Highway may be difficult to screen out as an alternative.¹⁷⁶ Regarding standard rail transportation, BLM further acknowledged that rail access could provide a “technically feasible surface transportation method that could satisfy the project purpose and need, depending upon the route” and could be “effective at hauling heavy loads for long distances in support of mining operations around the country, including Alaska.”¹⁷⁷ BLM

¹⁷³ *Id.*

¹⁷⁴ *Id.* at 22 n.5.

¹⁷⁵ *Muckleshoot Indian Tribe v. U.S. Forest Serv.*, 177 F.3d 800, 814 (9th Cir. 1999) (finding that the review of two virtually identical action alternatives and a no action alternative was not sufficient under NEPA).

¹⁷⁶ BLM Alternatives Memo at 23.

¹⁷⁷ *Id.* at 27.

agreed that rail access “is a proven technology in Alaska’s northern climate.”¹⁷⁸ In the recent feasibility study AIDEA commissioned to look at the full supply chain corridor for the Ambler Road, including the transportation of materials from the Ambler Road to a port for export, even AIDEA is exploring the use of rail.¹⁷⁹ On remand, the SEIS should fully consider rail as an alternative for this project.

BLM nevertheless refused to analyze the use of rail transportation as an alternative in the FEIS. BLM justified this failure by stating that the alternative was “not practical due to substantial handling inefficiencies (and therefore increased operating costs).”¹⁸⁰ BLM tried to further justify its pre-decisional determination by reciting the costs and technical challenges associated with transporting ore and freight via rail, namely the need to transfer cargo and ore at the terminus points. This is not impracticable, and there is no explanation in the Alternatives Memo as to how these types of transfers are different from typical methods of transporting freight via rail. Given that AIDEA is already looking at rail as an option for the remainder of the supply chain corridor for this project — which should have been analyzed as a connected action to the road — it is beyond reason why rail could not have been considered in place of the road. BLM jettisoned a potentially viable alternative due to potentially higher costs, without considering the environmental benefits as required by NEPA. Moreover, AIDEA’s artificially low-cost projections for construction, operation, and maintenance of the road mean that BLM was not in a position to meaningfully compare the costs of the road and a rail option to make such a determination.

Further, BLM arbitrarily assumed that “[t]here is likely little practical difference in impacts between the road and rail modes on this alignment.”¹⁸¹ The Alternatives Memo explains that the primary benefit of rail is to preclude illegal use of the proposed gravel road. BLM does not explain its baseless assertion that a rail would lead to “somewhat less likelihood” of vehicle use.¹⁸² A railroad would, practically speaking, eliminate the possibility for illegal road access by street vehicles or ATVS, as these vehicles are not designed or equipped to travel over railroad beds without being significantly damaged and immobilized.¹⁸³ In the longer-term it would also preclude the corridor being opened up to the public — another major impact that was ignored and needs to be addressed in the SEIS.

The Alternatives Memo claims that the rail concept includes a single lane maintenance road alongside the tracks, so the possibility of public access would remain.¹⁸⁴ There is no

¹⁷⁸ *Id.*

¹⁷⁹ AIDEA, Press Release: Board Approves Funding to Study Trans-Alaska Supply Chain Corridor for Ambler Access Project (Apr. 20, 2022), *available at* https://www.aidea.org/Portals/0/PressReleases/042022%20AAP%20Corridor%20Feasibility%20PR_final.pdf?ver=bTgJft3EZIPSSnYrVyvUGA%3D%3D [AIDEA Press Release].

¹⁸⁰ BLM Alternatives Memo at 29.

¹⁸¹ *Id.* at 30.

¹⁸² *Id.* at 29–30.

¹⁸³ *See, e.g.,* Don Sweeney, *Woman Who Wrecked Car Driving on Train Tracks Says GPS Led Her Astray, Mass. Cops Say*, MIAMI HERALD, <https://www.miamiherald.com/news/nation-world/national/article226943889.html>.

¹⁸⁴ BLM Alternatives Memo at 30.

explanation or justification for BLM's assumption that a road must necessarily accompany a railway. Railroads operate efficiently without parallel roadways in Alaska and the rest of the United States. Indeed, the Alaska Railroad's main line stretches 470 miles to connect Seward to Fairbanks, through varied terrain, and much of that route lacks road access. BLM cannot arbitrarily determine that a road must parallel any potential railway to Ambler in order to make a rail alternative impracticable or to skew its assessment of the potential impacts.

Importantly, a rail would eliminate a host of additional impacts from road use and construction. For instance, there is no indication that a rail would require the same extent of annual maintenance and associated gravel mining and disturbance as the proposed three-phase road. Additionally, rail access would decrease road dust, eliminate air emissions from vehicles, and may create less of a barrier for the region's hydrology and wildlife to cross. However, BLM did not explore any of these potential environmental benefits because it eliminated a rail system without analyzing it as an alternative. BLM should revise and reissue its FEIS to fully analyze the benefits and detriments of rail transport.

Additionally, BLM improperly ruled out an alternative that would have required AIDEA to build the road in one phase instead of three or otherwise limit the scale of the road that would be authorized (e.g., by eliminating Phase III in its entirety, as the Corps did in its decision). This is a viable option that was included in the revised permit application submitted to only the Corps — indicating it is a viable option for consideration in the SEIS. In the SEIS, BLM should consider an alternative that eliminates AIDEA's phased approach and only allows for the construction of what is now Phase II of the road (i.e., eliminate both the pioneer road and Phase III of the road). BLM rejected consideration of a phased approach seemingly because the alternative could not be mapped.¹⁸⁵ The mere fact that an alternative proposal cannot be recreated on a map is not a legitimate reason for dismissing that alternative out of hand and refusing to consider its environmental tradeoffs. To the extent AIDEA submits a new, consistent application to all of the agencies, as required by ANILCA, and is still asking for all 3 phases of this project, then the SEIS should still consider an alternative that does not allow for a phased approach.

AIDEA's proposal to build and operate a pioneer road will likely have significant environmental impacts that could be avoided by requiring AIDEA to fully build out the road in one stage instead of two or three progressively larger phases. The seasonal nature of the pioneer road, which is likely to be highly susceptible to annual flooding and other degradation problems, will have major impacts to hydrological systems in the area. Changes to the road width and maintenance, and the need to replace culverts to account for AIDEA's phased approach could have severe adverse impacts to the hydrology of the region and thus significantly degrade the environment.¹⁸⁶ It's also unclear the duration AIDEA intends to leave the pioneer road in place, which could lead to long-term use of a gravel road, and associated dust impacts and permafrost degradation, in an environmentally sensitive area.

¹⁸⁵ *Id.* at 20.

¹⁸⁶ *See*, for example, the reports by Fennessy and Frissell that were previously submitted for the record and discuss the serious impacts likely to occur from building and essentially rebuilding the stream crossings as part of AIDEA's proposed phased approach to construction.

Additionally, the temporal and geographic impacts would be very different if the road were built out to its full embankments in a linear fashion, as AIDEA would operate in discrete geographic areas at different times, which could change how wildlife are impacted by allowing them to avoid industrial activity in localized areas. Requiring AIDEA to build the road without using AIDEA's proposed phased approach may yield significant environmental benefits. As recognized by one engineering expert, BLM should have considered the benefits of requiring AIDEA to forego construction of its environmentally damaging Pioneer Road to minimize impacts to permafrost and tundra.¹⁸⁷

In the Alternatives Memo, BLM improperly refused to analyze any potential alternatives that “were vague or about process.”¹⁸⁸ In reality, these “process” requirements refer to methods of construction and operation of a massive 211-mile long road through a wilderness area, and varied approaches to road design, construction and operation would have significant environmental tradeoffs. Restrictions on traffic, requirements around construction methods and bridge designs, and different road designs are important alternatives that BLM failed to consider as means to reduce impacts. The SEIS should also look at requiring mitigation measures to minimize impacts to permafrost, aquatic resources, and other resources up front. Under AIDEA's pioneer road, many such measures (such as proper road insulation) would not be implemented until later phases, leaving resources vulnerable to damage.

3. *BLM Failed to Adequately Analyze the No Action Alternative in the FEIS.*

BLM failed to rigorously analyze the no action alternative for resources in the project area. The FEIS merely repeats for each resource that, under the no action alternative, the road would not be built and thus impacts would not occur. However, as detailed elsewhere in these comments, BLM did not have sufficient information about the environmental baseline to conduct a meaningful analysis. Its cursory consideration of the no action alternative and the baseline conditions was insufficient. The final EIS states that,

[u]nder the No Action Alternative, the BLM would not grant a right-of-way (ROW) easement, and no road would be constructed or operated to the District. A No Action Alternative is required to be included in a National Environmental Policy Act analysis, providing a baseline against which action alternative impacts can be compared. As part of the No Action alternative, BLM must analyze the impacts to environmental resource values outside the immediate ROW corridor.¹⁸⁹

BLM's consideration of the No Action alternative in the FEIS was cursory at best. The final EIS notes in a generalized way that the following impacts will occur from all action alternatives:

- Culverts would have impacts to the natural hydrology.

¹⁸⁷ See Engineering Report at 6-8.

¹⁸⁸ BLM Alternatives Memo, 20.

¹⁸⁹ 1 FEIS at 2-5.

- Changes in water depth and velocity could result in changes in erosion or sedimentation, ponding, or channel migration.
- Construction could hasten thawing of permafrost in localized areas and could damage natural topography and alter water flows and vegetation patterns.
- All action alternatives cross areas of asbestos and rock that can generate acidic runoff when disturbed, which can be harmful to the environment and human health.
- All alternatives would produce emissions due to combustion for moving vehicles, heating maintenance camps and buildings, and generating power at maintenance camps and for communications facilities.
- The project would lead to direct fill in wetland and vegetation habitat due to road construction, the areas near the road would be affected by road dust, noise, movement, and light or shading (at culverts and bridges), and potentially spills of pollutants from truck traffic.
- A road would fragment wildlife habitat and the presence of a road and road noise could affect caribou migration patterns and movements of other animals.
- Subsistence use would be altered by the presence of a road.
- Visual and noise impacts would affect recreation and tourism, which are closely related to wilderness values.¹⁹⁰

Despite the list of significant environmental impacts that can be expected to result from AIDEA's proposed project, the FEIS did not actually consider the tradeoffs and differences for each resource or fully delineate the baseline conditions for purposes of the no action alternative. Although the resource sections provide a "No Action Alternative" heading, the content is meaningless. For example, for water quality, the final EIS merely states that "[t]he road would not be built and there would not be impacts on the water resources associated with AIDEA's proposal under the No Action Alternative. Water resources would be affected by changing climate and permafrost conditions and other reasonably foreseeable future actions."¹⁹¹

Across all resources in the FEIS, BLM merely repeated that under the no action alternative, the road would not be built and thus there would be no associated impacts from AIDEA's road proposal.¹⁹² BLM has entirely failed to provide a baseline against which action alternative impacts can be compared, and as a result has overlooked important environmental tradeoffs. For instance, BLM failed to evaluate the findings in a key study done by the National Parks Service. When comparing households in villages within the Ambler project area to those along the existing road system in Alaska, subsistence harvest was greater in villages located off the existing road system.¹⁹³ If subsistence harvest of those villages near the proposed road

¹⁹⁰ *Id.* at ES-5 to -6.

¹⁹¹ *Id.* at 3-25 (internal cross references omitted).

¹⁹² *See, e.g. id.* at 3-127 ("The No Action Alternative would not result in any changes to socioeconomic conditions in the study area communities."); *id.* at 3-41 ("Under the No Action Alternative, the proposed project would not be developed, and associated impacts on air quality would not occur.").

¹⁹³ Nat'l Parks Serv., U.S. Dep't of the Interior, Evaluating Differences in Household

changed to mirror those villages on the current road system, it was estimated that the cost to replace those subsistence resources would be roughly equivalent to 33% of the average annual income in these villages.¹⁹⁴ BLM failed to fully consider the benefits of the no action alternative on subsistence and sociocultural systems in light of such studies. Further, BLM failed to consider the economic benefits of the no action alternative to both local communities and state taxpayers, among a host of other issues.

The SEIS needs to address these prior deficiencies by taking a hard look at the no action alternative, as NEPA requires. Doing so would allow permitting agencies to present a meaningful evaluation of impacts and to facilitate a reasoned choice among alternatives, including no action. As explained below, the BLM should not issue a right-of-way that fails to “protect the environment” as required by FLPMA, and the Corps must select the least environmentally damaging practicable alternatives. Here, the only lawful choice is the no action alternative.

D. BLM and the Corps Failed to Consider and Adequately Analyze Connected Actions.

The NEPA regulations promulgated by the Council on Environmental Quality (CEQ) provide that when an agency decides to prepare an EIS for a major federal action, it must as soon as practicable initiate a process for determining the scope of the EIS.¹⁹⁵ The scope of the EIS is “the range of actions, alternatives, and impacts to be considered” in the document.¹⁹⁶ The EIS must consider actions that are connected with, or closely related to, the project in question.¹⁹⁷

An agency preparing an EIS “may not ‘segment’ its analysis so as to conceal the environmental significance of the project or projects.”¹⁹⁸ In determining the proper scope of an EIS, the agency is required to consider three types of actions and three types of impacts.¹⁹⁹ The three types of actions — besides single, unconnected actions — are connected actions, cumulative actions, and similar actions.²⁰⁰ Actions are connected if they: (1) automatically trigger other actions which may require environmental impact statements; (2) cannot or will not proceed unless other actions are taken previously or simultaneously; or (3) are interdependent parts of a larger action and depend on the larger action for their justification.²⁰¹

Subsistence Harvest Patterns between the Ambler Project and Non-Project Zones 39 (Aug. 2016) [hereinafter NPS Subsistence Study].

¹⁹⁴ *Id.* at 41.

¹⁹⁵ 40 C.F.R. § 1501.7(a)(2).

¹⁹⁶ *Id.* § 1508.25.

¹⁹⁷ *Id.* § 1508.25(a)(1).

¹⁹⁸ *Hammond v. Norton*, 370 F. Supp. 2d 226, 244 (D.D.C. 2005).

¹⁹⁹ 40 C.F.R. § 1508.25.

²⁰⁰ *Id.* § 1508.25(a).

²⁰¹ *Id.* § 1508.25(a)(1).

Cumulative actions are those “which when viewed with other proposed actions have cumulatively significant impacts”²⁰² Similar actions are those “which when viewed with other reasonably foreseeable or proposed agency actions, have similarities that provide a basis for evaluating their environmental consequences together, such as common timing or geography.”²⁰³ NEPA requires that “connected actions” and “cumulative actions” be considered together in a single EIS, while an agency “may wish” to discuss similar actions together in the same EIS.²⁰⁴

BLM and the Corps violated NEPA as part of the prior permitting process by failing to consider the gravel mines and other related project infrastructure in detail as connected actions to this project. The FEIS also improperly failed to analyze the related hardrock mines as connected actions.

1. BLM and the Corps Improperly Segmented Their NEPA Analysis by Refusing to Consider the Gravel Mines and Other Project Components as Connected Actions.

The agencies made conflicting decisions about the gravel mines and other necessary project components (including airstrips, maintenance stations, and camps) in the FEIS and JROD. BLM deferred its analysis and approval of those elements until it received site-specific plans. Yet the Corps authorized 15 gravel mines and other components, despite the fact that the FEIS failed to take an adequate hard look at those components. The agencies did not acknowledge or explain these conflicting decisions. Both agencies violated NEPA and these problems need to be rectified in the SEIS.

The Ambler Road will be a gravel road and the project will likely require over 40 gravel mines to supply 15 million cubic yards of gravel for construction, plus 220,000 cubic yards of gravel annually for maintenance.²⁰⁵ The EIS identifies gravel mining for the road as a direct impact of the project.²⁰⁶ The JROD also acknowledges the project necessarily requires additional components like construction camps, water treatment facilities, fuel storage tanks, maintenance stations, communications facilities, and access roads to the gravel mines.²⁰⁷

The gravel mines and project components are connected actions that needed to be, but were not, fully considered in the EIS. The gravel mines and project components serve no purpose but for supplying gravel and support infrastructure for the road, and the project could not be built but for the mined gravel — the very definition of “connected actions” under NEPA.²⁰⁸ But the FEIS did not review these mines’ site-specific impacts. The JROD specifies that “BLM will evaluate site-specific [gravel] mining and reclamation plans submitted by the proponent” in the

²⁰² *Id.* § 1508.25(a)(2).

²⁰³ *Id.* § 1508.25(a)(3).

²⁰⁴ *Id.* § 1508.25.

²⁰⁵ 1 FEIS App. C at C-3; 4 FEIS Ch. 2 (showing potential gravel mine locations).

²⁰⁶ 3 FEIS App. Q at Q-8.

²⁰⁷ JROD App. F at F-53; JROD at 5.

²⁰⁸ 40 C.F.R. § 1508.25(a)(1).

future.²⁰⁹ BLM stated that it will “determine whether the FEIS for this Project is adequate, or whether additional site-specific NEPA is required based on potential issues” at that later time.²¹⁰ As such, the FEIS postponed its review of gravel mines to future analysis and permitting.

The FEIS also failed to analyze the impacts of other necessary project components.²¹¹ The JROD admits the locations of construction and maintenance camps “will be identified in site-specific plans as part of the Plan of Development” and that BLM will evaluate site-specific plans and impacts later.²¹² Deferring this analysis violates NEPA.²¹³

In addition, BLM failed to adequately review the cumulative effects of the gravel mines and other components.²¹⁴ Agencies are required to take a hard look at “*all* actions that may combine with the action under consideration to affect the environment.”²¹⁵ The gravel mines themselves are likely to cause significant impacts that needed to be evaluated, with gravel mines “up to 142 acres in size,” permanently impacting hundreds of acres.²¹⁶ The associated maintenance stations, access roads, airstrips, and other infrastructure would also increase noise, fugitive dust, and air emissions, and require fill which would further amplify impacts of gravel mining.

The FEIS attempts to justify its failure to analyze the impacts from the gravel mines and other project components by pledging to review and approve them later.²¹⁷ But that is contrary to NEPA. The agencies cannot segment consideration of connected actions; it needed to analyze them prior to authorizing this project.²¹⁸

To make matters worse, the Corps — despite the EIS’s acknowledged failure to consider the direct, indirect, and cumulative impacts of the gravel mines and other components — nevertheless authorized 15 gravel mines with access roads, 4 maintenance stations, 12

²⁰⁹ JROD at 15; *see also* BLM ROW at 7–8 (“[AIDEA] shall apply for any additional facilities ([gravel mines], construction camps, maintenance stations, communication sites[,] etc.) not covered under this right-of-way as soon as the plans of development have been approved....”).

²¹⁰ JROD at 15.

²¹¹ 1 FEIS at 2-8.

²¹² JROD at 3.

²¹³ *Thomas v. Peterson*, 753 F.2d 754, 758–60 (9th Cir. 1985).

²¹⁴ *See Great Basin Mine Watch v. Hankins*, 456 F.3d 955, 968–74 (9th Cir. 2006).

²¹⁵ *Great Basin Res. Watch v. U.S. Bureau of Land Mgmt.*, 844 F.3d 1095, 1104 (9th Cir. 2016) (citing *Te-Moak Tribe of W. Shoshone v. U.S. Dep’t of Interior*, 608 F.3d 592, 603 (9th Cir. 2010)) (internal quotation omitted).

²¹⁶ JROD App. F at F-53.

²¹⁷ 1 FEIS at 3-3 (“The BLM may authorize portions of the project under separate permits, such as an authorization for the road [right-of-way] and separate authorizations for material extraction and sales.”).

²¹⁸ *Thomas*, 753 F.2d at 758–60.

communications towers, 3 airstrips, and a fiber optic cable in its 404 permit.²¹⁹ This violates NEPA.

NEPA requires agencies to evaluate the site-specific impacts of an action before making an irreversible and irretrievable commitment of resources.²²⁰ The FEIS did not take a hard look at the direct, indirect, and cumulative impacts specific to the gravel mines and other components it approved. As noted above, the agencies expressly deferred review of those impacts until a later time.²²¹ The FEIS offers only cursory statements about generalized impacts from gravel mining and construction of other components, and relies instead on future permitting and potential mitigation measures.²²² The Corps could not both defer analyzing the site-specific impacts from the gravel mines and other components in the EIS *and* make an irretrievable commitment of resources by issuing a 404 permit for some of them.²²³

The Corps' authorization of those project components was particularly problematic given AIDEA's failure to verify the locations of gravel mines and other components. EPA raised serious concerns with AIDEA's failure to conduct field sampling to verify the locations for any gravel mines.²²⁴ Because the gravel mine locations were only preliminarily mapped and studies were not done to determine their suitability, the actual mine site locations were not determined.²²⁵ As a result, the Corps' failure to analyze the direct, indirect, and cumulative impacts of the gravel mines and related components, while at the same time making an irretrievable commitment of resources by authorizing those project components, violates NEPA and is directly at odds with the Corps' obligations under the CWA.

The agencies must use this remand process to obtain data on the specific locations of the Ambler Road's proposed gravel mines, airstrips, and other project components and fully analyze their site-specific impacts prior to issuing an SEIS.

²¹⁹ 404 Permit.

²²⁰ *Block*, 690 F.2d at 761–63; *Robertson*, 490 U.S. at 349 (stating NEPA requires an agency has “available, and will carefully consider, detailed information concerning significant environmental impacts”); *Se. Alaska Conservation Council v. U.S. Forest Serv.*, 443 F. Supp. 3d 995, 1007–12 (D. Alaska 2020) (explaining site-specific EIS must analyze impacts at project location).

²²¹ 1 FEIS at 3-3.

²²² *See, e.g.*, JROD App. D, Attachment D 2, at 2-6 (“AIDEA would provide a detailed mineral materials (e.g., gravel) mining and reclamation plan to BLM for approval at least 90 days prior to beginning any mining operations.”).

²²³ 5 U.S.C. § 706(2)(A). To the extent the Corps did not approve, but acknowledges the need for, additional gravel mines and project components, JROD App. F at F-53, it improperly segmented its NEPA analysis.

²²⁴ 2019 EPA Comments at 9–10.

²²⁵ *Id.*

2. *BLM and the Corps Improperly Segmented Their NEPA Analysis by Refusing to Consider Hardrock Mining as a Connected Action.*

The prior EIS failed to consider hardrock mining-related activities in the Ambler Mining District as connected actions in the EIS. AIDEA has repeatedly stated that this road is intended to serve as a gateway for development to the District. The purpose and need for the project described above only further reinforces this fact — but for the applicants’ purpose of facilitating mine development, the Ambler Road would not be developed. The Revised Permit Application states that “[t]he purpose of this project is to provide transportation access to the Ambler Mining District to support and encourage mineral exploration and development in this highly mineralized area.”²²⁶ Several of the Ambler Mining District’s hardrock deposits are being actively explored without road access. The clear purpose of this industrial road is to build a road for mine development, making mine development a connected action that must be fully considered as part of the project’s direct, indirect and cumulative effects. The prior EIS’s discussion of generalized impacts from such mines as a “cumulative effect” of the Ambler Road was insufficient to meet this clear NEPA obligation.

The Revised Permit Application also states that “[t]he road would provide surface transportation access to the mining district to allow for expanded exploration, mine development, and mine operations at mineral prospects throughout the District.”²²⁷ There are several known large mining prospects whose development depends on the proposed road, including Arctic, Bornite, Sun, and Smucker. Exploration in the area has taken place without roads for decades, making it clear that this is meant to be a road for development and large-scale mining operations, not merely a one-lane pioneer road for exploration. The State acknowledged in its application that mining in the Ambler district cannot and will not proceed unless this road is built. Development of these mineral resources will not proceed unless the road is permitted, making it abundantly clear that this road and future mining are connected actions. As Rick Van Nieuwenhuysse, then chief executive of Trilogy Metals, succinctly stated, “You build a road, you’ve got a mine.”²²⁸ Because development cannot and will not proceed unless other actions are taken previously or simultaneously, mining development is a connected action and BLM is required to fully consider the impacts and infrastructure associated with development of the Ambler mining district as part of its EIS.

Further, the Ninth Circuit applies an “independent utility” test to determine “whether multiple actions are so connected as to mandate consideration in a single EIS.”²²⁹ The crux of the “independent utility” test is “whether ‘each of two projects would have taken place *with or without the other* and thus had independent utility.’”²³⁰ Because development of the Ambler

²²⁶ Revised 404 Permit Application at 5.

²²⁷ *Id.* sec. 2, at 1.

²²⁸ Yereth Rosen, *The Environmental Review Process Is Beginning for a Controversial New Road in Alaska’s Arctic*, ARCTIC NOW, Dec. 6, 2017; *see also* Julie Stricker, *Rich copper deposit yields 43 million tons of reserves*, FAIRBANKS DAILY NEWS-MINER, Jul. 21, 2019 (“We’ve said from the beginning, no road no mine.”).

²²⁹ *Sierra Club v. U.S. Bureau of Land Mgmt.*, 786 F.3d 1219, 1226 (9th Cir. 2015).

²³⁰ *Id.* (quoting *Cal. ex rel. Imperial Cnty. Air Pollution Control Dist. v. U.S. Dep’t of the*

Mining District would not take place without construction of the proposed road, the independent utility test is met.

It is equally clear that without the presence of the Ambler Mining District, AIDEA would not be seeking to permit and construct the proposed road. The road is not intended to connect communities to the Dalton Highway or otherwise provide for local transportation. As the purpose and need statement make clear, the purpose of the BLM action is to issue a right-of-way grant which provides for “year-round industrial surface transportation access in support of mining exploration and development.”²³¹ Indeed, this is the sole purpose of the Ambler Road. As a result, BLM’s failure to fully consider the direct, indirect, and cumulative impacts from mining development as a direct impact renders the prior EIS fatally flawed.

At a minimum, BLM and the Corps need to consider Trilogy Metals’ mine at the Upper Kobuk Mineral Deposit as a connected action. Trilogy Metals indicated they plan to move forward imminently with their CWA Section 404 permit and the permitting process for that mine, and Trilogy has already been engaged in discussions with the Corps about permitting for that mine.²³²

As described later in these comments, the previous analysis of mining impacts in the FEIS’s cumulative effects appendix is deeply flawed and does not sufficiently consider mining impacts as required by NEPA. Thus, BLM cannot point to that flawed, cursory analysis to fulfill its NEPA obligations to fully consider the impacts of hardrock mining.

E. BLM’s Must Significantly Revise Its Impact Analysis.

1. The SEIS Must Adequately Describe the Direct and Indirect Impacts of the Proposed Road.

An EIS must discuss the direct, indirect, and cumulative effects of the proposed project on the human environment, as well as the means to mitigate adverse environmental impacts.²³³ The effects and impacts to be analyzed include ecological, aesthetic, historical, cultural, economic, social, and health impacts.²³⁴ Direct effects are those that are caused by the project and that occur in the same time and place.²³⁵ Indirect effects are those that are somewhat removed in time or distance from the project, but are nonetheless reasonably foreseeable.²³⁶ As discussed below, the FEIS previously failed to adequately describe the direct and indirect effects from the proposed project. The agencies must correct these problems with the prior analysis in the SEIS.

Interior, 767 F.3d 781, 795 (9th Cir. 2014), as amended).

²³¹ 1 FEIS at 1-3.

²³² Trilogy Metals News Release, *supra*; Letter from Cal Craig, Trilogy Metals, to Jason Berkner, U.S. Army Corps of Eng’rs, Alaska District (Jan. 15, 2020).

²³³ 40 C.F.R. §§ 1502.16, 1508.25(c).

²³⁴ *Id.* § 1508.8.

²³⁵ *Id.* § 1508.8(a).

²³⁶ *Id.* § 1508.8(b).

i. The SEIS Must Better Define the Scope of the Impacts Analysis.

As an initial matter, BLM must clearly define the project area in the SEIS to allow the public to understand the agency's analysis. Clarity is needed because BLM provided an overly vague description of the project area in the FEIS. Specifically, the FEIS stated:

The project area is generally defined as the area from the Brooks Range (same latitude as the northern edge of the Ambler Mining District [District]) south to the Yukon River and from the Dalton Highway corridor west to Kobuk Valley National Park (Volume 4, Maps, Map 1-1). The affected area, however, may differ for each resource—from narrow areas limited to the proposed road corridors to more expansive areas defined by the movement of caribou, fish, or subsistence hunters.²³⁷

However, Map 1-1 appears to present only the road corridors under consideration, not the areas surrounding the corridor, associated gravel mines, airstrips, or other facilities. Further, the Ambler Mining District is noted on the map, but it is not clear whether the entire mining district is being considered as part of the project area for purposes of BLM's analysis. This makes reviewing the document a challenge, as it is difficult for the public to determine how BLM identified the geographic scope for its direct impact analysis or how it varied that analysis based on individual resources. The prior EIS was also unclear in how impacts along the Dalton Highway from increased traffic were analyzed for individual resources. In the SEIS, BLM must clearly define the project area, rather than referring to a vague area that encompasses a vast region of the southern Brooks Range.

In addition, the SEIS must provide information regarding the scope of BLM's impact analysis for individual resources. Although the FEIS stated that the scope of analysis for individual resources could be found in each resource section and in corresponding maps,²³⁸ BLM's analysis for many resources contained no such information. For example, there is no map depicting the affected area for birds and the bird analysis section does not define the affected area.²³⁹ Compounding the issue, the FEIS repeatedly refers to "localized impacts" without defining what is meant by this term in connection with numerous resources.²⁴⁰ Without defining the geographic scope of impacts, the term "localized" is rendered meaningless for purposes of understanding the anticipated impact to resources such as air, fish, and migratory wildlife. In the

²³⁷1 FEIS at 3-1.

²³⁸ *Id.* at 3-1.

²³⁹ *Id.* at 3-83.

²⁴⁰ *Id.* at 3-34 ("Alternative A road would have localized air quality impacts."); *id.* at 3-54 ("Replacing natural habitat with culverts and confining flow through culverts and bridges will create localized adverse impacts to fish habitat..."); *id.* at 3-75 ("Impacts to winter movements of WAH caribou would be localized."); *id.* at 3-83 ("removal or alteration of uncommon [bird] habitat types would have a proportionately greater impact on the species that use them; however, the impact would be localized.").

SEIS, BLM must clearly define the scope of the project area, and thus its geographic scope for the direct and indirect impacts from the proposed project, in order to fulfill its NEPA obligations.

Finally, BLM must accurately and fully describe the temporal scope of the project and the magnitude and duration of impacts in the SEIS. Much of BLM's analysis in the FEIS mischaracterized or failed to fully explain how harmful and lasting the Ambler Road's impacts would be. For example, in the FEIS, BLM "address[ed] impacts for the activities based on the duration of the impact, often referring to temporary impacts associated with construction and long-term or permanent impacts related to the long-term presence of a road in the project area, including effects beyond the life of the ROW grant."²⁴¹ This suggestion — that impacts from many preliminary phases such as construction will be short-term — mischaracterizes the permanent nature of impacts resulting from all stages of the proposed project. Many resources, such as sensitive permafrost, tundra, and wetlands, will never recover from even the preliminary phases of the proposed project, even assuming the road is reclaimed at all, let alone in an adequate manner. Yet, BLM failed to address this reality in its analysis for numerous resources. For example, the FEIS indicates that permafrost thaw might occur during certain phases of the project and references the duration of each phase — without stating that the permafrost thaw *itself* would be permanent.²⁴² This is misleading. In the SEIS, BLM should revise its analysis to clearly indicate that many adverse impacts resulting from the project would be permanent with or without reclamation.

ii. The SEIS Must Consider Impacts from the Phased Approach to Construction.

The FEIS failed to adequately analyze the impacts from AIDEA's phased construction approach. BLM's supplemental analysis must consider the full extent of impacts resulting from all phases of the proposed road. In the FEIS, BLM's impact analysis inappropriately focused on Phase III of the project, wherein the road is complete and no longer being used seasonally, as opposed to the more damaging Phase 1 Pioneer Road. The FEIS states:

The impact analysis focuses on the most impactful phase (i.e., the phase with the greatest potential for significant impacts). For most resource topics, Phase 3 would have the largest footprint and most traffic, and would be anticipated to operate for the largest number of years over the 50-year lease term. This analysis identifies impacts that could be significant in Phases 1 and 2 that are different from those anticipated in Phase 3.²⁴³

²⁴¹ *Id.* at 3-2.

²⁴² *Id.* at 3-9 ("Phased construction may accelerate subsurface soil temperature increases, . . . Drainage changes occurring during Phase 1 (pioneer road) and Phase 2 (1-lane road) could impound water, warming subsurface soils along areas to be encompassed by the Phase 3 (2-lane) footprint. Should permafrost thaw issues occur during Phases 1 or 2, when the road width is narrower, shoulder rotations and embankment cracks could also impact the drivable surface. The timing and duration of construction activities are estimated in Appendix H, Table 2-9.").

²⁴³ *Id.* at 3-2.

This approach is inadequate because NEPA obligates BLM to analyze all impacts — and therefore all phases — of the project. The agency cannot avoid this requirement by arbitrarily labeling one phase the “most impactful.” In order to fulfill the agency’s NEPA obligations, BLM’s supplemental analysis must account for all impacts resulting from all phases of the proposed road. This includes fully accounting for impacts associated with preliminary phases of the road.

Relatedly, the SEIS must correct BLM’s assumption that Phase III will be more impactful than other proposed phases. As discussed elsewhere in these comments as well (e.g., in the permafrost section), AIDEA’s shoddy Phase I road poses a significant risk that it will degrade the hydrology and other conditions across a massive region and will ultimately pose a serious hazard to public safety and the environment. It is deeply troubling that the Phase I road will be used seasonally and not be built to withstand typical North Slope spring conditions or to account for the highly vulnerable permafrost resources that extend across 90% of the project area. This could have significant adverse environmental impacts, and present safety hazards for road travelers that exceed the impacts and hazards presented by Phase III. The prior permitting process failed to analyze these unique risks and impacts from Phase I of the road. As designed, any use of the Phase I road could lead to significant road and environmental damage. Even if access is restricted during Phase I, water flooding over the road would likely lead to increased contamination from asbestos, increased hydrological impacts with the road acting as a dam, and decreased road integrity over time. During summer months when permafrost is most vulnerable, the road will likely be unstable and could lead to cascading problems with permafrost degradation well beyond the footprint of the road. Permitting such haphazard and careless construction would be an outright failure to protect property, economic interests, and other users of lands adjacent to the right-of-way. It would also be contrary to the Corps of Engineers’ obligation to prevent unreasonable degradation. In sum, there is no reasonable basis for the assumption in the FEIS that the Phase III road would be the most impactful phase. Moreover, BLM’s analysis of many resources failed to actually analyze differences between Phase I and Phase II impacts. In the SEIS, BLM must correct the assumption that Phase III will be the most impactful phase, fully address the significant impacts associated with all phases, and account for differences between phases to specific resources.

Because AIDEA only submitted a revised permit application to the Corps, it is also still unclear what exactly AIDEA is proposing for the phased approach. In the revised Corps application, AIDEA proposed to stop construction at Phase II, abandoning Phase III of the road, which in turn led the Corps to authorize a different version of this project from BLM. The agencies need to address this discrepancy in the versions of the project they considered and approved as part of the remand process. It is also apparent from the face of the right-of-way that BLM has yet to receive a complete plan of development mapping out AIDEA’s actual plans for construction.²⁴⁴ The ROW indicates AIDEA will submit complete plans of development detailing their plans for each phase of the project at a later point in time.²⁴⁵ Without information at this stage on how AIDEA plans to implement its phased approach to construction, it is unclear how the agencies could have meaningfully analyzed AIDEA’s purported plans. That information needs to be obtained prior to the agencies issuing any new authorizations and needs to be

²⁴⁴ BLM ROW.

²⁴⁵ BLM ROW Attachment A at 6–7.

incorporated into the SEIS to ensure the agencies have considered the actual impacts and plans for this project — not some vague, conceptual description that lacks any of the details necessary for a meaningful analysis.

BLM’s impacts analysis must also account for the fact that construction will be ongoing throughout all phases of the road. BLM’s impacts analysis for numerous resources in the FEIS relies on the unfounded assumption that construction and operation of the road would occur at different times. This approach improperly segmented and minimized the project’s impacts. For example, the FEIS’s air quality discussion distinguishes between emissions present during “active construction” and those present during “the operational phase (post-construction).”²⁴⁶ This distinction is misleading. Due to AIDEA’s proposed phased approach, which BLM is accepting without question or consideration of an alternative, there will be vehicle traffic on the road beginning at Phase I. This means AIDEA will be engaged in ongoing construction while road use is underway for Phase II and Phase III. The FEIS failed to account for these overlapping impacts, as well as the impacts that will occur from the fact that two inches of gravel will be needed for annual road maintenance, which will result in ongoing gravel mining in addition to road construction. The SEIS must revise BLM’s analysis to account for the fact that impacts from road use, construction, and maintenance will occur simultaneously and therefore have a compound effect.

Because impacts from road construction and road operations could occur at the same time, the SEIS must also recognize that these concurrent activities will result in different impacts. In the FEIS, BLM arbitrarily concluded that impacts from construction and operations would be the same for many resources, including water quantity and quality. BLM provided absolutely no basis for this conclusion and also failed to consider the potential cumulative effects from these types of activities occurring simultaneously on portions of the road. These concerns and shortcomings in the FEIS analysis are described in more detail for each resource below.

As discussed elsewhere in these comments, the SEIS must recognize that mining in the Ambler Mining District is a connected action. The proposed road is a connected action to mining activities in the Ambler Mining District, and thus should have been analyzed in a single EIS, with all the direct, indirect and cumulative impacts of the road and mines analyzed together. However, in the FEIS, BLM incorrectly limited impacts from large-scale mining in the Ambler Mining District to the cumulative impacts section. The FEIS explains that “this analysis treats impacts resulting from mining exploration and development expected to occur off the road and later in time as indirect and cumulative effects.”²⁴⁷ This approach inaccurately characterizes the direct causal link between the Ambler Road and the mining the road is designed to facilitate. In fact, BLM has indicated that mining development would take place after Phase II of the proposed road. Phase III may not begin until 2035, after Arctic and Bornite mines are already in production.²⁴⁸ It is inappropriate for BLM to treat mining development as later in time than road construction when both are planned to take place simultaneously. As the concurrent impact of mining would greatly increase impacts on the surrounding environment and communities, correcting this error is essential to the adequacy of BLM’s supplemental analysis.

²⁴⁶ See, e.g., 1 FEIS at 3-42 to -43.

²⁴⁷ 1 FEIS at 3-1.

²⁴⁸ 2 FEIS at H-22.

iii. The SEIS Must Adequately Consider the Impacts of Reclamation.

Relatedly, BLM must describe how the road will be reclaimed and incorporate impacts from reclamation into its analysis of the direct and indirect impacts of the road. The FEIS indicates reclamation “would occur at the end of the 50-year ROW authorization, *or* when mineral exploration and development activities in the District conclude.”²⁴⁹ Given how little is known about the amount of mineral resources in the Ambler Mining District, this statement is meaningless. BLM’s supplemental analysis must provide an intelligible timeframe for road reclamation.

The SEIS must also include a detailed description and analysis of the reclamation process and its impacts. Although AIDEA is only permitting this project as a “temporary” road, the FEIS provided almost no information about AIDEA’s plans for reclamation of the project. The FEIS does not discuss basic information regarding how the road will be constructed, let alone how it will be reclaimed. Abandonment and reclamation of project facilities would involve reclaiming mine sites, and removing gravel roads, facility pads, bridges, culverts, and airstrips. Road abandonment and reclamation would impact a broad range of resources, particularly soils, permafrost, vegetation, wetlands, and hydrology. There would also be impacts to subsistence resources, hunting, and access. These and other impacts stemming from reclamation must be incorporated into BLM’s supplemental analysis.

In addition, BLM’s supplemental analysis for each affected resource and each alternative must analyze two scenarios: one in which the road is removed and reclaimed, and one in which the road remains in place permanently. Although AIDEA alleges the road will be reclaimed, many gravel roads have historically been left in place due to the continued use, cost, and the negative environmental effects of removal. Many commenters urged BLM to recognize this fact and consider impacts resulting from the road remaining in place permanently.²⁵⁰ Indeed, the FEIS recognized this as a distinct possibility. The FEIS states: “mining companies may request, from the underlying landowner(s), that some segments of the road within the District stay open and revert to mining company control to allow their continued access from the Dahl Creek airport or mining company airstrips to the mines for required water treatment and monitoring activities, to be conducted *potentially in perpetuity*.”²⁵¹ In light of this statement — which clearly calls into question BLM’s assumption that reclamation will ever occur — the SEIS must fully analyze the project’s impacts should the road remain in place.

2. *The SEIS Must Consider Foreseeable Impacts from the Road Ultimately Becoming Open to the Public.*

On remand, BLM must revise its analysis to consider impacts to the region if and when the road becomes open to the public. It is reasonably foreseeable that the Ambler Road will

²⁴⁹ *Id.* at 2-9.

²⁵⁰ 3 FEIS at Q-22 to -24.

²⁵¹ 1 FEIS at 2-9.

ultimately be open to public use.²⁵² Despite that, the agencies' prior decision-making process ignored the potential impacts of the road becoming public in the future. Like the Dalton Highway, the proposed Ambler Road is likely to eventually be opened to public use because it is a publicly funded road crossing public lands. BLM's analysis must account for this reality. In the FEIS, BLM relied on AIDEA's claim that the Ambler Road would stay closed to the public and only be used as an industrial access road. BLM's acceptance of this unsupported assertion must be corrected in the SEIS. AIDEA has not indicated how it plans to keep the road private, particularly over the long term. Nor have BLM, AIDEA, or the State of Alaska provided any legally binding basis for their position that the road would remain closed to public access. The lack of mechanism for keeping the road private is concerning because opening the Ambler Road to public access would exponentially increase the project's impacts on the communities and resources of the region. For example, public use of the road could greatly increase hunter access across the southern Brooks Range and introduce conflicts between urban and traditional subsistence hunters.

Indeed, the Record of Decision indicates, as previewed in the FEIS, that the road would likely be used for commercial deliveries and other non-mining purposes. The JROD states, in relevant part:

The road will operate as a private industrial-access road and will not be open to the general public. A permitting system will allow traffic to and from the District and will allow delivery of goods and fuel, by commercial carrier only, to communities/landowners near the road. Land managing agencies and emergency personnel on official business will also use the road. All drivers will be required to follow the Applicant's protocols (approved by the BLM) for road use.²⁵³

Because AIDEA has yet to provide any legally binding basis to keep the road closed, BLM needs to revise its analysis in the SEIS to consider this and all other impacts likely to flow from public use of the proposed road. Adequate analysis of this outcome will require a full assessment of the direct, indirect, and cumulative impacts, including socioeconomic and subsistence impacts that could stem from the road being open to the public.

Even to the extent the FEIS acknowledged AIDEA has plans for broader use of the road that could involve uses beyond just mining access, the FEIS did not adequately analyze those likely impacts. The FEIS provides a stunted and confusing discussion of AIDEA's plans to use a vaguely conceived permit system for "commercial deliveries." This analysis, tucked away in Appendix H, is problematic. First, BLM's adoption of AIDEA's questionable premise that road access will be limited by a permit system ignores considerable public comments indicating that the road is likely to be made fully public on a permanent basis. Second, and as explained further below, AIDEA's proposed permit system is devoid of even basic details. The SEIS must provide sufficient detail regarding AIDEA's potential permit system and address the much more likely scenario in which the road is eventually opened to public use.

²⁵² 3 FEIS at Q-22 to -24.

²⁵³ JROD at 5.

The lack of information about these additional road uses needs to be addressed on remand. In addressing AIDEA's proposed commercial delivery system, the SEIS must explain which users would be granted road access and for what purposes. BLM's discussion of commercial access in the FEIS amounts to AIDEA's vague "intentions" without providing basic details.²⁵⁴ For instance, the FEIS states that during an April 2019 presentation to BLM, AIDEA indicated "agencies (with a permit) could have limited access on the road (e.g., for monitoring or management activities)."²⁵⁵ Another slide from AIDEA's presentation apparently "indicated that the road would have a 'limited access designation' and listed state and federal landowners, regional Alaska Native corporations, and '*others TBD*' as the groups apparently intended to have limited access."²⁵⁶ There is no indication whatsoever regarding which agencies would have access, what user groups "others TBD" is meant to denote, or what "monitoring or management activities" are.²⁵⁷ BLM also did not explain the circumstances under which Alaska Native corporations would be allowed access. Will access be limited to monitoring for resource damages on lands? Or, will access be allowed for any purpose? In the SEIS, BLM must clarify all of these aspects of AIDEA's proposal and either provide AIDEA's presentation for public review or refrain from relying on or referencing these materials further. The likely impacts of these additional uses were not adequately addressed in the FEIS and need to be clarified and addressed on remand.

One important aspect of AIDEA's limited access proposal that must be addressed in the SEIS is how the provisions suggested by AIDEA would be enforced. Notably, the FEIS provides no legal basis for AIDEA's proposal. It is therefore unclear what authority exists to preclude road use where the underlying landowner is, for example, a Native Corporation. Regarding the question of underlying landowners, the FEIS adds considerable confusion. The FEIS states:

Owners of the land crossed by the road could decide whether to authorize other individual users under separate decision-making processes. For example, if another mine were proposed outside the District, access could be allowed, but *authorization would have to come through the underlying landowner(s) and not from AIDEA* or its road operator. Landowners issuing such authorization would do so in consultation with AIDEA and its road operator, though *AIDEA concurrence would not be required*, and all drivers would be required to follow AIDEA road safety and operations requirements.²⁵⁸

This alarming passage does not indicate what activities and uses landowners could authorize and appears to indicate that AIDEA lacks the authority to grant or deny any and all road use authorizations granted by "underlying landowners." It seems possible landowners — such as the state — could permit use of the road for any reason, including but not limited to hunting, resource development, recreational off-road-vehicle use, etc. Such activities could have

²⁵⁴ 2 FEIS at H-25.

²⁵⁵ *Id.*

²⁵⁶ *Id.*

²⁵⁷ *Id.*

²⁵⁸ *Id.* at H-26 (emphasis added).

significant impacts to the region’s wildlife, water, wetlands, and communities — none of which were adequately analyzed in the FEIS. Additionally, there would be no mechanism to prevent authorizations for vehicle use of the pioneer road during the spring when the pioneer road is not passable or intended for traffic. BLM is obligated to consult with and fully understand the future plans and likely restrictions — or lack thereof — that other landowners would put on future use of the Ambler Road. In the SEIS, BLM must describe and fully evaluate all of the intensely impactful uses that may be authorized by underlying landowners.

The SEIS must also explain AIDEA’s assertion that commercial access will not cause impacts beyond the ROW. The FEIS indicates that commercial deliveries to communities would “likely total less than one truck or bus per week” and that “[n]o additional work outside the approved ROW would occur to accommodate this.”²⁵⁹ This assertion is unfounded. Because the road does not directly connect to communities, footprints outside the ROW will be necessary to facilitate delivery of “fuel or freight to staging areas where the communities could access it.”²⁶⁰ However, the FEIS provides no detail regarding how many staging areas may be allowed, how far off of the ROW they will be allowed, or even whether they will be permitted year-round.²⁶¹ While BLM included a map entitled “Locations of Potential Commercial Delivery Access,” the map merely indicates which communities are likely to be affected by commercial deliveries and provides no information regarding staging areas for these communities.²⁶² The SEIS must describe the extent of disturbance outside the ROW that will be necessary to facilitate commercial deliveries to communities and analyze the impact staging areas will have.

The SEIS must also provide a robust discussion regarding AIDEA’s proposal to allow commercial deliveries to other landowners and users. The FEIS indicates that the road is likely to create demand for commercial deliveries for a variety of other users but provides scant information about this possibility. For example, BLM indicates that the road routes under Alternatives A and B would cross through and near several active mining claims, wilderness lodges, Native Allotments, and other areas for which “[i]t is reasonable to assume that there would be demand . . . for commercial deliveries of supplies, mostly for transport over snow from the road to the final destination.”²⁶³ This laundry list of potential users creates myriad questions regarding potential users, how a permitting system could be reliably established, and how “commercial deliveries” would be defined. Would commercial deliveries include the transport of personnel?²⁶⁴ Although AIDEA proposes to limit deliveries to communities to once a week, there is no stated limit regarding the number of commercial deliveries that will be allowed for other landowners and users. Would there be limits to this use, or would each user group simply get a pass for *carte blanche* road access? BLM must provide answers to these questions in order to analyze the potential cumulative impacts from road use in the SEIS.

²⁵⁹ *Id.* at H-25.

²⁶⁰ *Id.*

²⁶¹ *Id.* (explaining “commercial transportation providers” could “deliver fuel or freight to staging areas where the communities could access it, *probably in the winter.*”) (emphasis added).

²⁶² *Id.* at H-125.

²⁶³ *Id.* at H-28 to -30.

²⁶⁴ *Id.* at H-26 (indicating that transport of the “general public” would not be allowed).

In sum, the SEIS must provide substantially greater detail regarding AIDEA's proposed commercial delivery system and analyze the reasonably foreseeable outcome of the Ambler Road being open to the public. The likelihood of a road project as expansive as the one AIDEA has proposed remaining closed to public use and being reclaimed is exceedingly low. Indeed, the "General Public Access" section of the FEIS states the Alaska Department of Natural Resources, "must separately evaluate questions related to use of the road and restrictions on use and **cannot commit at this time regarding road use and restrictions** where the road would cross State of Alaska lands."²⁶⁵ Despite this, BLM failed to analyze the possibility that the road will eventually be opened to public use. This substantial error must be corrected in the SEIS.

3. *The FEIS Failed to Fully Consider Reasonably Foreseeable Future Development.*

The proposed project and other reasonably foreseeable developments will have an immense impact on the communities and resources of the largely undeveloped project area. In the SEIS, BLM must provide a robust cumulative impact analysis commensurate with these significant and likely irreversible cumulative impacts. "Cumulative actions" are those "which when viewed with other proposed actions have cumulatively significant impacts."²⁶⁶ "Cumulative impact" is defined as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions."²⁶⁷ Such impacts can result from individually minor but collectively significant actions taking place over a period of time.²⁶⁸ As discussed below and elsewhere throughout these comments, the agencies must identify and fully consider all potential cumulative effects in their supplemental analysis.

BLM's cumulative analysis to date has been inadequate. In the FEIS, BLM considered only four categories of activities as reasonably foreseeable future actions: Arctic Oil Development, consisting of activities in the Arctic National Wildlife Refuge Coastal Plain, National Petroleum Reserve-Alaska (NPR-A), and offshore in the Arctic Ocean; extension and eventual closure of Red Dog mine; Climate change; and Dalton Highway improvements.²⁶⁹ With few exceptions, such as section 3.4.3 (birds), the cumulative effects analysis ignores all of these identified reasonably foreseeable future actions and only discusses impacts from development within the Ambler Mining District. Table 3-1 purports to analyze these 4 "reasonably foreseeable actions" with a single column capturing 1-2 sentences vaguely describing impacts to each resource.²⁷⁰ For example, the FEIS's entire analysis of the cumulative impacts to subsistence resources from the proposed Ambler Road and associated mines, in conjunction with development in Arctic National Wildlife Refuge Coastal Plain, National Petroleum Reserve-Alaska (NPR-A), and offshore in the Arctic Ocean, is as follows: "[c]ould affect caribou

²⁶⁵ *Id.* at H-25.

²⁶⁶ 40 C.F.R. § 1508.25(a)(2).

²⁶⁷ *Id.* § 1508.7.

²⁶⁸ *Id.*

²⁶⁹ 2 FEIS at H-32 to -33.

²⁷⁰ *Id.* at H-34 to -37.

movements, which in turn could affect availability [sic] caribou for harvest.”²⁷¹ This statement of the obvious — that development in the Arctic could, in combination with the project, impact subsistence users — falls far short of BLM’s obligation to take a hard look at the cumulative effects of the proposed project. In the SEIS, the agencies must assess specific projects and describe how these foreseeable future actions could cumulatively impact the very same resources that are at risk from construction, operation, and maintenance of the proposed road to Ambler.

The SEIS must also analyze all past, present, and reasonably foreseeable future actions in a broad geographic area, including all watersheds that the proposed corridor crosses. Many relevant activities were either not addressed or insufficiently addressed in the FEIS. For example, past military developments in the Arctic have led to many contaminated sites in and around the project area. However, previously contaminated sites are not included in the list of relevant past and present actions in the FEIS.²⁷² In the SEIS, BLM should evaluate whether further asbestos contamination from gravel mining in the area may cause additive or synergistic impacts.

The SEIS should also consider the impacts from specific road and development projects in the area. For example, the proposed road to Umiat on the eastern end of the road, may lead to increased subsistence hunting pressure, habitat fragmentation, and disturbance to wildlife. To the west, roads and pipelines from Chukchi Sea Outer Continental Shelf oil and gas production may also connect through this region, as shown in maps from the former Minerals Management Service. These future projects are likely to result in cumulative impacts to caribou in combination with the Ambler Road. However, they were not included in BLM’s list of reasonably foreseeable developments and are not addressed in the FEIS’s subsistence impacts section. In the SEIS, BLM should consider the impact of all development in and around the project area that are likely to increase the pressure on resources and communities in the project area.

It is also reasonably foreseeable that the Ambler Road will spur additional road construction and mine claim development along the road corridor. All such activities must be considered in the SEIS. As noted in group’s prior comments, maintenance of the Ambler Road could lead to synergistic increases in development in surrounding regions, and longer-term impacts in the Ambler Mining District because the road could continue to be used for future development. As proposed, the ROW does not stretch the full distance to the Ambler Mining District, but instead ends south of the anticipated development areas. It is reasonably foreseeable that mining companies will seek to build additional roads to connect individual mining sites to the proposed road, and some may be as long as 50 miles. It is also reasonably foreseeable that the road will result in the development of additional mines both within the District and along the road corridor. BLM noted in the FEIS that a variety of mining claims are present along the road corridor, which will likely use the road to access these claims.²⁷³ AIDEA recently indicated it anticipates there would be up to five concurrent mine operations, which would in turn have cascading effects across the region and more broadly to areas outside of the road, including along the Dalton Highway.²⁷⁴ Besides failing to consider the impacts from vehicle use to reach these

²⁷¹ *Id.* at H-37.

²⁷² *Id.* at H-31 to -32.

²⁷³ *Id.* at H-28 to -30.

²⁷⁴ AIDEA Press Release.

claims, the FEIS failed to adequately analyze the cumulative impacts of furthering these additional mining activities. Furthermore, and as noted above, BLM has indicated that the road could revert to mining company control to allow continued access from airstrips to the mines in perpetuity.²⁷⁵ The impact of permanent continued use by mining companies and of additional mining along the road corridor must be included in the SEIS's cumulative effects analysis.

There are also project elements that will need to be developed to allow for the transport of any minerals outside of the region. AIDEA Board Chair Dana Pruhs recently acknowledged that the road is "only one part of the logistics chain" and that AIDEA needs to look "holistically" at the full set of transportation logistics for the project.²⁷⁶ Similarly AIDEA's Executive Director touted that the Ambler Road "has the potential to lead to up to five concurrent mine operations over time, which will have broad impacts to Alaska's existing transportation infrastructure."²⁷⁷ Based on that, AIDEA commissioned a feasibility study to evaluate ore concentrate transportation routes starting from the intersection of the Ambler Road with the Dalton Highway via rail to potential export terminals within Alaska. These additional infrastructure needs are directly connected to the development of the Ambler Road and should have been analyzed in depth in the FEIS, but were not. The SEIS needs to analyze the impacts of these foreseeable and directly related future developments.

Any realistic analysis of the Ambler Road's cumulative impacts must also be framed within the larger context of existing pressures to increase industrial connectivity across Alaska. Specifically, the Ambler Road may spur a renewed push to expand the DeLong Mountain Transportation System Port for the exportation of not only ore, but also the immense coal resources of the western Arctic. The project may also increase economic pressure to build roads to the north into other mineral zones and coal deposits currently closed to development in the National Petroleum Reserve in Alaska and elsewhere in Alaska. It is also reasonably foreseeable that the proposed road will ultimately connect to Nome. A road to Nome has been an Alaska discussion for decades and the state has acknowledged the possibility of building the road in segments.²⁷⁸ Most recently, the Western Alaska Access Planning Study Corridor Planning Report evaluated alternative corridors connecting the existing road system to Nome and the Seward Peninsula. One of its final two alternatives was a northerly route that follows roughly the same route as the proposed Ambler ROW from the Dalton Highway to just east of Gates of the Arctic, where it passes south of the Preserve.²⁷⁹ It does not require imagination to envision a connection between the Ambler District and Nome if a Dalton Highway right-of-way is authorized.²⁸⁰

²⁷⁵ 1 FEIS at 2-9.

²⁷⁶ AIDEA Press Release.

²⁷⁷ *Id.*

²⁷⁸ Tim Bradner, *Road to Nome Is Subject of Renewed Studies*, Alaska J. of Commerce, Sept. 3, 2009.

²⁷⁹ Western Alaska Access Planning Study (WAAPS): Corridor Planning Report, DOWL HKM, January 2010.

²⁸⁰ 2 FEIS at G-29 to -32 (explaining that connecting the Ambler Mining District to Nome via a road is possible but eliminating the route from considered alternatives because Nome currently lacks the necessary deep-water port to facilitate ore exportation).

In sum, the FEIS failed to fully assess the proposed project's direct, indirect, and cumulative impacts to subsistence use, wildlife, and hydrology in the region in violation of NEPA. Those failings along with the significant revisions needed to adequately assess the project's impacts on specific resources are described in greater detail below.

F. A Broad Range of Mitigation Measures Should Be Evaluated in the SEIS.

“Implicit in NEPA’s demand that an agency prepare a detailed statement on ‘any adverse environmental effects which cannot be avoided should the proposal be implemented,’ is an understanding that the EIS will discuss the extent to which such adverse effects can be avoided.”²⁸¹ Accordingly, an EIS must discuss appropriate mitigation measures.²⁸² Specifically, agencies must “include appropriate mitigation measures not already included in the proposed action or alternatives.”²⁸³ BLM must, in order, seek to avoid impacts, minimize impacts, and, only if those approaches are insufficient to fully mitigate the impacts, appropriately and sufficiently offset any remaining impacts. Those measures “must be discussed in sufficient detail to ensure that environmental consequences have been fairly evaluated.”²⁸⁴ Simply identifying mitigation measures, without analyzing their effectiveness, violates NEPA. Rather, an “essential component of a reasonably complete mitigation discussion” must include “an assessment of whether the proposed mitigation measures can be effective.”²⁸⁵ In addition, CEQ has instructed that the “possibility of mitigation” should not be relied upon to avoid further environmental analysis.²⁸⁶ In sum, the effectiveness of mitigation measures must always be disclosed in a NEPA analysis and their prominence in the range of alternatives and role in the effects analysis requires substantial treatment in the EIS.

Additionally, under Section 302 of FLPMA, BLM may not authorize, and must “take any action necessary to prevent unnecessary or undue degradation” of public lands.”²⁸⁷ If AIDEA “cannot adequately mitigate impacts from the project, and BLM is, as a result, unable to achieve its resource and value objectives, then BLM may deny the land-use authorization in the decision

²⁸¹ *Robertson*, 490 U.S. at 351-52 (quoting 42 U.S.C. § 4332(2)(C)(ii)).

²⁸² *See* 40 C.F.R. §§ 1502.14(f), 1502.16(h), 1508.25(b). 40 C.F.R. § 1508.20 defines mitigation to include: (1) avoiding the impact altogether by not taking a certain action or parts of an action; (2) minimizing impacts by limiting the degree or magnitude of the action and its implementation; (3) rectifying the impact by repairing, rehabilitating, or restoring the affected environment; (4) reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and (5) compensating for the impact by replacing or providing substitute resources or environments.

²⁸³ *Id.* §§ 1502.14(f), 1502.16(h).

²⁸⁴ *Neighbors of Cuddy Mountain v. U.S. Forest Serv.*, 137 F.3d 1372, 1380 (9th Cir. 1998) (quotations and citation omitted).

²⁸⁵ *S. Fork Band Council of W. Shoshone of Nevada v. U.S. Dep’t of Interior*, 588 F.3d 718, 727 (9th Cir. 2009).

²⁸⁶ Forty Most Asked Questions; *see also Davis v. Mineta*, 302 F.3d 1104, 1125 (10th Cir. 2002).

²⁸⁷ 43 U.S.C. § 1732(b).

document.”²⁸⁸ BLM also has an obligation under Section 810 of ANILCA to take reasonable steps to minimize and address potential impacts to subsistence from the project. Given the significant adverse effects to subsistence uses and resources, as well as other values, that are likely to result from the Ambler Road and its unavoidable impacts, it is vital that BLM consider whether its approval of this project complies with these statutes. In addition, BLM should require additional mitigation measures beyond what was considered in the FEIS to protect subsistence uses and other resources.

BLM’s prior analysis of mitigation measures in the final EIS is deficient for multiple reasons. First, the final EIS was wholly inadequate at considering meaningful mitigation measures and design features that could avoid and minimize impacts from the proposed project’s phased construction and design. This is largely due to AIDEA’s failure to gather adequate baseline information or adequately design the project prior to submitting its applications. The limited information — including any amount of site-specific information about the project and its design, baseline information, and potential impacts and mitigation measures — and conclusory statements about minimal negative impacts in AIDEA’s application and the final EIS make it difficult to suggest meaningful mitigation measures. Providing the public with a handful of schematics for a typical “slice” of the road, a typical culvert, or a sample bridge, without far more for a project of this size, has effectively deprived the public of any meaningful opportunity to understand, analyze, and propose potential mitigation measures. These shortcomings were further highlighted in the JROD, which admits the locations of construction and maintenance camps “will be identified in site-specific plans as part of the Plan of Development” that has yet to be developed and that BLM will evaluate site-specific plans and impacts later.²⁸⁹ This violates NEPA’s requirements to conduct a site-specific analysis of a project’s impacts and renders it nearly possible to require meaningful and enforceable mitigation measures.

There are also outstanding questions regarding what version of the project AIDEA is actually proposing and what the agencies are considering for purposes of this remand — the version of the project previously approved by BLM, or the version previously approved by the Corps? This matters for purposes of assessing needed mitigation, among other reasons. For instance, it is unclear whether AIDEA will ever construct the road to Phase III. That was a point of discrepancy between the versions of the project approved by BLM and the Corps that needs to be clarified on remand. Either way, BLM should nonetheless consider an alternative or a mitigation measure wherein AIDEA would not be allowed to build the road in phases and would be required to construct the full road embankment at the outset, which could reduce some impacts along the road corridor as compared to the reckless and unclear phased approach proposed by AIDEA.

Second, BLM failed to analyze the effectiveness and enforceability of the mitigation measures that the final EIS did contain. It is greatly concerning that the permitting agencies involved in this process appear to have no clear plan or sense of their own authority to determine

²⁸⁸ Bureau of Land Mgmt., Draft Regional Mitigation Manual Section 1794, at 1-8 (2014).

²⁸⁹ JROD at 3.

how any mitigation measures would be enforced. The final EIS states that because “[d]ue to only a portion of each alternative being on BLM-managed land, BLM’s authority to require and enforce specific measures is limited.”²⁹⁰ This is highly problematic, as BLM seems to be stating that it does not have authority to require mitigation measures on non-BLM lands. This fact, however, does not appear to be reflected in BLM’s impacts analysis in the final EIS. Moreover, BLM has broad authority under FLPMA to ensure that any right-of-way the agency grants does not cause undue degradation of public lands. BLM cannot shirk this responsibility. As discussed elsewhere in these comments, the Corps of Engineers is also obligated to consider mitigation measures to address the impacts to wetlands and waters for the entire project and prevent against significant degradation. The final EIS is not sufficient to support the Corps’ legal obligation to consider mitigation measures.

Additionally, the final EIS states that “[t]he Alaska Department of Natural Resources, in its role as a cooperating agency for the project, has stated that it must separately evaluate questions related to use of the road and restrictions on use and cannot commit at this time regarding restrictions where the road would cross State of Alaska (State) lands.”²⁹¹ This noncommittal statement is completely unacceptable. Under Alternatives A and B, the proposed road crosses state-owned or managed lands for the majority of its route. BLM and the Corps have an obligation under NEPA and their respective permitting requirements to mandate mitigation measures that are clear, measurable, and *enforceable*. These significant, outstanding questions regarding the agencies’ authority to require mitigation must be sorted out as part of this remand process to ensure the agencies are considering the full breadth of this project’s impacts and potential mitigation measures.

Furthermore, the mitigation measures contained in Appendix N are largely vague and contain no clear requirements to avoid and minimize environmental damage. For instance, the final EIS attempts to pass off permitting requirements of Alaska DEC as air quality mitigation measures. These are not mitigation measures, but requirements of other agencies that AIDEA is already mandated by law to comply with. Another example is BLM’s vague statements that AIDEA would conduct baseline surveys to identify non-native invasive, as well as rare plants, prior to construction to avoid impacts, or requiring AIDEA to later identify areas of natural occurring asbestos prior to gravel mining. Baseline surveys and monitoring are **not** mitigation measures. Indeed, such baseline studies should be conducted prior to AIDEA proposing a particular route.

Regarding the project’s impacts on hydrology and wetlands, the EIS falls short on basic information regarding use of mitigation measures. As pointed out by Dr. Siobhan Fennessy:

Overall, the EIS claims that the full impact of the proposed road will be mitigated by the use of BMPs and other mitigation measures that are promised to be used during road construction and maintenance in order to minimize impacts to natural flow patterns and maintain hydrologic connectivity, particularly with respect to culverts (e.g. Appendix N). No details of the mitigation measures are provided and no assurances are given that they will be checked for completeness

²⁹⁰ 1 FEIS at ES-6.

²⁹¹ *Id.* at 2-2.

and proper implementation and maintenance. The EIS states that design features and mitigation will be determined during permitting. Given the ecological sensitivity of the region and the risks posed by the project, the details and plans to minimize and mitigate impacts should be included in the EIS... The EIS and associated documents fail to fully describe or assess the specific measures that might be used to mitigate the described impacts. Instead only general statements are made in Appendix N, for example on page N-14: “Design features related to this mitigation would be determined during the design/permitting phase and would be incorporated into ROW authorization and permit stipulations.” This is insufficient to describe how AIDEA intends to minimize adverse impacts from this project.²⁹²

These issues are described in more detail below in comments on permafrost and tundra, aquatic ecosystems, fish, and our comments regarding the Corps’ mitigation obligations. Critiques of mitigation measures for specific resources are likewise contained in resource-specific comments below.

The FEIS repeatedly indicated with regard to a huge range of resources and impacts that mitigation measures would be designed at a later, unspecified permitting/design phase.²⁹³ BLM cannot defer conducting any analysis of meaningful mitigation measures to some future point in time, seemingly outside the scope of this NEPA process. BLM is required to conduct this analysis at this point and cannot simply note that it will design effective measures in the future. It raises serious questions about how the agency can analyze the effectiveness of mitigation measures it has yet to even develop. Any conclusory statements that such measures will be adequate in the future to mitigate impacts are arbitrary and unfounded. It is not meaningful and is contrary to NEPA for the agency to list measures that might be developed at some future time. Promises that those measures would be developed in the future do not excuse the agencies from needing to analyze the effectiveness of those measures as part of their NEPA obligations, prior to authorizing the project.

In sum, the final EIS falls far short of discussing mitigation in sufficient detail to ensure that environmental consequences have been fairly evaluated. BLM has failed to identify mitigation measures, merely parrots permitting requirements for other agencies, makes vague statements about “minimizing damage,” or references wholly unclear future points at which it or another agency might conduct the analysis of the mitigation measures BLM and the Corps were obligated to conduct as part of the NEPA process and prior to approving the project. The final EIS violates NEPA by failing to fully consider actual mitigation measures or to analyze their effectiveness or enforceability, and these errors must be rectified in the SEIS.

BLM and the Corps must also consider new mitigation measures specific to the Ambler Road that will help to avoid, minimize, and compensate for adverse effects to resources. We encourage the agency to work closely with affected communities in crafting these measures. All mitigation should be meaningful in its ability to address adverse impacts, and measurable in its

²⁹² Siobhan Fennessy, Ph.D., PWS, Comments on the Ambler Road Draft Environmental Impact Statement (Oct. 7, 2019) at 5, 10. [hereinafter Fennessy DEIS Report].

²⁹³ 1 FEIS at 2-10 to -16; 3 FEIS at N-32, Q-25 to -26.

effectiveness. BLM should also discuss in the SEIS how the project and its impacts will be monitored and adjusted over time, both to address the effectiveness of the mitigation measures and to account for future changes to the project area like climate change and additional future development.

As discussed above, the Corps should also use this new process as an opportunity to rectify the serious problems with its previous compensatory mitigation determination. As part of the prior process, the Corps failed to ensure AIDEA's proposed mitigation adequately offset impacts and required zero compensatory mitigation. That is wholly inappropriate for a project of this scale, and those problems should be corrected in any new decisions.

VI. THE REMAND PROCESS MUST PROVIDE AN ADEQUATE BASIS FOR THE CORPS TO MEET ITS CLEAN WATER ACT AND NEPA OBLIGATIONS.

The Federal Defendants initially proposed a narrow scope for the remand and entirely failed to discuss the broad range of legal violations related to the Corps. In its authorization of the Ambler Road, the Corps violated Section 404 of the CWA by failing to adequately analyze or mitigate the project's impacts to aquatic resources.²⁹⁴ The Federal Defendants made no commitment to address the Corps' legal violations in their remand motion, and there is no commitment by the Corps to address the legal violations underlying its 404 permit.²⁹⁵

Federal Defendants admitted for purposes of ANILCA Section 810 that their "analyses lack meaningful discussion of Project-related water impacts," including fisheries impacts.²⁹⁶ Several of Plaintiffs' claims against the Corps and BLM under NEPA and the CWA stem from the same inadequate analyses.²⁹⁷ These identified legal errors relate to the agencies' obligations under NEPA and the CWA. As such, the Corps cannot disregard the connection between the identified legal errors and the 404 Permit. The Corps should rescind the 404 permit for the Ambler Road, address the serious legal errors from the prior decision-making process, and should not reissue the permit unless it finds the project meets the CWA's stringent substantive and procedural requirements.

A. Section 404 Permit Review Requirements.

Congress enacted the CWA in 1972 to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters."²⁹⁸ The Act sets several goals, including attainment

²⁹⁴ Pls.' Opening Br. for Summ. J., *N. Alaska Env'tl. Ctr. v. Haaland*, Case No. 3:20-cv-00187-SLG (Dec. 1, 2021) (ECF No. 99) [hereinafter NAEC Br.] at 35–54.

²⁹⁵ AVC Remand Mot. at 3 n.1 (stating that the Corps would "consider what action is needed" and follow its own regulations regarding possible permit modifications during the remand).

²⁹⁶ AVC Remand Mot. at 15.

²⁹⁷ NAEC Br. at 19–20 (arguing Defendants failed to obtain baseline information on hydrological and fisheries resources in violation of NEPA); 47–49 (arguing EIS failed to consider aquatic resource impacts sufficient for 404 permit).

²⁹⁸ 33 U.S.C. § 1251(a).

and preservation of “water quality which provides for the protection and propagation of fish, shellfish, and wildlife”²⁹⁹ To further its goals, the Act prohibits “discharge of any pollutant” into navigable waters except in accordance with the CWA terms.³⁰⁰

The Corps issues permits for the discharge of dredged or fill material pursuant to section 404 and subject to the Corps’ and EPA’s 404(b)(1) Guidelines (Guidelines).³⁰¹ Corps regulations governing the issuance of Section 404 permits declare that “[m]ost wetlands constitute a productive and valuable public resource, the unnecessary alteration or destruction of which should be discouraged as contrary to the public interest.”³⁰² The Corps’ and EPA’s 404(b)(1) Guidelines impose important limitations on the Corps’ ability to issue a Section 404 permit.³⁰³ The Corps must ensure compliance with the 404(b)(1) Guidelines before issuing a permit. The Guidelines impose important limitations on when a Section 404 permit may be issued.³⁰⁴ The Guidelines prohibit the permitting of any discharge of dredged or fill material: 1) if there is a practicable alternative to the proposed discharge, 2) if the discharge causes or contributes to violations of applicable state water quality standards, 3) if the discharge will cause or contribute to significant degradation of the environment, or 4) unless all appropriate steps have been taken to minimize potential adverse impacts.³⁰⁵ The 404(b)(1) Guidelines provide that significant adverse effects on human health or welfare; aquatic life and other water dependent wildlife; aquatic ecosystem diversity, productivity, and stability; or recreational, aesthetic, and economic values are effects contributing to significant degradation.³⁰⁶ These factors both individually and cumulatively must be considered when evaluating the specific details of the road application.

The Corps cannot authorize a discharge without “sufficient information to make a reasonable judgment as to whether the proposed discharge will comply with [the Section 404(b)(1)] Guidelines.”³⁰⁷ EPA notes that:

the record must contain sufficient information to demonstrate that the proposed discharge complies with the requirements of Section 230.10(a) of the Guidelines. The amount of information needed to make such a determination and the level of

²⁹⁹ *Id.* § 1251(a)(2).

³⁰⁰ *Id.* § 1311(a). The term “pollutant” encompasses not only chemical and biological materials but also, rock and sand. 33 U.S.C. § 1362(6). Pollutants are known as “fill material” when their discharge either replaces any portion of a water of the United States with dry land or changes the bottom elevation of a water body. *See id.* C.F.R. § 323.2(e)(1); 40 C.F.R. § 232.2. The term “dredged material” means “material that is excavated or dredged from waters of the United States.” 33 C.F.R. § 323.2(c); 40 C.F.R. § 232.2.

³⁰¹ 33 U.S.C. § 1344; 40 C.F.R. pt. 230.

³⁰² 33 C.F.R. § 320.4(b)(1); *see also id.* § 320.4(b)(2) (identifying eight types of wetland functions important to the public interest).

³⁰³ 40 C.F.R. pt. 230.

³⁰⁴ *Id.*

³⁰⁵ *Id.* § 230.10.

³⁰⁶ *Id.* § 230.10(c)(1)–(4).

³⁰⁷ *Id.* § 230.12(a)(3)(iv); *see* 33 C.F.R. §§ 320.2(f) and 320.4(a)(1).

scrutiny required by the Guidelines is commensurate with the severity of the environmental impact (as determined by the functions of the aquatic resource and the nature of the proposed activity) and the scope/cost of the project.³⁰⁸

Pursuant to the Guidelines, no discharge of dredged or fill material shall be permitted if, among other things, a practicable alternative to the proposed discharge would have less adverse impact on the aquatic ecosystem.³⁰⁹ The Corps also cannot authorize any discharge of dredged or fill material that will cause or contribute to significant degradation of the waters of the United States.³¹⁰ The “degradation or destruction of special aquatic sites, such as filling operations in wetlands, is considered to be among the most severe environmental impacts covered by the[] Guidelines.”³¹¹

Under the 404(b)(1) guidelines, the Corps is required to consider the following effects, individually and collectively, that contribute to significant degradation:

(1) Significantly adverse effects of the discharge of pollutants on human health or welfare, including but not limited to effects on municipal water supplies, plankton, fish, shellfish, wildlife, and special aquatic sites.

(2) Significantly adverse effects of the discharge of pollutants on life stages of aquatic life and other wildlife dependent on aquatic ecosystems, including the transfer, concentration, and spread of pollutants or their byproducts outside of the disposal site through biological, physical, and chemical processes;

(3) Significantly adverse effects of the discharge of pollutants on aquatic ecosystem diversity, productivity, and stability. Such effects may include, but are not limited to, loss of fish and wildlife habitat or loss of the capacity of a wetland to assimilate nutrients, purify water, or reduce wave energy; or

(4) Significantly adverse effects of discharge of pollutants on recreational, aesthetic, and economic values.³¹²

The Corps is required to base this determination on factual determinations, evaluations, and tests required under the guidelines, and to focus in particular on the persistence and permanence of the effects.³¹³ The Guidelines require the Corps to make certain factual

³⁰⁸ See Environmental Protection Agency, Memorandum: Appropriate Level of Analysis Required for Evaluating Compliance with the Section 404(b)(1) Guidelines Alternatives Requirements, <https://www.epa.gov/cwa-404/memorandum-appropriate-level-analysis-required-evaluating-compliance-section-404b1>.

³⁰⁹ 40 C.F.R. § 230.10.

³¹⁰ *Id.* § 230.10(c).

³¹¹ *Id.* § 230.10(d).

³¹² *Id.* § 230.10(c).

³¹³ *Id.*

determinations addressing the potential short-term or long-term effects of a proposed discharge of dredged or fill material on the physical, chemical, and biological components of the aquatic environment.³¹⁴ This includes determinations on (a) physical substrate; (b) water circulation, fluctuation, and salinity determinations; (c) suspended particulate/turbidity determinations; (d) contaminant determinations; (e) aquatic ecosystem and organism determinations; (f) proposed disposal site determinations; (g) determinations of cumulative effects on the aquatic ecosystem; and (h) determinations of secondary effects on the aquatic ecosystem.³¹⁵ The Corps cannot authorize a discharge without “sufficient information to make a reasonable judgment as to whether the proposed discharge will comply with [the Section 404(b)(1)] Guidelines.”³¹⁶

When a project is not “water dependent,” as in the case of the Ambler Road, and the project would fill “special aquatic sites,” including wetlands, the Corps’ regulations create a rebuttable presumption that there are practicable and environmentally preferable alternatives, and such alternatives are presumed to have less adverse impact unless “clearly demonstrated” otherwise.³¹⁷ This substantive requirement mandates the Corps to select the least environmentally damaging practicable alternative (LEDPA).

An alternative is practicable “if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.”³¹⁸ Practicable alternatives include “activities which do not involve a discharge of dredged or fill material,” as well as “discharges of dredged or fill material at other locations” where such discharges would result in fewer impacts to the aquatic environment.³¹⁹ The applicant has the burden of demonstrating that no feasible alternative exists, and the Corps must engage in a reasoned analysis of this issue.³²⁰ The Corps cannot blindly and uncritically accept an applicant’s study of alternatives and its assertions that no practicable alternative exists.³²¹ Under the regulations, any “practicable” alternative to achieve the basic and overall project purposes must be determined to be cost-effective, when viewed from the perspective of the industry as a whole.³²² But the least environmentally damaging practicable alternative need not be the least-

³¹⁴ *Id.* § 230.11.

³¹⁵ *Id.* § 230.11(a)–(h).

³¹⁶ *Id.* § 230.12(a)(3)(iv); *see* 33 C.F.R. §§ 320.2(f), 320.4(a)(1).

³¹⁷ 40 C.F.R. § 230.10(a)(3); *Flowers*, 423 F. Supp. 2d at 1352.

³¹⁸ 40 C.F.R. § 230.10(a)(2).

³¹⁹ *Id.* § 230.10(a)(1).

³²⁰ *Flowers*, 423 F. Supp. 2d at 1356–57.

³²¹ *Hintz*, 800 F.2d at 835–36.

³²² The financial circumstances of a particular applicant are not considered relevant if an alternative could be achieved practicably by a “typical” applicant. The preamble to the 404(b)(1) regulations states: “Our intent is to consider those alternatives which are reasonable in terms of the overall scope/cost of the proposed project. The term economic might be construed to include consideration of the applicant’s financial standing, or investment, or market share, a cumbersome inquiry which is not necessarily material to the objectives of the Guidelines. We consider it implicit that, to be practicable, an alternative must be capable of achieving the basic purpose of the proposed activity.” 45 Fed. Reg. 85,339 (Dec. 24, 1980).

costly, nor the most profitable.³²³ The regulations presume that less environmentally damaging alternatives are available to the applicant and practicable, unless the applicant clearly demonstrates otherwise. In the absence of such a clear showing, the Corps is required to deny the permit application.³²⁴

B. The Corps Does Not Have Sufficient Project or Baseline Information to Determine if the Project Will Comply with the 404(b)(1) Guidelines.

The Corps does not have sufficient information on which to make the factual determinations required under the Guidelines. One of the most substantial problems with both the 404 permit application and the prior EIS is that the agencies are proceeding without having sufficient information about any of the details of this project or the specific areas that will be impacted. The information AIDEA has provided to date is wholly inadequate to provide a basis for the Corps to meet its NEPA obligations or to permit this project under the 404 Guidelines. These comments reflect equally on the lack of analysis in the FEIS and relates to problems both BLM and the Corps need to address under NEPA.

1. Lack of Project Information.

Despite the massive scale of this project and the near guarantee that it will cause significant degradation across the region, the Corps approved the 404 permit. As noted in just a handful of sentences in the Corps' 2019 public notice, the permit application is for the phased construction of a year-round industrial road from the Ambler Mining District to the Dalton Highway.³²⁵ The Corps states there are three phases to the road that will involve starting with a single-lane gravel pioneer road and building up until it is an all-season road that could support mining exploration, development, and operations. Despite this, there is absolutely no information anywhere in AIDEA's permit application, the Corps' notice, or the EIS explaining in any level of detail anything about how that phased construction will actually occur, what the impacts will be, and how the Corps will mitigate against those impacts.

As an initial matter, AIDEA submitted a substantially modified permit application to the Corps, midstream in the last permitting process. This raises serious questions about what version of the project the agencies are considering as part of this remand process. The JROD disclosed that AIDEA submitted another revised permit application to the Corps in February 2020 — after publication of the DEIS, but before issuance of the FEIS.³²⁶ The Corps never released that revised application for public review or comment.

³²³ *Louisiana Wildlife Fed'n, Inc. v. York*, 761 F.2d 1044, 1048 (5th Cir. 1985) (noting that the Corps had properly chosen “alternatives that reduced both the applicants’ profit and the economic efficiency of their proposed operations in order to preserve other environmental values”).

³²⁴ See 40 C.F.R. § 230.12(a)(3)(i), (iv).

³²⁵ U.S. Army Corps of Eng'rs, Public Notice of Application for Permit: POA-2013-00396 (Sept. 13, 2019) [hereinafter COE Notice].

³²⁶ JROD, App. F at F-3.

In its modified proposal, AIDEA proposed to construct the road to Phase II, but not Phase III.³²⁷ The revised application also requested approval of only 15 gravel mines — despite the acknowledged need for over 40 mines, as well as access roads — 4 maintenance stations, 12 communication towers, 3 aircraft landing strips, and a fiberoptic cable.³²⁸ AIDEA changed its requested 404 permit to a 10-year term, in contrast to its 50-year right-of-way requests to NPS and BLM. The Corps determined that the revised version of the project was the least environmentally damaging practicable alternative, and approved the project as described in AIDEA’s revised permit application.³²⁹ AIDEA failed to provide updated applications to any of the other permitting agencies. The BLM and the Corps did not issue a supplemental EIS to evaluate the revised permit application, and the agencies ultimately permitted very different versions of the project in the JROD. This glaring discrepancy must be addressed during the remand process. AIDEA should be required to submit a new, consolidated application to all the agencies, consistent with ANILCA, to ensure all the agencies are reviewing the same project proposal. The Corps cannot properly authorize this project under the 404 Guidelines or ANILCA without all agencies having adequate and consistent permit application on which to base any of the factual determinations.

There is also zero site-specific information on which to base an appropriate analysis of the infrastructure associated with this project. AIDEA has yet to provide sufficient site-specific information about the precise way in which this project will be built, where exactly it will be located, what the site-specific impacts of their proposal will be, what mitigation measures will address those impacts, and more. AIDEA’s schematics for construction of the road are so generalized as to provide essentially no information to the public or to the Corps. For example, the Corps’ notice shows “typical fill sections” for what the road might look like for the “full build out (Phase III).”³³⁰ This is wholly inadequate for a project of this scale and provides no information about how a phased approach will actually be implemented, what the site-specific impacts of the project will be, what mitigation will be necessary to prevent degradation, or any other information necessary for the Corps to adequately evaluate this project.

The Corps had previously identified data gaps in AIDEA’s application that were never remedied. Early in the prior permitting process, the Corps raised concerns that AIDEA’s application did not address “[h]ow roads cross and are parallel to major river crossings.”³³¹ As discussed further below, the Corps approved AIDEA’s 404 Permit despite an outstanding need for accurate mapping of wetlands and streams along the actual road corridor, and the fact that AIDEA could not identify the locations of all stream crossings.³³² EPA also questioned the Corps’ decision to defer its analysis of culvert impacts at specified locations.³³³ In its JROD, the

³²⁷ *Id.*

³²⁸ *Id.* App. F at F-3 to -4.

³²⁹ *Id.* at 11.

³³⁰ COE Notice at 12–14.

³³¹ Army Corps of Eng’rs, Scoping Comments/Review of Functional Assessment (2013).

³³² Env’tl. Prot. Agency, FEIS Comments 1 (2020) [hereinafter 2020 EPA Comments].

³³³ 2019 EPA Comments at 8, 15 (explaining need to identify culvert locations to assess impacts); JROD, App F at F-7 (stating AIDEA would identify culvert locations later); *see also* Report of C. Frissell on DEIS at 9–10 [hereinafter Frissell DEIS Report] (fisheries expert Dr.

Corps allowed AIDEA to defer obtaining data and identifying water crossings for the eastern 50 miles of the corridor until an unspecified “final design phase.”³³⁴ The Corps never should have authorized this project without that key site-specific information. Its decision to do so raises serious questions about how the Corps could have engaged in an adequate analysis of the impacts of this project when it had yet to obtain complete information on which to base such an analysis.

The Corps cannot proceed with revisiting its permit for this project in reliance on the incomplete, skeletal amount of information and conflicting project designs that AIDEA has provided to date. As discussed further throughout these comments, the Corps also does not have sufficient site-specific project information related to any of the factors it is required to consider and make findings on, including physical substrate; water circulation, fluctuation, and salinity determinations; suspended particulate/turbidity determinations; contaminant determinations; aquatic ecosystem and organism determinations; proposed disposal site determinations; determinations of cumulative effects on the aquatic ecosystem; and determinations of secondary effects on the aquatic ecosystem.

The Corps should not move forward in issuing any revised 404 Permit until AIDEA provides sufficient information about the project design so the agency can adequately analyze this project and make the required findings under the Guidelines.

2. *Lack of Baseline Information.*

The Corps also does not have sufficient information on the distribution of wetlands across the project area to determine appropriate mitigation measures or to adequately assess the proposed project. Given the prevalence of jurisdictional wetlands throughout the project area, the Corps needs to ensure that impacts are assessed and mitigated appropriately. The road would permanently fill over 2,000 acres of wetlands and cross over 2,900 waterbodies.³³⁵ It would require 29 bridges, with 11 large bridges crossing major rivers, including the Kobuk Wild and Scenic River.³³⁶ The project would discharge between 8.4–11 million cubic yards of fill into wetlands permanently,³³⁷ and over 47 miles (250,000 feet) of stream channels would be permanently impacted.³³⁸ As described further below, there is a significant lack of baseline information about aquatic resources in the project area that must be rectified during this remand process both for NEPA and CWA compliance purposes.

The Corps should require a full wetlands delineation and complete a functional assessment for the entire length of the road, as well as alternative routes under consideration

Chris Frissell explaining lack of information on waterway crossings).

³³⁴ JROD, App. F at F-7.

³³⁵ POA-2013-00396 (Sept. 13, 2019) at 2; 2016 AIDEA Application at 2.

³³⁶ POA-2013-00396 (Sept. 13, 2019) at 2; 1 DEIS at 3-25.

³³⁷ POA-2013-00396 (Sept. 13, 2019) at 3 (seeking to discharge 11 million cubic yards); JROD at 10 (authorizing 8.4 million cubic yards).

³³⁸ *Id.*

during the NEPA process. This has yet to be done for the full length of the proposed road or for any of the alternatives.

As discussed in the expert report for the draft EIS prepared by Siobhan Fennessy, Ph.D., multiple delineation reports were completed related to this project: a preliminary wetland delineation report by DOWL (2014), a desktop delineation study by DOWL (2016), and a delineation report for the Gates of the Arctic conducted by the NPS and ABR, Inc. (2017).³³⁹ Those reports “used different study areas along the road alignment to delineate wetlands (for example different widths from the road center), therefore, the extent of wetlands reported is different in each, making comparisons difficult.”³⁴⁰ There is also no delineation for Alternative C, which precludes a complete assessment of the alternatives.³⁴¹ Without more specific information about the alternatives, it is not possible to meaningfully compare or assess the impacts of the different road alignments. Desktop wetlands delineations are not always a reliable indication of where wetlands or protected resources may occur. Information is often outdated and, in some cases, inaccurate when compared with results from field surveys. Also, the desktop review does not account for common variables in the data, which could include seasonal changes in vegetation, climate, and land use change. Therefore, at a minimum, a wetland delineation should be performed for the entire road length, areas that will host project facilities (ie, airstrips, camps, gravel mines) and that will be disturbed during construction.

Moreover, neither AIDEA nor the Corps performed an adequate functional assessment as part of the prior EIS process, and Groups are not aware that any further functional assessments have been completed to date. As discussed by Dr. Fennessy, multiple assessments of the functions and values of the wetlands were completed over the past five years, “but as with the delineation reports, different methods were employed in the different studies, giving differing results.”³⁴² This is inconsistent with the Corps’ regulatory guidance, which notes that “Districts should use a functional assessment by qualified professionals to determine impacts and compensatory mitigation requirements.”³⁴³ Conducting a functional assessment is critical to determining what functions particular wetlands perform, and their capacity to perform those functions. This missing information is critical to understanding the functions of wetlands the Ambler Road would destroy and determining whether the project would directly or cumulatively cause significant degradation. The Corps should require AIDEA to complete a new functional assessment to inform the agency’s permitting decision during the remand process.

This lack of baseline information highlights the fact that the Corps and BLM do not have site-specific information about the project proposal or basic information about the area the road

³³⁹ Fennessy DEIS Report.

³⁴⁰ *Id.* at 3, 17.

³⁴¹ *Id.*

³⁴² *Id.* at 19.

³⁴³ U.S. Army Corps of Eng’rs, Regulatory Guidance Letter No. 02-02, Guidance on Compensatory Mitigation Projects for Aquatic Resource Impacts Under the Corps Regulatory Program Pursuant to Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899, Dec. 24, 2002 (included as an attachment to these comments).

would traverse — making it nearly impossible to engage in a meaningful or remotely accurate assessment of the potential impacts to wetlands and other water resources in the project area.

Knowing the locations of wetlands and other aquatic resources is necessary to determine the nature and degree of impacts from the project and ensure impacts are avoided and minimized before 404 permit issuance.³⁴⁴ The Corps cannot rely on mitigation measures as a substitute for identifying those areas and evaluating the impacts of the proposal in the first instance, as it did in its JROD.³⁴⁵

Moreover, the final EIS did not analyze impacts or mitigation measures related to the Nutuvukti fen, purportedly justifying the omission because the fen is on NPS-managed lands, and thus subject to a separate, non-NEPA process.³⁴⁶ But the Corps must identify and assess the nature and degree of all potential impacts to aquatic resources from the proposed fill, including those on NPS-managed lands.³⁴⁷ And this EIS is meant to serve as the basis for the Corps' 404 permit. This missing analysis must be included in any supplemental EIS prepared for the Ambler Road.

C. The Project and Its Secondary and Cumulative Effects Will Cause or Contribute to Significant Degradation of Aquatic Resources.

This project will cause significant degradation. The waters across this region will be significantly degraded by the proposed project. As noted above, the direct and indirect impacts to jurisdictional wetlands and waters of the United States will be inevitable and significant from this project. The water crossings alone have the potential to significantly degrade waters in the area, particularly since there is not even site-specific information on which to base an analysis of impacts and mitigation measures. Gravel roads, facility and maintenance pads, and airstrips placed on the tundra surface would smother the vegetation and permanently alter the natural soil horizon by compression.

As discussed in the expert report by Dr. Frissell, given the widespread occurrence of surface waters and wetlands along the proposed road corridors, there is “abundant evidence that more than 50% of the proposed corridor for the Ambler Road routings traverses wetland. These wetlands are intimately connected to surface and groundwater and therefore influence the quality of streams, rivers, and lakes.”³⁴⁸ Dr. Frissell also explained that “massive alteration of wetland features and landscape hydrology — both directly underneath the foot print of the road — and indirectly through up-gradient and down-gradient alteration of surface and subsurface water flows — will inexorably result” from the road.³⁴⁹

³⁴⁴ 40 C.F.R. §§ 230.10(d), 230.11(b), (e).

³⁴⁵ JROD, App. F at F-42 to -44, F-51 (acknowledging general issues of permafrost thaw, fugitive dust, and thousands of stream crossings are problematic, but assuming without support that mitigation measures and construction to Phase II would reduce impacts to extent practicable).

³⁴⁶ PDEIS Agency Response Matrix at 10.

³⁴⁷ 40 C.F.R. § 230.11(e).

³⁴⁸ Frissell DEIS Report at 9.

³⁴⁹ *Id.* at 10.

The expert report by Dr. Siobhan Fennessy concludes that there will be substantial, negative impacts along the road corridor:

The proposed Ambler road alignment will have severe, negative impacts on aquatic ecosystems along its route, including rivers, streams, lakes, and wetlands. Roads have well documented ecological effects on hydrology, soils, and biota, disrupting ecosystems and altering landscapes. The EIS fails to adequately assess or document the full extent of these impacts, nor are the details of the measures that might mitigate those impacts provided. Because the alignment of the Ambler road runs east to west, it is situated perpendicular to the natural flow of water from the Brooks Range, and is likely to cause major hydrologic disruption with impacts on the chemical, physical and biological integrity of the waters along the route, which are now in near pristine, undisturbed condition.³⁵⁰

Dr. Fennessy also explained that, because the Ambler Road would run perpendicular to the Brooks Range's natural runoff flows, it "represents a major hydrologic alteration that will severely reduce stream connectivity, fragment habitats, and pose a barrier to fish passage," and will cause "extensive" wetland and water quality impacts.³⁵¹

The seasonal nature of the pioneer road, which is projected to flood annually and will also likely lead to significant permafrost degradation issues because of the lack of insulation, will have major impacts to hydrological systems in the area, as will adding multiple inches of gravel to the road for annual maintenance. The Corps must consider the impacts of the road beyond just construction, as the ongoing flooding and maintenance of the road have the potential to even further degrade the environment.

Excavation at the necessary gravel mine sites would also result in permanent loss of the existing vegetation and wetlands within the gravel mine footprints, and given the location of this project, have the potential to release asbestos into the environment. Further, dewatering these mines onto the tundra surface or into a natural drainage could permanently alter the hydrologic regime through vegetation destruction and surface soil erosion. This could have widespread geographic impacts considering the number of gravel mines proposed for this project.

AIDEA is also proposing to mine gravel along the road corridor with little to no information provided about the size, location, or impacts from such gravel mining. Gravel mining causes severe and long-lasting impacts, particularly if gravel extraction is allowed in floodplains and streambeds.³⁵² Despite that, the final EIS does not propose meaningful mitigation measures that would prevent gravel extraction from these sensitive areas; the mitigation measures in fact provide for it when authorized by the state.

³⁵⁰ Fennessy DEIS Report at 1.

³⁵¹ *Id.* at 1, 22.

³⁵² Frissell DEIS Report at 14; Fennessy DEIS Report at 15.

EPA determined the project “may result in substantial and unacceptable impacts” to aquatic resources of national importance, i.e., the Kobuk and Koyukuk Rivers and their tributaries and wetlands, and the Nutuvukti fen,³⁵³ triggering a process for the agencies to elevate concerns over a project under CWA section 404(q). EPA based this determination on the “outstanding natural resource value” of the region’s wetlands and waterways, habitat for fisheries and other wildlife, subsistence use, and unique ecosystems like the Nutuvukti fen — an “intricate” and “unique” wetland ecosystem.³⁵⁴ EPA noted that impacts “would result from water extraction activities associated with dust abatement, the development of [gravel mines] adjacent to waterways, and the release of hazardous materials and pollutants during operation and management of the road.”³⁵⁵ We understand that EPA did not ultimately elevate its concerns over the Ambler Road under the 404(q) process, meaning the agency did not submit a “3(b)” letter under this process.³⁵⁶ However, given that no apparent changes were made to the project to address those substantial and unacceptable impacts, this only underscores further how serious the impacts to important aquatic resources will likely be from this project and raises questions about whether those concerns were actually addressed.

The Corps is obligated to demonstrate why concerns about the project’s widespread and permanent impacts are either unfounded or adequately addressed to ensure that the project would not cause or contribute to significant degradation.³⁵⁷ To date, the agency has failed to do so. The Corps attempted to brush off these significant direct and secondary impacts by asserting that AIDEA’s vague mitigation measures and post-permitting project design would reduce or eliminate them.³⁵⁸ For instance, the JROD repeatedly states that adaptive management and future design features would ensure hydrological connectivity is maintained and impacts from contamination would be avoided.³⁵⁹ The Corps’ findings are not supported by the record because it lacked critical information to make that determination, as described above, and because those findings are contradicted by the final EIS, the Corps’ experts, and expert comments that explained mitigation would not completely resolve these issues.

Specifically, the FEIS acknowledged that, even with AIDEA’s design measures in place, there would be widespread changes to overland, surface, and groundwater flows, and myriad other adverse impacts from the road.³⁶⁰ The Corps’ wetlands specialist also found that, even if mitigation practices are followed, embankment erosion and culvert blowouts (a culvert failure

³⁵³ 2019 EPA Comments at 3.

³⁵⁴ *Id.*

³⁵⁵ *Id.*

³⁵⁶ See email from John Sargent, Corps, to Annie Whitley, EPA (Nov. 26, 2019).

³⁵⁷ 40 C.F.R. § 230.10(c).

³⁵⁸ JROD, App. F at F42–43.

³⁵⁹ See, e.g., JROD, App. F at F43–50.

³⁶⁰ 2 FEIS App. H at H-54 to -55 (noting construction would degrade fish spawning habitat, increase water temperatures, and introduce fugitive dust and toxins into waterways); 3 FEIS App. N at N-26 (explaining bridges and culverts would only be “partially effective” at maintaining hydrological connectivity and wetland functions because of difficulty in predicting drainage pathways and potential that culvert installation and maintenance would be inadequate).

that washes portions of the embankment and pipe downstream) are “inevitable.”³⁶¹ And Dr. Frissell confirmed that “there is no opportunity for avoidance of significant adverse hydrologic and aquatic habitat effects in and near the road corridor from this project; the only question is which streams and rivers will be more directly impacted.”³⁶² In sum, the record demonstrated the Ambler Road would have significant, adverse impacts to the structure and function of aquatic ecosystems across a vast region, and that such impacts were not sufficiently avoided or minimized such that significant degradation would not occur.³⁶³

As part of this remand process, the Corps must address the serious deficiencies with its conclusions that mitigation measures would sufficiently address these unacceptable adverse impacts.³⁶⁴ The Corps has not adequately addressed these concerns to date, or considered the significance or magnitude of impacts that would result even with mitigation measures. Moreover, the Corps still lacks critical baseline information about the aquatic resources in the region and project infrastructure to support its analysis of the impacts and potential mitigation measures.

The scale of this industrial road, AIDEA’s unclear plans for development, and the lack of meaningful mitigation measures show that there will be significant degradation from this project. This was not adequately analyzed or addressed in the FEIS and must be addressed during the remand. The Corps needs to address these concerns about the likelihood of significant degradation.

1. The Corps Needs to Consider the Cumulative and Secondary Effects of the Project in Its Significant Degradation Determinations.

The impacts the Corps is required to consider are not limited in time or space to just the initial discharge and acreages. Rather, they encompass all activities and impacts “associated with” the fill activities. Furthermore, “[f]undamental to these Guidelines is the precept that dredged or fill material should not be discharged into the aquatic ecosystem, unless it can be demonstrated that such a discharge will not have an unacceptable adverse impact *either individually or in combination with known and/or probable impacts of other activities affecting the ecosystems of concern.*”³⁶⁵

The secondary and cumulative effects from the Ambler Road, such as the release of asbestos and ARD into the region’s waters, risk causing significant degradation and the Corps has not demonstrated otherwise. The final EIS determined there could be population-level effects to fish, even in the unlikely event that mining and associated activities are properly managed.³⁶⁶

³⁶¹ A. Tippery PFEIS Comments at 2.

³⁶² Frissell DEIS Report at 9

³⁶³ 40 C.F.R. § 230.11(e).

³⁶⁴ *Id.* § 230.10(c).

³⁶⁵ *Id.* § 230.1(c) (emphasis added).

³⁶⁶ 2 FEIS App. H at H-51 to-52 (explaining recent study finding 100% of modern mines in the U.S. predicted compliance with water quality standards, but 76% failed to meet those standards from mining, and 64% failed to mitigate water contamination).

EPA explained that identifying and avoiding asbestos and ARD along the road corridor is necessary to ensure against significant degradation, but noted that “total avoidance may be difficult to achieve.”³⁶⁷ Dr. Fennessy explained “the indirect and cumulative impacts of [ARD] are likely to be severe” and can persist for decades.³⁶⁸ Dr. Frissell pointed out that “the release of even low levels” of contaminants can cause “large and potentially irreversible biological effects.”³⁶⁹

Moreover, the FEIS concluded that “[c]umulatively, the project has the potential to cause very substantial, long-term impacts to fish and aquatic life that could lead to very substantial impacts on subsistence use practices in the region, even with mitigation measures in place.”³⁷⁰ The Corps acknowledged during the prior permitting process that the road would create issues of permafrost thaw and degradation,³⁷¹ introduce fugitive dust into wetlands and waterbodies with resulting turbidity and changes to water quality,³⁷² present risks of contamination from asbestos and ARD,³⁷³ and require thousands of stream crossings and culverts.³⁷⁴

The Corps also needs to accurately consider secondary effects from road dust. EPA questioned the scientific basis for limiting the EIS’s analysis of impacts to wetlands and waterways to 100 meters beyond the project footprint, noting impacts could extend up to 1,000 meters.³⁷⁵ The Corps itself undermined the EIS’s limited analysis, confirming that “indirect impacts to wetlands *will occur* outside of the 100 meter direct impact corridor, mostly due to changes in hydrology and thermal regime caused by the road structure, even with culverts” and acknowledged that impacts should have been considered to 300 meters.³⁷⁶ Despite its own critique, the Corps issued its JROD without obtaining the information or doing the analysis necessary to understand the full nature and degree of the project’s aquatic impacts.

Despite these issues, the Corps deferred gathering information and assessing the impacts of gravel mining, road dust, ARD, and asbestos contamination until after permit issuance. These deficiencies are reflected in the lack of analysis in both the FEIS and the Corps’ decision. But the Corps must analyze these issues and impacts now in determining whether the Ambler Road’s secondary and cumulative effects will cause or contribute to significant degradation; it cannot defer these findings until a later date. The fact that the Corps ultimately authorized a number of the gravel mines without engaging in a site-specific analysis is contrary to both NEPA and the CWA. This needs to be addressed as part of the remand process in the SEIS and in any new decision by the Corps.

³⁶⁷ 2019 EPA Comments at 10 (citing 40 C.F.R. § 230.10(c)).

³⁶⁸ Fennessy DEIS Report at 13.

³⁶⁹ Frissell DEIS Report at 14.

³⁷⁰ 2 FEIS App. H at H-57.

³⁷¹ JROD App. F at F-42.

³⁷² *Id.* at F-49.

³⁷³ *Id.* at F-46 to -47.

³⁷⁴ *Id.* at F-44.

³⁷⁵ 2019 EPA Comments at 9.

³⁷⁶ A. Tippery PFEIS Comments at 3 (emphasis added).

2. *Secondary and Cumulative Effects Include Hardrock Mining Operations Made Possible by the Issuance of the 404 Permit(s) for the Ambler Road.*

The Corps' regulations state that "[a]ll activities which the applicant plans to undertake which are reasonably related to the same project and for which a [Department of the Army] permit would be required should be included in the same permit application."³⁷⁷ The Corps must consider impacts from the development of hardrock mines in the Ambler district because the purpose of the road is to provide industrial transport for Trilogy Metals' mine and potentially other mining companies.

The Corps must consider future actions in the Ambler Mining District, such as large and small mining operations, and the development of a port or terminal for ore transport, which would also need permits from the Corps. Mining activity is "reasonably related" to the proposed road project, and will require a Corps permit. This also includes the mineral and related operations associated with all of the gravel mines (material sites) proposed along/near the Road, and others associated with the Road Project (such as along the Dalton Highway). Indeed, the entire purpose of the Ambler Road is to provide access to the Ambler Mining District. Despite this, the final EIS does not provide sufficient information on which the Corps can base its analysis of the impacts from mineral-related operations.

The Corps has acknowledged that foreseeable future actions associated with the Ambler Road, including mining, would cause a wide range of "major impacts" to aquatic resources,³⁷⁸ and that, while the impacts of reasonably foreseeable future mining activities were "unknown," they are likely to be extensive.³⁷⁹ But the Corps did not explain in the JROD why these cumulative impacts would not cause or contribute to significant degradation as required by the Guidelines.³⁸⁰ Nor did the Corps identify mitigation measures that would address cumulative impacts from mining. As a result, the Corps failed to demonstrate that the Ambler Road "will not have an unacceptable adverse impact either individually or in combination with [other likely impacts] affecting the ecosystems of concern."³⁸¹

The Corps is required to consider the secondary and cumulative effects of the mine and other components of this project, and should do so in any new 404 permit it considers issuing as part of this remand process.

³⁷⁷ 33 C.F.R. § 325.1(d)(2).

³⁷⁸ JROD, App. F at F-38.

³⁷⁹ *Id.* at E-23 (predicting loss and alteration from future mining is expected to be at least thousands, if not hundreds of thousands, of acres).

³⁸⁰ 40 C.F.R. § 230.11(g).

³⁸¹ *Id.* § 230.1(c).

D. The Corps Must Obtain Sufficient Information to Determine the Least Environmentally Damaging Practicable Alternative.

As part of this remand process, the Corps must fully assess whether AIDEA's proposal is the LEDPA. As noted above, the Corps cannot authorize a discharge without "sufficient information to make a reasonable judgment as to whether the proposed discharge will comply with [the Section 404(b)(1)] Guidelines."³⁸² There are still many essential pieces of information regarding gravel mining, bridge and culvert construction and maintenance, ice roads, other project components, and hydrological impacts that AIDEA and the agencies have not addressed. AIDEA has failed to provide the site-specific information necessary for the Corps to make the necessary factual determinations related to significant degradation and the impacts of this project. Additionally, AIDEA has failed to clearly demonstrate that less environmentally damaging alternatives are unavailable.

AIDEA submitted a revised application which the Corps deemed the LEDPA in the JROD; but this proposal was never subject to review by the public or other agencies. Nor did the Corps explain why other, even less damaging alternatives were not also practicable or available.

As discussed above, the final EIS wholly failed to consider a range of reasonable alternatives and design measures that could dramatically reduce the impact of this project, including rail rather than road transport, use of rigid foam board insulation to vastly reduce the project's gravel footprint, and requiring AIDEA to eliminate or modify its plans for its damaging Phase I Pioneer Road.³⁸³ These deficiencies must be addressed and the missing information contained and analyzed in the SEIS for the Corps to consider on remand. The Corps cannot authorize this project on the basis of the information provided to date. The project proposal does not incorporate adequate mitigation measures and the agencies did not look at an adequate range of alternatives to ensure that the version of the project authorized by the Corps (but not the other agencies) is in fact the LEDPA.

E. The Corps Must Require Appropriate Mitigation Measures.

1. The Previously-Approved Mitigation Measures Are Inadequate.

The Corps must require appropriate measures to mitigate the impacts from the Ambler Road. The CWA requires AIDEA to avoid, minimize, and mitigate impacts to the aquatic ecosystem.³⁸⁴ The mitigation sequence requires AIDEA to first avoid impacts to aquatic resources.³⁸⁵ For those impacts that cannot be avoided, AIDEA must take all appropriate and practicable steps to minimize impacts.³⁸⁶ For the remaining unavoidable impacts, AIDEA must

³⁸² *Id.* § 230.12(a)(3)(iv); see 33 C.F.R. §§ 320.2(f), 320.4(a)(1).

³⁸³ See also Engineering Report.

³⁸⁴ See 33 C.F.R. pts. 325 and 332.

³⁸⁵ See Env'tl. Prot. Agency, Factsheet, Wetlands Compensatory Mitigation Factsheet, EPA-843-F-08-002, https://www.epa.gov/sites/production/files/2015-08/documents/compensatory_mitigation_factsheet.pdf.

³⁸⁶ See *Id.*

use compensatory mitigation to replace the loss of wetland and aquatic resource functions in the watershed.³⁸⁷ The amount and quality of compensatory mitigation may not substitute for avoiding and minimizing impacts.³⁸⁸

The prior permitting process did not include any detailed mitigation plan. There is no indication from a review of the mitigation measures in the EIS or the Corps' public notice that the mitigation measures related to the 404 Guidelines and the requirements applicable to the Corps were developed or analyzed in the final EIS. The prior EIS failed to recognize that the Corps is obligated to consider mitigation measures to address the impacts to wetlands and waters for the entire project and prevent against undue degradation.³⁸⁹

The FEIS failed to fully describe or assess the effectiveness of any specific mitigation measures that might be used to address the impacts of the project. As discussed above, many of the mitigation measures related to a vast array of resources and potential impacts (particularly with regard to aquatic resources) were left to be developed at a later, unspecified permitting/design stage — calling into question how the Corps could have even analyzed the effectiveness of such yet-to-be-developed measures. Instead of actually analyzing the specific measures that might mitigate impacts, there are only general statements that the design features would be determined during that later permitting phase and would be incorporated into BLM's ROW authorization prior to construction.³⁹⁰ This lack of specific, enforceable mitigation measures will further exacerbate the significant degradation likely to occur from this project. BLM and the Corps need to analyze existing mitigation measures in the supplemental NEPA analysis and cannot wait until the point of issuing a new record of decision or wait until some later post-decisional point in time to analyze the mitigation measures for this project and present that analysis to the public.

According to Dr. Fennessy, a “clear evaluation of road impacts and mitigation efforts requires detailed information on the stream and wetland hydrology in the specific areas where those impacts will occur, and information on the design, sizing, installation and maintenance of the culverts,” but the “EIS does not present this information.”³⁹¹ The EIS acknowledges the vast majority of culverts are likely to fail and cause serious problems, such as blocking fish passage, and yet the EIS does nothing to mitigate against those impacts.³⁹²

There are also substantial concerns related to the manner in which AIDEA anticipates constructing this project. Even though AIDEA is purportedly planning to build the road in three phases — depending on which application one is looking at — there is no site-specific information or details about precisely how that will be implemented or how further degradation

³⁸⁷ *Id.*

³⁸⁸ *Id.*

³⁸⁹ *See, e.g.*, 33 C.F.R. § 320.4(r)(2) (requiring mitigation for “significant resource losses which are specifically identifiable, reasonably likely to occur, and of importance to the human or aquatic environment”).

³⁹⁰ *See, e.g.*, 1 FEIS at 2-10 to -16; 3 FEIS at N-6, -11.

³⁹¹ Fennessy DEIS Report at 9–10.

³⁹² *See, e.g., id.* at 9.

to wetlands and other water resources will be avoided. BLM and the Corps need to address these omissions.

The Corps attempted to brush off the Ambler Road's significant direct and secondary impacts by asserting in its JROD that AIDEA's vague mitigation measures and post-permitting project design would reduce or eliminate them.³⁹³ For instance, the JROD repeatedly states that adaptive management and future design features would ensure hydrological connectivity is maintained and impacts from contamination would be avoided.³⁹⁴ These vague statements are arbitrary and unsupported; the Corps can't possibly know those measures will be adequate to ensure connectivity is maintained or impacts are minimized when the measures in question have yet to even be designed to a point where that analysis could be done. The Corps must rectify its failure to avoid and minimize the Ambler Road impacts as part of this remand process.

As described above, the Corps lacked baseline and project information to find that AIDEA's design measures and mitigation would minimize and avoid impacts. There is no detailed mitigation plan and numerous aspects of the project plans are not finalized, including the actual locations and designs of the road, gravel mines, and other project components. The Corps does not explain its determination that impacts were sufficiently mitigated in light of this missing information. Additionally, as described above, the record demonstrates that significant and unavoidable adverse impacts would occur even if all mitigation measures are properly implemented.

The Corps also cannot categorize impacts as being avoided or minimized when it anticipates permitting them later.³⁹⁵ For instance, the Corps cannot simply ignore impacts from AIDEA's extensive gravel mining proposal simply by permitting the mines in a piecemeal fashion. Of concern, during the prior process, the Corps claimed a reduction in the number of gravel mines (41 to 15 sites) would be an important avoidance and minimization measure,³⁹⁶ while admitting elsewhere in its JROD that additional mines may be permitted later to supply sufficient quantities of gravel.³⁹⁷

The Corps should not merely rely on the proposed avoidance and design criteria contained in AIDEA's application, many of which are simply requirements of other permitting agencies, and not actual mitigation measures. The Corps should independently consider what additional measures are needed for the length of the industrial gravel road to minimize and avoid impacts to wetlands and how mitigation will replace lost aquatic resource functions.

Additionally, the Corps must adequately take into consideration the potential effects of climate change on the project and how to mitigate against those impacts. The final EIS provides almost no analysis of the potential impacts of climate change on the project and the need for additional mitigation measures or design features to address those vulnerabilities. This is

³⁹³ JROD at F-42 to -43

³⁹⁴ *See, e.g., id.* at F-43 to -50.

³⁹⁵ 33 C.F.R. § 325.1(d)(2) (requiring all activities related to a project that need a 404 permit to be in same permit application).

³⁹⁶ JROD, App. F at F-42.

³⁹⁷ *Id.* App. F at F-53.

particularly important for a project like this, which is located in the Arctic and likely to be susceptible to the effects of climate change. As discussed below, there are also serious concerns related to permafrost degradation that will only be further exacerbated by climate change, and yet were not adequately addressed in the prior decision-making process. Permafrost degradation has the potential to cause serious downstream and other adverse impacts to aquatic resources along the corridor, and yet those impacts were almost entirely ignored in the prior analysis.

The Corps should analyze the potential impacts of climate change on each of the alternatives to determine how each alternative should be designed or how mitigation measures should be incorporated into each alternative to address the potential impacts from climate change in a region that is experiencing the effects of climate change first-hand. The Corps should also assess, based on things like the site-specific permafrost conditions and hydrology in the vicinity of the specific alternatives, how these impacts are likely to play out over time in the project area.

F. Compensatory Mitigation Must Replace Lost Aquatic Functions.

The 404(b)(1) Guidelines provide that “no discharge of dredged or fill material shall be permitted unless appropriate and practicable steps have been taken which will minimize potential adverse impacts of the discharge on the aquatic ecosystem.”³⁹⁸ Pursuant to the Corps’ permitting regulations, compensatory mitigation may be required to ensure that a permit complies with the 404(b)(1) Guidelines.

Despite the wide range of impacts that will not be addressed through avoidance and minimization measures, the Corps required absolutely no compensatory mitigation for the Ambler Road — an unprecedented and unfathomable decision for a project of this size. Rather, the Corps’ JROD stated that it would not require compensatory mitigation because “mitigation in the form of avoidance and minimization is sufficient.”³⁹⁹ As described above, that finding was arbitrary and unsupported.

The 2008 Mitigation Rule sets out how mitigation requirements are determined and provides the Corps with the authority to deny a permit if there is a “lack of appropriate and practicable compensatory mitigation.”⁴⁰⁰ The 2008 Mitigation Rule also contains substantive provisions regarding the size and location of compensatory mitigation that are directly pertinent to the Corps’ decision whether to permit this project. The 2008 Mitigation Rule requires that “the amount of required compensatory mitigation *must be, to the extent practicable, sufficient to replace lost aquatic resource functions.*”⁴⁰¹ The district engineer “must use a watershed approach to establish compensatory mitigation requirements . . . to the extent appropriate and practicable.”⁴⁰² “The ultimate goal of a watershed approach is to maintain and improve the

³⁹⁸ 40 C.F.R. § 230.10(d).

³⁹⁹ JROD, App. F at F-15.

⁴⁰⁰ 33 C.F.R. § 332.1(c)(3).

⁴⁰¹ *Id.* § 332.3(f) (emphasis added).

⁴⁰² *Id.* § 332.3(c)(1).

quality and quantity of aquatic resources within watersheds through strategic selection of compensatory mitigation sites.”⁴⁰³

EPA and the Corps have entered into two relevant memoranda of agreement — a general memorandum of agreement (MOA) in 1990 (1990 MOA) and an MOA specific to Alaska in 2018 (2018 MOA).⁴⁰⁴ The 1990 MOA sets out the avoid-minimize-mitigate sequence, stating that the Corps must first make “a determination that potential impact[s] have been avoided to the maximum extent practicable; remaining unavoidable impacts will then be mitigated to the extent appropriate and practicable by requiring steps to minimize impacts, and, finally, compensate for aquatic resource values.”⁴⁰⁵ The 1990 MOA also sets out the “no net loss” policy: “The Corps will strive to avoid adverse impacts and offset unavoidable adverse impacts to existing aquatic resources, and for wetlands, will strive to achieve a goal of no overall net loss of values and functions.”⁴⁰⁶ The 1990 MOA acknowledges that some individual permitting decisions may not achieve no net loss because “mitigation measures to meet this goal are not feasible, not practicable, or would accomplish only inconsequential reductions in impacts.”⁴⁰⁷ The 1990 MOA also identifies that “[t]he determination of what level of mitigation constitutes ‘appropriate’ mitigation is based solely on the values and functions of the aquatic resource that will be impacted.”⁴⁰⁸ The 1990 MOA also states that “‘Practicable’ is defined at Section 230.3(q) of the [404 (b)(1)] Guidelines.”⁴⁰⁹

The 2018 MOA recognizes guiding principles specific to Alaska, including:

- Avoiding wetlands may not be practicable where there is a high proportion of land in a watershed or region which is jurisdictional wetlands;
- Restoring, enhancing, or establishing wetlands for compensatory mitigation may not be practicable due to limited availability of sites and/or technical or logistical limitations;

⁴⁰³ *Id.*

⁴⁰⁴ Memorandum of Agreement Between the Environmental Protection Agency and the Department of the Army Concerning the Determination of Mitigation Under the Clean Water Act Section 404(b)(1) Guidelines (1990 MOA), <https://www.epa.gov/cwa-404/memorandum-agreement> (included as an attachment to these comments); Memorandum of Agreement Between the Department of the Army and the Environmental Protection Agency Concerning Mitigation Sequence for Wetlands in Alaska Under Section 404 of the Clean Water Act (2018 MOA) https://www.epa.gov/sites/production/files/2018-06/documents/epa_army_moa_alaska_mitigation_cwa_404_06-15-2018_0.pdf (included as an attachment to these comments).

⁴⁰⁵ 1990 MOA at II.C.

⁴⁰⁶ *Id.* at II.B.

⁴⁰⁷ *Id.*

⁴⁰⁸ *Id.*

⁴⁰⁹ *Id.* 40 C.F.R. § 230.3(q) provides “the term *practicable* means available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.”

- Compensatory mitigation options over a larger watershed scale may be appropriate given that compensation options are frequently limited at a smaller watershed scale;
- Where a large proportion of land is under public ownership, compensatory mitigation opportunities may be available on public land;
- Out-of-kind compensatory mitigation may be appropriate when it better serves the aquatic resource needs of the watershed; and
- Applying a less rigorous permit review for small projects with minor environmental impacts is consistent with the Section 404 program regulations.⁴¹⁰

The 2018 MOA identifies that “required compensatory mitigation should be located in the same watershed as the impact site, and should be located where it is most likely to successfully replace lost aquatic resource functions and values.”⁴¹¹ The 2018 MOA endorses a “Watershed Approach,” and sets out that “[t]he goal of a watershed approach is to maintain *and improve the quality and quantity of aquatic resources* within watersheds through strategic selection of compensatory mitigation sites.”⁴¹²

While the 2018 MOA recognizes that larger watershed scales may be used, it states that “[t]he size of watershed addressed using a watershed approach should not be larger than is appropriate to ensure that the aquatic resources provided through compensation activities will effectively compensate for adverse environmental impacts resulting from activities authorized by Section 404 permits.”⁴¹³

The Corps’ 2018 *Thought Process*, an agency guidance document, identifies six factors that may warrant compensatory mitigation,⁴¹⁴ four of which are relevant to the Ambler Road. The relevant factors include: (1) projects in rare or difficult to replace wetlands; (2) projects that permanently impact more than one-tenth an acre of wetlands or WOUS, or 300-feet of streams where the watershed condition warrants mitigation; (3) placement of fill within 300 feet of fish-bearing waters and jurisdictional wetlands with “more than minimal” impacts; and (4) large-scale projects with adverse aquatic resource impacts, such as mining development and highway projects.⁴¹⁵ The Ambler Road will traverse and impact aquatic resources of national importance; permanently impact over 1,400 acres of wetlands and over 47 miles of streams in a watershed that warrants mitigation; place fill in fish-bearing waters causing significant impacts; and is a large-scale highway project for a mining development with adverse aquatic impacts.

⁴¹⁰ 2018 MOA at II.B.

⁴¹¹ *Id.* at III.C.1.

⁴¹² *Id.* at III.C.1.a (emphasis added).

⁴¹³ 2018 MOA at III.C.1.b.

⁴¹⁴ U.S. Army Corps of Eng’rs, *Alaska District Compensatory Mitigation Thought Process* 5 (Sept. 18, 2018), <https://www.poa.usace.army.mil/Portals/34/docs/regulatory/2018MitigationThoughtProcess.pdf> (listing factors and explaining they are consistent with Corps’ regulations).

⁴¹⁵ *Id.*

Despite this, the Corps failed to require any compensatory mitigation for the Ambler Road during the prior permitting process. The Corps stated that compensatory mitigation would not be required because the project — in tandem with existing disturbance — would impact less than 5% of the watershed.⁴¹⁶ But nothing in the CWA or the Corps’ regulations limit its consideration of mitigation to only those impacts that impact a certain threshold of a watershed.⁴¹⁷ The goal of the Corps’ watershed approach “is to maintain and improve the quality and quantity of aquatic resources within watersheds through strategic selection of compensatory mitigation sites.”⁴¹⁸ It does not set a threshold percentage for impacts that must be reached before the Corps requires compensatory mitigation. In addition, allowing the Corps to arbitrarily define an almost boundless scale for arbitrarily determining what percentage of a watershed will be impacted by a project would allow the Corps to write off the impacts of even highly impactful, serious projects — as it did with the Ambler Road. Such an approach is contrary to the CWA. Even EPA has critiqued this threshold percentage approach as potentially violating the CWA.⁴¹⁹ The Corps must require compensatory mitigation sufficient to offset lost aquatic functions for the entirety of the Ambler Road and its secondary and cumulative effects, in order to comply with its obligations under the CWA and the 404 Guidelines. Its failure to do so as part of the prior decision-making process violated the CWA and 404 Guidelines.

G. The Corps Should Not Authorize this Project Because It Is Not in the Public Interest.

Issuance of a CWA Section 404 permit for this project was contrary to the public interest and nothing has shifted in the interim to alter this fact.⁴²⁰ Corps regulations governing the issuance of Section 404 permits declare that “[s]ome wetlands are vital areas that constitute a productive and valuable public resource, the unnecessary alteration or destruction of which should be discouraged as contrary to the public interest.”⁴²¹ In furtherance of this protective

⁴¹⁶ JROD App. F at F-30 to -31.

⁴¹⁷ See 33 C.F.R. § 332.3(f)(1); *Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) (affirming agency action is arbitrary where it “relied on factors which Congress has not intended it to consider” or “offered an explanation for its decision that runs counter to the evidence before the agency”).

⁴¹⁸ 33 C.F.R. § 332.3(c)(1); see also 33 C.F.R. § 332.2 (defining “watershed approach” as an analytical tool for assessing locations and types of mitigation).

⁴¹⁹ U.S. Environmental Protection Agency, Technical Review of a Threshold-Based Approach for Determining Significant Degradation in Alaska (July 5, 2018).

⁴²⁰ 33 C.F.R. § 320.4(a)(1) (“The benefits which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. The decision whether to authorize a proposal, and if so, the conditions under which it will be allowed to occur are therefore determined by the outcome of this general balancing process.”). In the preamble to a 1982 Interim Final Rule and a Request for Comments concerning a wide range of issues concerning the Corps permitting programs, the Corps described the public interest review process as “the heart of our evaluation process. It involves weighing and balancing of all factors affecting the public interest.” 47 Fed. Reg. 31794 (July 22, 1982).

⁴²¹ 33 C.F.R. § 320.4(b)(1); see also 33 C.F.R. § 320.4(b)(2) (identifying eight types of wetland functions important to the public interest).

policy for wetlands, the Corps is required to undertake a “public interest review” of a proposed discharge before issuing a wetlands permit.⁴²² This includes a “careful weighing of all those factors which become relevant in each particular case.”⁴²³ The “benefits which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments.”⁴²⁴ This requires the Corps to consider “the probable impacts” of a proposed project on “[a]ll factors which may be relevant to the proposal[,] including cumulative effects.”⁴²⁵ The Corps must consider the probable impacts, including cumulative impacts, of the proposed activity and its intended use on the public interest.⁴²⁶

The Ambler Road is not in the public interest. The project involves significant, unresolved conflicts as to resource use and will result in major adverse impacts to subsistence uses, public health, and other values. As discussed throughout these comments, the project has not been adequately analyzed or considered to date, the agencies have yet to receive site-specific information about the vast majority of this project and the proposed infrastructure, and the agencies have not adopted appropriate mitigation measures to prevent significant degradation. As proposed, the project is likely to cause significant degradation across a far-reaching area. There are also significant cumulative effects, as discussed throughout these comments. The Corps should rescind the prior authorization and should not reissue the permit because this project is contrary to the public interest.

VII. BLM MUST COMPLY WITH FLPMA IN PREPARATION OF THE SEIS.

The final EIS fails to meet the strict public interest, environmental protection, and financial requirements of the Federal Land Policy and Management Act (FLPMA). Under FLPMA Title V, Section 504, BLM may grant a ROW only if it “will do no unnecessary damage to the environment.”⁴²⁷ BLM must adhere to the requirements of FLPMA governing issuance of ROW permits in addition to meeting its obligations under NEPA. FLPMA provides that rights-of-way “shall be granted, issued or renewed ... consistent with ... any other applicable laws.”⁴²⁸ BLM was obligated to require AIDEA to submit complete ROW or other special use permit authorizations and to ensure that all mandates of FLPMA Title V and its implementing regulations were adhered to.⁴²⁹

BLM failed to comply with FLPMA’s substantive and procedural requirements when previously authorizing this project. BLM should address these deficiencies as part of the remand process and in the SEIS.

⁴²² *Id.* § 320.4(a).

⁴²³ *Id.* § 320.4(a)(1).

⁴²⁴ *Id.*

⁴²⁵ *Id.*; *see also id.* pt. 325 App. B. § (7)(b)(3).

⁴²⁶ *Id.* § 320.4(a)(1); *see also id.* pt. 325 App. B. § (7)(b)(3).

⁴²⁷ 43 U.S.C. § 1764(a).

⁴²⁸ *Id.* § 1764(c).

⁴²⁹ *See* 43 C.F.R. pt. 2800 (BLM FLPMA grant regulations).

A. AIDEA’s Right-of-Way Application Is Still Incomplete for Purposes of FLPMA.

Groups pointed out during the prior permitting process that many of the informational requirements needed for a ROW were missing or exceedingly vague in AIDEA’s application. The FEIS fell short of rectifying these omissions, rendering BLM’s analysis insufficient under NEPA and making issuance of a right-of-way by BLM inappropriate.

FLPMA and BLM’s regulations contain strict application and approval requirements for rights-of-way. A right-of-way that “may have significant impact on the environment” requires submission of a complete plan of construction, operation, and rehabilitation of the right-of-way.⁴³⁰ Prior to granting a right-of-way, the applicant must submit, and BLM must approve, a plan of development (POD) for the entire project.⁴³¹ BLM’s regulation at 43 C.F.R. § 2804.12(a) provides that a completed application *must* include the following: a description of the project and the scope of the facilities; the estimated schedule for constructing, operating, maintaining, and terminating the project; the estimated life of the project and the proposed construction and reclamation techniques; and a statement of the entity’s financial and technical capability to construct, operate, maintain, and terminate the project.

There is no question that this ROW will have significant impacts. BLM was therefore required to obtain a complete plan of construction, operation, and rehabilitation prior to issuance of the ROW. Despite the fact that AIDEA has yet to submit a complete POD, BLM issued its right-of-way. The JROD states AIDEA would “refine” the POD and the “POD would be reviewed and approved by the BLM and made part of the [right-of-way] Grant to AIDEA.”⁴³² That never happened; the right-of-way was issued without a complete POD. The right-of-way instead details 26 subject areas — such as permafrost, stream crossings, asbestos, ARD, dust control, air quality, and more — that had yet to be addressed in a POD and where AIDEA needed to submit plans addressing those issues.⁴³³ It is those future plans, which have yet to be developed, that “will describe in detail the construction, operation, maintenance, and termination of the right-of-way and its associated improvements and facilities.”⁴³⁴

That is exactly the information required to be in the POD prior to issuance of the right-of-way.⁴³⁵ The right-of-way also acknowledged that AIDEA has yet to apply for many of the facilities directly related to the road and right-of-way, including gravel mines and project components.⁴³⁶ These necessary project components needed to be part of the complete POD. BLM’s failure to require the submission of a complete POD prior to issuing the right-of-way violated FLPMA.⁴³⁷

⁴³⁰ 43 U.S.C. § 1764(d).

⁴³¹ *Id.*; 43 C.F.R. §§ 2804.12, 2804.25(c).

⁴³² JROD at D-2 to -4; 3 FEIS App. N at N-6.

⁴³³ BLM ROW at 6–7.

⁴³⁴ *Id.* at 6.

⁴³⁵ 43 U.S.C. § 1764(d).

⁴³⁶ BLM ROW at 7–8.

⁴³⁷ 43 U.S.C. § 1764(d).

As discussed in further detail below, there were a number of specific elements that were required in the FLPMA regulations for there to be a complete application — but were lacking at the time BLM issued the ROW. BLM’s issuance of the ROW prior to having this complete information was contrary to FLPMA. BLM should rescind the ROW and ensure it has all this required information prior to reissuing the ROW.

1. *AIDEA Failed to Provide an Adequate Description of the Project and the Scope of the Facilities.*

AIDEA did not provide a complete description of either the project or the full range of anticipated facilities needed for the proposed road. For example, the 250-foot ROW width does not specify whether that will be the operational (i.e., post-construction) width of the road itself, or the width for construction purposes, and vaguely states that “in a few areas, with bridge crossings and steep terrain, the ROW width may need to be up to 400 feet wide.”⁴³⁸ Information such as where this steep terrain occurs and which areas of the ROW will need to be wider, is not included anywhere in AIDEA’s application — which isn’t surprising, given that AIDEA has yet to do sufficient studies and design work to even know where these issues are likely to arise. There is no description of equipment that will be needed to construct and maintain the road or associated gravel mines. Further, it is not clear that AIDEA has requested a ROW from BLM for any necessary ice or snow roads for the project. The description of the ROW itself is completely lacking the information necessary to understand where these activities might occur and the potential impacts.

As to the scope of the facilities, the application stated that “the project would require the construction of numerous support structures including: bridges, culverts, maintenance stations, turnouts, material sites, material site access roads, maintenance stations [sic], and airstrips”⁴³⁹ Aside from the indefinite, projected locations of bridges and culverts, little else is described for these structures. BLM itself acknowledged that it did not have site-specific information related to many of these project components, which it needed to analyze in the FEIS for purposes of both NEPA and FLPMA. This vague information was insufficient to provide BLM or the public with adequate information about the facilities that will be associated with this project. There is no information on bridge construction methods (e.g., how pile driving will be done or how AIDEA plans to construct span bridges), nor have the bridges been designed yet based on site-specific information to even fully understand how they would be built. There is no information on culvert installation, maintenance, or replacement, or details on airstrip construction and use. It is unclear whether the material site access roads will be entirely ice roads, or whether permanent gravel roads will be needed. The extent of infrastructure at the maintenance stations should have been included in a complete application as well. That should have included information on infrastructure size, number of staff, means of year-round access, and power generation requirements.

⁴³⁸ *Id.* § 1764(c).

⁴³⁹ 2016 AIDEA Application, sec. 6, at 3.

2. *AIDEA Failed to Provide an Adequate Schedule or Information on Proposed Techniques for Constructing, Operating, Maintaining, and Terminating the Project.*

AIDEA previously provided no meaningful information about the schedule of its project. All statements in its application were tied to the level of industry interest at any given time, making the timeframe for every aspect of the project from construction through reclamation completely unclear. AIDEA's use of a vaguely defined 3-phase approach to construction was particularly problematic. There is still almost no information on AIDEA's plan to use this 3-phase approach to construction and the timing of each phase. AIDEA states that its proposed transition from one phase of the road to another would "occur over time and would only proceed as needed based on activity levels in the district and the number of mines in production or being developed, which determines the demand for transportation capacity."⁴⁴⁰ The ROW itself recognizes this serious gap, in that it allows AIDEA to submit plans of development at later points in time for the individual phases of development.⁴⁴¹ BLM never should have issued the ROW without a complete plan of development that encompasses all anticipated phases of the project; without that complete information, BLM was not in a position to adequately analyze mitigation and other measures necessary to meet its substantive obligations under FLPMA.

There is also no intelligible time frame on when or how the road will be reclaimed. Reclamation "would be expected to occur 50 years after road construction is completed, *or* when mineral exploration and development activities in the District conclude."⁴⁴² Given how little is known about the amount of mineral resources in the Ambler Mining District, this statement about the timing of reclamation is meaningless. BLM should set a time limitation on the life of the "seasonal" Phase I road to ensure that if mineral development does not take place in the District in a reasonable time frame, that the environmentally damaging road is not simply abandoned in place. As noted elsewhere in these comments, AIDEA's proposed Phase I road is not even anticipated to be a year-round road and could present a serious hazard to the public, wildlife, and the environment if left in place. To comply with FLPMA, BLM must require a schedule for terminating the project, which was lacking in AIDEA's application.

AIDEA provides almost zero information about the plans for reclamation of this project, despite the fact that AIDEA is only permitting this project as a "temporary" road. AIDEA's application does not discuss basic information on how this road will be constructed, let alone any information on how it will be reclaimed. AIDEA states that it "may procure road design, construction, maintenance and operation services through third-parties,"⁴⁴³ but that type of catch-all statement is legally insufficient. AIDEA is responsible for providing this information to obtain a FLPMA ROW grant, and cannot evade this requirement by assigning these responsibilities to an unidentified future contractor or by making promises to obtain that information in the future.

⁴⁴⁰ *Id.* sec. 2, at 6.

⁴⁴¹ BLM ROW ex. A at 6.

⁴⁴² 2016 AIDEA Application, sec. 2, at 7 (emphasis added).

⁴⁴³ *Id.* sec. 2, at 1.

Specific shortcomings include statements that merely acknowledge the need for, and state the vague locations of, material sites. AIDEA anticipates 42.23 million cubic yards of gravel will be needed for the project for construction and maintenance.⁴⁴⁴ By way of comparison, about 24 million cubic yards of gravel were used to construct the Dalton Highway paralleling the Alaska pipeline.⁴⁴⁵ BLM itself acknowledged in the JROD that it did not have sufficient site-specific information to authorize the gravel mines at that time;⁴⁴⁶ but the gravel mines are a core, connected component of this project and AIDEA was required to provide complete information about the plans for gravel mining as part of this permit application. There is no information on the specific mine locations, blasting, how much gravel will be taken from each site, the excavation process, necessary machinery, or gravel mine reclamation.

As stated above, important information on bridge and culvert construction and maintenance is absent from the application, as well as any information on AIDEA's reclamation plan. Different reclamation techniques would be needed depending upon which "Phase" of the road is eventually built and subsequently reclaimed. Presumably, AIDEA must use ice roads to transport materials, however, a description of these activities and ice road construction and maintenance is wholly absent from the application. AIDEA has not met the requirement to provide information on the estimated life of the project or construction and reclamation techniques.

3. *A Statement of AIDEA's Financial and Technical Capability to Construct, Operate, Maintain, and Terminate the Project Is Required.*

In its application to BLM, AIDEA claimed "AIDEA's capability to construct, operate, maintain and terminate the project is evidenced by the successful [DeLong Mountain road] at Red Dog Mine."⁴⁴⁷ This response is unacceptable, and AIDEA must be held to a higher standard than a single conclusory sentence related to a project that moved forward under dramatically different circumstances than the Ambler Road might.

BLM must analyze AIDEA's assertion with close scrutiny. The DeLong Mountain Road is a 52-mile haul road connecting the Red Dog Mine — the world's largest zinc mine — to a port along the Chukchi Sea. Ambler would foremost be a copper mine, producing a small quantity of high-quality copper ore. While this copper is economically valuable, it might annually produce less than ½ of 1% of global supply. Ambler would secondly be a zinc mine, projected to produce around ¼ as much zinc per year as Red Dog, for a lifetime ¼ as long. Whereas Red Dog is one of the world's most important sources of zinc (it is currently the #2 global source) and produces a noticeable fraction (5%–10%) of global zinc, Ambler would produce closer to 1%–2% of the annual world supply.

⁴⁴⁴ *Id.* sec. 2, at 4.

⁴⁴⁵ U.S. Bureau of Land Mgmt., Utility Corridor Planning Area Resource Mgmt. Plan and Eenvtl. Impact Statement, 3-24 (Aug. 1987).

⁴⁴⁶ JROD at 3.

⁴⁴⁷ 2016 AIDEA Application, sec. 2, at 7.

Further, Red Dog Mine, whose road was financed by AIDEA, receives payments from the mine's operator (Teck Alaska) for its use. In that project, there was a proven applicant who was part of the permitting process, unlike the present case, involving a company with a dubious track record in both Alaska and elsewhere. NovaGold, led by Trilogy's CEO for fifteen years, Rick Van Nieuwenhuysse, operated the Rock Creek Mine outside of Nome for only a few months before shutting down. The company was also subject to a class action lawsuit involving allegations that NovaGold misled investors about the economic feasibility of the Galore Creek Mine in British Columbia and settled that case for \$28 million Canadian dollars—the largest securities settlement at the time under Canada's class action laws. AIDEA itself is also a highly questionable project proponent. A recent report on AIDEA showed that AIDEA's project decisions are politically driven and that AIDEA has lost billions of dollars for the state.⁴⁴⁸

In addition to the disreputable project proponent, the current road has a much higher cost for AIDEA. Construction of the DeLong Mountain road decades ago cost \$180 million and then an additional \$85 million for improvements, for a total cost of \$265 million.⁴⁴⁹ The potential \$844.9 and \$906.0 million cost in AIDEA's permit application for the 30-year life of the Ambler road is already considerably higher, and does not purport to include the cost to eventually reclaim the road, as AIDEA is obligated to do for its current proposed project. We also note that AIDEA repeatedly claims the road will have a 50-year life, so this is likely not an accurate cost assessment.

Moreover, the DeLong Mountain road ends at a tidewater export location, in contrast to the Ambler Road ending at the Dalton Highway. The transportation cost via road for Ambler Mining District ore would be much greater than for Red Dog mine ore, as the latter can reach a ship by travelling a much shorter distance. Compared to the DeLong Mountain road, the proposed road is longer, to a more uncertain mineral deposit, with a significantly higher price tag. Development of the Ambler mining district and this proposed road have no long-term funding, no investors, and no plan. This road project should proceed only with a clear commitment by mine operators to repay the state all the construction, operations, maintenance, financing and the reclamation costs of the project. A vague statement about a toll road and bonding is not a statement of financial capability and does not meet FLPMA's requirement.

Finally, BLM must carefully consider AIDEA's financial ability to reclaim the road. AIDEA's ability to finance the construction and maintenance costs for this project is already questionable; their ability to finance any sort of reclamation, let alone one that would adequately restore the project area to an appropriate condition, is in serious doubt.

Relatedly, it is unclear whether BLM previously complied with the financial requirements of FLPMA regarding ROW applications and approvals. At a minimum, BLM must

⁴⁴⁸ Milt Barker & Gregg Erickson, AIDEA – Cost and Financial Performance – A Long, Hard Look (2022), *available at* https://static1.squarespace.com/static/62cca323b85faf15e3ca3ce8/t/63320dbc1620c750ff2654f5/1664224705415/FINAL_AIDEA+Cost+and+Financial+Performance+Report_+2022.pdf.

⁴⁴⁹ AIDEA, AMBLER ACCESS, <http://www.ambleraccess.com/funding.html> (last visited Oct. 25, 2019).

obtain “Fair Market Value” (FMV) for the use of federal land and resources. FLPMA requires that “the United States receive fair market value of the use of the public lands and their resources.”⁴⁵⁰ “The holder of a right-of-way shall pay in advance the fair market value thereof, as determined by the Secretary granting, issuing, or renewing such right-of-way.”⁴⁵¹ In addition, AIDEA must fully “reimburse the United States for all reasonable administrative and other costs incurred in processing an application for such right-of-way and in inspection and monitoring of such construction, operation, and termination of the facility pursuant to such right-of-way.”⁴⁵²

While the BLM ROW gives a nod toward these requirements, it is unclear what BLM ultimately determined would be FMV for the ROW — the ROW grant merely punts and states that the BLM authorized officer would determine the FMV at an unspecified future time.⁴⁵³ This is incompatible with FLMPA’s requirements that the ROW holder pay such value in advance. The projected FMV amount should be provided for public review and comment in the SEIS.

In addition, BLM must charge full costs for a reclamation and performance bond to cover the ROW.⁴⁵⁴ In particular, BLM’s bonding requirements mandate that ROW holders must provide for bonding “that covers liability for damages or injuries resulting from releases or discharges of hazardous materials.”⁴⁵⁵ This is especially important for AIDEA’s proposal to mine for and construct a road from gravel that is known to contain asbestos, which will inevitably lead to environmental liabilities from use of these hazardous materials. Additionally, AIDEA’s bond must provide for “[i]nterim and final reclamation, re-vegetation, recontouring, and soil stabilization. This component must address the potential for flood events and downstream sedimentation from the site that may result in offsite impacts.”⁴⁵⁶ As described herein, there is no reclamation plan for this proposal, making it unclear how AIDEA and BLM will ensure compliance with BLM’s bonding requirements. These substantial financial considerations are in addition to the rents and other fees required by FLPMA and the ROW regulations.⁴⁵⁷

In addition to all of the above FLPMA requirements, because all of these financial considerations are necessarily part of BLM’s review and approval of the ROW, they are subject to full public review under NEPA — something the FEIS failed to provide.

⁴⁵⁰ 43 U.S.C. §1701(a)(9).

⁴⁵¹ *Id.* § 1764(g).

⁴⁵² *Id.*

⁴⁵³ BLM ROW at 2 (“For and in consideration of the rights granted, the holder agrees to pay the Bureau of Land Management fair market value rental as determined by the AO”).

⁴⁵⁴ *See* 43 C.F.R. § 2805.20 (BLM Bonding Requirements).

⁴⁵⁵ *Id.*

⁴⁵⁶ 43 C.F.R. § 2805.20(a)(5)(ii).

⁴⁵⁷ *See* 43 C.F.R. pt. 2800.

B. BLM's Prior Right-of-Way Grant Did Not Comply with FLPMA's Substantive Requirements.

Important substantive requirements flow from FLPMA's ROW provisions. First, BLM must honor the requirement that the right-of-way grant "do no unnecessary damage to the environment"⁴⁵⁸ A right-of-way that "may have significant impact on the environment" requires submission of a plan of construction, operation, and rehabilitation of the right-of-way.⁴⁵⁹ The ROW permit "shall contain terms and conditions which will ... minimize damage to scenic and esthetic values and fish and wildlife habitat and otherwise protect the environment."⁴⁶⁰ Additionally, BLM must "protect the interests of individuals living in the general area traversed by the right-of-way who rely on the fish, wildlife, and other biotic resources of the area for subsistence purposes" and incorporate terms and conditions or mitigation measures to adhere to this requirement.⁴⁶¹

At least three important substantive requirements flow from FLPMA's ROW provisions. First, BLM has a mandatory duty to impose conditions that "will minimize damage to scenic and esthetic values and fish and wildlife habitat and otherwise protect the environment."⁴⁶² The terms of this section do not limit "damage" specifically to the land within the ROW corridor. Rather, the expansive term "the environment" indicates that the overall effects of the ROW on wildlife, environmental, scenic, and aesthetic values must be evaluated and these resources protected. In addition, the obligation to impose terms and conditions that "protect Federal property and economic interests"⁴⁶³ requires that BLM impose conditions that protect not only the land crossed by the ROW, but all federal lands affected by the approval of the ROW.

For the Ambler Road proposal, as noted herein, BLM failed to evaluate all aspects and ramifications of issuing the ROW by unreasonably limiting the scope of its analysis. In particular, BLM failed to consider the mineral material/gravel mines and related infrastructure made possible by the ROW, and the extensive significant impacts to aquatic resources along the road corridor. Also, as noted herein, the FEIS failed to show how mining development in the Ambler District made possible by the issuance of the ROW meets these FLPMA requirements.

Second, FLPMA mandates a BLM determination as to what conditions are "necessary" to protect federal property and economic interests, as well as "otherwise protect[ing] the public interest in the lands traversed by the right-of-way or adjacent thereto."⁴⁶⁴ This means that the agency can only approve the ROW if it "protects the public interest in lands" not only upon which the road would traverse, but also lands and resources adjacent to and associated with the ROW. "[A]s BLM has held, it is not private interests but the public interest that must be served by the issuance of a right-of-way."⁴⁶⁵

⁴⁵⁸ 43 U.S.C. § 1764(a) (1996).

⁴⁵⁹ *Id.* § 1764(d).

⁴⁶⁰ *Id.* § 1765(a)(ii).

⁴⁶¹ *Id.* § 1765(b)(iv).

⁴⁶² *Id.* § 1765(a) (emphasis added).

⁴⁶³ *Id.* § 1765(b).

⁴⁶⁴ *Id.* (emphasis added).

⁴⁶⁵ *King's Meadow Ranches*, 126 IBLA 339, 342 (1993).

BLM is currently unable to make a finding that industrial use of the lands surrounding by and served by the ROW (such as through the road itself, the hardrock mines in the Ambler District, and the gravel mines and related infrastructure), would “protect the public interest,” because of the dearth of baseline data and project information provided to date. In particular, BLM’s deferral of review of the project’s gravel mines and other necessary project components violates its substantive responsibilities under FLPMA. BLM cannot legitimately conclude that the impacts from over 40 gravel mines, airstrips, access roads, and other components necessary for the Ambler Road are in the “public interest” and “minimize damage to scenic and esthetic values and fish and wildlife habitat and otherwise protect the environment,”⁴⁶⁶ when BLM has never seen the complete plans for this infrastructure. Nor has BLM analyzed the site-specific impacts or obtained baseline information related to these project components. Moreover, BLM lacked information to conclude that the road itself, particularly its vaguely defined phased construction approach, would serve the public interest. BLM’s ROW itself referred to a broad range of missing information and plans (e.g., a complete plan of development) that would need to eventually be provided to BLM, but were not available or clear at the time BLM issued the ROW.⁴⁶⁷ BLM was not in a position to ensure the project was in the public interest when it had yet to receive key information, and never should have issued the ROW without obtaining that information and engaging in the necessary analysis to ensure the project would be in the public interest.

BLM cannot and should not have issued a ROW that failed to “protect the environment” as required by FLPMA, including the environmental resource values in and beyond the ROW corridor. FLPMA does not authorize BLM to consider private interests as weighed against environmental and public interests such as protection of fish and wildlife habitat, subsistence uses, and public health.

Third, FLPMA requires that the right-of-way grant “do no unnecessary damage to the environment” and be “consistent with ... any other applicable laws.”⁴⁶⁸ FLPMA further requires that BLM “take any action necessary to prevent unnecessary or undue degradation of the [public] lands” when granting a right-of-way.⁴⁶⁹ Unnecessary or undue degradation is defined, in part, as “[f]ail[ing] to comply with ... Federal and state laws related to environmental protection,”⁴⁷⁰ and includes “applicable Federal and state air quality standards.”⁴⁷¹

This means that a grant of a ROW leading to exploration and mining in the Ambler District must satisfy all applicable laws, regulations and policies, including the Clean Air Act, Endangered Species Act, Clean Water Act, and all state and local laws and regulations. In particular, BLM must work with the Corps to ensure compliance with the CWA, as described

⁴⁶⁶ 43 U.S.C. § 1765(a)(ii), (b)(vi).

⁴⁶⁷ BLM ROW.

⁴⁶⁸ 43 U.S.C. § 1764(a)–(c).

⁴⁶⁹ *Id.* § 1732(b); 43 C.F.R. §§ 2801.2(b), 2805.11(a)(5).

⁴⁷⁰ 43 C.F.R. § 3809.5. Although that definition is contained in BLM’s hardrock mining regulations, that is the only place BLM has defined UUD.

⁴⁷¹ 43 C.F.R. § 3809.420(b)(4) (performance standards under UUD).

above. BLM must also ensure AIDEA complies with applicable air quality standards, as described further below. Yet, as detailed below, the FEIS did not analyze whether the project will comply with national ambient air quality standards (NAAQs). This does not fulfill BLM's FLPMA duty to ensure that the project will comply with NAAQS when granting a right-of-way.

BLM's "permit first, monitor later" plan for ensuring compliance with air pollution, water quality, and other legal standards fails to ensure it has prevented unnecessary or undue degradation and fails to support BLM's finding that the project is in the public interest.⁴⁷² As described elsewhere in these comments, it is not clear that this ROW authorization can comply with a number of important laws designed to protect the environment and the public.

Finally, FLPMA expressly requires that all land-use authorizations contain terms and conditions to protect resources and the environment.⁴⁷³ As described in these comments, the final EIS fails to consider an adequate range of enforceable and meaningful mitigation measures, in violation of NEPA and FLPMA.

Because the prior authorizations did not meet FLPMA's substantive requirements, BLM should rescind the ROW and ensure that it has complete information to engage in the required public interest analysis and ensure there are measures that are adequate to protect the environment prior to making a new decision.

VIII. THE AGENCIES FAILED TO COMPLY WITH THE WILD AND SCENIC RIVERS ACT.

Congress passed the Wild and Scenic Rivers Act of 1968 (WSRA) to "protect[] for the benefit and enjoyment of present and future generations" selected Wild rivers that "possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values."⁴⁷⁴ To qualify for inclusion in the Wild and Scenic Rivers system, a river must first be a "free-flowing stream" and the adjacent land must possess at least one of the above enumerated outstandingly remarkable values (ORVs).⁴⁷⁵

The WSRA mandates that designated Wild rivers "shall be preserved in free-flowing condition, and that they and their immediate environments shall be protected."⁴⁷⁶ "Wild" rivers should be maintained "free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted."⁴⁷⁷ Free flowing is defined as "existing or flowing in natural condition without impoundment, diversion, straightening, rip-

⁴⁷² *Ctr. for Biological Diversity v. U.S. Dept. of Interior*, 623 F.3d 633, 647 (9th Cir. 2010) (lack of supporting analysis renders BLM's public interest determination arbitrary and capricious).

⁴⁷³ *Colo. Trout Unlimited v. U.S. Dept. of Agriculture*, 320 F.Supp.2d 1090, 1108 (D. Colo. 2004).

⁴⁷⁴ 16 U.S.C. § 1271.

⁴⁷⁵ *Id.* §§ 1271, 1273(b).

⁴⁷⁶ *Id.* § 1271.

⁴⁷⁷ 16 U.S.C. § 1273(b)(1).

lapping, or other modification of the waterway.”⁴⁷⁸ This includes all rivers not yet designated, but available for inclusion in the system.⁴⁷⁹ The WRSA requires that, “[i]n all planning for the use and development of water and related land resources, consideration shall be given by all Federal agencies involved to potential national wild, scenic and recreational river areas.”⁴⁸⁰ Despite these requirements, the agencies in the prior permitting processes failed to adequately analyze the impacts to Wild and Scenic Rivers, including the Kobuk River, to ensure that their values would not be impaired.

A. The FEIS Did Not Adequately Analyze the Impacts to Wild and Scenic Rivers.

On remand, the agencies must address the deficiencies in the prior consideration of the Ambler Road on Wild and Scenic Rivers and specifically the designated Wild Kobuk River. The agency’s prior Wild and Scenic Rivers Act analysis in the FEIS was almost non-existent since BLM punted the analysis for the listed Kobuk Wild River to the NPS’s EEA.⁴⁸¹ Where the Wild and Scenic Rivers Act was discussed, the analysis was buried in other sections of the FEIS.⁴⁸²

On remand, BLM must analyze the proposed Amber Road’s impacts on the designated Wild Kobuk River, which would be impacted under alternatives A and B. BLM is obligated to consider all information before making an informed decision and should not merely assume NPS’s decision was adequate for purposes of NEPA or the WSRA. BLM has an independent duty to select an alternative and is required under NEPA to perform its own impact analysis. Those impacts were also directly relevant and tied to the Corps’ consideration of potential aquatic impacts. ANILCA also makes it clear in Title XI that any transportation system that traverses an area within the National Wild and Scenic Rivers System “shall be subject to such conditions as may be necessary to assure that the stream flow of, and transportation on, such river are not interfered with or impeded, and that the transportation . . . system is located and

⁴⁷⁸ *Id.* § 1286.

⁴⁷⁹ *Id.* § 1276(d)(1).

⁴⁸⁰ *Id.*; see *Ctr. for Biological Diversity v. Veneman*, 335 F.3d 849 (9th Cir. 2003).

⁴⁸¹ 1 FEIS at ES-4.

⁴⁸² The FEIS comports to address the Wild and Scenic Rivers’ values in “Sections 3.4.3, Recreation and Tourism; 3.4.4, Visual Resources; 3.2.6, Acoustical Environment; and 3.4.1, Land Ownership, Use, Management, and Special Designations.” 1 FEIS at ES-4. While the Recreation and Tourism section mentions that Gates of the Arctic is used for backpacking, river floating, and fishing and is managed to retain wilderness values for “‘solitude’ and ‘primitive and unconfined recreation’ values,” there is no mention of the Wild and Scenic Rivers Act and its mandates to manage and protect ORVs. 1 FEIS at 3-117. BLM does cite to a chart listing common float trips (five of the six would be crossed by alternatives A and B below the Wild and Scenic River designated portion; in contrast Alternative C would actually cross the Kobuk below its Wild and Scenic River designation.). 1 FEIS at 3-118; *see* 1 FEIS App. F. Merely using a list or chart does nothing to provide analysis of Wild and Scenic Rivers Act designation and necessary protections. BLM does acknowledge that individuals who recreationally float the Wild and Scenic Rivers often travel beyond the Wild and Scenic River designation several days to reach a community in the interior, and effects will be felt to recreation. 1 FEIS at 3-21.

constructed in an environmentally sound manner.”⁴⁸³ Nothing in ANILCA related to the Ambler Road undercut or modified the applicability of these requirements.

Segmenting these important environmental impacts improperly separates the NEPA process and cuts off the agencies’ obligations under ANILCA, leading to an incomplete FEIS with misleading information.⁴⁸⁴ In effect, BLM frustrated the public’s opportunity to weigh in on these alternatives by putting them in several documents and leaving the EIS incomplete. BLM cannot sever this duty or delegate to another agency when there is a requirement to consider the environmental impacts for each alternative. BLM must address the deficiencies of the prior Wild and Scenic Rivers Act analysis in the SEIS so that it supports meaningful public engagement, and the agencies can make informed decisions about a preferred alternative.

On remand, BLM needs to address the FEIS’s failure to take a hard look at the full range of direct, indirect, and cumulative impacts from the road, bridges, culverts, and mining activities to Wild and Scenic Rivers. For example, the FEIS did not adequately analyze the potential impacts to the Kobuk or other rivers from AIDEA’s phased construction approach. The FEIS also needs to consider the potential for spills, water withdrawals, other pollution, culverts, road dust, climate change, mining, other foreseeable developments (such as spur roads), and other project impacts specifically in the context of designated and potential Wild and Scenic Rivers.

The SEIS should also consider additional mitigation measures to address the impacts to Wild and Scenic Rivers. The FEIS sections that supposedly covered such mitigation measures failed to provide any river specific analysis.⁴⁸⁵ Mitigation under the Wild and Scenic Rivers Act is meant to ensure that ORVs are protected for future generations, and the consideration of how to do that and also how to maintain the natural flow and other requirements of the WSRA need to be analyzed on a river- and site-specific basis. On remand, the SEIS should incorporate consideration of alternatives and mitigation measures to minimize the impacts to specific designated and potential Wild and Scenic Rivers.

B. The FEIS Failed to Analyze the Outstandingly Remarkable Values & Impacts to the Wild Kobuk River.

BLM was required to consider and mitigate impacts to the Wild Kobuk River’s ORVs,⁴⁸⁶ but failed to do so as part of the prior permitting process. The Kobuk River is a designated Wild River with Cultural, Geologic, Natural Resources (fisheries), Recreation, and Scenic ORVs.⁴⁸⁷ The Kobuk Wild River holds some of the highest values for wilderness character in the entirety of Gates of the Arctic. The road would cross the designated section of the river under both Alternatives A and B—one route to the south and one to the north within Gates of the Arctic. Alternative C also crosses the Kobuk, but below the designated portion.

⁴⁸³ 16 U.S.C. § 3167(b).

⁴⁸⁴ 42 U.S.C. § 4332(C).

⁴⁸⁵ See 3 FEIS at N-38 to -39.

⁴⁸⁶ 16 U.S.C. § 1276(d)(1).

⁴⁸⁷ NPS, Kobuk River, <https://www.nps.gov/gaar/kobukriver.htm>.

BLM needed to consider each alternative in light of the Wild and Scenic Rivers Act. Although two alternatives cross at different locations on the river, BLM improperly did not provide any analysis recognizing the site-specific differences, merely finding that both river crossings are the same width.

The agencies need to ensure they have the actual site-specific information about the Kobuk crossings. As detailed throughout these comments, AIDEA has yet to do many of the studies necessary to fully design and pin down the bridge locations on a site-specific basis. AIDEA is also still missing key baseline data about aquatic resources in the region. This lack of site-specific design and baseline information for the area calls into question the adequacy of the agencies' analyses with regard to the Kobuk River in general. Without complete bridge designs and site-specific information, the agencies were not in a position to analyze whether there were adequate requirements in place to protect ORVs and prevent modifications to the stream flow. This is contrary to the agencies' obligations under the WSRA for both the Kobuk and other designated and potential Wild and Scenic Rivers. These major information gaps need to be addressed in the remand process by both BLM and NPS for purposes of its EEA.

BLM must address several problems with its prior consideration of the Kobuk's ORVs. In the FEIS, BLM allows watercraft, such as barge or other traffic, on the Kobuk River that is potentially inconsistent with the Wild and Scenic River Act designation. It is unclear in the FEIS how barge and other vessels might be allowed along the Kobuk in relation to the road right-of-way.⁴⁸⁸

Although BLM provided some analysis about the visual impacts for the Ambler Road in the FEIS, that analysis was inadequate. The FEIS only included a visualization of the Kobuk River with a bridge for Alternative A.⁴⁸⁹ BLM states that Alternative A would have more significant visual impacts than Alternative B or C, but does not provide any photo or other comparison or any apparent basis for such a conclusion.⁴⁹⁰ There is no site-specific analysis to indicate why this may be the case — only the conclusory statement that there might be greater impacts because the area in Alternative A is more sensitive.⁴⁹¹ BLM must explain this conclusion, and frame its analysis in terms of the Wild and Scenic Rivers Act and Kobuk River's ORVs. Additionally, BLM must consider and incorporate issues from soundscape impacts on the Kobuk River, which wasn't done in the FEIS.⁴⁹²

⁴⁸⁸ See 1 FEIS at 3-114 (“While the types of impacts are similar among alternatives, Alternative C would cross the Kobuk and Koyukuk rivers in areas that could be used by barges or other large boats while Alternatives A and B would cross rivers used primarily by small craft. Phase 1 would have a greater impact as the initial culverts would be installed during this phase. Potential mitigation includes adequate clearance on bridges where barge service and boat use occur to reduce impacts in accordance with bridge permitting that would be effective in maintaining access.”).

⁴⁸⁹ *Id.* at A-7

⁴⁹⁰ 2 *id.* at H-72.

⁴⁹¹ *Id.*

⁴⁹² 1 *id.* at C-6.

BLM should address AIDEA's proposed water withdrawals on the Kobuk. Using water from the designated Kobuk River for construction is inconsistent with its Wild and Scenic River designation. The EIS does not mention that a withdrawal is planned for the designated Wild and Scenic Kobuk River for construction, but the EEA makes clear that is part of AIDEA's proposal.⁴⁹³ This must be analyzed for consistency with the Act.

The contemplated use of riprap and other fill material is directly inconsistent with the Wild and Scenic Rivers Act.⁴⁹⁴ The FEIS does not explain when or how AIDEA will choose to use riprap or select other materials — possibly because AIDEA has yet to fully design the bridge at a site-specific level. There is no description of what "other" fill materials may be used and what environmental impacts such materials would have. BLM needs to describe what types of fill will be used and what would be most appropriate in light of the Kobuk's Wild and Scenic designation. BLM provides no analysis to explain this inconsistency, and the apparent reliance on rip-rap, which is expressly prohibited in the WSRA, indicates the agency did not comply with its legal obligations.

AIDEA also proposes to place a gravel mine near the Kobuk Wild and Scenic River; that proposed material site would encompass approximately 61 acres near the Kobuk.⁴⁹⁵ AIDEA also proposes to include a construction camp that will develop into a long-term maintenance facility with an airstrip.⁴⁹⁶ The proximity of the above described development is not mentioned the EIS, only the NPS EEA. The mine and all the related additional infrastructure and support facilities would be inconsistent with the Kobuk's Wild and Scenic Values and, as discussed in these comments, a blatant violation of ANILCA. BLM should make it clear those project elements are contrary to law and will not be authorized.

BLM must also consider Alternative C's impacts on the Kobuk River. Alternative C still crosses the Kobuk River, even though this location is south of the designated section in Gates of the Arctic.

Overall, the cursory statements in the FEIS do not constitute a meaningful analysis of Wild and Scenic River Act impacts to the Kobuk River or adequately address or minimize those impacts, as required by the WSRA and ANILCA. Allowing development of a road across the Kobuk River (particularly without adequate information about its design and impacts to ensure the protection of ORVs), water withdrawals, and adjacent development are inconsistent with protecting the river's ORVs. BLM must address these deficiencies as part of the remand process.

⁴⁹³ See Nat'l Park Serv., U.S. Dep't of the Interior, Ambler Mining District Access Project at Gate of the Arctic National Park and Preserve: Environmental and Economic Analysis (July 2020) at 10 [hereinafter Final EEA] (describing the proposed withdrawal).

⁴⁹⁴ 1 FEIS at 3-28; 16 U.S.C. § 1286.

⁴⁹⁵ Final EEA at 9; Final EEA App. A, Figure 5.

⁴⁹⁶ *Id.* at 9; *id.* at App. A, Figure 3.

C. The FEIS Failed to Analyze the Outstandingly Remarkable Values of Other Designated Rivers and Rivers Suitable for Future Designation.

The SEIS must consider effects on other designated WSRs. Below their official Wild and Scenic River designations, Alternatives A and B cross the Alatna, John, and Koyukuk Rivers.⁴⁹⁷ BLM must consider the impacts of a road on protecting their upriver status and any changes to their protected values. The rivers are connected waterways, ecosystems, and recreation corridors and the proposed road development will likely impinge on the rivers' ORVs even if the road does not cross the designated areas directly.

While the FEIS acknowledged that the road would cross the Alatna, John, and Koyukuk rivers south of where they are designated (in Gates of the Arctic), the FEIS provided no analysis for how their values would be protected or how the designated portions could be impacted — instead, it merely concluded that there will be impacts to common float trips.⁴⁹⁸ For Alternative C, it also mentioned that float trips will be affected in the Koyukuk, Kobuk (downstream of Wild River segment), and Hogatza River corridors.⁴⁹⁹ BLM states that, “[i]n some instances, culverts can impact the transport and storage of sediment and wood, which can adversely affect the instream habitat characteristics both upstream and downstream of the structures throughout the life of the road.”⁵⁰⁰ Beyond this acknowledgement, the information presented is so minimal it is unclear to what extent BLM believes impacts will occur upstream to these rivers. BLM must account for the impacts to the ORVs of all designated rivers—whether the proposed road directly crosses them or not — and must account for and address upstream impacts to designated rivers from the project.

Finally, to ensure river values are protected for future designation, BLM is also required to consider the recommendation of all suitable rivers for inclusion in the Wild and Scenic Rivers System.⁵⁰¹ BLM must undergo an identification and evaluation process for the rivers crossed by Alternatives A, B, and C to comply with internal agency guidance and the WSRA.⁵⁰² The FEIS did not provide any analysis of undesignated rivers for possible future inclusion in the Wild and Scenic Rivers system, and this shortcoming should be addressed on remand.

IX. THE AGENCIES FAILED TO COMPLY WITH ANILCA.

There were significant issues related to the agencies' compliance with section 810 of ANILCA, in addition to those the agencies already acknowledged in requesting this remand

⁴⁹⁷ In addition, the primary tributary of the Wild Designated North Fork of the Koyukuk is also designated as Wild. *See* NPS, Tinayguk River, <https://rivers.gov/rivers/Tinayguk.php>. The FEIS does not acknowledge this relationship and should consider the Wild Tinayguk River in the appropriate analysis of upstream effects to the designated rivers.

⁴⁹⁸ 1 FEIS at C-8; *see* 4 FEIS at Map 3-26.

⁴⁹⁹ 1 *id.* at C-8.

⁵⁰⁰ *Id.* at 3-70.

⁵⁰¹ 16 U.S.C. § 1276(d)(1).

⁵⁰² *See Id.* § 1275; Bureau of Land Mgmt., BLM Manual 6400, Wild and Scenic Rivers – Policy and Program Direction for Identification, Evaluation, Planning, and Mgmt. at 6-136 (July 13, 2012).

process. In addition to those legal errors, the agencies failed to comply with the substantive and procedural requirements of Title XI of ANILCA. On remand, any consideration of gravel mines or other infrastructure in Gates of the Arctic also needs to be removed from consideration, as it is contrary to ANILCA.

A. BLM’s Must Address the Numerous Deficiencies with Its ANILCA 810 Analysis.

The agencies supplemental analysis must correct the full extent of legal failings that occurred with BLM’s prior ANILCA Section 810 analysis. BLM has acknowledged that its analysis of subsistence impacts for purposes of the agency’s obligations under ANILCA 810 was “deficient” because the agency failed to adequately discuss subsistence impacts related to caribou and fish.⁵⁰³ Specifically, BLM recognized that its Tier 1 evaluation did not “meaningfully discuss . . . impacts on vegetation, or the consequences for caribou foraging, caribou abundance, caribou availability for subsistence harvesting, or any other vegetation-related impacts on caribou and subsistence.”⁵⁰⁴ BLM also acknowledged that it failed make “any mention of dewatering’s potentially significant impacts on fish, spawning areas, and subsistence, even though fish provide interior Alaska’s greatest quantity of subsistence resources.”⁵⁰⁵ BLM also indicated that these analytical deficiencies were “compounded by new information” showing that “Yukon River salmon runs plunged in 2021 to historic lows” and that significant declines in the Western Arctic Caribou Herd’s (WACH) population over the last two years “justif[y] new hunting restrictions.”⁵⁰⁶ On remand, DOI committed to reconsidering only these discrete issues contained in its 810 analysis.⁵⁰⁷

While groups agree that BLM’s ANILCA Section 810 analysis is deficient, the flaws in the agency’s analysis are far broader and more fundamental than the agency has recognized to date. As outlined above, BLM’s analysis of subsistence impacts lacked necessary baseline data, failed to account for mining as a connected action, and failed to consider foreseeable impacts associated with public use of the road. BLM’s approach to the ANILCA Section 810 analysis added to these deficiencies by inappropriately excluding impacted subsistence communities and further diminishing the proposed project’s subsistence impacts.

In addition, the NPS has yet to fulfill its own ANILCA Section 810 obligations. To date, NPS has failed to approve any subsistence evaluation or make the required determinations with respect to NPS lands. While BLM and NPS “jointly engaged in the ANILCA Section 810 process,”⁵⁰⁸ NPS cannot satisfy its independent obligations under ANILCA Section 810 by referencing an analysis that BLM has acknowledged is deficient. As part of the SEIS process, NPS must approve of a corrected subsistence evaluation and make the required ANILCA 810

⁵⁰³ AVC Remand Mot. at 2, 14–17.

⁵⁰⁴ *Id.* at 14.

⁵⁰⁵ *Id.* at 16.

⁵⁰⁶ *Id.* at 16–17.

⁵⁰⁷ *Id.* at 2.

⁵⁰⁸ *Id.* at 9.

findings for the portion of the road that is proposed to cross Gates of the Arctic National Preserve.

1. *Statutory Background*

Title VIII of ANILCA recognizes that subsistence uses are a public interest and provides a framework to consider and protect subsistence uses in agency decision-making processes.⁵⁰⁹ Section 810 sets forth a procedure through which effects to subsistence resources must be considered and provides that “actions which would significantly restrict subsistence uses can only be undertaken if they are necessary and if the adverse effects are minimized.”⁵¹⁰

ANILCA section 810 consists of a two-tiered process evaluating impacts. The federal agency first makes an initial finding, referred to as the “Tier 1” determination, in determining whether to withdraw, reserve, lease, or otherwise allow the use, occupancy, or disposition of land.⁵¹¹ The agency is required to “evaluate the effect of such use, occupancy, or disposition on subsistence uses and needs, the availability of other lands for the purposes sought to be achieved, and other alternatives which would reduce or eliminate the use, occupancy, or disposition of public lands needed for subsistence purposes.”⁵¹² As part of this determination, BLM must consider the cumulative impacts⁵¹³ and analyze:

- 1) Reductions in the abundance of subsistence resources caused by a decline in the population or amount of harvestable resources;
- 2) Reductions in the availability of resources used for subsistence purposes caused by alteration of their normal locations, migration, or distribution patterns; and
- 3) Limitations on access to subsistence resources, including from increased competition for the resources.⁵¹⁴

If the agency, after conducting the Tier 1 analysis, determines that the activity will not “significantly restrict subsistence uses,”⁵¹⁵ then the agency issues a Finding of No Significant Restriction and the requirements of ANILCA Section 810 are satisfied. However, if the agency makes the initial determination that the action would “significantly restrict subsistence uses,” the agency must then conduct a “Tier 2” analysis.⁵¹⁶

⁵⁰⁹ 16 U.S.C. §§ 3111–3126.

⁵¹⁰ *Amoco Production Co. v. Village of Gambell*, 480 U.S. 531, 544 (1987).

⁵¹¹ ANILCA § 810(a), 16 U.S.C. § 3120(a).

⁵¹² *Id.*; *Hanlon v. Barton*, 470 F. Supp. 1446, 1448 (D. Alaska 1988).

⁵¹³ *Sierra Club v. Penfold*, 664 F. Supp 1299, 1310 (D. Alaska 1897), *aff’d*, 857 F.2d 1307 (9th Cir. 1988).

⁵¹⁴ State Dir., Bureau of Land Mgmt., Instruction Memorandum No. AK-2011-008: Instructions and Policy for Compliance with Section 810 the Alaska Nat. Interest Lands Conservation Act (ANILCA) (Jan. 14, 2010) [hereinafter BLM Instruction Memorandum].

⁵¹⁵ 16 U.S.C. § 3120(a).

⁵¹⁶ *Kunaknana v. Clark*, 742 F.2d 1145, 1151 (9th Cir. 1984); *Hanlon*, 470 F. Supp. at 1448.

Under Tier 2, a proposed action that may significantly restrict subsistence uses can only be adopted if the agency finds that the restriction on subsistence is necessary and consistent with sound public lands management principals; involves the minimal amount of public lands necessary to accomplish the purpose of the use, occupancy or disposition of public lands; and takes reasonable steps to minimize the adverse impacts to subsistence uses and resources from any use.⁵¹⁷ Thus, ANILCA Section 810 imposes procedural requirements as well as substantive restrictions on the agency’s decisions.⁵¹⁸ The agency must provide notice to local and regional councils and hold hearings in potentially affected communities.⁵¹⁹ Under BLM’s guidance, if the action “may” restrict subsistence uses, BLM is required to take a precautionary approach and comply with the notice and hearing procedures in Section 810.⁵²⁰

2. *The SEIS Must Correct Deep Flaws in BLM’s Tier 1 Analysis.*

The supplemental ANILCA Section 810 analysis must analyze subsistence impacts to all potentially affected communities in order to correctly identify which communities may experience significantly restricted subsistence uses. Although caribou are an important subsistence resource throughout western and northwestern Alaska, BLM’s prior analysis arbitrarily limited communities included in the agency’s Tier 1 analysis. In the FEIS, BLM acknowledged the existence of 53 potentially affected subsistence communities.⁵²¹ Of those, the agency identified 27 “primary” communities defined as communities “located within 50 miles of the project alternatives, or with subsistence use areas documented within 30 miles of the project alternatives.”⁵²² The FEIS included individual discussions regarding subsistence impacts to primary communities. The remaining 26 communities — members of the Western Arctic Caribou Herd Working Group that did not meet BLM’s “primary” proximity criteria — were deemed “WAH study communities.”⁵²³ The WAH study communities were included to “capture[] potential indirect or cumulative impacts to communities who use caribou that migrate through the project area and are harvested elsewhere”⁵²⁴ and were discussed only generally as a group in the technical report. These communities were excluded entirely from BLM’s Tier 1 analysis. This approach did not meet BLM’s obligations under ANILCA 810. Identifying all communities for which subsistence uses may be significantly restricted is an integral step of the ANILCA 810 process that cannot be skipped by setting arbitrary proximity standards. This is especially true where the subsistence species at issue is “highly migratory”⁵²⁵ and the proposed project may increase mortality “affecting the overall population” of WACH caribou.⁵²⁶ As caribou are an “important subsistence resource to communities [throughout] western and

⁵¹⁷ 16 U.S.C. § 3120(a)(1)–(3).

⁵¹⁸ *Sierra Club v. Marsh*, 872 F.2d 497, 502–03 (9th Cir. 1989).

⁵¹⁹ 16 U.S.C. § 3120(a).

⁵²⁰ BLM Instruction Memorandum at 6-2.

⁵²¹ 1 FEIS at 3-138.

⁵²² *Id.*

⁵²³ *Id.*

⁵²⁴ *Id.*

⁵²⁵ *Id.*

⁵²⁶ 3 *id.* at M-5.

northwestern Alaska,”⁵²⁷ valid analysis of the proposed project’s subsistence impacts must include consideration of subsistence impacts to all communities that rely on WACH caribou and other impacted herds throughout their ranges.

Relatedly, the SEIS must make accurate findings regarding the likelihood that communities will experience subsistence impacts as a result of the proposed project. In the FEIS, BLM failed to do so. For those communities that were considered for Tier 1 analysis, BLM concluded Alternative A and B “may result in a significant restriction to subsistence uses” for 16 communities “due to a decrease in abundance and availability” of subsistence resources.⁵²⁸ BLM made the same conclusion for 12 communities under Alternative C.⁵²⁹ This finding is inconsistent with BLM’s own analysis throughout the FEIS and previous assessments about the potential impacts to subsistence from development in the region — all which support an affirmative impact finding.⁵³⁰ For example, the FEIS indicates:

Caribou migration may be altered to the point where calving success and winter survival are affected. These would both have major impacts on the herd population. While the proposed project will occur in approximately .0005% of the WAH overall range, effects from fragmenting an unbroken habitat with a linear structure may impact caribou behavior. These changes could lead to a higher mortality rate in caribou affecting the overall population.⁵³¹

In fact, BLM indicated that aircraft impacts alone associated with the project “would have significant impacts on the [caribou] herd population.”⁵³² BLM’s acknowledgements that the proposed Ambler Road will impact subsistence species are especially significant given that the agency greatly *underestimated* the projects direct and indirect impacts in the FEIS. As explained elsewhere in these comments, BLM failed to recognize that mining in the Ambler Mining District and the Ambler Road are connected actions and dramatically underestimated the project’s mining impacts to important subsistence species such as moose, caribou, and fish. Despite BLM’s scant analysis of mining impacts, the agency nonetheless found that “mines, mining roads, and secondary access roads would increase habitat fragmentation exponentially” and would “further remove usable habitat for caribou during migration and winter, which could force substantial range shifts, increased competition for resources, or increased predation.”⁵³³ Although all of these admissions acknowledge the proposed project will significantly impact subsistence users, BLM’s Tier 1 finding did not reflect this reality. This disconnect between the record and BLM’s findings must be corrected in the SEIS.

The SEIS’s Tier 1 analysis must also clearly disclose and analyze the magnitude of the project’s likely impacts on subsistence communities. In order to adequately “minimize the

⁵²⁷ 1 *id.* at 3-138.

⁵²⁸ 3 *id.* at M-13 to -15.

⁵²⁹ *Id.* at M-18.

⁵³⁰ *See, e.g.,* Watson, *supra* at 2.

⁵³¹ 3 FEIS at M-5.

⁵³² *Id.* at M-5 to -6.

⁵³³ 3 FEIS at M-20.

adverse impacts to subsistence uses and resources from any use” in an agency’s Tier 2 analysis, an agency must first understand the full extent of likely subsistence impacts.⁵³⁴ However, information on the extent of subsistence impacts likely to result from the proposed project is largely missing from the FEIS. For example, BLM’s Tier 1 analysis completely failed to mention the duration of likely subsistence impacts to affected communities. This obscured the fact that many subsistence impacts will be permanent and downplayed the scale of impacts to subsistence users in the region overall. Additionally, the Section 810 analysis acknowledged that “subsistence users often harvest fish in specific locations along rivers; thus, localized changes in fish distribution could have impacts on resource availability for individual harvesters.”⁵³⁵ Yet, BLM did not perform further analysis to determine how far subsistence users might need to travel or how much additional money they may spend performing subsistence activities. Regarding impacts to subsistence users of fish, the FEIS stated “[i]n addition to the communities who have documented use of the rivers crossed by the project corridors, communities upstream and downstream from the project corridors could experience impacts on fish availability if larger impacts to fish movement or health occur. An impact on this scale would be quite significant.”⁵³⁶ In making this alarming statement, BLM did not identify which communities might be impacted or whether such an impact would be permanent. To accurately disclose the magnitude and extent of the proposed project’s impacts to subsistence users, the SEIS must provide information regarding which communities are most likely to be impacted, the duration of likely subsistence impacts, and any costs associated with those impacts. As described below, baseline data about fisheries resources and a meaningful assessment of impacts for specific waterways was missing from the FEIS; this must be corrected in the SEIS to make such an assessment possible for purposes of ANILCA 810.

The SEIS must also analyze and make adequate Tier 1 findings regarding the proposed project’s impacts on subsistence access. Under BLM’s ANILCA 810 guidance, BLM must determine whether there will be a significant impact to subsistence by looking at three key categories of impacts: reductions to the abundance of subsistence resources, reductions to the availability of resources, and limitations on access to subsistence resources.⁵³⁷ However, in the FEIS, BLM made no findings with regard to access. BLM’s failure to find there would be a significant restriction on access to subsistence resources is completely at odds with the discussion in the FEIS:

The proposed ROW would not permit access to residents for subsistence purposes but would allow residents to cross the road at established crossing areas. The efficacy of crossing ramps to reduce access impacts for local hunters would depend on the location, design, and frequency of the ramps along the ROW. Subsistence users do not always use or follow established trails when pursuing resources overland; instead traveling in various directions based on environmental factors (e.g., weather, snow and ice conditions) and traditional knowledge of resource distribution and behavior.

⁵³⁴ 16 U.S.C. § 3120(a)(1)–(3).

⁵³⁵ 3 FEIS at M-9.

⁵³⁶ *Id.*

⁵³⁷ See BLM Instruction Memorandum.

Therefore, the presence of crossing ramps would not eliminate significant impacts to user access. Subsistence users may have to travel additional distances when pursuing resources in order to locate approved crossing areas, or they may take safety risks by crossing in areas not approved for crossing. In addition, despite the presence of crossing ramps, some individuals may still have difficulty using crossing ramps, especially when hauling sleds.⁵³⁸

Failing to reach a decision regarding subsistence access restrictions despite this passage was a significant failing in BLM's prior Section 810 analysis that must be corrected in the SEIS.

The agencies' Tier 1 analysis in the SEIS must also adequately consider the proposed project's cumulative impacts. Under ANILCA 810, "the purpose of the cumulative effects analysis is to determine the effects of the proposed action and alternatives together with other past, present, and reasonably foreseeable future actions."⁵³⁹ BLM's prior analysis fell far short of meeting this obligation. In the FEIS, BLM limited its consideration of reasonably foreseeable future actions solely to development at the Ambler Mining District, and use of the road for commercial access.⁵⁴⁰ The analysis spans less than a page and a half and inexplicably disregards future actions the agency acknowledged as reasonably foreseeable elsewhere in the FEIS. Specifically, BLM's cumulative analysis for purposes of its NEPA obligations considered four categories of reasonably foreseeable future actions: Arctic oil development, consisting of activities in the Arctic National Wildlife Refuge Coastal Plain, National Petroleum Reserve-Alaska (NPR-A), and offshore in the Arctic Ocean; extension and eventual closure of Red Dog mine; climate change; and Dalton Highway improvements.⁵⁴¹ The sheer scale of these actions, when combined with the massive Ambler Road, will substantially impact the abundance and availability of subsistence resources across Arctic Alaska. In the SEIS, the agencies must analyze the subsistence impacts likely to result from these and all other relevant and reasonably foreseeable future actions as required by Section 810 of ANILCA.

It is particularly troubling that BLM's ANILCA 810 cumulative effects analysis entirely failed to account for impacts associated with the road eventually being open to public use. This was a fatal flaw that must be corrected in the SEIS. As discussed in these comments, there is no reasonable basis for BLM and AIDEA's assertion that the road will remain closed to the public. Yet, BLM entirely ignored the foreseeable outcome of the road becoming open to the public. Instead, BLM limited its analysis of potential competition from outside hunters via the road to one sentence that purports to consider AIDEA's vague plan to open the road to commercial access. Noting that mining workers may increase hunting competition,⁵⁴² the FEIS flatly concludes "[s]port hunting is a key issue within the region for subsistence harvesters, and public

⁵³⁸ 3 FEIS at M-7 (emphasis added).

⁵³⁹ BLM Instruction Memorandum at 7.

⁵⁴⁰ 3 FEIS at M-20.

⁵⁴¹ 2 *id.* at H-32 to -33.

⁵⁴² 3 *id.* at M-20 ("In addition, it is unclear whether the road would allow access to small mining claims; while large mines would likely have policies regarding hunting and fishing by workers, smaller mining outfits or individuals may allow these activities.").

access to the area via a road or ROW would contribute to these impacts.”⁵⁴³ This is unacceptable. While it is highly unlikely that use of the road would be limited to commercial access, the degree of hunting competition and poaching such a proposal would introduce warrants far more robust analysis. Moreover, as explained above, it is entirely foreseeable that the Ambler Road will eventually be fully open to public — permanently and significantly reducing the abundance, availability, and access to subsistence resources in the region. As competition from sport hunting was already identified as a “key” issue for “communities within the region [that] have already experienced increased competition in traditional hunting areas,”⁵⁴⁴ impacts associated with opening the road to public access must be fully addressed and analyzed in the SEIS.

As part of the agencies’ Tier 1 analysis, the SEIS must also adequately evaluate whether subsistence impacts could be reduced by selecting other lands for the proposed project. Section 810 of ANILCA requires BLM to evaluate other alternatives and “the availability of other lands for the purposes sought to be achieved . . . which would reduce or eliminate the use, occupancy, or disposition of public lands needed for subsistence purposes.”⁵⁴⁵ While alternatives analyzed in the EIS may fulfill this requirement,⁵⁴⁶ BLM’s range of alternatives in the FEIS was inadequate and failed to fulfill the agency’s obligations under both NEPA and ANILCA 810. In the SEIS, the agencies must expand on the alternatives considered in order to evaluate whether other routes or alternatives would reduce or eliminate the use, occupancy, or disposition of public lands needed for subsistence purposes.

3. *The Tier 2 Analysis Must Adhere to ANILCA Section 810’s Statutory Standards.*

The SEIS must also correct significant errors in BLM’s prior Tier 2 analysis, including the inappropriate exclusion of impacted subsistence communities. If an agency’s Tier 1 analysis concludes a proposed action may significantly restrict subsistence uses, the agency may only adopt the action under Tier 2 if it is necessary and consistent with sound public land management principals; involves the minimal amount of public lands necessary; and minimizes the adverse impacts to subsistence uses and resources.⁵⁴⁷ Agencies are also required to provide notice to and hold hearings in potentially affected communities.⁵⁴⁸ BLM’s guidance explains that the agency must take a precautionary approach to this step and that its Tier 2 responsibilities are triggered where an action “may” restrict subsistence uses.⁵⁴⁹

The agency failed to meet these obligations in the FEIS by applying an overly restrictive standard that excluded 7 of the 27 “primary” subsistence communities from its Tier 2 analysis. Specifically, the agency explained:

⁵⁴³ *Id.*

⁵⁴⁴ *Id.*

⁵⁴⁵ 16 U.S.C. § 1320.

⁵⁴⁶ BLM Instruction Memorandum at 6.

⁵⁴⁷ 16 U.S.C. § 3120(a)(1)–(3).

⁵⁴⁸ *Id.* § 3120(a).

⁵⁴⁹ BLM Instruction Memorandum at 6-2.

An alternative would be considered to significantly restrict subsistence uses if, after consideration of protection measures, such as lease stipulations or required operating procedures, it can be *expected* to substantially reduce the opportunity to use subsistence resources (BLM 2011). *Substantial* reductions are generally caused by *large* reductions in resource abundance, a *major* redistribution of resources, *extensive* interference with access, or major increases in the use of those resources by non-subsistence users.⁵⁵⁰

This definition supplants the precautionary “may significantly restrict” standard in favor of a more difficult requirement that subsistence restrictions be “expected” to occur. In addition, the requirement that subsistence impacts be “substantial,” “large,” “major,” and “extensive” in order to trigger notice and hearing requirements imposes a much more demanding standard than the statute and BLM’s guidance documents call for. This is inappropriate. In order to adequately protect subsistence uses and engage with impacted communities, the SEIS must make required Tier 2 findings and fulfill notice and hearing obligations for any community that may experience significant subsistence restrictions as ANILCA Section 810 requires.

In addition, the SEIS must significantly revise BLM’s erroneous Tier 2 findings. The FEIS did not properly find that the Ambler Road is necessary, involves the minimal amount of public lands, or that the project includes reasonable mitigation measures as required by ANILCA Section 810.⁵⁵¹ As described above, BLM and its cooperating agencies should not even consider authorizing permits for this project due to the dearth of information provided by AIDEA. The project’s significant restrictions on subsistence uses are far from “necessary” — this road will be for the benefit of a single Canadian mining company and in no way complies with BLM’s obligations under FLPMA or the Corps’ obligations under the Clean Water Act. Further, this proposal does not involve the minimum amount of public lands necessary, as the project requires a much larger gravel footprint than necessary; indeed, as described above, the Corps ultimately permitted a version of the project with a smaller footprint, illustrating that BLM’s prior 810 findings are likely incorrect. Moreover, BLM failed to consider a reasonable range of alternatives, such as a rail line, which would also reduce the amount of public lands necessary for the Ambler Road. Finally, because the impacts to subsistence are far greater and more pervasive than BLM has acknowledged in its 810 analysis, BLM has not adequately addressed the need for mitigation measures. Nor has the agency shown that the handful of proposed mitigation measures included in the FEIS — largely consisting of measures BLM admits are of limited effectiveness — meet the agencies ANILCA 810 obligations to minimize subsistence impacts.⁵⁵² This deficiency must be rectified in the SEIS by developing meaningful mitigation measures in consultation with subsistence communities likely to be impacted by the Ambler Road.

⁵⁵⁰ 3 FEIS at M-2 (emphasis added).

⁵⁵¹ 16 U.S.C. § 3120(a)(3).

⁵⁵² See 3 FEIS at N-46 to -47 (imposing a measure requiring AIDEA to “consult” with local communities that is expected to be “minimally or partially effective at disseminating information to the broader communities but would be a forum to encourage such dissemination.”); see also *id.* (recognizing that a measure requiring AIDEA to minimize disturbing activities as “practicable” and “when possible” would be largely ineffective at reducing subsistence impacts).

B. The Agencies Previously Failed to Comply with ANILCA Title XI's Substantive and Procedural Requirements.

Congress enacted Title XI of ANILCA to provide for “an orderly, continuous decisionmaking process” and minimize adverse siting impacts when permitting transportation system units (TSUs) through conservation system units and “to insure the effectiveness of the decisionmaking process.”⁵⁵³ To achieve these goals, Congress established “a single comprehensive statutory authority for the approval or disapproval of applications for such systems.”⁵⁵⁴ Title XI applies broadly to “any Federal department or agency that has any function or duty” under “any law of general applicability . . . to grant any authorization . . . without which a transportation or utility system cannot, in whole or in part, be established or operated.”⁵⁵⁵

Section 1104 requires a very specific process.⁵⁵⁶ It mandates the submission of a consolidated application on a specific form to all relevant federal agencies on the same day.⁵⁵⁷ Section 1104 then provides a precise timeline for notice to the applicant regarding the application’s completeness, and, if complete, publication of the EIS.⁵⁵⁸ All agencies must then make a decision whether to approve the application.⁵⁵⁹ In reaching its decision, each permitting agency must make specific findings including whether alternative routes are available, the impacts on resources from the TSU, and what measures are necessary to “avoid or minimize negative impacts.”⁵⁶⁰

Title XI further requires that rights-of-way include protective terms and conditions.⁵⁶¹ These include, but are not limited to, requirements to ensure the right-of-way is compatible with the conservation system unit’s purposes “to the maximum extent feasible”; “requirements for restoration, revegetation, and curtailment of erosion”; requirements to ensure compliance with air and water quality standards; requirements that the right-of-way be “the minimum necessary width,” and designed to control or prevent damage to the environment, fish and wildlife habitat, property, and public health; requirements to protect subsistence; and requirements to avoid and minimize other adverse impacts.⁵⁶² Congress was clear: failure to comply with Title XI’s procedures renders the agencies’ approvals without “any force or effect.”⁵⁶³

⁵⁵³ 16 U.S.C. § 3161(a), (c).

⁵⁵⁴ *Id.*

⁵⁵⁵ *Id.* § 3162(1), (3).

⁵⁵⁶ *Id.* § 3164. Congress stated these procedures “supersede[] rather than supplement[] existing law.” S. REP. NO. 96-413, at 246 (1979).

⁵⁵⁷ 16 U.S.C. § 3164(c); *see also* ANILCA § 201(4)(c) (addressing rights-of-way across Gates).

⁵⁵⁸ 16 U.S.C. § 3164(d), (e).

⁵⁵⁹ *Id.* § 3164(g); *see also* ANILCA § 201(4)(e) (providing deadline for Gates).

⁵⁶⁰ 16 U.S.C. § 3164(g).

⁵⁶¹ *Id.* § 3167; ANILCA § 201(4)(e) (making section 1107’s process applicable to Gates).

⁵⁶² 16 U.S.C. § 3167(a).

⁵⁶³ *Id.* § 3164(a); *Friends of Alaska Nat’l Wildlife Refuges v. Bernhardt*, 463 F. Supp. 3d 1011, 1024–26 (D. Alaska 2020) (explaining Title XI’s mandatory procedures).

The federal permitting agencies previously failed to follow Title XI's procedures to permit a TSU through Gates of the Arctic.⁵⁶⁴ The agencies violated Title XI because they ultimately did not consider the same project application based on AIDEA's 2020 modified Corps permit. AIDEA submitted its original application to the agencies in 2015 which was deemed incomplete.⁵⁶⁵ AIDEA revised its application in 2016,⁵⁶⁶ after which NPS began its EEA process and the other agencies began the NEPA process.⁵⁶⁷ In 2019, AIDEA made changes to the proposed project to incorporate communications infrastructure and submitted a modified application to all the agencies at that time.⁵⁶⁸ The 2019 application was still woefully incomplete and deficient under ANILCA and other applicable laws.

Subsequently, in February 2020, AIDEA revised the project further but only submitted those revisions to the Corps; it did not submit the revised proposal to BLM or NPS.⁵⁶⁹ The 2020 application proposed building the road to Phase II instead of Phase III, eliminating gravel mines without maintenance stations or communications towers present, eliminating gravel mines within Gates of the Arctic for the Northern route, and reducing the number of bridge crossings and culverts.⁵⁷⁰ AIDEA explained that it made the revisions to reduce impacts.⁵⁷¹ As a result, the agencies considered very different projects with different impacts and the Corps ultimately permitted a project in its 404 permit that was different from the project and rights-of-way approved by BLM and NPS.⁵⁷²

This violated Title XI, which mandates a consolidated application and outlines the process to be followed very specifically.⁵⁷³ The agencies failed to adhere to this mandatory process by considering and approving different versions of AIDEA's project. This renders those prior approvals "without any force or effect."⁵⁷⁴ On remand, the agencies need to rescind the

⁵⁶⁴ ANILCA § 201(4)(c)–(d) (making section 1104's process applicable to Gates).

⁵⁶⁵ 2015 SF299 Application at 1–2.

⁵⁶⁶ 2016 Revised App.

⁵⁶⁷ Notice of Intent, 82 Fed. Reg. 12119 (Feb. 28, 2017).

⁵⁶⁸ Letter from Jeffrey San Juan, AIDEA, to Timothy Hammond, BLM, re: Modification to AIDEA AMDIAP SF299 Communications Application Amendment (2019); DOWL, Ambler Mining District Industrial Access Project: SF299 Application Communications Amendment (Apr. 2019).

⁵⁶⁹ Revised 404 Permit Application; JROD App. F at F-3 (describing changes in the Corps' February 2020 revised permit application).

⁵⁷⁰ *Id.*

⁵⁷¹ Letter from Mark Davis, AIDEA, to John Sargent, U.S. Army Corps of Eng'rs, re: AMDIAP Permit Application, POA-2013-00396 (Feb. 5, 2020).

⁵⁷² EEA ROD at 6 (NPS ROD explaining it did not receive the 2020 amended application and describing differences); Email from Ellen Lyons, U.S. Army Corps of Eng'rs, to Jeff Rasic, Nat'l Park Serv., re: CORPS 151-200_2020_0227.pdf (June 4, 2020) (Corps email noting "[t]he Corps was always working off of a different set of plans than that which was submitted" to other agencies).

⁵⁷³ 16 U.S.C. §§ 3162, 3164, 3166, 3167.

⁵⁷⁴ *Id.* § 3164(a).

prior authorizations and require AIDEA to submit a consolidated application to all of the federal agencies involved to ensure they are reviewing the same proposal and are following Title XI's procedural requirements.

NPS also failed to include adequate terms and conditions in the right-of-way across Gates of the Arctic, in violation of Title XI. NPS failed to incorporate requirements designed to prevent damage to the environment, "including the minimum necessary width" for the right-of-way across Gates of the Arctic.⁵⁷⁵ In the right-of-way, NPS indicated that AIDEA is still "in the pre-construction stage of the project, with field studies, engineering, and design to be undertaken next."⁵⁷⁶ Because AIDEA had yet to identify the actual location of the road corridor, NPS authorized a "Conceptual Alignment," which it defined as a 250- to 400-foot corridor.⁵⁷⁷ NPS indicated the constructed road corridor would be 100-feet wide and located somewhere within the Conceptual Alignment.⁵⁷⁸ NPS also authorized all three phases of the road,⁵⁷⁹ despite AIDEA's amended Corps application that removed Phase III to reduce impacts.⁵⁸⁰

NPS's authorization of an extremely wide "conceptual" right-of-way corridor did not meet ANILCA's requirement for the agency to issue rights-of-way for the minimum necessary width. As written, the right-of-way provides AIDEA with an open-ended pass to determine and modify the location of the road within a broad area and without the agency ensuring in advance that it has only authorized the minimum necessary width. It is unclear how NPS determined the Conceptual Alignment corridor was the minimum footprint or sufficient to protect resources when AIDEA has yet to do the field work to identify the road location and project design. The fact that the Corps only authorized Phase II of the project indicates that NPS should have also only authorized Phase II — and therefore potentially a narrower and less impactful right-of-way.⁵⁸¹ NPS's failure to incorporate requirements to minimize the footprint of the right-of-way and impacts on Gates of the Arctic is contrary to ANILCA.

NPS also failed to incorporate adequate terms more broadly into the right-of-way to control or prevent damage to the environment or ensure the right-of-way is compatible with the purposes of Gates of the Arctic "to the maximum extent feasible."⁵⁸² Gates' purposes include maintaining wilderness values, providing for continuing recreation opportunities, and protecting habitat for fish and wildlife.⁵⁸³ Rather than incorporating adequate terms in the right-of-way, NPS included an open-ended provision for AIDEA to complete its plan of development for each phase, and provide information for at least 27 subject areas, at a later point in time.⁵⁸⁴ The right-

⁵⁷⁵ *Id.* § 3167(a)(4).

⁵⁷⁶ NPS ROW at 2.

⁵⁷⁷ *Id.*; EEA ROD at 5.

⁵⁷⁸ NPS ROW at 2.

⁵⁷⁹ *Id.* at 3–4.

⁵⁸⁰ Revised 404 Permit Application at 12.

⁵⁸¹ *See* 16 U.S.C. § 3161(c) (explaining intent "to minimize adverse impacts" of siting TSUs).

⁵⁸² *Id.* § 3167.

⁵⁸³ ANILCA § 201(4)(a).

⁵⁸⁴ NPS ROW Ex. C at 7.

of-way stated AIDEA would need to submit plans for construction, operation, maintenance, and termination of the right-of-way and related facilities for each road phase after right-of-way issuance.⁵⁸⁵ This illustrates AIDEA had yet to complete its project designs or gather baseline information for permafrost, stream crossings, asbestos, air quality, and more.⁵⁸⁶ The right-of-way also only requires AIDEA to “take reasonable efforts” to ensure facilities are built and operated in a way that protects scenic, cultural, fish, and wildlife values.⁵⁸⁷

Listing future plans and calling them “terms and conditions” does not satisfy ANILCA’s requirement that NPS include enforceable terms and conditions in its right-of-way for restoration and reclamation, to ensure activities will not violate air and water quality standards, or to ensure the protection of the environment and Gates of the Arctic’s purposes.⁵⁸⁸ NPS needs to rescind the prior right-of-way and ensure prior to making a new decision that the terms and conditions fully comply with ANILCA’s mandates.

C. Allowing Gravel Mining or Additional Infrastructure in Gates of the Arctic Would Violate ANILCA.

Both alternatives A and B in the FEIS included gravel material sites within the boundaries of the Gates of the Arctic,⁵⁸⁹ as did NPS’s EEA and ROD.⁵⁹⁰ The maps depicting alternative B further indicate there would be both an access road and a maintenance station within the boundaries of the Preserve. As discussed in these comments, some of the material sites would potentially be developed into long-term roadway maintenance facilities with housing for maintenance workers, landing strips, and their own access roads. Any authorizations for material sites and additional infrastructure in the Preserve are contrary to law and need to be removed from consideration.

There is no legal basis for allowing material sites or other major infrastructure within the boundaries of the Gates of the Arctic. ANILCA Section 206 withdrew all units of the National Park System in Alaska “from all forms of appropriation or disposal under the public land laws, including location, entry, and patent under the United States mining laws, disposition under the mineral leasing laws, and from future selections by the State of Alaska and Native Corporations.”⁵⁹¹ This broad withdrawal encompasses any potential disposals under the Materials Act. Nothing in ANILCA Section 201, which contains the provisions related to a right-of-way across the Preserve, or any other provision modifies this withdrawal to allow for BLM to authorize material sales or additional infrastructure within the boundaries of the Preserve.⁵⁹² That provision relates solely to a right-of-way across the Preserve for access to the Ambler Mining

⁵⁸⁵ *Id.*

⁵⁸⁶ *Id.*; *cf. Or. Nat. Desert Ass’n*, 840 F.3d at 571 (stating agency could not do analysis without baseline information).

⁵⁸⁷ NPS ROW Ex. C at 4.

⁵⁸⁸ 16 U.S.C. § 3167.

⁵⁸⁹ 2 FEIS at Map 2-3.

⁵⁹⁰ EEA at A-6; NPS ROD at 5.

⁵⁹¹ ANILCA § 206.

⁵⁹² *Id.* at § 201.

District.⁵⁹³ On remand, BLM and NPS need to ensure these features are eliminated from consideration and make it clear that any such authorizations would be contrary to ANILCA.

X. THE AGENCIES FAILED TO COMPLY WITH ADDITIONAL RELEVANT LEGAL REQUIREMENTS.

In addition to the agencies' obligations under NEPA, the CWA, and FLPMA as described above, there are additional legal requirements that were not adequately addressed in the prior decision-making process. As described below, the Coast Guard failed to meet its legal obligations in the prior permitting process and BLM failed to comply with the Endangered Species Act and its own mineral mining regulations. These obligations are discussed in the following sections. We further note that BLM's process also fell far short of its obligations under the National Historic Preservation Act, explained in our comments on archaeological resources below and as BLM previously admitted in requesting this remand.

A. The Coast Guard Failed to Meet Its Obligations Under the Rivers & Harbors Act.

Any entity planning to construct or modify a bridge or causeway across a navigable waterway of the United States must apply for a USCG bridge permit.⁵⁹⁴ The USCG requires information on a broad range of information relevant to its ability to maintain navigation on navigable waterways, including the direction and strength of currents⁵⁹⁵ and the heights of the high and low water marks.⁵⁹⁶ The Coast Guard may impose necessary conditions relating to the construction, maintenance, and operation of these bridges in the interest of public navigation.⁵⁹⁷

At the outset of this project, when AIDEA filed its original and revised permit application, the Coast Guard raised serious questions about the completeness of AIDEA's application for purposes of its authorizations under Section 9 of the Rivers and Harbors Act. This is because AIDEA failed to provide any site-specific information about the precise locations and designs of the multiple proposed bridges that would cross navigable waterways. As a result, the Coast Guard sent a letter to AIDEA indicating that its application for a Rivers and Harbors Act permit was not complete.⁵⁹⁸

⁵⁹³ *Id.*

⁵⁹⁴ *See* 33 C.F.R. § 115.

⁵⁹⁵ *Id.* § 115.50(h)(2)

⁵⁹⁶ *Id.* § 115.50(h)(3).

⁵⁹⁷ U.S. Coast Guard, *Bridge Permitting Guide*, 3 (2016).

⁵⁹⁸ Letter from J.N. Helfinstine, U.S. Coast Guard, to Maryellen Tuttel, DOWL HKM (Jan. 22, 2016) ("Your Coast Guard permit application for numerous bridges spanning several major rivers within [AIDEA's] proposed 211-mile-long Ambler Mining District Industrial Access Project corridor outlined in your Transportation and Utility System Right-of-Way application (SF299) under the Alaska National Interest Lands Conservation Act . . . can not be processed at this time. It is incomplete and does not meet the requirements as outlined in our application guidelines.").

Throughout the entirety of the prior EIS process, the Coast Guard maintained that it would need to receive complete permit applications and site-specific information related to the bridge crossings before it could issue a decision under the Rivers and Harbors Act related to navigability. The Coast Guard even went so far as to reiterate to BLM in 2019, prior to BLM finalizing the EIS, that it identified five rivers within the Koyukuk River System (Jim River, the South Fork of the Koyukuk River, the Koyukuk River, the Middle For of the Alatna River, and the Alatna River) as well as seven rivers in the Kobuk River System (Kobuk River , Reed River, Mauneluk River, Kogoluktuk River, Shungnak River, Ambler River) to be navigable waters that would require Coast Guard bridge permits.⁵⁹⁹ AIDEA never submitted detailed site-specific information on the bridges and their designs to the Coast Guard or any of the other federal agencies. AIDEA is only now proposing as part of its summer fieldwork studies to do the geotechnical and other hydrology studies necessary to develop the designs for these bridges.⁶⁰⁰

ANILCA requires the submission of a complete, consolidated application from AIDEA to all the relevant federal agencies, who are then required to issue decisions on the same timeframe. Despite this, the FEIS ultimately indicated that the Coast Guard would obtain and analyze site-specific information about the project as part of a post-NEPA permitting process. Groups filed their lawsuit raising questions about the Coast Guard's failure to comply with ANILCA and issue a decision as part of the joint permitting process in August 2020. Several months later, in December 2020, the Coast Guard issued cursory letters to AIDEA indicating it no longer needed bridge permit applications from AIDEA. The Coast Guard appears to have issued these documents well after groups filed the litigation, after the window of time when the agencies should have made their joint decisions, and possibly in an attempt to negate ANILCA claims related to the Coast Guard's failure to make its requisite joint decision with the other permitting agencies.

The Coast Guard's cursory and unsupported statements that it would no longer need complete permit applications, despite years of maintaining that it would need those applications to adequately address navigability concerns, raises serious questions about the Coast Guard's compliance with the Rivers and Harbors Act and its obligations to maintain navigability. There was no apparent process or outreach to communities done to verify the uses of the rivers it previously identified or to ensure navigability would actually be maintained on those rivers. On remand the agencies need to ensure that the navigability and existing uses of the rivers that will be impacted by this project — many of which are important for subsistence, recreation, and other uses — will be maintained.

The problems and questions around the Coast Guard's role in the prior permitting process also relate directly to the information gaps in the NEPA process more broadly and to the lack of an adequate basis for BLM's and the Corps' authorizations as well. The FEIS did not contain any of the site-specific information about the bridge crossings over navigable waters because the agencies were never provided with that information. At the time the project was previously authorized, AIDEA had yet to do much of the geotechnical work and other baseline work to inform the actual designs for the bridges. Without that site-specific baseline and design

⁵⁹⁹ Letter from J.N. Helfinstine, U.S. Coast Guard, to Tim LaMarr, Bureau of Land Mgmt. (July 29, 2019).

⁶⁰⁰ See, e.g., 2022 Field Work Plan.

information, none of the federal agencies were in a position to do an adequate analysis of the bridge crossings and to determine whether those crossings could impact navigation or hydrology, among other issues.

B. BLM Fails to Explain How the Proposed Ambler Road Would Comply with the Endangered Species Act.

NEPA's implementing regulations require an EIS to "state how alternatives considered in it and decisions based on it will or will not achieve the requirements [of NEPA] and other environmental laws and policies."⁶⁰¹ Congress enacted the Endangered Species Act (ESA) to conserve endangered and threatened species and the habitats and ecosystems upon which they depend.⁶⁰² As the Supreme Court observed, the ESA is "the most comprehensive legislation for the preservation of endangered species ever enacted by any nation."⁶⁰³ Federal agencies must scrupulously comply with the ESA to effectuate Congress' intent to require them to "afford first priority to the declared national policy of saving endangered species," even above their primary missions.⁶⁰⁴

"The heart of the ESA is section 7(a)(2)."⁶⁰⁵ Section 7(a)(2) contains substantive and procedural requirements, and mandates that every federal agency, in consultation with the appropriate wildlife agency, ensure that any action over which it has discretionary involvement or control is not likely to (1) jeopardize the continued existence of any threatened or endangered species or (2) result in the destruction or adverse modification of critical habitat.⁶⁰⁶ "This language admits of no exception."⁶⁰⁷

The SEIS should explain how BLM will comply with its substantive and procedural obligations under the ESA. The final EIS asserts that BLM consulted with FWS under the ESA as part of the prior permitting process,⁶⁰⁸ but the EIS then provides generalized statements that the BLM does not believe any protected species are present in the project area, raising serious questions about whether and how such section 7 consultation occurred.

As described throughout these comments, the final EIS failed to properly define the scope of the Ambler Road's direct, indirect, secondary, and cumulative effects. Thus, it is not clear

⁶⁰¹ 40 C.F.R. § 1502.2(d); see *Montana Wilderness Ass'n v. McAllister*, 658 F. Supp. 2d 1248, 1255–56 (D. Mont. 2009); *Pac. Coast Fed. of Fishermen's Ass'ns v. Interior*, 929 F. Supp. 2d 1039, 1059–60 (E.D. Cal. 2013).

⁶⁰² *Id.*

⁶⁰³ *Tenn. Valley Authority v. Hill*, 437 U.S. 153, 180 (1978).

⁶⁰⁴ *Id.* at 184–85; see also *id.* at 173–74

⁶⁰⁵ *W. Watersheds Project v. Kraayenbrink*, 632 F.3d 472, 495 (9th Cir. 2011).

⁶⁰⁶ 16 U.S.C. § 1536(a)(2); 50 C.F.R. §§ 402.03, 402.14(a). "Action," "jeopardize the continued existence of," and "destruction or adverse modification" are defined by regulation. 50 C.F.R. § 402.02.

⁶⁰⁷ *TVA v. Hill*, 437 U.S. at 173. Congress later amended Section 7(a)(2) to allow exceptions in extraordinary circumstances, none of which apply here. See 16 U.S.C. § 1536(h).

⁶⁰⁸ 1 FEIS at 1-6.

how BLM is defining the project area or study area for purposes of the ESA assessment that it points to in the final EIS. For example, the final EIS makes vague statements that no ESA-listed threatened, endangered, or candidate species occur in or near the study area in the case of bird species,⁶⁰⁹ and that the ESA does not list any terrestrial mammals known or suspected to occur within the project area.⁶¹⁰ Any definition of the project area for purposes of an ESA impacts analysis must include the Ambler Mining District, project infrastructure along the road corridor, and other cumulative impacts from this project such as increased traffic along the Dalton Highway. BLM must consider the breadth of cumulative impacts in any initial determination regarding whether ESA-listed plant or animal species would be impacted by the Ambler Road.

In the case of ESA-protected and rare plants, the final EIS asserts that no ESA or protected rare species occur in the project area. But in the very same paragraph, BLM acknowledges that “[a]vailable mapping shows additional rare species in the project area, but none located within 0.25 mile (1,320 feet) of affected areas. However, rare plant surveys near the alternatives are limited and *have not been performed along the routes of the alternatives.*”⁶¹¹ The fact that no survey has demonstrated the presence of ESA-listed or threatened plants is of no import when no surveys have occurred along the actual road corridor, and for the surveys that have occurred in proximity to the road corridor, rare plant species have in fact been found. Moreover, as described elsewhere in these comments, there are still outstanding questions regarding the actual road location within the right-of-way corridor. BLM cannot rely on such conclusory and illogical statements to satisfy its substantive and procedural obligations under the ESA.

As part of the SEIS and remand process, BLM should engage FWS in meaningful consultation under ESA section 7, fully considering all of the Ambler Road’s direct and cumulative effects on protected species.

C. Authorizing the Gravel Mines Would be Contrary to the Materials Act.

Any gravel mine approvals must be conducted under BLM’s mineral material sales regulations, which contain strict limits to protect the public interest. In 1947 Congress passed the Materials Act, as amended, 30 U.S.C. §§ 601-604, authorizing the disposition of, *inter alia*, sand, stone, and gravel. Eight years later, Congress passed the Multiple Use Mining Act of 1955, also known as the Surface Resources Act or Common Varieties Act, 30 U.S.C. § 611, which declared that no deposit of common varieties of, *inter alia*, sand, stone, or gravel would be considered “a valuable mineral deposit within the meaning of the mining laws of the United States so as to give effective validity to any mining claim hereafter located under such mining laws.” Thus, Congress removed common varieties of those materials from the purview of the mining law and made them subject to the provisions of the Materials Act.⁶¹²

⁶⁰⁹ 1 FEIS at 3-83.

⁶¹⁰ *Id.* at 3-93; *see also id.* at 3-65 (same statements regarding ESA-listed fish species).

⁶¹¹ *Id.* at 3-50.

⁶¹² *United States v. Pitkin Iron Corp.*, 170 IBLA 352, 354 (2006); *United States v. Multiple Use, Inc.*, 120 IBLA 63, 76A (1991).

These gravel mines and material sales contracts are governed by 43 CFR § 3600. Under these Mineral Material Disposal regulations, no disposal is authorized by the statute where it would be “detrimental to the public interest.”⁶¹³ In addition, the regulations preclude BLM from disposing of mineral materials if it determines “that the aggregate damage to public lands and resources would exceed the public benefits that BLM expects from the proposed disposition.”⁶¹⁴ These Part 3600 rules, unlike the § 3809 rules governing locatable/hardrock minerals, preclude BLM from authorizing any activity/sale without meeting the “public interest” standard at 43 C.F.R. § 3601.

Even the limited record available regarding these mines shows that mining these sites would fail the public interest test. Gravel mining will directly cause additional ground disturbance and habitat destruction above and beyond what will be associated with the Ambler Road project footprint and needs to be considered as a connected action in this EIS, not downplayed across resource analyses. Gravel extraction is generally done in large, open pit mines and can have devastating impacts on permafrost areas. Open pit mines require extensive overburden removal — for example, over 50 feet of vegetation and soil needed to be excavated to reach suitable gravel in the mines created for Kuparuk.⁶¹⁵ The resulting overburden stockpile disturbs tundra, and the gravel pit itself causes permanent changes to the area’s thermal regime due to “thaw bulbs” forming in the permafrost around the unfrozen water during flooding.⁶¹⁶ Indirect effects such as these have led some researchers to approximate that a one acre gravel pit may affect as much as 25 acres surrounding the site.⁶¹⁷

Beyond the damage associated with “typical” gravel mining in permafrost regions, the likelihood of releases of harmful asbestos into the environment from the mines precludes their approval. The FEIS acknowledges that “[g]ravel materials containing [Naturally Occurring Asbestos (NOA)] may be used in the construction of the road embankment where alternative materials are not readily available.”⁶¹⁸

Surveys have found NOA in mineral deposits in rock and soils in the project area. Asbestos minerals typically are stable within undisturbed soils, but disturbances to the soils through construction and excavation may cause fibers to become mobile. A preliminary evaluation of bedrock potential for NOA in the project area shows all action alternatives traverse areas of medium potential for NOA and cross large swaths of surficial deposits that have not been evaluated for NOA potential.⁶¹⁹ The Alaska Department of Transportation and Public Facilities (DOT&PF) conducted explorations for suitable material sites in 2004 and 2013 for the Ambler Airport improvements project. Most test sites within surficial deposit areas had measurable concentrations of NOA present.

⁶¹³ 30 U.S.C. § 601 (2000); 43 C.F.R. 3601.6(a).

⁶¹⁴ 43 C.F.R. § 3601.11; *see also* *Ronald W. Byrd*, 171 IBLA 202, 208 (2007).

⁶¹⁵ BENJAMIN SULLENDER, AUDUBON ALASKA, ECOLOGICAL IMPACTS OF ROAD- AND AIRCRAFT-BASED ACCESS TO OIL INFRASTRUCTURE 19 (July 2017), *available at* http://ak.audubon.org/sites/g/files/amh551/f/road_aircraft_access_report_final_0.pdf.

⁶¹⁶ *Id.* (internal citations omitted).

⁶¹⁷ *Id.* (internal citations omitted).

⁶¹⁸ 1 FEIS at ES-5.

⁶¹⁹ Solie and Athey 2015; *see* 4 FEIS at Map 3-2.

Development of the material sites, construction of the road, and use of the road constructed using materials with NOA may result in worker exposures to asbestos. Asbestos is a known carcinogen, and exposure to asbestos fibers through inhalation may lead to the development of pulmonary disease, including asbestosis and/or lung cancer and mesothelioma. Fugitive dust emissions would have measurable amounts of asbestos in areas of the roadway constructed with gravel containing NOA. Dusts settling on snow, foliage, or bare ground would affect an area approximately 328 feet (100 meters) from the roadway edge, spreading the asbestos contamination beyond the road footprint. Wind, precipitation, and vegetation disturbances (e.g., humans and animals moving through brush where asbestos fibers have settled) may cause asbestos fibers to become airborne or be washed into water bodies and drinking water sources.

While BLM admits that NOA will be released, it refused to analyze the site-specific aspects of this pollution and where it might be an issue. The FEIS's dismissal of the need for baseline information about NOA was particularly troubling; rather than gather additional information on the likely material sites and the presence of asbestos, BLM said the information was not essential to a choice among alternatives and did not require material testing.⁶²⁰ Yet, the admitted significant potential for asbestos to be released was essential to BLM's alternatives review, as producing carcinogenic asbestos is a highly relevant factor BLM must consider to ensure it meets the FLPMA and Part 3600 public interest mandates. Further, the FEIS did not analyze the extent to which the NOA materials would actually be used — potentially because AIDEA has yet to even gather the baseline information to understand how pervasive NOA might be and what the likelihood of gravel with NOA being used actually is for the project. Because BLM did not obtain site-specific information to analyze the actual locations of the gravel mines and the likelihood of asbestos exposure, BLM did not even have adequate information about the project on which to base a public interest analysis. In addition to the unacceptable NOA releases caused by the mines, the mines are detrimental to the public interest due to their short-and-long-term damage to the environment.⁶²¹

As noted herein, BLM must undertake a full review of the impacts from these mines under FLPMA and NEPA as part of this remand process since that did not occur as part of the prior decision-making process. BLM's prior failure to obtain baseline and site-specific information about the proposed gravel mines and likelihood that there could be NOA exposure concerns violated the agency's obligations to protect the public interest under FLPMA and the Materials Act.

THE ANALYSIS OF IMPACTS IN THE PRIOR EIS WAS INADEQUATE.

BLM and the Corps were obligated to assess the direct, indirect, and cumulative effects of the proposed project on the human environment, as well as means to mitigate adverse

⁶²⁰ 3 FEIS at R-5.

⁶²¹ See *Echo Bay Resort*, 151 IBLA 277, 284 (1999) (denial of mineral material sale upheld due to threats to local springs, wildlife and habitat, recreation, and scenery).

environmental impacts.⁶²² The effects and impacts to be analyzed include ecological, aesthetic, historical, cultural, economic, social, and health impacts.⁶²³ Direct effects are those that are caused by the project and that occur in the same time and place.⁶²⁴ Indirect effects are those that are somewhat removed in time or distance from the project, but nonetheless reasonably foreseeable.⁶²⁵ The agencies must also consider actions that are connected with, or closely related to, the project in question.⁶²⁶ NEPA requires that “connected actions” and “cumulative actions” be considered together in a single EIS.⁶²⁷

Indirect effects “are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.”⁶²⁸ In contrast, “cumulative impact” is defined as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.”⁶²⁹ “Cumulative impacts” include those impacts “which when viewed with other proposed actions have cumulatively significant impacts.”⁶³⁰ Such impacts can result from individually minor but collectively significant actions taking place over a period of time.⁶³¹

In the cumulative impacts analysis, BLM and the Corps were required to take a “hard look” at all past, present, and reasonably foreseeable future actions:

[A]nalysis of cumulative impacts must give a sufficiently detailed catalogue of past, present, and future projects, and provide adequate analysis about how these projects, and differences between the projects, are thought to have impacted the environment Without such information, neither the courts nor the public . . . can be assured that the [agency] provided the hard look that it is required to provide.⁶³²

“Effects are reasonably foreseeable if they are sufficiently likely to occur that a person of ordinary prudence would take [them] into account in reaching a decision.”⁶³³ In an EPA NEPA guidance document, EPA noted:

⁶²² 40 C.F.R. §§ 1502.16, 1508.25(c).

⁶²³ *Id.* at § 1508.8.

⁶²⁴ *Id.* at § 1508.8(a).

⁶²⁵ *Id.* at § 1508.8(b).

⁶²⁶ *Id.* at § 1508.25(a)(1).

⁶²⁷ *Id.* at § 1508.25.

⁶²⁸ *Id.* at § 1508.8(b).

⁶²⁹ *Id.* at § 1508.7.

⁶³⁰ *Id.* at § 1508.25(a)(2).

⁶³¹ *Id.*

⁶³² *Te-Moak Tribe of W. Shoshone v. Dep’t of Interior*, 608 F.3d at 603 (rejecting NEPA review for mineral exploration operation that failed to include detailed analysis of impacts from nearby proposed mining operations).

⁶³³ *EarthReports Inc. v. Federal Energy Regulatory Commission*, 828 F.3d 949, 955 (D.C. Circuit 2016).

[P]rojects need not be finalized before they are reasonably foreseeable. “NEPA requires that an EIS engage in reasonable forecasting. Because speculation is . . . implicit in NEPA, [] we must reject any attempt by agencies to shirk their responsibilities under NEPA by labeling any and all discussion of future environmental effects as crystal ball inquiry.” *Selkirk Conservation Alliance v. Forsgren*, 336 F.3d 944 (9th Cir. 2003). As the [EPA] also has noted, “reasonably foreseeable future actions need to be considered even if they are not specific proposals.”⁶³⁴

The agencies may not rely solely on the one-sided information and conclusions contained in AIDEA’s permit application. As the lead agency responsible for developing the EIS, the BLM is obligated to obtain appropriate baseline data for the project area and do a thorough analysis of potential impacts from the proposed project.

For most of the resources reviewed in the FEIS, the agencies failed to take a hard look at direct, indirect, and cumulative effects. As discussed above, the FEIS failed to appropriately consider connected actions and reasonably foreseeable future actions. The FEIS failed to provide the necessary baseline data, underestimated the known impacts, and in some cases simply ignored information that must be included in a legally sufficient environmental analysis. A few of the problems addressed in this section include the FEIS’s failure to consider direct, indirect, and cumulative impacts to wetlands, water quality, fish, birds, and wildlife; the FEIS overestimation of economic benefits to local communities and underestimation of costs to the State of Alaska; the FEIS’s failure to consider the impacts from AIDEA’s proposal to construct the road in three phases; the FEIS’s failure to adequately analyze the impacts of the related hardrock mining that would occur from this road; and the FEIS’s failure to acknowledge extensive water quality impacts to the aquatic ecosystem. In sum, BLM failed to consider the full range of direct, indirect and cumulative impacts of construction and operation of the Ambler Road.

I. BLM’S ANALYSIS OF THE IMPACTS OF THE AMBLER ROAD ON THE AQUATIC ECOSYSTEM WAS INADEQUATE.

BLM and the Corps failed to take a hard look at the serious impacts to aquatic resources likely to result from this project. The prior EIS’s analysis of the potential impacts to the aquatic ecosystem and its analysis of ways to address those impacts was completely inadequate and those deficiencies must be rectified as part of the remand process. The EIS’s failure to take a hard look at impacts to aquatic resources was made clear by the agencies themselves in their motion for voluntary remand. There, the agencies admitted for purposes of ANILCA Section 810 that their “analyses lack meaningful discussion of Project-related water impacts,” including fisheries impacts.⁶³⁵ Both BLM and the Corps lack critical information needed for an analysis of

⁶³⁴ Environmental Protection Agency, *Consideration of Cumulative Impact Analysis in EPA Review of NEPA Documents*, Office of Federal Activities, May 1999, at 12–13, <https://www.epa.gov/sites/production/files/2014-08/documents/cumulative.pdf>.

⁶³⁵ AVC Remand Mot. at 15.

aquatic impacts, including baseline data about the area and information about the project itself. They should prepare the SEIS after this information is obtained so that a complete analysis of impacts and appropriate mitigation can be conducted in compliance with NEPA and the CWA.⁶³⁶

Baseline data must be obtained prior to the SEIS being prepared. During the prior permitting process, the Corps identified data gaps in AIDEA's application that were never remedied. Early in the permitting process, the Corps informed AIDEA that it would require a functional or aquatic site assessment, and that mapping of wetland types was required to compare alternatives and evaluate how aquatic impacts could be avoided and minimized.⁶³⁷ The Corps also raised concerns that AIDEA's application did not address "[h]ow roads cross and are parallel to major river crossings."⁶³⁸ This information was needed for the 220-mile length of the Ambler Road corridor. In particular, AIDEA also almost entirely failed to provide any verified data regarding aquatic resources in the eastern 50 miles of the road corridor. The Corps informed AIDEA it would need wetland classification mapping, LiDar (high-resolution ground maps created via laser scans), and fieldwork to identify aquatic resources along the road corridor.⁶³⁹ The Corps informed AIDEA that could not make any accurate determinations of impacts to waters of the U.S. until these missing data issues were resolved.⁶⁴⁰ However, AIDEA never provided this information.

There is little in the way of hydrological data presented in the prior EIS or provided by AIDEA to support its permit application. The FEIS references some river gauging station records, but that stream flow data is not used in the FEIS.⁶⁴¹ The information provided in the FEIS is limited and does not provide any "insight into the hydrological conditions, such flow rates or water volumes, of the rivers, streams, and wetlands in the region, nor the anticipated impacts of the road either from crossings or lateral disconnection."⁶⁴² There is also no information on the ordinary high-water mark, mean high water mark, and 100-year flood levels for locations of the major bridge crossings — all of which is necessary for the agencies to ensure they can maintain navigability on those rivers.

Despite never obtaining this information, the Corps issued a 404 permit for the Ambler Road and BLM approved a ROW permit.

⁶³⁶ See also the section above explaining how the inadequate analysis of aquatic impacts violated the CWA.

⁶³⁷ Corps Letter to BLM request for specific analysis in DEIS in response to scoping NOI (Feb. 7, 2018) at 4.

⁶³⁸ Army Corps of Engineers Functional Assessment Review.

⁶³⁹ *Id.*; Corps response to March 28 DOWL JD report (May 3, 2018) at 2; Email re Amber Road EIS Questions (Feb. 8, 2018).

⁶⁴⁰ Email re AMDIAP – Desktop Delineation Documentation (Apr. 26 2016); Ambler Road EIS Cooperating Agency Meeting Notes (Jun. 11, 2019) at 7 (agencies explaining they "need to know the existing functions of wetlands, and a functional assessment of wetlands that should be field determined and quantitative to get a 404 permit").

⁶⁴¹ Fennessy DEIS Report at 8.

⁶⁴² *Id.*

Regarding the lack of data for the eastern 50 miles of the corridor, the Corps allowed AIDEA to rely on prior fieldwork delineating wetlands 15 miles away from the road corridor with “similar aerial signatures.”⁶⁴³ In its JROD, the Corps allowed AIDEA to defer obtaining data for the eastern 50 miles of the corridor until “the final design phase,” at which time it would “identify additional drainages and . . . avoid and minimize the impacts to wetlands and aquatic resources to the extent practicable.”⁶⁴⁴ But, as EPA noted, even with that prior data, there was still an outstanding need for accurate mapping of wetlands and streams along the actual road corridor, and the agencies were still missing the locations of all stream crossings.⁶⁴⁵ EPA also questioned the Corps’ decision to defer its analysis of culvert impacts at specified locations.⁶⁴⁶

Indeed, AIDEA recently confirmed that “[m]ost of the rivers and streams along the Project alignment have little or no data regarding the flow regime and no data [has] been gathered in the 50 easternmost miles of the alignment to support the Project.”⁶⁴⁷ This plain violation of the NEPA and the CWA must be rectified as part of this remand process. The agencies should require AIDEA to gather this information before moving forward with preparation of the SEIS.

The FEIS also lacked basic information about the project design, as discussed above in these comments. The final EIS did not adequately analyze the potential impacts from all of the proposed phases for construction of this project. And, to make matters even more confusing, the Corps determined that limiting the Ambler Road’s construction to Phase II was the LEDPA, but BLM still authorized the project through Phase III based on a different application from the one considered by the Corps. The inconsistencies between the permitting applications received from AIDEA and what the agencies ultimately permitted raises serious questions about the scope and scale of the project currently under consideration. Regardless, the SEIS must fully analyze the impacts of the “Pioneer Road” and its risk of washing out annually, as AIDEA has stated that Phase 3 of the project may never be implemented and the Pioneer Road may remain in place for an underdetermined amount of time.

The prior EIS also lacked information on impacts resulting from the Ambler Road. Expert comments on the prior DEIS pointed out that the document lacked detailed information explaining the extent or magnitude of the disruption to natural patterns of floods, erosion, and blocked wetland surface water drainage, among other impacts.⁶⁴⁸ As discussed in the previously submitted report on the prior draft EIS by Dr. Siobhan Fennessy, “[t]he proposed Ambler road

⁶⁴³ U.S. Army Corps Memorandum of Record Approving Wetland Delineation Methodology for Ambler Road Permit Application (Dec. 17, 2019).

⁶⁴⁴ JROD, App. F at F-7.

⁶⁴⁵ 2020 EPA Comments at 1 (EPA noting FEIS acknowledgment that drainages less than 12 feet wide in vegetated areas were not mapped).

⁶⁴⁶ 2019 EPA Comments at 8, 15 (EPA comments explaining need to identify culvert locations to assess impacts); JROD, App. F at F-7 (JROD stating AIDEA would identify culvert locations later); *see also* Frissell DEIS Report at 9–10 (Dr. Frissell explaining lack of information on waterway crossings).

⁶⁴⁷ 2021 AIDEA field work plan at 3

⁶⁴⁸ Fennessy DEIS Report at 7; Frissell DEIS Report at 21.

alignment will have severe, negative impacts on aquatic ecosystems along its route, including rivers, streams, lakes, and wetlands. Roads have well documented ecological effects on hydrology, soils, and biota, disrupting ecosystems and altering landscapes.”⁶⁴⁹ Because the alignment of the Ambler Road runs from east to west, “it is situated perpendicular to the natural flow of water from the Brooks Range, and is likely to cause major hydrologic disruption with impacts on the chemical, physical and biological integrity of the waters along the route, which are now in near pristine, undisturbed condition.”⁶⁵⁰

EPA further identified that “[t]he analysis of temporary, secondary and cumulative impacts to aquatic resources lacks site-specific data to allow for a full evaluation of project impacts to the project area and downstream waters.”⁶⁵¹ Further, it is clear that the Ambler Road’s impacts would extend beyond the corridor, but the impacts of road’s numerous hydrological alterations were not quantitatively addressed in the final EIS.⁶⁵² The final EIS also lacked “any reasoned assessment of the downstream hydrologic effects of the extent and distribution of wetlands expected to be impacted” because it did not assess number, distribution, and characteristics of sites where erosion, turbidity, barriers to fish passage, and alteration of hydrological flow could occur.⁶⁵³ This information is critical to determine the nature and degree of impacts, and must be considered in the SEIS.

This project will require the installation of between 2,900 and 4,300 culverts in more than 1,000 perennial streams that support anadromous fish populations, with many bridges also being built to channel water under the road. This project “represents a massive hydrologic alteration to the region that will reduce stream connectivity, fragment habitats, and decrease biodiversity through vegetation impacts and by presenting a barrier to the passage of fish, amphibians, and other species.”⁶⁵⁴ BLM cannot simply identify or list impacts that are likely to occur. The SEIS must provide details on the anticipated extent or magnitude of impacts from altered flooding and streamflow patterns, increasing erosion and the transport of sediment and other materials, disruption of overland sheet flows, and long-term impacts, such as changes to the patterns of channel migration and associated biodiversity effects.

The final EIS also incorrectly assumed that many of the impacts of the road footprint will be limited to the immediate area around the road itself. However, studies of the impacts of roads and other linear infrastructure concluded that “the hydrological impacts of a road can be widespread, extending well beyond the direct footprint of a road.”⁶⁵⁵ The SEIS must consider the full impacts outside of the direct road footprint, such as downstream impacts and fugitive dust impacts at least 300 feet beyond the road corridor, consistent with NEPA and CWA requirements.

⁶⁴⁹ Fennessy, *supra*, at 1.

⁶⁵⁰ *Id.* at 1–2.

⁶⁵¹ 2019 EPA Comments at 2.

⁶⁵² Fennessy DEIS Report at 10–11.

⁶⁵³ Frissell DEIS Report at 10.

⁶⁵⁴ *Id.* at 6.

⁶⁵⁵ *Id.*

The agencies must obtain sufficient quantitative and site-specific data about the existing conditions on which to base its analysis in the SEIS. The final EIS contained “little quantitative data on existing local conditions used to substantiate the findings presented in the EIS.”⁶⁵⁶ For example, the final EIS noted that that Alternative A will have the least impact, a conclusion which is apparently based solely on the length of the road.⁶⁵⁷ This is despite the fact that Alternative B would require fewer bridges and would not pass within one-quarter mile of Walker Lake and its important hydrological resources.⁶⁵⁸ Without specific, quantitative and site-specific information about the anticipated impacts, there is insufficient information on which to base conclusions about alternatives.

The project is also likely to have serious impacts to water quality that must be adequately addressed in the SEIS. As discussed by Dr. Fennessy, there will be major impacts to water quality from a range of aspects related to this project that were not adequately addressed in the prior EIS:

Water quality will be impacted by many factors including increased sediment loads (including fine sediments that can impact fish and spawning grounds), naturally occurring asbestos in mineral deposits, acid mine drainage from mine operations, the generation and deposition of dust (including the possibility of dust carrying toxic contaminants such as lead and zinc), and the likelihood of petroleum spills that can be toxic to fish and other organisms. Water quality is also impacted by culverts such that upstream stream water chemistry differs compared to downstream.⁶⁵⁹

The SEIS should provide specific information on anticipated water quality changes, including a quantitative assessment of how water quality might change.”⁶⁶⁰ There are also a number of significant problems with the EIS’s discussion of water quality discussed in the report by Dr. Fennessy. Roads are known to increase issues with soil erosion and sedimentation.⁶⁶¹ The final EIS reports without any basis that increased sediment will be similar to that which occurs naturally during high flow events.⁶⁶² Increased sediment levels can have substantial impacts on fish, eggs, and spawning habitat.⁶⁶³ These impacts must be fully analyzed in the SEIS.

The final EIS also failed to adequately assess the likely impacts of crossing areas and utilizing gravel known to contain naturally occurring asbestos. Even without asbestos present, gravel mining activities are likely to have serious impacts to fish and water resources.⁶⁶⁴ BLM and the other agencies cannot reasonably permit the Ambler Road without a full understanding

⁶⁵⁶ *Id.* at 4.

⁶⁵⁷ 1 FEIS at 3-31.

⁶⁵⁸ *Id.* at 3-33.

⁶⁵⁹ Fennessy DEIS Report at 3.

⁶⁶⁰ *Id.* at 11.

⁶⁶¹ *Id.* at 12.

⁶⁶² 1 FEIS at 3-27.

⁶⁶³ *Id.* at 12–13.

⁶⁶⁴ Fennessy DEIS Report at 15.

how AIDEA would supply gravel for the project, and how much asbestos would be likely to be released as part of the gravel mining process. This information must be obtained for the SEIS.

The final EIS also fails to adequately assess or document the full extent of the Ambler Road's impacts to a range of water-dependent resources, and fails to provide the details of the measures that might mitigate those impacts. According to Dr. Fennessy, the EIS and supporting documents are "not clear about the extent of wetland impacts that will result, neither about the extent of the direct impacts due to fill or the indirect effects of altered hydrology, vegetation and water quality."⁶⁶⁵

The SEIS must look at the full range of cumulative impacts to water resources, including the cumulative impact of placing thousands of culverts in the watersheds that will be crossed by the road. The prior EIS failed to do so. This is particularly troubling because "the loss of connectivity between wetlands and other aquatic sites will affect the functions and ecosystem services provided by all of these systems."⁶⁶⁶ Despite purporting to consider hardrock mining in the Ambler District as a cumulative effect, the prior EIS failed to look with any level of specificity at the potential impacts from hardrock mining on water and water quality. The final EIS provided information regarding the different types of mining operations that might be used, and the types of impacts that might result, but failed to provide a specific analysis of the impacts that might occur to water quality as a result of mining in the Ambler District.

The final EIS's discussion of reclamation and how that will impact water resources is essentially non-existent. The FEIS states generally the road would be reclaimed, but there is no information given about methods of road or fill removal, how culverts and bridges will be removed, or how the area of the road alignment will be reclaimed.⁶⁶⁷ A full analysis of AIDEA's reclamation activities should be included in the SEIS, in order to comply NEPA and other applicable laws.

As discussed elsewhere in these comments, the EIS's consideration of potential mitigation measures related to hydrology and water resource impacts is inadequate. Instead of providing details about the mitigation measures and analyzing their actual effectiveness, BLM repeatedly says that the design features and mitigation will be determined during permitting.⁶⁶⁸ In particular, the prior EIS failed to provide mitigation measures regarding gravel extraction in sensitive areas. The mitigation measures for this project must be analyzed on a site-specific level at this stage of the environmental review process. AIDEA's application and the final EIS do not provide sufficient site-specific information for where and how this project will be built; that information is necessary in order to determine the actual effectiveness of any mitigation measures. Right now, BLM can only assume without any basis that any mitigation measures will be effective. BLM and the other agencies need to obtain sufficient site-specific information about this project in order to engage in a meaningful analysis of the impacts and mitigation, and should not proceed with preparing a SEIS prior to doing so.

⁶⁶⁵ *Id.* at 3.

⁶⁶⁶ Fennessy DEIS Report at 3.

⁶⁶⁷ *See* 1 FEIS at 3-25, -26

⁶⁶⁸ 3 DEIS at app'x N.

II. BLM'S ANALYSIS OF THE IMPACTS ON FISHERIES WAS INADEQUATE.

The final EIS fails to account for the Ambler Road's significant degradation to fish habitat and impacts to all fish species. As with the analysis of impacts to aquatic resources, the agencies admitted in their motion for remand that their "analyses lack meaningful discussion of Project-related water impacts," including fisheries impacts.⁶⁶⁹ Both BLM and the Corps lack critical information needed for an analysis of impacts to fish and fish habitat, including baseline data about species and anadromous waterways, and further lack information about the project itself. Any SEIS should be prepared after this information is obtained so that a complete analysis of impacts and appropriate mitigation can be conducted in compliance with NEPA and the CWA.

BLM must obtain significant fish studies and analyze the potential impacts to vulnerable species. All species present in the area will incur harms from road impacts from construction, operation, and maintenance activities near or in the watersheds. Yet, there is little information available in the final EIS on the extent of habitat and what these impacts would look like, especially in the context of contaminants, and how the proposed mitigation measures would actually alleviate direct and indirect harms to fish. It is clear from AIDEA's latest fieldwork proposal that it is only now, after-the-fact, attempting to obtain much of the baseline data on fish. That information should have been collected and analyzed prior to any decisions on this project.

BLM's current baseline fish studies are inadequate and unreliable. Fish are highly migratory, which suggests that the absence of fish during a single survey should not be interpreted that the waterbody is not fish habitat. In the final EIS, BLM uses broad studies of the areas, not those tailored to the actual road corridor. With such limited data, BLM should not assume that simply because it lacks data affirmatively proving fish presence, that such fish species are absent from a particular water way.⁶⁷⁰ Put simply, absence of evidence should not be treated as evidence of absence.

BLM's final EIS assumptions are based on sparse data and underestimate the fish populations in the project area, particularly because the agency lacks data to assess to the downstream impacts to rivers and streams crossed by the road corridor. BLM must gather detailed fish data for the specific roadway corridors, using different methods that pertain to the sampled species, consider the individual seasonal migrations for different fishes, estimate the levels of sedimentation, and sedimentation's impact/loss of values from its delivery into the waterways.⁶⁷¹ BLM must do detailed studies of the alternatives to actually determine the fish populations and fish habitat along different alternative routes in order to fully assess impacts in the SEIS.

BLM also previously failed to fully consider the scale of impacts from road construction, a shortcoming that must be rectified as part of the SEIS process. Construction of the phased road will have the most significant impacts for the project. Road construction will have effects on all

⁶⁶⁹ AVC Remand Mot. at 15.

⁶⁷⁰ Frissell DEIS Report at 7.

⁶⁷¹ *Id.* at 7–8.

fish present in the study area, including sheefish, chum coho, and Chinook salmon, Dolly Varden charr, Arctic grayling, humpback whitefish, broad whitefish, northern pike, burbot, and Alaska blackfish.⁶⁷² These populations will be affected by sedimentation and road infrastructure will cause “massive alteration of wetland features and landscape hydrology—both directly underneath the foot print of the road—and indirectly through up-gradient and down-gradient alteration of surface and subsurface water flows.”⁶⁷³

BLM must acknowledge and account for the full extent of such impacts from bioavailability of nutrients, turbidity and sediment related harms, erosion, and alteration of stream and river channels. BLM must require further studies before the agency can even begin to answer basic questions that are imperative to assess fisheries habitat, such as: “How would specific river and stream crossings in the area be affected, and where do these lie in relation to streams and habitats of known importance to fishes? What proportion of known important habitats within the affected region are vulnerable to harm from the project?”⁶⁷⁴ These questions must be answered in order for BLM to evaluate differences in impacts between alternatives and meaningfully assess impacts to fisheries from the Ambler Road.

BLM must also adequately account for contaminants associated with road dust and road runoff. Traffic will have substantial effects on the waterways from dust, exhaust, road material, and brake debris.⁶⁷⁵ Significant mineral concentrations from dust and deposited metals have lethal and non-lethal effects on fish. BLM must adequately consider the infiltration of toxics into the aquatic food webs from dust and the broader implications from the outfall.

While the final EIS acknowledged that vehicle traffic may increase melt as a result of fugitive dust emissions, it did not account for the cumulative effects of these impacts to the hydrologic system.⁶⁷⁶ Chemical contaminants will combine with the other inert mineral particles distributed by the roadway. BLM must fully address the totality of the toxic minerals, hydrocarbons and metals. The roadway is a lengthy project and BLM has not considered the extent which these minerals will continue to accumulate in the system for the life of the project.

The mitigation measures contained in the final EIS are inadequate to protect fisheries habitat and must be tailored to avoid erosion and sedimentation, permafrost impacts, and water contamination. Specifically, BLM must develop site-specific mitigation measures for the following impacts:

- Erosion and sedimentation. The mitigation measure currently described is vague, simply requiring AIDEA to develop and comply with future best management practices.⁶⁷⁷ This

⁶⁷² 1 FEIS at 3-66 to -68

⁶⁷³ Frissell DEIS Report at 9.

⁶⁷⁴ *Id.* at 10.

⁶⁷⁵ *Id.* at 11.

⁶⁷⁶ 1 FEIS at 3-81.

⁶⁷⁷ 3 *id.* App. N at N-21.

provides no assurance this will be effective. This measure must be robust, detailed, and tailored to site-specific locations and particular water crossings.

- Permafrost. The current measures contained in Appendix N do not provide effective means of enforcement to reduce permafrost effects, and again simply point to future design features developed at a later time to mitigate impacts. BLM must ensure this measure has teeth. In addition, BLM must consider the practicality of design features for the mitigation of permafrost impacts and adjust these to minimize drainage alterations.⁶⁷⁸
- Wetlands avoidance. BLM and the Corps failed to design alternatives that sufficiently mitigate for wetlands impacts, as described in detail above regarding the Corps' CWA obligations.
- Blockage of fish movements. The final EIS measures point to later designs to generally protect fish passage, but do not explain what such designs would be or actually analyze their effectiveness.⁶⁷⁹ Site-specific measures must be included and analyzed due to the significant amount of stream crossings and potential for changing the steamways due to grading.⁶⁸⁰
- Dust abatement. New mitigation measures must be tied to the road locations and designs, soil types, road surface materials, and operating and maintenance regimes, with differences considered among alternatives.
- Spills. BLM's current mitigation measures only account for relatively small spills, and acknowledges the measures are likely ineffective at addressing large spills.⁶⁸¹ BLM must ensure that there are measures in place for catastrophic spills, and consider requirements such as container leakage and means to avoid chronic spillage.
- Gravel extraction. Gravel extraction is one of the most damaging activities to take place during the construction period, and the final EIS wholly fails to account for the inherent risks and potential effectiveness of the rote mitigation measures and practices it lists, in the context of the particular landscape and road routes proposed. Gravel extraction poses a significant risk to fisheries habitat. BLM must not allow gravel activities in river beds and floodplains, the most sensitive areas.

BLM's mitigation measures to protect for fish habitat require significant overhaul of the considerations in the SEIS. As described above, the prior permitting process determined that even with mitigation measures in place, significant impacts would result to fisheries and their habitat. For example, the FEIS acknowledged that, even with AIDEA's design measures in place, there would be widespread changes to overland, surface, and groundwater flows, and myriad other adverse impacts from the road. The final EIS specifically found that construction would degrade fish spawning habitat, increase water temperatures, and introduce fugitive dust and toxins into waterways, even with mitigation in place.⁶⁸² As part of this remand process, the

⁶⁷⁸ Frissell DEIS Report at 17.

⁶⁷⁹ 3 FEIS App. N at N-21.

⁶⁸⁰ Frissell DEIS Report at 16.

⁶⁸¹ 3 FEIS App. N at N-17 to -18.

⁶⁸² 2 FEIS App H at H-54 to -55.

SEIS must accurately describe site-specific conditions of the proposed Ambler Road alternatives as a precursor to assessing the feasibility and effectiveness of mitigation measures.

The final EIS also fails to consider the significance of the increased impacts from a changing climate as related to the viability of fisheries habitat. BLM must consider the significant higher peak flows at a 100-year frequency consistent with current trends in the SEIS, and account for other climate trends such as increased stress and survival of fisheries from warming waters. BLM is also required to consider mitigation due to the increase in erosion, sedimentation, stability of riverbanks, and nearby stream vegetation.⁶⁸³ Climate change alters the applicability of all mitigation measures, increasing risks — all measures should be adjusted accordingly.⁶⁸⁴

There will be significant cumulative effects from mining in the Ambler District that will increase the Ambler Road's effects on water and fishery resources. The final EIS failed to consider such impacts, even though there were four potential projects identified at the Arctic, Bornite, Sun, and Sucker deposits. The SEIS must address this significant shortcoming. The Frissell report on the draft EIS describes how this omission alters the analysis for impacts to fishery resources in both scale and duration:

the nature of environmental effects of the road system itself integrally depends on the nature of the mines developed. This will affect the quantity and timing of haul and support traffic on the roads, the nature of the materials hauled and therefore subject to spills, fugitive dust, and chronic leakage and dispersion into receiving waters, hence the specific aspects of the toxicity of the essentially permanent contamination that will impact the industrial road corridor. Operating life and any need for post-closure operations at mines will further affect the traffic loads and need for maintenance of the road to maintain its operability, both seasonally (e.g., with regard to snow clearance and use of deicing agents) and long-term (maintaining running surfaces a drainage while limiting erosion and sediment delivery to waterways).⁶⁸⁵

These omissions must be rectified to provide an accurate representation of the proposed alternatives and actual impacts from the road.

In addition, if the outgrowth from the current proposed and acknowledged scenarios were to increase — such as through mining and other industrial development along the road corridor — fisheries would also experience significant effects. Impacts would be particularly significant if the road is made available to the public, as public use would increase fishing pressure as well as pollution in the area. Any additional mining or increases in the duration of road use will proliferate the critical impacts. BLM previously failed to adequately consider the scale, duration, seasonality and other critical factors described above in detail in order to develop an accurate

⁶⁸³ Frissell DEIS Report at 19.

⁶⁸⁴ *Id.* at 18–19.

⁶⁸⁵ Frissell DEIS Report at 19–20.

picture of cumulative impacts to fisheries, and those gaps in its analysis should be addressed in the SEIS.

III. BLM'S ANALYSIS OF THE IMPACTS TO CARIBOU WAS INADEQUATE.

In requesting this remand process, Interior acknowledged that there were significant problems with the prior analysis of subsistence impacts, particularly with regard to caribou. The problems with the analysis in the ANILCA 810 analysis that Interior previously acknowledged are also reflected in the deficiencies with the prior EIS. Caribou are an incredibly important species ecologically and for subsistence. It is thus crucial that the SEIS present a robust consideration of possible impacts to caribou from the proposed alternatives and address the problems with the prior analysis, as well as update that analysis to account for the full range of likely impacts to caribou. Of the various caribou herds that use the project region, the Western Arctic Herd (WAH) is the most numerous and most heavily relied upon for subsistence. One of the biggest changes between the issuing of the FEIS and the current scoping period is updated information about the size of the WAH. The FEIS reported the size of the WAH at 259,000 individuals,⁶⁸⁶ reflecting the 2017 count conducted by the Alaska Department of Fish and Game. That number was higher than that reported by the 2016 count (201,000 individuals),⁶⁸⁷ leading some to hope that the steep decline the herd had been showing was ending. Since that time, however, there have been two additional counts which show the WAH has continued to decline. The 2021 count reported a population size of 188,000 individuals.⁶⁸⁸ This is the lowest population size recorded since the mid-1980s and is below the State of Alaska's minimum population objective, which has potential implications for subsistence harvest regulations. The Western Arctic Caribou Herd Working Group, which brings together a diverse group of stakeholders to promote conservation of the WAH and its use, has expressed concerns about the latest numbers and the decreasing pattern of herd size over nearly two decades. They recently changed the herd management level to "preservative declining" to indicate concern over where the herd is going and to offer recommendations for measures to reduce impacts on the herd.⁶⁸⁹ It is crucial that BLM similarly takes into consideration the reduced population size and continuing downward trend of the WAH and how it may affect additional impacts to the herd if the Ambler Road and the mining it is intended to support were to be developed.

BLM also needs to update the analysis to account for new information and activity related to the potential scale of development in the region and to consider how that will impact caribou. As noted elsewhere in these comments, there is extensive new exploration activity that has been occurring along a much broader swath of the road corridor than was previously discussed or acknowledged in the FEIS. Such projects will increase estimates of habitat loss and

⁶⁸⁶ 2 FEIS at 3-89.

⁶⁸⁷ Western Arctic Caribou Herd Working Group. 2021. Caribou Trails: News from the Western Arctic Caribou Herd Working Group. Issue 21.

⁶⁸⁸ Western Arctic Caribou Herd Working Group. 2022. Caribou Trails: News from the Western Arctic Caribou Herd Working Group. Issue 22.

⁶⁸⁹ *Id.*

alternation, such as those provided in Appendix H Table 2-10,⁶⁹⁰ and would lead to additional displacement and indirect habitat loss if developed.

In addition to incorporating new information relevant to caribou and other species, the SEIS should alter the way information on potential impacts is presented to provide clarity for the public. The FEIS describes three categories of impact to caribou: direct habitat loss, displacement, and indirect loss of range. However, only direct loss is quantified,⁶⁹¹ despite the fact that the amount of habitat affected by displacement and indirect loss is likely to be much greater than that due to direct loss. While the FEIS states that indirect effects were “not quantified because they are dependent on numerous variables, such as vegetation type, environmental conditions, and numerous aspects of the perturbations,”⁶⁹² it is still possible to provide a range of potential effects based on available information. For example, the FEIS acknowledges studies that have found displacement of caribou between 2.5 – 14.3 miles from active mines.⁶⁹³ These differences could be combined with the mine location and footprint estimates in the reasonably foreseeable development scenario to quantify a range of possible displacement distances. This would better provide a sense of the possible impacts of development on caribou and their users, beyond simply the direct footprint likely to be lost. Previously published methods exist for quantifying the range of possible effects of development, given uncertainties in where exact locations of development will occur,⁶⁹⁴ which could be adapted for use in the SEIS, such as inclusion in Appendix H Table 2-10. Given the potentially greater area of impact of such indirect effects of road and mine development, it is also important that their descriptions be included in the main content of Volume 1 Chapter 3, rather than relegated to the appendices. For example, mining impacts are mentioned briefly in Chapter 3,⁶⁹⁵ but descriptions of displacement due to mining, which are likely to have a greater affect, are left to an appendix in a different volume of the FEIS.⁶⁹⁶ It is not only what information is presented but how that information is presented that matters in appropriately conveying potential impacts of the various alternatives.

Finally, while the FEIS acknowledges the disproportionate importance of lichen habitat for the WAH, it concludes that project impacts on lichen habitat cannot be quantified due to the expense of obtaining lichen data.⁶⁹⁷ This is unacceptable, especially given acknowledgement that habitat alteration of lichens could extend away from the footprint of the road, thus leading to additional impact beyond that quantified in Appendix H Table 2-10, and in some instances may have effects equivalent to complete habitat loss.⁶⁹⁸ Lichen is most commonly relied upon by

⁶⁹⁰ 2 FEIS at H-23.

⁶⁹¹ 1 FEIS at 3-94 & E-24.

⁶⁹² 1 FEIS at 3-94.

⁶⁹³ 2 FEIS at H-60.

⁶⁹⁴ See Fullman TJ, Sullender BK, Cameron MD, Joly K (2021) Simulation modeling accounts for uncertainty while quantifying ecological effects of development alternatives. *Ecosphere* 12(5): e03530.

⁶⁹⁵ 1 FEIS at 3-104.

⁶⁹⁶ 2 *id.* at H-60 to -61.

⁶⁹⁷ 1 *id.* at 3-94.

⁶⁹⁸ *Id.* at 3-95.

caribou as a winter forage source. Given the overlap of the proposed project area with WAH winter range, this makes any detrimental effects on lichen availability or quality concerning. A more robust accounting for these potential impacts is needed.

IV. THE FEIS FAILED TO ADEQUATELY CONSIDER IMPACTS TO BIRDS.

Foundationally, the agency should not rely on inadequate data to describe bird values that could be affected by the proposed road. The FEIS acknowledged that there was “little information on avian species distribution or abundance in the project area, and researchers have completed few avian monitoring studies in this region.”⁶⁹⁹ The agency, or the project proponents, should complete at least a few years of avian monitoring, including point counts and breeding bird surveys, before moving forward with the SEIS to ensure there is adequate baseline data. For instance, instead of using breeding bird surveys from nearby areas, the SEIS should include data from surveys along the alternative routes. The FEIS claimed that “[o]btaining detailed data on [bird] species distribution and abundance of 141 species in a project area of this size would be exorbitant.”⁷⁰⁰ But this is a specious argument because BLM could focus on a few focal species, limit surveys for distribution & abundances of birds to only the road corridors and zones of influences, or use a habitat suitability model to model species distribution in certain areas of the project area, based on vegetation data. Better baseline data and modeling on where birds occur in the project area would ensure the agencies have adequate baseline data and are in a position to analyze different alternatives and mitigation measures.

In addition to relying on inadequate baseline data, the FEIS analysis often lacks citations and specificity. For example, one paragraph begins, “Bird habitat, including potential breeding, nesting, foraging, staging, and stopover habitat, would be lost where vegetation removal and gravel fill placement occur,” but there is no citation or reference.⁷⁰¹ Similarly, the statements on disturbance during construction phases are missing citations.⁷⁰² The agency should generally make edits and add scientific support to its statements on impacts to birds. As written, the FEIS does not contain the specificity required to fully understand or analyze impacts to birds.

Further, the FEIS did not analyze the connection between road disturbance and predation. The FEIS mentioned that road disturbance during construction and use could disturb birds “due to vehicle traffic, road maintenance activities, and other operation or closure activities.”⁷⁰³ The FEIS also noted predators on nesting birds may increase due to more linear features and perching opportunities.⁷⁰⁴ But the FEIS did not describe how these impacts may work together by disturbing nesting birds away from their young or increasing predators available to prey upon those nests.

⁶⁹⁹ 1 FEIS at 3-81.

⁷⁰⁰ *Id.* at 3-81 n.53.

⁷⁰¹ *Id.* at 3-83.

⁷⁰² *Id.* at 3-83 to -84.

⁷⁰³ *Id.* at 3-84 to -85.

⁷⁰⁴ *Id.* at 3-86.

The FEIS downplays the effect of habitat loss by failing to explain that habitat loss would extend well beyond the construction phases. The FEIS erroneously states, “Most habitat loss would occur during Phase 1 construction, with habitat loss expanding during construction of Phases 2 and 3.”⁷⁰⁵ However, later the FEIS states, “Fugitive dust deposition could also increase thermokarst”⁷⁰⁶ Habitat loss through thermokarst, permafrost melt, and changes in hydrology due to gravel road construction would span much longer than the life of the road and are irreversible. These effects are well documented,⁷⁰⁷ and the FEIS should include acknowledgment of this major impact on bird habitat from a gravel road. Moreover, the FEIS entirely misses the likely habitat loss from gravel mines and ice roads and does not explain that reclamation would not fully restore habitat for birds.

Moreover, the estimate of how far dust may affect habitat extending out from a road appears to have been underestimated. The FEIS stated “fugitive dust could be deposited up to 328 feet (100 meters) from the gravel road (Walker and Everett 1987).”⁷⁰⁸ The SEIS should take into consideration that a newer study, Myers-Smith et al. (2006), concluded, “significant disturbance may have occurred in a 200-m-wide [656 feet] corridor adjacent to the roadway.”⁷⁰⁹ The older study by Walker and Everett (1987) only notes that snowmelt from dust is evident out to 100 meters (328 feet), but dust was actually found out to 1000 meters, was heavier in winter, and the methods at the time made it difficult to measure dust effects beyond 30 meters. These are important data points not made clear in the FEIS, which simply concluded, without a scientific basis, that the indirect impact will extent out to 328 feet. Indeed, more recently other researchers have found “zones of impact” of windblown dust to 3280 feet from a road.⁷¹⁰ This indicates that the FEIS is not only wrong but may be off by an order of magnitude in its analysis of indirect impacts on bird habitat. The agency should use updated data, explain the assumptions and drawbacks of the studies it is using, and expand upon its analysis of impacts from roads and their indirect effects.

⁷⁰⁵ *Id.* at 3-83.

⁷⁰⁶ *Id.* at 3-84.

⁷⁰⁷ *E.g.*, Raynolds, M. K., D. A. Walker, K. J. Ambrosius, J. Brown, K. R. Everett, M. Kanevskiy, G. P. Kofinas, V. E. Romanovsky, Y. Shur, and P. J. Webber, *Cumulative geocological effects of 62 years of infrastructure and climate change in ice-rich permafrost landscapes, Prudhoe Bay Oilfield, Alaska*, 20 *Global Change Biology* 1211 (2014); Walker, D. A., M. K. Raynolds, Y. L. Shur, M. Kanevskiy, K. J. Ambrosius, V. E. Romanovsky, G. P. Kofinas, J. Brown, K. R. Everett, P. J. Webber, M. Buchhorn, G. V. Matyshak, and L. M. Wirth, *Landscape and Permafrost Changes in the Prudhoe Bay Oilfield, Alaska*, Alaska Geobotany Center Publication, Fairbanks, Alaska (2014); *see generally*, Ben Sullender, *Ecological Impacts of Road- and Aircraft-based Access to Oil Infrastructure*, Audubon Alaska (2017).

⁷⁰⁸ 1 FEIS at 3-84.

⁷⁰⁹ Myers-Smith, I. H., B. K. Arnesen, R. M. Thompson, and F. S. Chapin, III, *Cumulative impacts on Alaskan arctic tundra of a quarter century of road dust*, 13 *Ecoscience* 503 (2006).

⁷¹⁰ Kumpula, T., A. Pajunen, E. Kaarlejärvi, B. C. Forbes, and F. Stammer, *Land Use and Land Cover Change in Arctic Russia: Ecological and Social Implications of Industrial Development*, 21 *Global Environmental Change* 550 (2011).

The FEIS was also overly conclusory regarding impacts on birds from noise and light. The FEIS stated, “Noise and light pollution may extend large distances from the gravel footprint, depending on vegetation type, topography, ambient sound levels, and various other factors (Bayne et al. 2008; see Section 3.2.6, Acoustical Environment, and Appendix D, Attachment A, for more information on noise).”⁷¹¹ This statement does not explain how noise and light can impact birds and is inadequate. The cumulative impacts analysis was also brief and conclusory. The paragraph on “Mining, Access, and other Indirect and Cumulative Impacts” only noted that cumulative impacts “would be additive to and synergistic with the action alternatives.”⁷¹² The FEIS stated that resulting mining development of the area would increase activity and fragmentation but did not explain how. The paragraph concluded, without evidence or explanation, that “accumulation of impacts on birds would be similar regardless of the action alternative selected.”⁷¹³

The prior cumulative impacts analysis was also insufficient because it did not contemplate the potential for the road to become public, nor analyze the different types of impacts that would result. The cumulative impacts from this road include the direct and indirect impacts of the road itself, impacts from climate change, impacts from the road opening to the public, and other reasonably foreseeable actions. The analysis in the SEIS must consider how these impacts may add together over time and across the landscape, as well as how these impacts could interact synergistically.

The impacts analysis only briefly mentioned climate change in passing, stating, “Warming Arctic conditions combined with other cumulative actions may increase wildfires, change the abundance and distribution of forage and nesting habitat, or increase the prevalence and intensity of weather events (Hinzman et al. 2005).”⁷¹⁴ The FEIS entirely missed some impacts from climate change, including the exacerbation of predation, the timing of phenological events such as migratory bird arrival and departure and its relation to food and nesting resources, and impacts to migration and wintering habitat. And although the FEIS mentioned wildfires, habitat changes, and stochastic weather, it did not explain how these generalized effects may occur within the project area. Nor did the FEIS describe how these individual effects from climate change could interact with impacts from the proposed road. The SEIS should provide more analysis on climate change on birds in the project area, including additional references beyond just Hinzman et al. (2005), which is a general reference that summarizes evidence of and effects from climate change in 2005.

When it came to the alternatives analysis, the FEIS failed to meaningfully describe the different impacts that would arise between the alternatives. At the outset of describing the no action alternative, the FEIS said, “Avian habitat associations lack the refinement, and vegetation mapping lacks the detail necessary to accurately predict impacts at the species level.”⁷¹⁵ Under Alternative B, the FEIS stated, “Due to the poor granularity of available habitat mapping and

⁷¹¹ 1 FEIS at 3-84.

⁷¹² *Id.*

⁷¹³ *Id.*

⁷¹⁴ *Id.* at 3-86.

⁷¹⁵ *Id.*

lack of refined species habitat associations, it is not possible to pinpoint differences between Alternatives A and B in regard to potential impacts on birds.”⁷¹⁶ And the comparison made for Alternative C is merely that the route is longer, that some different habitat types are implicated, and the route would cross an area of high waterfowl species richness.⁷¹⁷

That alternatives comparison fell short of what is required by NEPA, and the problems were only exacerbated by the underlying lack of baseline data. In the impacts analysis, the FEIS noted, “The removal or alteration of uncommon habitat types would have a proportionately greater impact on the species that use them.”⁷¹⁸ But the alternatives comparison did not consider the differences in altered habitat types among the alternatives, and how it related to birds. For instance, the impacts analysis used cliff-dwelling raptors as an example of how varying habitat types could affect different birds. The analysis on each alternative could consider how much cliff habitat will be affected under each alternative, and result in a more robust alternatives comparison. The agency should engage in an analysis of habitat loss and how it will vary based on the alternatives in the SEIS for various bird species, in addition to more data and conducting more modeling to better describe the affected environment.

The FEIS lacked sufficient mitigation measures for birds. First, the mitigation measures in Appendix N did not include measures to mitigate effects from predation, collisions, vehicle and aircraft traffic, despite these impacts being mentioned in the FEIS. In particular, the mitigation measure on the Migratory Bird Treaty Act (MBTA) is inadequate and confusing. The FEIS stated, “If AIDEA chose to clear vegetation during this timeframe then AIDEA would have a qualified biologist survey any area where vegetation would be damaged by the project or associated activities within 48 hours prior to vegetation disturbance.”⁷¹⁹ This deference to the road proponents’ preference is improper. The agency should ensure AIDEA adheres to the standards in the MBTA. The SEIS should also incorporate in additional mitigation measures to minimize the impacts to birds more broadly.

V. THE PRIOR ANALYSIS OF THE IMPACTS FROM EXTRACTION OF SAND AND GRAVEL RESOURCES WAS INADEQUATE.

A. The Agencies Failed to Obtain Adequate Baseline Information Related to Sand and Gravel Resources.

The agencies previously failed to obtain adequate baseline data related to the sand and gravel resources in the project area. The construction of the road will require “large amounts of sand and gravel, embankment material, and aggregate resources, as well as sources of riprap.”⁷²⁰ Despite the clear need for extensive amounts of gravel to be mined for this project, geotechnical investigations on the specific sizes, grades and actual quantities that are available and where they are located have not been conducted. As a result, it is still unclear precisely where the gravel mines are likely to be located, whether there are sufficient gravel resources for this project, and

⁷¹⁶ *Id.*

⁷¹⁷ *Id.*

⁷¹⁸ *Id.* at 3-83.

⁷¹⁹ *Id.*

⁷²⁰ *Id.* at 3-14.

whether there are sufficient volumes of materials that are clean of Naturally Occurring Asbestos (NOA). If a source contains unacceptable levels of asbestos, alternative sources must be located and mined for sand and gravel. It is impossible to evaluate the potential impacts of excavating the sand and gravel resources necessary for the mine without baseline data to characterize where there might be sources of NOA-free sand and gravel along the proposed route. Baseline information on sand and gravel resources needed to be obtained prior to the agencies authorizing the project and was essential to the agencies being able to evaluate the impacts of the actual proposed mines. That information needs to be obtained prior to any new decisions and incorporated into the SEIS.

Additionally, there is still not adequate baseline data related to the potential for acid rock drainage (ARD) along all the corridor. Leaching of metals and metalloids, such as selenium, arsenic, mercury and other harmful materials can have lasting adverse impacts on water, flora and fauna and subsistence uses and users. For example, mineralized rock was used in construction materials at the Kensington mine, resulting in downstream impacts.⁷²¹ The prevention of ARD is notoriously difficult, and the use of an alternative site for road development to avoid sites with ARD potential should have been analyzed in the prior EIS. The SEIS must include baseline data on ARD generating material to provide for a reasoned choice between alternatives and to inform the need for additional mitigation measures.

B. The Agencies Failed to Adequately Analyze Gravel Mining.

As discussed earlier in these comments, the gravel mines were connected actions that needed to be analyzed in depth in the EIS, but that did not occur as part of the prior decision-making process. AIDEA proposed to develop material sites to obtain gravel and riprap for construction and maintenance. Some of the material sites would be expected to be developed into long-term roadway maintenance facilities. These long-term sites would house maintenance workers and include landing strips. Most material sites would require access roads of varying lengths to connect the borrow location to the proposed road. Additionally, side roads would be constructed to provide access to water sources for road construction and maintenance activities.

Instead of conducting an adequate analysis of all these facilities in the FEIS, the gravel mines described in the FEIS were only hypothetical locations proposed by AIDEA without the actual baseline information and fieldwork done to verify those would be the actual gravel mine locations. BLM postponed its site-specific review of the gravel mines to a future permitting stage. This was directly at odds with the Corps, which affirmatively authorized a number of gravel mines without that required NEPA analysis taking place.⁷²² The FEIS attempts to justify its failure to analyze the impacts from the gravel mines and other project components by pledging to review and approve them later.⁷²³ As a result, the FEIS never took a hard look at the

⁷²¹ Bonnie Gestring and John Hadder, U.S. Gold Mines Spills & Failures Report: The Track Record of Envtl. Impacts Resulting from Pipeline Spills, Accidental Releases and Failure to Capture and Treat Mine Impacted Water, EARTHWORKS (July 2017).

⁷²² JROD at 15.

⁷²³ 1 FEIS at 3-3 (“The BLM may authorize portions of the project under separate permits, such as an authorization for the road [right-of-way] and separate authorizations for material extraction and sales.”).

actual site-specific impacts of the gravel mines. AIDEA is only now trying to do the baseline study work — after-the-fact — to determine where it will actually put the gravel mines for the project. This is completely backwards and at odds with the requirements of NEPA. On remand, the agencies need to ensure they have complete site-specific baseline and other information about the gravel mines and analyze that information in the SEIS.

The prior EIS failed to adequately analyze the direct, indirect and cumulative effects of mining for gravel or other materials necessary for construction of the road. According to the FEIS, this project will require a massive amount of gravel mining to meet the anticipated gravel needs for the project; “Estimated required borrow material for road construction under the action alternatives would be approximately 15 million cubic yards (Alternative A), approximately 16.8 million cubic yards (Alternative B), and approximately 22 million cubic yards (Alternative C; DOWL 2019b).”⁷²⁴ AIDEA further anticipates 42.23 million cubic yards of gravel will be needed for the project for construction and maintenance.⁷²⁵

The development of material sites would affect vegetation cover, topography, drainage patterns, the thermal regime of subsurface soils, wetlands and aquatic resources, wildlife and birds, noise, air quality (e.g., fugitive dust), and more. There are also massive indirect effects — e.g., from the storage of overburden piles, which in turn can create thermal regime changes and permafrost damage — have led some researchers to approximate that a one-acre (0.4 ha) gravel pit may impact as much as 25 acres surrounding the site.⁷²⁶ There are also significant human health concerns related to the presence of NOA in much of the gravel in the region that were left largely ignored in the prior decision-making process. Rather than fully analyze all those impacts, the FEIS provided only vague descriptions and failed to take a hard look at the potential direct, indirect and cumulative effects on the specific resources in the project area based on the specific proposed gravel mine sites. Even the FEIS acknowledged that “the full magnitude of effects is difficult to quantify given the lack of specific gravel extraction methods and plans.”⁷²⁷ Without specific gravel extraction methods and plans, it was impossible to evaluate the direct, indirect, and cumulative effects of gravel and materials mining on water resources, hydrology, fish and fish habitat, air quality, vegetation, amphibians, wildlife and wildlife habitat, subsistence resources, and other potential resources. The mitigation measures in the FEIS were also too vague to provide any certainty about whether they would successfully offset, prevent, or remediate impacts. It is impossible to determine whether mitigation measures will be effective without detailed information about how they will be monitored and enforced.

Overall, the FEIS was severely deficient in its analysis of the impacts of gravel mines. On remand, BLM needs to obtain complete applications for the specific gravel mines (after the completion of appropriate baseline studies to determine those would be the actual gravel mine locations) and needs to analyze the full range of impacts and mitigation measures in the SEIS. Detailed mining plans and reclamation plans are necessary to evaluate the potential direct, indirect and cumulative effects of gravel and other materials mining in the SEIS, and this type of information and analysis cannot be deferred until some further time by the agencies.

⁷²⁴ 1 FEIS at 3-16.

⁷²⁵ *Id.* sec. 2, at 4.

⁷²⁶ *Id.*

⁷²⁷ *Id.* (emphasis added).

VI. THE PRIOR ANALYSIS OF THE IMPACTS TO TUNDRA, PERMAFROST, AND VEGETATION WAS INADEQUATE.

A. The Agencies Previously Failed to Obtain Key Baseline Data Necessary to Engage in a Meaningful Analysis.

There is almost no baseline or site-specific data of the physical environment that would allow for an assessment of road impacts on tundra, permafrost, or vegetation. The FEIS acknowledged that Alternatives A and B traverse areas of continuous permafrost (greater than 90 percent).⁷²⁸ Despite the pervasiveness of permafrost across the entirety of the project area, site-specific baseline data about the permafrost conditions was never considered as part of the prior decision-making process—likely, because there had not been sufficient baseline information gathered to inform that analysis in the first place:

Ice-rich permafrost soils in the proposed corridors are anticipated to warm and potentially thaw with or without road construction. Climate temperature trends and permafrost temperatures over the past decades show a defined increase. Increasing permafrost temperatures may lead to increased creep rates of soils on slopes and slope failures. Permafrost warming and thawing may lead to development of thaw settlement and thaw ponds.⁷²⁹

This is not a sufficient description of the environmental baseline. The FEIS completely failed to provide an adequate analysis of the baseline conditions, sufficient to inform the agencies' consideration of impacts and necessary mitigation measures.

In the FEIS, BLM stated that “[g]eotechnical investigations proposed during the design phase would identify their presence, extent, and stability, and the road would be designed and constructed to avoid and minimize impacts using appropriate and standard road design practices.”⁷³⁰ In response to comments calling on the agencies to obtain information on temperature, ice-content, and soils data and permafrost information along the alternative alignments, the FEIS stated that that “missing information likely is relevant to better understanding of the project area environment but ... is not relevant to significant adverse impacts on the environment.”⁷³¹ The FEIS claimed that the consequences for “thawing permafrost are principally damage to the road, which is a risk to the applicant but probably not significant to the broader environment.”⁷³² As such, the FEIS concluded that “[d]rilling information would be informative but is not essential to a choice among alternatives” and that the risks from permafrost “would be dealt with equally among the alternatives in design.”⁷³³ Aside from failing to take a hard look, as discussed below, such statements also further highlight the agencies' failure to consider a reasonable range of alternatives that would reduce impacts to

⁷²⁸ 1 FEIS at 3-5.

⁷²⁹ *Id.* at 3-8.

⁷³⁰ *Id.*

⁷³¹ 3 *id.* App. R at R-32.

⁷³² *Id.*

⁷³³ *Id.*

permafrost and tundra in the project area. As discussed elsewhere, meaningfully different road routes, consideration of a seasonal ice road, or use of a rail rather than gravel road would alter and potentially reduce project impacts, particularly on vegetation and permafrost.

The agencies' failure to obtain baseline information related to the soils and particularly the permafrost conditions across the project area violated NEPA. The agencies needed to obtain and understand that fundamental baseline information to adequately analyze the likely impacts and necessary mitigation measures for the project. It was inappropriate for the agencies to rely on after-the-fact baseline studies and project design work to reach the baseless conclusion that the project would somehow be designed in a way that would mitigate those impacts. Baseline information about the road corridor is critical to ensure that the project is designed in an environmentally responsible and safe way and does not cause degradation to aquatic and other resources along the entirety of the corridor. As the FEIS recognized, permafrost soils are "highly susceptible to erosion or other soil movements caused by disturbances to ground-covering vegetation and subsequent thawing of the permafrost. Depending on soil type and ice content, permafrost may be considered thaw-stable, where foundation materials are unchanged in unfrozen condition, or thaw-sensitive (unstable), where the foundation experiences loss of strength and thaw settlement upon thawing."⁷³⁴

The FEIS's dismissal of the need for this information based on conclusory statements that such information did not relate to potentially significant impacts on the environment or related primarily to damage to the road are completely arbitrary. Permafrost degradation along the entirety of the road corridor, given the pervasiveness of permafrost in the region, is a serious impact that was not adequately analyzed in the FEIS. Many other impacts have the potential to cascade out from permafrost degradation — including the need for additional gravel mining to mitigate those impacts and to maintain the road, the potential for downstream impacts with the road washing out regularly, the risk of ponding and other subsidence, and other broader degradation of aquatic resources across a vast region. The FEIS's dismissal of the need for this information — which it also acknowledges would be needed to fully design the project — was arbitrary, contrary to NEPA, and reflects a broader failure to analyze or address the true impacts of this project.

The proposed roadway design gave three embankment designs for Phase 3 road design: one design for good soils, one for moderate soils, and one for poor soils.⁷³⁵ Thicker embankments will be needed when designing with poor soils compared to good soils. As embankment thickness design increases, so do gravel requirements. Relatedly, gravel reduction opportunities from the use of rigid foam insulation board on the "good" soil fill design is greater than on the "poor" soil fill design. The FEIS, however, does not categorize site-specific detail for the types of soils (good, moderate, or poor) found across the length of the roadway because that information was lacking. That information was important to determine depth of gravel needed across the roadway and thus the total amount of gravel — and potential impacts from gravel mining — needed for the project.

⁷³⁴ 1 *id.* at 3-5.

⁷³⁵ See 1 FEIS App.C at A-1.

The missing baseline data should have been obtained prior to making a decision since it also would have provided information on areas that may have high dust volume (from silt), high risk of erosion (and stream sedimentation), and would inform an analysis of the likelihood of potential for acid rock drainage along the road route, as well as necessary mitigation measures to address those impacts. Soil baseline information is important to determine the locations of areas rich in silt where, if winds are also high, dust may blow further than in areas dominated by gravel and affect greater areas of vegetation and water bodies, or contribute greater volumes of dust in those locations. Silt and dust additionally alter the rate of snowmelt where the dust is blown on the surface. These factors all heavily influence the extent and severity of impacts to permafrost from this project. Additionally, in areas with permafrost, it is likely to increase the cost of building that section of road, or indicate more frequent repairs may be needed in along that road section, suggesting higher maintenance costs.

While there was a map of permafrost locations in the FEIS, it contained the following caution that further underscores that the agency never had key baseline information necessary to take a hard look at the impacts of this project: “No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards.”⁷³⁶ This is unacceptable. Without soil baseline or specific information on permafrost, it is difficult to place confidence in this type of large-scale map to provide site-specific information. Such admissions also highlight that BLM violated NEPA’s mandate that an EIS be “supported by evidence that the agency has made the necessary environmental analyses.”⁷³⁷ “The information must be of high quality” because “[a]ccurate scientific analysis . . . and public scrutiny are essential to implementing NEPA.”⁷³⁸ BLM’s statements shrugging off the accuracy of maps and underlying data plainly violate this basic NEPA requirement. Site-specific information was also required to make an accurate comparison of alternatives, determine the overall impacts of the roadway, and develop meaningful mitigation measures. On remand, the agencies should ensure they have this key baseline information and incorporate that into the analysis in the SEIS.

Finally, BLM failed to adequately consider impacts to permafrost and tundra as a result of mining in the Ambler District, which is a direct effect of this project. Important details relevant to the extent of permafrost impacts are not sufficiently addressed: the type of mining (underground, open pit, mill, or heap leach); the volume of waste rock; and the volume of tailings, which influence whether waste rock and tailings can be placed underground, thereby influencing the amount of surface area required for long term storage. The amount of area required for storage — particularly if multiple mines are developed — may be restricted by the land area not susceptible to permafrost thaw. The entire mining belt appears to be in a location of continuous permafrost, and may be highly susceptible to landslides, subsidence, and other dramatic ground movement. These impacts have affected the Dalton Highway and Denali Park Road, will no doubt affect the Ambler Road, and could very possibly affect mine waste management.

⁷³⁶ 4 FEIS at Map 3-01.

⁷³⁷ 40 C.F.R. § 1502.1; *see also id.* § 1502.8.

⁷³⁸ *Id.* § 1500.1(b).

B. The Prior Analysis of AIDEA's Phased Approach and the Impacts to Permafrost Was Inadequate.

Given that more than 90% of the road corridors under Alternatives A and B traverse areas of continuous permafrost, it is unacceptable that BLM failed to provide site-specific and meaningful consideration of the impacts of this project on permafrost. The agencies also failed to take a hard look at the full range of impacts related to AIDEA's phased construction approach, and particularly the impacts of Phase I, where the risk of serious permafrost degradation was a significant concern previously flagged by agency staff. Despite AIDEA's clear plans to build and use the road in phases and the unique impacts specific to those phases, the EIS focused its analysis on construction and operation of the Phase III road and purported to only discuss differences between phases when they were significant.⁷³⁹ By focusing its analysis on the impacts of the Phase III road, the EIS largely ignored the impacts of phased construction to most resources; to the extent it addressed Phase I for resources such as permafrost, its analysis was deficient.

Overall, the EIS included very little detail on the road's phases or how they would be constructed — largely because of the lack of project designs and detailed construction plans.⁷⁴⁰ One of the key differences between Phase I and later phases is the shallow depth of the road embankment at Phase I, with later phases upgrading the road to a thicker embankment to insulate the road and mitigate impacts to permafrost.⁷⁴¹

The potential for permafrost degradation, particularly from the less-insulated Phase I, was a serious impact raised by agency staff and commenters.⁷⁴² EPA noted that about “92% of the

⁷³⁹ *Id.* at 3-2.

⁷⁴⁰ Letter from AIDEA to BLM re Request for Information AMDIAP F-97112 (2810) 032 rw, at 1 (Apr. 16, 2019); Email from A. Freeburg to C. Glassburn re Phone follow up (Aug. 8, 2019), Email from C. Glassburn to A. Freeburg re Re: Phone follow up (Aug. 8, 2019) (stating there was only a “conceptual level of design and development” and estimating AIDEA had only designed 7–30% of the project); BLM ROW at 6 (requiring later submission of information and detailed plans for each phase).

⁷⁴¹ 2016 AIDEA Application at 3–4; 1 FEIS at 2-3; Engineering Report at 7. Phase I could not be used during heavy rainfall or the spring and early summer because of the need to minimize roadway damage during breakup with its less rigorous design. 1 FEIS at 2-6; Email from Joe Durrenberger to Greg Dudgeon et al. re FWD: Response to Questions (Mar. 19, 2018).

⁷⁴² Ambler Road Environmental Impact Statement Subsistence Impacts Assessment Workshop Day 2 Meeting Minutes, at 5 (Apr. 9, 2019) (flagging Phase I could lead to sinkholes, contribute large sediment loads into streams, cause operations and maintenance concerns, and permafrost thawing will impact water quality in downgradient streams); Ambler Mining District Industrial Access Project Cumulative Impacts Assessment Workshop Day 1 Meeting Minutes at 7 (Apr. 8, 2019) [hereinafter Cum. Impacts Meeting Minutes] (indicating Phase I is the “vulnerable stage” and mitigation would be difficult to implement); *id.* at 16 (NPS noting it “wouldn't take much” to thaw permafrost at Phase I); PDEIS Agency Response Matrix at 4 (BLM responding to EPA that site-specific information on thaw subsidence risk does not exist and would be gathered later); 2019 EPA Comments, Enclosure at 3; *id.* at 9 (EPA requesting

[project] area is underlain by continuous permafrost susceptible to thawing.”⁷⁴³ In Gates of the Arctic, AIDEA estimated that 80% of the corridor would require road embankments greater than eight feet thick to protect permafrost from thaw.⁷⁴⁴ Groups also previously submitted technical comments underscoring the serious risks of Phase I, explaining that the depth of permafrost is likely to decrease at a rate of 0.5 feet per year until the construction of Phase III, with greater impacts at Phase I because of its shallower depth and lack of insulation.⁷⁴⁵ This is particularly troubling since AIDEA indicated the Phase I road could remain in place for up to ten years and be used for longer-term mine development.⁷⁴⁶

Despite these serious concerns, the FEIS lacked an adequate analysis of the unique and significant impacts to permafrost from Phase I. The FEIS has a cursory reference to the potential for phased construction to accelerate permafrost thaw because Phase I would not insulate the roadway similar to later phases.⁷⁴⁷ The FEIS briefly notes drainage changes could impound water and warm subsurface soils and that, if permafrost thaw issues occur during early phases, shoulder rotations and embankment cracks could impact the road’s surface, but the agencies did not analyze what impact those occurrences would have.⁷⁴⁸

These conclusory statements are not an adequate hard look at the full range of impacts from Phase I. Phase I has little, if any, mitigation for permafrost damage since it is lacking the insulation of later phases. Because Phase I would not include all the measures to insulate the roadway of later phases, the EIS needed to analyze the unique impacts specific to that phase, particularly for permafrost degradation. This includes an analysis of the extent and severity of permafrost degradation across the length of the road, how that degradation would be exacerbated by Phase I, how not having adequate insulation at Phase I could impact the road’s long-term viability, how that could alter the amount of gravel needed for the road and its continual maintenance, how climate change could further amplify the impacts, and how that particularly vulnerable stage of the project might cause a host of other serious problems in downgradient waters. Considering the impacts of the Phase II and III roads was not sufficient because those phases included greater insulation and did not present the same threats to permafrost degradation

quantification of permafrost impacts); Ambler Mining District Industrial Access Project Cumulative Impacts Assessment Workshop Day 2 Meeting Minutes at 5–6 (Apr. 9, 2019) (NPS staff explaining “everything flows from permafrost: water quality issues, erosion potential, long-term viability of road, and amount of gravel needed to support the road”).

⁷⁴³ 2019 EPA Comments, Enclosure at 1.

⁷⁴⁴ 2016 Revised App. at 4.

⁷⁴⁵ Engineering Report at 7.

⁷⁴⁶ The record contains conflicting statements about Phase I’s duration. Email from J. Durrenberger to Greg Dudgeon et al re FWD: Response to questions 2 (Mar. 19, 2018) (AIDEA indicating mine operations could use the Phase I road); 2016 Revised App. at 6 (indicating Phase II construction would commence once mine operations reach level requiring year-round access); 2 FEIS, Att. G at G-1–2 (indicating construction of different phases may overlap); Cum. Impacts Meeting Minutes at 4 (noting inconsistencies in time periods for Phase 1, and unknown timeframe for Phase 3).

⁷⁴⁷ 1 FEIS at 3-9.

⁷⁴⁸ *Id.*

as Phase I. Even so, the FEIS still did not take a hard look at the permafrost impacts from Phase II and III to understand if even those designs would actually be adequate to mitigate the impacts to permafrost. The agencies failure to adequately consider the unique impacts to permafrost violated NEPA.

The agencies' conclusion that the mitigation measures to address permafrost thaw were likely to be successful was also arbitrary.⁷⁴⁹ The agencies could not adequately analyze the likely scope of these impacts or ways to mitigate them because they did not have baseline information about the extent and depth of permafrost in the project area or thaw subsidence risk.⁷⁵⁰ As the Ninth Circuit recognized in analogous contexts, an agency's reliance on post-approval studies to gather baseline information, assess impacts, and then develop mitigation "deprives [the agency] of any foundation upon which to base their conclusion" that mitigation measures will be sufficient.⁷⁵¹ Without that information, the agency could "not know what impacts to mitigate, or whether the mitigation proposed would be adequate to offset damage."⁷⁵² The agencies' failure to take a hard look at the impacts to permafrost and ways to mitigate those impacts violated NEPA.

The FEIS also entirely failed to consider impacts from the "access trail" proposed as an initial step even prior to the Phase I Pioneer Road. As explained in the Engineering Report incorporated by reference into these comments (and previously submitted with comments), an access trail would be needed in advance of constructing the Pioneer Road, meaning that trees and brush along the road corridor will be removed.⁷⁵³ Once removed, permafrost degradation will accelerate significantly, to an average of .15 meters per year.⁷⁵⁴ Applying this data to the Ambler Road project, over 2 years, the permafrost can be expected to decrease by about 1 foot, ie, by the start of Phase 2 road construction.⁷⁵⁵ The permafrost degradation rate of about .5ft/year can be expected to continue unchanged until a full depth embankment is constructed.⁷⁵⁶ The FEIS entirely failed to consider impacts from the access trail. Additionally, the FEIS did not consider damage to tundra and permafrost resulting from use of the road during spring break up. Because there is no enforceable mechanism to restrict public access of the road during flooding, BLM must consider the adverse impacts to permafrost resulting from spring-time use of the Pioneer Road.

⁷⁴⁹ *Id.* at 2-10, 3-9.

⁷⁵⁰ See PDEIS Agency Response Matrix at 4 (indicating site-specific information on thaw subsidence risk does not exist and AIDEA will do geotechnical investigations to evaluate permafrost and risk of thaw and then design project to consider the risks); 2016 Revised App. at 37-38 (AIDEA acknowledging "the extent and depth to permafrost is widely unknown" and stating AIDEA needs more detailed thermal information).

⁷⁵¹ *LaFlamme*, 852 F.2d at 400.

⁷⁵² *Or. Nat. Desert Ass'n*, 840 F.3d at 571.

⁷⁵³ Engineering Report at 7.

⁷⁵⁴ *Id.*

⁷⁵⁵ *Id.*

⁷⁵⁶ *Id.*

Adding embankment insulation to the road soon after removing earth above the permafrost, especially in ice rich thaw-sensitive areas, has the potential to reduce permafrost degradation.⁷⁵⁷ Although AIDEA's construction plans are still largely unclear and undefined, there is some indication they would establish the entire access trail, then building the entire Pioneer Road (Phase I), and then building the full depth embankment (Phase II).⁷⁵⁸ BLM should consider an alternative in the SEIS wherein AIDEA would immediately construct the full depth embankment in consecutive segments or implement mitigation measures from the start to prevent permafrost degradation. This would allow pristine areas of land to remain untouched longer and limit permafrost degradation and associated road quality deterioration. This should have been considered as an alternative in the prior FEIS, and should be evaluated in the SEIS.

C. The SEIS Should Consider Alternative Designs and Mitigation Measures to Address Permafrost and Other Impacts.

The prior decision-making process almost entirely failed to propose mitigation measures for the project to address permafrost and other impacts to soils and vegetation, and largely deferred to AIDEA to develop those measures in the future after collecting baseline data. The FEIS stated that “[p]rovisions for reducing permafrost degradation would be included in project design” and “would be determined during the design/permitting phase and would be incorporated into ROW authorization and permit stipulations.”⁷⁵⁹ As discussed repeatedly throughout these comments with regard to multiple aspects of this project, this is completely contrary to NEPA and needs to be addressed as part of the remand process. The agencies needed to obtain adequate baseline and project design information prior to authorizing this project to ensure that serious impacts would not be overlooked or unaddressed. Allowing AIDEA to do the vast majority of the design work and studies for this project after the completion of the NEPA process did not allow for a meaningful analysis and did not meet the agencies' NEPA obligations.

The agencies must analyze the use of mitigation measures to address these impacts, including the use of different materials to reduce impacts. As explained in detail in the Engineering Report previously submitted by groups, “[r]igid foam insulation board (RFIB) can be added to any full-depth embankment design in the EIS and result in substantial gravel reduction. To be more specific, adding RFIB into the current EIS proposed fill design, for moderate soils, would result in about 61% reduction of gravel volume requirements during the construction period.”⁷⁶⁰ Although the FEIS mentions that such measures may be considered to mitigate impacts, it in no way analyzes the potential environmental tradeoffs.

Additionally, use of insulation could reduce the footprint of the roadway itself by 28%.⁷⁶¹ Although both insulated and “gravel only” roadway surface and shoulder widths will remain the same, an insulated road embankment base will be substantially narrower than a “gravel only”

⁷⁵⁷ *Id.* at 8.

⁷⁵⁸ *Id.*

⁷⁵⁹ 1 FEIS at 2-11.

⁷⁶⁰ Engineering Report at 1.

⁷⁶¹ *Id.* at 5.

embankment.⁷⁶² A reduced road footprint will impact fewer acres of arctic tundra across the entire length of the road. Use of appropriate insulation will reduce impacts to tundra and permafrost from continual maintenance and AIDEA's contemplated gravel mining for the road in perpetuity, as decreasing the amount of gravel needed for the project by 61% would reduce the number and/or size of mines required for the project.⁷⁶³ "Without considering the potential for vastly decreasing the gravel quantity requirements, this EIS does not offer an accurate representation of the potentially different extent of impacts to the environment."⁷⁶⁴ This and other mitigation measures should have been considered in the FEIS, and must be evaluated now as part of the SEIS.

D. The Prior Decision Did Not Adequately Address the Risks from Invasive Plant Species.

The FEIS failed to adequately account for the likely significant spread of non-native vegetation that could occur from the construction and use of a roadway. There are significant risks from invasive species along any of the action alternatives considered in the FEIS. Introduction of invasive species will create competition for the native species and exacerbate the effects of the roadway system.

Currently, the natural vegetation in the roadway's area is largely intact. The FEIS acknowledged that there is no comprehensive surveys of baseline information related to vegetation or rare plants that could be along the corridor.⁷⁶⁵ BLM must perform these surveys in order to establish important baseline information; making conclusory statements that there is "sufficient information" does not make it so.⁷⁶⁶ It is unclear what information BLM is citing to as sufficient since the FEIS indicates there is insufficient documentation of non-native invasive species. On remand, the agencies should require the completion of baseline surveys to determine locations of venerable rare plants and the risks that non-native species might have upon the natural ecosystems. BLM's ROW itself recognizes AIDEA will need to provide that information prior to conducting surface disturbing activities, so it makes no sense that the agencies deferred gathering that baseline data to incorporate into the site-specific analysis of this project and how to address its impacts.⁷⁶⁷ Those baseline surveys are necessary to appropriately account for the site-specific conditions and be able to establish robust and targeted mitigation measures.

The FEIS does not adequately address the risks from invasive species, and the proposed mitigation measures are inadequate to protect against their spread. As the FEIS acknowledged, the spread of invasive species would create a long-term impact from the roadway if uncontrolled.⁷⁶⁸ Both TAPS and the Dalton Highway allowed for the establishment of non-native

⁷⁶² *Id.* at 6.

⁷⁶³ *Id.* at 5.

⁷⁶⁴ *Id.* at 6.

⁷⁶⁵ 1 FEIS at 3-58.

⁷⁶⁶ *Id.*

⁷⁶⁷ BLM ROW ex. A at 9.

⁷⁶⁸ 1 FEIS at L-186.

invasive species.⁷⁶⁹ Invasive species can hitchhike on vehicles and freight.⁷⁷⁰ BLM's maps show the significant concentration of these species along the Dalton Highway.⁷⁷¹ The Ambler Road would add transportation corridors for these types of vegetation into a previously pristine area. AIDEA proposed to conduct baseline surveys to identify already existing, non-native invasive species in rare plants prior to construction.⁷⁷² But it is not clear from the FEIS if such surveys would happen systematically, how thorough they would be, or when they would occur. Most phases of construction would occur during winter when there is snow on the ground. BLM did not previously address how the identification of plant species would occur prior to initial construction or if there are other survey plans.

The FEIS also makes the conclusory assertion that impacts from the spread of invasive species could be minimized through baseline and periodic surveys, as well as implementation of an Invasive Species Prevention and Management Plan (ISPMP).⁷⁷³ Yet, BLM has not developed this plan and merely proposes general properties and approaches the plan should incorporate — “The ISPMP would incorporate a landscape management approach across landowner boundaries, BMPs, Early Detection Rapid Response (EDRR), and reporting requirements to land managers. The ISPMP must be approved by the jurisdictional land manager prior to authorization of road construction and operations.”⁷⁷⁴ As an initial matter, there are several different jurisdictional land managers across the length of the road corridor, which could lead to different requirements along different stretches of the road. This would be hard for operators and the public to understand and make it hard to enforce meaningful standards. Further, this is exactly the type of plan that the public should have had an opportunity to review as part of the prior permitting process. The public is unable to give meaningful feedback on the methods proposed to control and eradicate invasive species. The FEIS threw out a bucket list of possible measures and asserted that yet-to-be-developed plan would be sufficient to address invasive species, but declined to establish in any specific way how they would target and prevent the introduction of non-native species to the area. On remand, the SEIS should include additional measures and specificity for how invasive species issues will be addressed.

In the SEIS, the agencies should expand the mitigation measure requiring mineral material (sand and gravel) originating from the Dalton Highway corridor to be inspected and certified weed free before use.⁷⁷⁵ BLM should require any materials from any location used for construction, including mineral materials and building materials for AIDEA's proposed infrastructure and temporary construction camps along the roadway, to be certified weed free. Without this measure, building materials may spread non-native plants. The SEIS should also add robust monitoring requirements for non-native and invasive species. The current measures

⁷⁶⁹ U.S. Fish and Wildlife Alaska, *Everyone Loses: Invasive Species in Alaska* (June 20, 2017), available at <https://medium.com/usfws/everyone-loses-invasive-species-in-alaska-e5dace94237c>.

⁷⁷⁰ *Id.*

⁷⁷¹ 4 FEIS at Map 3-11.

⁷⁷² 3 FEIS at N-16, N-18.

⁷⁷³ 1 FEIS at 3-60; 3 FEIS App. N at N-27.

⁷⁷⁴ 3 *id.* App. N at N-27.

⁷⁷⁵ *Id.* at N-28.

proposed in the DEIS do not include a clear monitoring plan. This is integral to the effectiveness of any mitigation measure and catching infiltration of non-native species.

The FEIS claimed that mitigation measures will be enough to control noxious weeds and invasive species using methods that will not make waterways or wildlife vulnerable in any of the proposed alternatives. Without an actual management plan for review by the public, the FEIS had no grounds to establish that spread of invasive species will likely be mitigated by those measures. The FEIS also did not explain why certain areas would have slightly elevated risk. The significant risks shown by the Dalton Highway is a clear indicator of the actual risk a roadway presents and which the agencies cannot brush aside without analysis.

In sum, on remand the agencies should require the completion of baseline surveys prior to making any new decisions, should account for the significant risk any alternative poses, and should develop a robust mitigation plan that is available to the public for review.

VII. BLM'S ANALYSIS OF AIR QUALITY IMPACTS IS INADEQUATE.

An adequate NEPA analysis and compliance with the Clean Air Act requires BLM to quantitatively analyze the air pollution impacts associated with each alternative considered in the SEIS, ensure prevention of significant deterioration of air quality, fully analyze a suite of enforceable mitigation measures, and address impacts from greenhouse gas emissions. As described above, BLM is also required to ensure its right-of-way authorization would comply with the Clean Air Act pursuant to its obligations under FLPMA. In order to adequately analyze these issues, BLM should have performed a complete quantitative analysis of criteria pollutants and modeled impacts, but failed to do so in the final EIS. Further exacerbating this issue, BLM's qualitative analysis in the final EIS is deficient. These issues must be rectified in the SEIS process.

Baseline levels of air quality must be established prior to allowing any road construction activities. In the absence of a baseline monitoring data record that is representative of ambient air conditions in the southern Brooks Range, BLM should ensure that quality-assured monitoring data are collected within the program area in accordance with EPA and State data quality criteria and that the data are made available to the public, prior to allowing any gravel mining or other construction activities to commence. No air pollutant monitoring sites are currently within the analysis area for the proposed Ambler Road; monitoring sites nearest the area are in Fairbanks and Denali National Park and Preserve ("Denali").⁷⁷⁶ The final EIS relies on air quality data from Denali National Park and Preserve for its baseline qualitative discussion, but the project is roughly 200 miles north of the closest EPA designated Class I protected area of Denali.⁷⁷⁷ BLM states that this is due to a "lack of representative air monitoring data over the large geographic area."⁷⁷⁸ The final EIS does not explain what the differences may be between background air quality within the project area and Denali, which is many miles away and within a protected National Park.

⁷⁷⁶ 1 FEIS at 3-40.

⁷⁷⁷ *Id.*

⁷⁷⁸ *Id.*

Understanding background concentrations of pollutants is important to determining whether a project's emissions would violate air quality standards. The Ambler region is home to numerous communities and activities, such as mining exploration, occur in the area.⁷⁷⁹ This project would also dramatically increase emissions along the Dalton Highway. Without background data about the region where the project would be located, or a discussion of how BLM could reasonably account for differences between air quality in Denali and the project area, the agencies cannot adequately consider the incremental impacts of emissions from the project.⁷⁸⁰

The area of the proposed Ambler Road contains many rural communities, but BLM does not discuss how human-induced air pollutant emissions from industrial processes and mobile emissions may alter the air quality in this region and does not adequately explain its assumptions that background emissions would be similar across these two areas.⁷⁸¹ The lack of relevant background data for the project area is a significant shortcoming that should be addressed during this remand. BLM should collect accurate background data to support its air quality analysis before it prepares a SEIS.

After establishing baseline air quality, BLM must complete a comprehensive, quantitative modeling analysis of construction and use of the Ambler Road in this SEIS in order to prevent significant impacts. BLM completed a limited quantitative analysis in the final EIS, but that analysis suffered from multiple, significant deficiencies which must be corrected as part of the SEIS process to ensure compliance with both the Clean Air Act and NEPA.

First, the final EIS failed to analyze all project emissions in its quantitative analysis. The EIS stated that it considered the type, duration, and potential magnitude of air pollutants, and pointed to Appendix D, Table 24 as showing construction and operation activities with the potential to generate air emissions.⁷⁸² But that table only considered emissions from road traffic *after* the project is built.⁷⁸³ It did not consider emissions from construction activities, aircraft traffic, gravel mining, camp use, and maintenance activities — which are all within the project's scope. Because AIDEA provided “no specific construction and operations plan,” the EIS stated it was not possible “to quantify the criteria air pollutants for construction, or maintenance and operations activities.”⁷⁸⁴ By only considering emissions from very limited operational activities, the EIS skewed its analysis and minimized the extent and severity of air quality impacts. This is

⁷⁷⁹ 2 FEIS App H at H-43 (Appendix H acknowledging human use of the area but not explaining the severity or magnitude of human-caused emissions on background air quality).

⁷⁸⁰ *Great Basin Res. Watch*, 844 F.3d at 1101; *see also* PDEIS Agency Response Matrix at 6 ((EPA recommending the FEIS, at a minimum, provide quantitative estimates of emissions along the Dalton Highway).

⁷⁸¹ *Id.*

⁷⁸² 1 FEIS at 3-42.

⁷⁸³ 1 FEIS App. D at D-20–21.

⁷⁸⁴ 1 FEIS at 3-42.

also true for its quantitative assessment of greenhouse gases (GHGs), which considered emissions from a narrow, but different, subset of construction and operation activities.⁷⁸⁵

To comply with NEPA, agencies must determine whether the project would comply with air quality standards, either qualitatively or quantitatively.⁷⁸⁶ To the extent the final EIS quantified a fraction of the project's emissions,⁷⁸⁷ it did not explain how those emissions relate to National Ambient Air Quality Standards (NAAQS), standing alone or in tandem with background air quality. Understanding a project's emissions and how they contribute to background pollutant concentrations is critical to determining whether a project's emissions would violate NAAQS.⁷⁸⁸ No such analysis occurred, and should be completed in the SEIS.

BLM must independently estimate the emissions inventory, model air pollution impacts associated with each of the action alternatives, and compare these results to the baseline of its No Action Alternative. The absence of modeling deprives the public and decision makers from understanding the air quality impacts of the Ambler Road and evaluating the potential tradeoffs and differences between alternatives, including between the no action and the action alternatives. Air quality modeling is a necessary tool for assessing future air pollutant impacts under NEPA and supporting BLM's conclusion that construction and use of the Ambler Road would be unlikely to exceed health-based NAAQS and thresholds set to protect against adverse impacts to air quality related values. A quantitative modeling assessment of the air quality impacts from the alternatives, based on modeling of emissions associated with the specific assumptions for the action alternatives — including the location of the road, gravel mines, phases of construction, and road traffic patterns — would be needed in order

to understand whether or not impacts would be greater under certain alternatives for some pollutants, in some locations. This analysis should be included in the SEIS.

The final EIS's analysis of the qualitative impacts to air quality is also wildly deficient and falls far short of the agency's NEPA obligation to take a hard look at impacts. As an initial matter, the final EIS entirely failed to consider AIDEA's proposal to develop the road in three phases, with phase one being a pioneer road that will require active maintenance and continual construction. The final EIS completely ignores the fact that impacts from traffic and road use would be ongoing at the same time as construction since there will be simultaneous work to maintain the pioneer road and/or construct subsequent of road phases, with associated gravel

⁷⁸⁵ 1 FEIS App. D at D-22 (not evaluating GHG emissions from operation of maintenance stations, annual maintenance activities through anticipated life of road, construction and operation of any mines, or vehicle use of road); 1 FEIS App. D at D-23 (considering only GHG emissions from ore transport).

⁷⁸⁶ 40 C.F.R. §1502.2(d) (requiring EIS “state how alternatives considered in it and decisions based on it will or will not achieve the requirements [NEPA] and other environmental laws and policies”); *see also* *Great Basin Res. Watch*, 844 F.3d at 1103; *Montana Wilderness Ass’n v. McAllister*, 658 F. Supp. 2d 1249, 1256 (D. Mont. 2009).

⁷⁸⁷ 1 FEIS App D at D-19 to -21.

⁷⁸⁸ *See Tinicum Twp., Pa. v. U.S. Dep’t of Transp.*, 685 F.3d 288, 294–95 (3d Cir. 2012) (generally explaining Clean Air Act and overlap with NEPA).

mining activities. Emissions from these activities would occur at the same time and within the same area, vastly increasing emissions and significantly impacting air quality.

The qualitative analysis was further flawed because it focuses on particulate matter from fugitive dust but overlooks emissions from the extensive vehicle and aircraft traffic needed to support road construction, bridge building, gravel mining, culvert installation, and worker transport.⁷⁸⁹ The non-fugitive dust emissions from these activities are not discussed. To the extent the EIS acknowledged emissions from construction camps and maintenance stations, it merely noted that “[a]ir quality impacts would also result” from these sources.⁷⁹⁰ But the EIS did not identify the types of emissions, their duration, or magnitude.⁷⁹¹ Similar to the flaws with BLM’s limited quantitative analysis, the qualitative analysis also ignored that activities to maintain the Phase I road and construct subsequent phases — with associated gravel mining, construction, and worker transport — would occur while the road is in use, compounding those emissions.⁷⁹² The impacts from these emissions occurring simultaneously are not analyzed in the EIS, which treats “operational” or traffic emissions as post-construction.⁷⁹³ For these reasons, the EIS’s qualitative analysis was insufficient.

By way of comparison, the Greater Mooses Tooth 1 Supplemental EIS modeled air quality impacts from construction and operation of a substantially smaller seven-mile gravel road, one gravel pad, and associated gravel mine. There, the quantitative analysis found there would be increases in nitrogen dioxide (NO₂), sulfur dioxide (SO₂), and carbon monoxide from construction activities.⁷⁹⁴ Indeed, for the GMT1 project the nitrogen dioxide emissions alone were predicted to reach **89%** of the allowable NAAQS/AAAQS levels.⁷⁹⁵ It is shocking that BLM states that a proposal to build a road approximately **30 times longer** “would not be expected to exceed applicable air quality standards.”⁷⁹⁶ The final EIS did not respond to comments questioning how a road approximately 30 times longer with 40-plus gravel mines would not be expected to exceed the NAAQS, or otherwise justify its conclusory assertions that the project would not violate these standards in the absence of accurately quantifying and modeling the project’s emissions. These flaws should be rectified in the SEIS process by way of BLM completing a quantitative analysis and modeling all of the Ambler Road’s project emissions.

⁷⁸⁹ 1 FEIS at 3-42; 1 FEIS at 2-5–8.

⁷⁹⁰ 1 FEIS at 3-43.

⁷⁹¹ *Great Basin Mine Watch*, 456 F.3d at 971 (explaining general statements about possible impacts are not a hard look).

⁷⁹² Coalition DEIS Comments at 110 (public comments explaining EIS needed to consider emissions from concurrent construction and operation).

⁷⁹³ 1 FEIS at 3-42.

⁷⁹⁴ 1 Bureau of Land Mgmt., Final Supplemental Environmental Impact Statement for the Alpine Satellite Development Plan for the Proposed Greater Mooses Tooth One Development Project 261–65 (2014).

⁷⁹⁵ *Id.* at 264.

⁷⁹⁶ 1 FEIS at 3-45.

Further, the FEIS's conclusory assertions that exceedances of air quality thresholds would be "minimized" because the nearest communities to the road are eight miles away and the winter construction season is "short" are not supported by any analysis in the record.⁷⁹⁷

Moreover, BLM should consider emissions produced as a result of mining exploration and development activities in the Ambler Mining District. As discussed above, the road and mining development are connected actions and their impacts must be considered together in a single EIS. The final EIS merely states that "[i]mpacts from mines in the District will be site-specific and permitted specifically for proposed operations and potential emissions to avoid exceeding air quality standards."⁷⁹⁸ BLM cannot kick the can down the road, so to speak, on this critical analysis, as any emissions from mining activities will be additive to emissions from construction, operation, and maintenance of the proposed road.

The SEIS must analyze or condition construction and use of the Ambler Road on a comprehensive set of required, measurable, and enforceable mitigations to ensure there will be no significant impacts to air quality associated with the project. The final EIS contained no legitimate mitigation measures directed at minimizing or avoiding air quality impacts. The final EIS references points to requirements of the Alaska Department of Environmental Conservation's Division of Air Quality and general requirements that AIDEA create a future dust control plan, but those are merely permitting requirements of other agencies and otherwise not effective, enforceable mitigation measures.⁷⁹⁹ Additionally, specific protective measures regarding use of asbestos must be included in the SEIS, as well as other meaningful, project-specific mitigation measures to reduce impacts to air quality.

Monitoring does not mitigate against impacts to air quality, and BLM should not conflate these requirements. NEPA requires BLM to consider mitigation measures and reasonable alternatives to eliminate or mitigate adverse impacts to air quality. BLM must put forth an alternative that ensures no significant air quality impacts and full compliance with the Clean Air Act. This would include one that fully considers whether there will be unacceptable health risks associated with criteria and hazardous air pollutant impacts, significant cumulative visibility impacts, or significant deterioration of air quality. BLM should use modeling to determine what specific mitigation measures and pace / location / intensity of construction and traffic patterns on the Ambler Road will be needed to ensure BLM's actions will not cause or contribute to violations of the NAAQS or adverse impacts to air quality related values, and then BLM must include those measures as enforceable mitigation measures in the SEIS.

Finally, as discussed further in the next section, BLM should adequately address greenhouse gas emissions and climate change impacts from construction of the Ambler Road, its associated mines, and future traffic in the area. The first step for such an analysis requires BLM quantitatively model the significance of GHG emissions from the Ambler Road project and its cumulative effects.

⁷⁹⁷ *Id.*

⁷⁹⁸ *Id.* at 3-47.

⁷⁹⁹ *Id.* at 3-42.

VIII. THE SEIS MUST ADEQUATELY ADDRESS AND DISCLOSE CLIMATE CHANGE RELATED IMPACTS.

Any new environmental analysis of the Ambler Road must fully account for the project's direct and cumulative climate impacts, as well as the impacts of climate change on the road and connected mines. NEPA requires that agencies discuss not only a proposed action's environmental effects, but also their significance.⁸⁰⁰ Therefore, in addition to accurately quantifying the GHG emissions consequences of the Ambler Road and associated mining, BLM must put the project's emissions in context. Because any project's emissions appear "individually minor" when compared against global (or even national) totals, quantifying emissions is only a first step; agencies must also explain the project's "incremental impact" on climate change.⁸⁰¹ In other words, an agency must explain how a project's GHG emissions would move the planet closer or further away from unacceptably dangerous warming, or a "tipping point" at which catastrophic impacts would occur.⁸⁰² In conducting this analysis, BLM must consider high quality and accurate climate science, including the most recent scientific information.⁸⁰³ BLM must also disclose what effect a decision to approve the Ambler Road would have on the United States' commitments to limit warming to below 1.5°C. Moreover, BLM should do more than just consider this information: It can and should reach a decision that is in accordance with the science and the federal government's commitment to respond to the climate crisis by selecting the no action alternative.

The proposal to authorize construction of a 211-mile industrial road to access and develop an extensive mining district in a remote region of Alaska, which would require a major build-out of infrastructure and a massive transportation network including trucks, airplanes, helicopters, trains, and ships, must be analyzed in the context of the current global climate crisis.

An overwhelming international scientific consensus has established that human-caused climate change is already causing severe and widespread harms and that climate change threats are becoming increasingly dangerous. The climate crisis, caused primarily by fossil fuel emissions, poses an existential threat to every aspect of society. Fossil fuel-driven climate change has already led to more frequent and intense heat waves, floods, and droughts; more destructive hurricanes and wildfires; rising seas and coastal erosion; increased spread of disease; food and water insecurity; acidifying oceans; and increasing risk of species extinction and collapse of ecosystems. The climate crisis is killing people across the nation and around the

⁸⁰⁰ 40 C.F.R. § 1500.1.

⁸⁰¹ *Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1215–17 (9th Cir. 2008); *see also California v. Bernhardt*, 472 F. Supp. 3d 573, 623 (N.D. Cal. 2020) (“[Agencies] must communicate ‘the *actual* environmental effects resulting from . . . emissions’ of greenhouse gas, not just quantify [those emissions].”) (quoting *Nat'l Highway Traffic Safety Admin.*, 538 F.3d at 1216).

⁸⁰² *See Nat'l Highway Traffic Safety Admin.*, 538 F.3d at 1220–27 (concluding petitioners' argument raised substantial questions about the effects of the agency's action on the human environment).

⁸⁰³ 40 C.F.R. § 1500.1(b) (requiring “high quality” information and “[a]ccurate scientific analysis”).

world, accelerating the extinction crisis, and costing the U.S. economy billions in damages every year. The harms from the climate crisis and fossil fuel pollution are not felt equally, but instead fall most acutely on communities of color, as well as low-wealth and other frontline communities, thus worsening the environmental justice crisis. The vast scientific literature documenting these findings has been set forth in a series of authoritative reports from the Intergovernmental Panel on Climate Change (IPCC) and U.S. Global Change Research Program.⁸⁰⁴ The IPCC, the international scientific body for the assessment of climate change, concluded in its *Climate Change 2021: The Physical Science Basis* report that: “[i]t is unequivocal that human influence has warmed the atmosphere, ocean and land. Widespread and rapid changes in the atmosphere, ocean, cryosphere and biosphere have occurred,” and further that “[t]he scale of recent changes across the climate system as a whole – and the present state of many aspects of the climate system – are unprecedented over many centuries to many thousands of years.”⁸⁰⁵ Without limits on fossil fuel production and deep and rapid emissions reductions, global temperature rise will exceed 1.5°C and will result in catastrophic damages in the U.S. and around the world.⁸⁰⁶

Climate change is being acutely felt in Alaska, where parts of the Arctic are warming at four times the rate of the rest of the world.⁸⁰⁷ The effects of warming in Arctic Alaska have been especially severe. The Arctic’s average winter temperature has increased by 6°F over the past 60 years, and the Arctic is expected to warm by an additional 10°F to 12°F this century.⁸⁰⁸ In the Arctic, climate change is causing, and will continue to cause, sea-level rise, sea-ice melt, river flow changes, and permafrost thaw.⁸⁰⁹

The U.S. Global Change Research Program’s Fourth National Climate Assessment (NCA4), published in 2018, identified the risks of climate change that threaten the United States,

⁸⁰⁴ Intergovernmental Panel on Climate Change, *Summary for Policymakers, in Climate Change 2021: The Physical Science Basis*, Working Group I Contribution to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (2021), <https://www.ipcc.ch/report/sixth-assessment-report-working-group-i> [IPCC, *Summary for Policymakers* 2021]; U.S. Global Change Research Program, *Climate Science Special Report: Fourth National Climate Assessment, Vol. I* (2017), <https://science2017.globalchange.gov/>; U.S. Global Change Research Program, *Fourth National Climate Assessment, Volume II: Impacts, Risks, and Adaptation in the United States* (Rev. Mar. 2021), https://nca2018.globalchange.gov/downloads/NCA4_2018_FullReport.pdf [NCA4 Vol. II].

⁸⁰⁵ IPCC, *Summary for Policymakers* 2021 at 4 and 8.

⁸⁰⁶ IPCC, *Global Warming of 1.5°C: An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty* (2018), <https://www.ipcc.ch/sr15/> [IPCC 2018].

⁸⁰⁷ Mika Rantanen et al., *The Arctic has warmed nearly four times faster than the globe since 1979*, *Communications Earth & Environment* (2022)3:168 (Aug. 11, 2022).

⁸⁰⁸ BLM, *National Petroleum Reserve in Alaska, Final Integrated Activity Plan and Environmental Impact Statement*, Vol. 1 at 3-2 (June 2020).

⁸⁰⁹ *Id.* at 3-3.

and explained how a lack of mitigation and adaptation measures will result in dire climate consequences.⁸¹⁰ That report also confirmed that Alaska is on the front lines of climate change, as it is warming faster than any other state, and faces a myriad of issues associated with a changing climate:

As temperature and precipitation increase across the Alaska landscape, physical and biological changes are also occurring throughout Alaska’s terrestrial ecosystems. Degradation of permafrost is expected to continue, with associated impacts to infrastructure, river and stream discharge, water quality, and fish and wildlife habitat.⁸¹¹

Moreover, “[t]he impacts of climate change will likely affect all aspects of Alaska Native societies, from nutrition, infrastructure, economics, and health consequences to language, education, and the communities themselves.”⁸¹²

The SEIS should meaningfully consider and address both the potential effects of this project on climate change and the effects of climate change on the project itself and its environmental impacts.

A. The SEIS Should Adequately Address the Potential Effects and Contribution of the Proposed Ambler Road Project on Climate Change.

The Ambler Road proposal includes not only the 211-mile road, from the Dalton Highway to the Ambler Mining District, but also “multiple material sites, temporary construction camps and long-term maintenance camps, airstrips, a fiber optic communications line, radio communications sites, and guard stations.”⁸¹³ The term of the requested right-of-way is 50 years.⁸¹⁴

In addition to the direct impacts of the proposed Ambler Road, BLM should address the Road’s indirect effects, and cumulative effects.⁸¹⁵ The sole purpose of the Ambler Road is to allow for an industrial access road from the Dalton Highway to the Ambler Mining District.⁸¹⁶ As described above, the proposed road and future development in the Ambler Mining District are connected actions. At a minimum, the BLM has recognized that reasonably foreseeable mine development within the Ambler Mining District should be included as indirect and cumulative impacts.⁸¹⁷ All of these projects, activities, and impacts are reasonably foreseeable, and need to be included in an assessment of the potential greenhouse gas emissions should this project be

⁸¹⁰ U.S. Global Change Research Program, Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II: Report-in-Brief (2018).

⁸¹¹ *Id.* at 154–55.

⁸¹² *Id.*

⁸¹³ 1 FEIS at ES-1.

⁸¹⁴ *Id.*

⁸¹⁵ 40 C.F.R. §§ 1502.16(b), 1508.7.

⁸¹⁶ 1 FEIS at ES-1.

⁸¹⁷ *Id.* ES-2 to -3.

approved. The BLM assumes that the four leading mine prospects within the District — Arctic, Bornite, Sun, and Smucker — will all be developed as open pit mines with some underground mining.⁸¹⁸ Many of these activities are described in vague, cursory terms in the final EIS’s cumulative effects section, but the emissions-generating activities that will take place if the road is built and mines become operational is not fully explained or analyzed. NEPA requires that these reasonably foreseeable projects, activities, and impacts be included in the BLM’s analysis of greenhouse gas emissions and impacts on climate change.⁸¹⁹

The EIS also identified — without examining — numerous activities that will contribute to climate change, including the permanent destruction of wetlands and permafrost; considerable transportation including trucks, airstrips, helipads, trains, and ships with associated emissions; the significant burning of fossil fuels at the four mine development sites, permanent work camps, and additional infrastructure; and the additional considerable power that would be needed at the eventual smelters.

As described above, the final EIS quantified only a small subset of GHG emissions and other pollutants associated with the Ambler Road, inappropriately minimizing the extent of the emissions associated with the project’s construction, maintenance and operations. Even in the absence of tangible data, the final EIS offers the conclusory assertion that “[w]hile this project itself would not generate sufficient GHG emissions to affect global climate, incrementally with other projects, it would contribute to the accumulation of relatively small emissions worldwide that have together resulted in effects to the global climate.”⁸²⁰ Not only is this finding unsupported factually, it is contrary to BLM’s legal mandates under NEPA.

NEPA requires agencies to “provide the necessary contextual information about [an action’s] cumulative and incremental environmental impacts.”⁸²¹ For environmental impacts that have a tipping point, quantification of a project’s pollutants “is a necessary component” of the agency’s analysis but “not a sufficient description of the actual environmental effects that can be

⁸¹⁸ *Id.*

⁸¹⁹ 40 C.F.R. § 1508.8(b) (defining “indirect effects” as those “which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems); 40 C.F.R. § 1508.7 (defining “cumulative impact” as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.”); *see also* *Ctr. for Biological Diversity v. Nat’l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1216–17 (9th Cir. 2008) (“The impact of greenhouse gas emissions on climate change is precisely the kind of cumulative impacts analysis that NEPA requires agencies to conduct.”).

⁸²⁰ 1 FEIS at 3-44.

⁸²¹ *Nat’l Highway Traffic Safety Admin.*, 538 F.3d at 1217; *see also* *v. Bureau of Land Mgmt.*, 387 F.3d 989, 995 (9th Cir. 2004) (agencies must analyze the “degree that each [environmental] factor will be impacted”).

expected [from the project].”⁸²² Applying this rule in the climate change context, the Ninth Circuit has held that an agency must “evaluate the ‘incremental impact’ that [GHG] emissions will have on climate change or on the environment more generally in light of other past, present, and reasonably foreseeable actions.”⁸²³ Agencies must consider these emissions in context.⁸²⁴ District courts have further explained why quantifying emissions without additional context is insufficient.⁸²⁵ An agency “must communicate the *actual* environmental effects resulting from emissions of greenhouse gas, not just quantify them.”⁸²⁶ BLM must look at the Ambler Road and other projects “in combination with each other,”⁸²⁷ to determine “‘whether, or how, to alter the program to lessen cumulative impacts’ on climate change.”⁸²⁸ The SEIS should contain such an analysis, going far beyond the final EIS’s conclusory assertions that the Ambler Road’s unquantified emissions would be too small to effect global climate.

CEQ’s Final Climate Guidance provides guidance on how federal agencies should address climate change in their NEPA analyses.⁸²⁹ The Final Climate Guidance applies to all federal agency actions subject to NEPA, “including land and resource management decisions.”⁸³⁰ This guidance should be used by BLM in its reconsideration of the Ambler Road.

Further, various methodologies exist that are generally accepted in the scientific community to use in assessing the significance of such a project. For example, the cumulative lifecycle emissions from the Ambler Road and mines enabled by it, in combination with other fossil fuel production and other emissions, should be put in the context of the global and U.S. carbon budgets, based on climate change thresholds.

BLM should also use of the social cost of greenhouse gases to estimate the cost of the Ambler Road’s emissions.⁸³¹ Several courts have rejected agency refusals to use the social cost

⁸²² *Klamath-Siskiyou Wildlands Ctr.* 387 F.3d at 995; *see also id.* at 997 (setting aside environmental assessments that, among other things, quantified the total amount of spotted owl habitat that the projects would adversely affect but did not discuss “the effect of this loss on the spotted owl throughout the watershed”).

⁸²³ Nat’l Highway Traffic Safety Admin., 538 F.3d at 1216.

⁸²⁴ *Id.*

⁸²⁵ *California v. Bernhardt*, 472 F. Supp. 3d at 623 (citing Kevin M. Stack & Michael P. Vandenberg, *The One Percent Problem*, 111 COLUM. L. REV. 1385, 1393 (2011)).

⁸²⁶ *Id.* (internal quotation marks and alterations omitted).

⁸²⁷ *WildEarth Guardians v. U.S. Bureau of Land Mgmt.*, 457 F. Supp. 3d 880, 894 (D. Mont. 2020) (citing Nat’l Highway Traffic Safety Admin., 538 F.3d at 1217).

⁸²⁸ *Id.* (quoting *Churchill Cty. v. Norton*, 276 F.3d 1060, 1080 (9th Cir. 2001)).

⁸²⁹ *See* CEQ, Memorandum, Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews (Aug. 1, 2016).

⁸³⁰ *Id.* at 9-11.

⁸³¹ *High Country Conservation Advocs. v. U.S. Forest Serv.*, 52 F. Supp. 3d 1174, 1189-93 (D. Colo. 2014); *WildEarth Guardians v. Bernhardt*, No. CV 17-80-BLG-SPW, 2021 WL 363955, at *8-10 (D. Mont. Feb. 3, 2021); *California v. Bernhardt*, 472 F. Supp. 3d at 623.

of greenhouse gases as a means of evaluating the impact of GHG emissions.⁸³² The administration has also admonished: “It is essential that agencies capture the full costs of greenhouse gas emissions as accurately as possible, including by taking global damages into account.”⁸³³ Secretarial Order No. 3399 directs bureaus and offices to “use appropriate tools, methodologies, and resources available to quantify GHG emissions and compare GHG quantities across alternatives,” with the “social cost of greenhouse gases” being a “useful measure to assess the climate impacts of GHG emission changes for Federal proposed actions.”⁸³⁴ BLM did not even mention the use of this tool in the final EIS for the Ambler Road.

The Interagency Working Group on Social Cost of Greenhouse Gases has produced estimates for the social cost of carbon in order to “allow agencies to incorporate the social benefits of reducing [CO₂] emissions into cost-benefit analyses of regulatory actions.”⁸³⁵ The working group presented values for social costs of CO₂ from 2010 to 2050, ranging from \$10 to \$212 (in 2007 dollars per metric ton of carbon dioxide).⁸³⁶ These values can help in analyzing the costs imposed by the net GHG emissions that might eventually result from development, especially where BLM monetizes the purported economic benefits of the project.

The social cost of carbon is another method that BLM could use to quantify and disclose the harm caused by the proposed project’s greenhouse gas emissions. In fact, in three recent cases where the agency’s NEPA analysis quantified greenhouse gas emissions but claimed that it was impossible to discuss the effects of these emissions, courts held that the agency’s refusal to use the social cost of carbon to illustrate the impact of these emissions was arbitrary and capricious.⁸³⁷

⁸³² See, e.g., *Sierra Club v. FERC*, 867 F.3d 1357, 1375 (D.C. Cir. 2017); *Mont. Env’t Info. Ctr. v. U.S. Office of Surface Mining*, 274 F. Supp. 3d 1074, 1094–99 (D. Mont. 2017) (rejecting agency’s failure to incorporate the federal social cost of carbon estimates into its cost-benefit analysis of a proposed mine expansion); *High Country Conservation Advocs.*, 52 F. Supp. at 1190–93 (holding the social cost of carbon was an available tool to quantify the significance of GHG impacts, and that it was “arbitrary and capricious to quantify the benefits of the lease modifications and then explain that a similar analysis of the costs was impossible”) (emphases omitted). An agency may not assert that the social cost of fossil fuel development is zero: “by deciding not to quantify the costs at all, the agencies effectively zeroed out the costs in its quantitative analysis.” *Id.* at 1192; see also *Nat’l Highway Traffic Safety Admin.*, 538 F.3d at 1200 (holding that while there is a range potential social cost figures, “the value of carbon emissions reduction is certainly not zero.”).

⁸³³ Executive Order 13990, Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis, 86 Fed. Reg. 7037, 7040 (Jan. 25, 2021).

⁸³⁴ Secretary of the Interior, Order No. 3399, Sec. 5(b).

⁸³⁵ Interagency Working Group on Social Cost of Greenhouse Gases, Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis - Under Executive Order 12866, at 3 (Aug. 2016).

⁸³⁶ *Id.* at 4, ES-1.

⁸³⁷ *Sierra Club v. FERC*, 867 F.3d 1357, 1374 (D.C. Cir. 2017); *Montana Env’t Info. Ctr. v. U.S. Office of Surface Mining*, 274 F. Supp. 3d 1074, 1097 (D. Mont. 2017); *High Country Conservation Advocates v. United States Forest Serv.*, 52 F. Supp. 3d 1174, 1190-91 (D. Colo.

Developed by more than a dozen federal agencies and offices, the Interagency Working Group on the Social Cost of Greenhouse Gases’ (“IWG”) social cost of carbon protocol is an appropriate tool for analyzing the climate impacts of the greenhouse gas emissions of the Ambler Road proposal. The social cost of carbon provides a metric for estimating the economic damage, in dollars, of each incremental ton of carbon dioxide emitted into the atmosphere.⁸³⁸ By translating climate impacts, and tons of greenhouse gasses in particular, into dollars, the social cost of carbon offers BLM an easy to use and easy to understand tool that would allow the public and decisionmakers to better understand the climate impacts of the proposed project.

Further, NEPA requires BLM to “[i]nclude appropriate mitigation measures not already included in the proposed action or alternative.”⁸³⁹ Additionally, in considering the environmental consequences of the proposed action, BLM must include a discussion of the “[m]eans to mitigate adverse environmental impacts.”⁸⁴⁰ Mitigation includes avoiding the action altogether by not taking a certain action or parts of the action, and minimizing impacts by limiting the degree or magnitude of the action and its implementation, as well as restoration and compensation.⁸⁴¹ Mitigation must be assessed “in sufficient detail to ensure that environmental consequences have been fairly evaluated.”⁸⁴² The final EIS failed to consider a range of mitigation measures sufficient to reduce the Ambler Road’s direct, indirect, and cumulative climate impacts. BLM should therefore consider and address in the SEIS the various ways and methods that these emissions could be mitigated, including the emissions of the indirect and reasonably foreseeable future actions, and develop or include any alternatives focused on lowering these anticipated emissions.

To comply with NEPA, in the SEIS, BLM must quantify the overall greenhouse gas emissions that would result from the Ambler Road proposal, including all direct, indirect, and cumulative projects, activities, and impacts, and then meaningfully assess and disclose the impacts and consequences of these additional emissions.

B. The SEIS Should Adequately Address the Potential Impacts of Climate Change on the Proposed Ambler Road.

The Ambler Road is proposed in a region already heavily impacted by climate change, and would contribute to a continuing worsening climate through additional, significant greenhouse gas emissions that were not quantified or adequately disclosed in the final EIS. The SEIS must contain a detailed analysis of the relationship between climate change and the proposed action to comply with NEPA.

2014).

⁸³⁸ Interagency Working Group on Social Cost of Carbon, “Technical Support Document: Technical Updated of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866” (May 2013, Revised Aug. 2016).

⁸³⁹ 40 C.F.R. § 1502.14(e).

⁸⁴⁰ *Id.* § 1502.16(h).

⁸⁴¹ *Id.* § 1508.20.

⁸⁴² *Neighbors of Cuddy Mt. v. U.S. Forest Serv.*, 137 F.3d 1372, 1380 (9th Cir. 1998).

Continuous permafrost underlies the region of the proposed action, and the Ambler Road is expected to cause soils in the proposed corridors to warm and potentially thaw, as climate temperature trends and permafrost temperatures show a defined increase. BLM acknowledged that increased permafrost temperatures may lead to increased creep rates of soils on slopes and slope failures, and permafrost thawing and warming may lead to development of thaw settlement and thaw ponds.⁸⁴³ The road will negatively impact vegetation, permafrost conditions, and waterways in an area already under stress from climate change, making the cumulative effects of the project difficult to predict. As we saw recently with the Denali Park Road, building gravel roads through permafrost areas can lead to serious infrastructure problems with great environmental and financial consequences.⁸⁴⁴ BLM should closely consider the Denali Park Road as an instructive example of how gravel roads in permafrost landscapes will certainly degrade over time, and how such degradation may accelerate dramatically, hastened by thawing of the underlying layers of once-perpetually frozen permafrost. This is a particularly significant concern in light of the already high likelihood of permafrost degradation likely to occur from the start of this project if AIDEA is allowed to proceed with its Pioneer Road, as discussed earlier in these comments.

The SEIS must explain how the continually changing and warming planet will impact this proposed action and its direct, indirect, and cumulative impacts, as NEPA requires. For instance, how will the warming and thawing permafrost impact the road itself, the airstrips, and other infrastructure? How will the increase in precipitation, flooding, and intensity of storm events likely add to the anticipated environmental impacts of the reasonably foreseeable tailings basins, waste rock piles, and open mine pits? How realistic is both funding and effectiveness of perpetual water monitoring and treatment at the four mine sites in a continuing warming and changing climate including potentially increased precipitation? How would this project impact the integrity of permafrost and what are the climate implications? What sort of reclamation plan can be designed which will be effective 50 years in the future at the end of the road's useful life?

Studies analyzing precipitation in Alaska indicate that extreme precipitation events will increase in frequency and intensity over the coming decades.⁸⁴⁵ This could have disastrous effects on the road's stability and safety, given the numerous water crossings needed the proposed route paralleling the Brooks Range. And because the Ambler Road proposal is for a minimum period of 50 years, the analysis of the potential impacts resulting from the management of wastewater, tailings, and waste rock at the mine sites must consider what is currently being predicted for decades into the future. In fact, recent experience shows that abnormally high levels of precipitation and ensuing flooding can destroy waste dumps, seepage

⁸⁴³ 1 FEIS at 3-4.

⁸⁴⁴ Yereth Rosen, Worsening thaw-spurred landslide curtails access to Alaska's Denali park, REUTERS (APR. 26, 2021) <https://www.reuters.com/business/environment/worsening-thaw-spurred-landslide-curtails-access-alaskas-denali-park-2022-04-26/>.

⁸⁴⁵ See K. E. Bennett, *Changes in Extreme Hydroclimate Events in Interior Alaskan Boreal Forested Watersheds*, 197 (Dec. 8, 2014) (unpublished Ph.D. dissertation, University of Alaska Fairbanks).

capture systems, and mine access roads; cause impoundments to overflow and dams to be breached; and push water treatment costs over-budget or cause releases of untreated water.⁸⁴⁶

In sum, the BLM must consider and analyze all aspects of this proposal in the context of a changing climate and environment, and cannot assume conditions in this region over the next 50 years will be the same as the past or present.

IX. BLM'S ANALYSIS OF THE IMPACTS OF HARDROCK MINING IN THE AMBLER MINING DISTRICT WAS INSUFFICIENT.

As noted above, the hardrock mining — and particularly the imminent permitting of Trilogy's Upper Kobuk project — should have been considered as a connected action for purposes of the FEIS. Even to the extent the FEIS considered the hardrock mines at all as part of the cumulative impacts analysis, that analysis was deficient. The FEIS failed to provide adequate baseline data to characterize the existing environment, sufficient data or analysis on the potential impacts of the four mineral deposits considered reasonably foreseeable, or sufficient data or analysis on the access roads that would connect the Ambler Road to the mines identified as reasonably foreseeable. The agencies need to include a far more robust analysis of the impacts of hardrock mining in the SEIS.

A. The Agencies Failed to Obtain Adequate Baseline Data Within the Ambler Mining District.

The stated purpose of the proposed action is to open the Ambler Mining District to mineral exploration and development, including four projects that the FEIS considers reasonably foreseeable for full mine development. Yet, the FEIS fails to provide baseline information, including sufficiently detailed maps, to characterize the resources at risk from the potential direct, indirect, and cumulative effects of those projects. For example, there are no maps in the FEIS that provide sufficient detail of the Ambler Mineral District to identify the potential surface and groundwater resources at risk. Although Maps 9 & 10 in appendix H appear to be the most detailed, the scale is insufficient to identify anything but major rivers, and it is not clear that these maps were informed by actual on-the-ground baseline data about those aquatic resources.⁸⁴⁷

The associated narrative also omits any baseline information to characterize the environmental resources, including baseline data for specific rivers, streams, springs, wetlands or groundwater aquifers within the project area — again, most likely because much of that baseline information that is necessary to understand the region and the potential project impacts was not gathered prior to the last decision-making process.

The agencies must ensure that they have baseline data on water quality, stream flows, groundwater aquifers, and aquatic communities (including fish and fish habitat,

⁸⁴⁶ See W. McCullough, W. Jepson & B. Maehl, *Zortman: Dealing with Extreme Weather Events* at 5, 9-11, 15-16, 19, 26-28 (2011); T. D. Pearce *et al.*, *Climate Change and Mining in Canada*, 16 *Mitigation & Adaptation Strategies for Global Change* 347, 357-58, 360 (2011).

⁸⁴⁷ 2 FEIS App. H at H-105, -107.

macroinvertebrates, etc.). That baseline data should fully characterize the existing social and environmental conditions, including, but not limited to subsistence resources, soils, vegetation, amphibians, wildlife and wildlife habitat, wetlands, birds, cultural resources, hydrology, hydrogeology, air quality, and ambient sound, etc. to ensure that the agencies have the information necessary to analyze the potential impacts of the mining projects that will be directly connected to and furthered by construction of the Ambler Road.

B. The FEIS Failed to Adequately Analyze the Reasonably Foreseeable Impacts of Hardrock Mining.

Although the FEIS found that a number of future mining projects are “reasonably foreseeable” under NEPA, the FEIS was woefully inadequate in its review of the foreseeable impacts from hardrock mining across this region. As an initial matter, the FEIS made unrealistic and inappropriate assumptions about the timeframe for the likely impacts from mining in the region and use of the Ambler Road. The FEIS made a series of assumptions in its analysis of the proposed project, including the assumption that production activities at each deposit would continue year-round for 5-35 years, and that it is reasonable to expect that the life cycles of the larger deposits fit within the proposed 50-year lifespan of the road.⁸⁴⁸ The FEIS failed to consider other reasonable scenarios in which delays or additional production could extend the lifespan beyond the 50-year time frame associated with the road.

On remand, the agencies need to consider more recent information about the scale of likely development in the region. With Trilogy on the precipice of moving forward with permitting the first mine in the region with the Corps of Engineers, the analysis in the SEIS needs to be updated to reflect the current plans and details related to that project. After the release of the FEIS, Trilogy finalized its Arctic Deposit Feasibility Study and Technical Report, as well as a Technical Report for the Bornite deposit.⁸⁴⁹ These reports, along with any CWA section 404 permitting materials that have been submitted to the Corps, should be incorporated into the analysis in the SEIS. The FEIS did not fully account for or analyze the impacts of these foreseeable mining projects, which should be analyzed in far more depth as connected actions in the SEIS.

The SEIS also needs to account for more recent exploration activity that is currently occurring and will only increase with the potential for this road to be built. There is new information about other potential mining developments in proximity to the road since the release of the FEIS, which should lead to an expanded area of analysis for future development. The reasonably foreseeable development scenario in Appendix H assumed that the four most advanced projects in the Ambler Mining District (Arctic, Bornite, Sun, and Smucker) would be developed.⁸⁵⁰ While the FEIS acknowledges the potential for other development outside of the

⁸⁴⁸ *Id.* at H-5 to -6.

⁸⁴⁹ Trilogy Metals, Inc., Arctic Feasibility Study: Alaska, USA: NI 43-101 Technical Report (2020) [hereinafter Arctic Feasibility Study]; Trilogy Metals, Inc., NI 43-101 Technical Report on the Bornite Project, Northwest Alaska, USA (2022).

⁸⁵⁰ 2 FEIS at H-6.

District, none are considered reasonably foreseeable development,⁸⁵¹ nor are they depicted clearly on the Appendix H maps.⁸⁵² However, in May 2022, South32 USA applied for hardrock exploration permits for its Roosevelt Project, which lies to the east of the District along Alternatives A and B.⁸⁵³ As has been noted in the media,⁸⁵⁴ the feasibility of such development is linked to construction of the Ambler Road, making it reasonable for analysis in the SEIS. Furthermore, activity at these sites is not simply “foreseeable” but is already having an impact, with numerous helicopter landing sites and 80 drill holes slated for 2022 and more on the horizon. Such helicopter and exploration activity would be cumulative to any associated with road preparation and construction, resulting in additional impact to wildlife and subsistence hunters that should be considered in the SEIS. Claims owned by Trilogy Metals that lie near the proposed alternatives but outside the District, such as the Helpmejack and Malamute claims, likewise should be analyzed in the SEIS.

The FEIS was also deficient in numerous other regards and ignored a broad range of impacts from even what it acknowledged was foreseeable. On remand, the agencies should provide qualitative and quantitative information about the full range of potential impacts associated with hardrock mining specific to the environmental resources within the Ambler Mining District. The DEIS dismisses any attempt to quantitatively analyze the impacts of the proposed mineral projects on the environment within the Ambler Mining District, stating that there is insufficient information. It failed to include the potential impacts described within the NI-43 101 technical reports for the Arctic and Bornite Project. It also failed to use hypothetical mining scenarios to quantify the effects of mining in the Ambler Mining District, as has been done elsewhere (e.g., in the Bristol Bay Watershed Assessment). The SEIS should include a detailed analysis of a broad range of potential impacts to specific water bodies, wetlands, aquatic communities, subsistence, and other resources.

The FEIS inappropriately referred to other unrelated EISs in place of conducting an adequate analysis for purposes of this specific project and region. The FEIS points to and incorporates by reference the Kensington Gold Project Final Supplemental EIS, Pogo Gold Mine Final EIS, Red Dog Mine Extension Aqqaluk Project Final Supplemental EIS (EPA 2009), and Kobuk-Seward Peninsula Resource Management Plan as examples of “typical” mines.⁸⁵⁵ It is insufficient to reference quantitative information located in other documents, rather than providing that information within the Ambler Road EIS specific to this region. Furthermore, these documents are dated and fail to disclose the full range of impacts associated with even

⁸⁵¹ *Id.* at H-4.

⁸⁵² *Id.* at H-105 to -123.

⁸⁵³ South32 USA Exploration, Inc. 2022. Application for Permits for Hardrock Exploration: Koyukuk Mining District. Roosevelt Project-West. 4 May 2022. Application for Permits to Mine in Alaska (APMA) 20222537, <https://aws.state.ak.us/OnlinePublicNotices/Notices/View.aspx?id=207175> (last visited Oct. 24, 2022).

⁸⁵⁴ Shane Lasley, *South32 expands exploration in Alaska*, North of 60 Mining News, Jan. 27, 2022, <https://www.miningnewsnorth.com/story/2022/01/27/mining-explorers-2021/south32-expands-exploration-in-alaska/7194.html> (last visited Oct. 24, 2022).

⁸⁵⁵ 2 FEIS at H-8.

those mine operations, let alone ones in this specific region. For example, the Kensington Mine was recently cited for 200 water quality violations, including discharges of acid mine drainage into Lower Slate Lake,⁸⁵⁶ and acid mine drainage was released into East Fork Slate Creek during construction between 2006 and 2010.⁸⁵⁷ Mine inspections at Kensington have also found that acid generating material had been placed as fill at the north end of the tailings facility.⁸⁵⁸ Attempts to seal the seeping water from cracks and holes in the shotcrete were ineffective. As a result, acid mine drainage resulted in water quality impacts to Lower Slate Lake. None of these impacts are described in the 2004 Supplemental EIS cited to in the FEIS for the Ambler Road.

Similarly, the Red Dog mine has repeatedly spilled mine concentrate, containing high concentrations of zinc, along its haul road⁸⁵⁹ — impacts that occurred after the referenced 2009 FEIS, including an estimated 250,000 pounds in 2012, 10,000 gallons in 2014, 17,125 gallons in 2015, 140,000 in 2016 and 5,300 pounds in 2019.⁸⁶⁰ Red Dog has also released fugitive dust, causing impacts to vegetation and subsistence resources, and the release of metals and other contaminants from the mine into streams and the Wulik River, which resulted in long-term violations and a fish kill.⁸⁶¹ In 2015, the Pogo Mine experienced a spill of 90,000 gallons of paste backfill as a result of a ruptured line, releasing a mix of mine tailings and cement containing three parts per million cyanide.⁸⁶² In 2011, the Pogo Mine exceeded its surface water discharge limits for pH, iron, manganese and cyanide, degrading water quality in the Goodpaster River.⁸⁶³ This information is not contained in the cited Pogo and Red Dog EIS documents, and thus was not considered by BLM or incorporated by reference in the Ambler Road FEIS.

⁸⁵⁶ U.S. EPA, *EPA and Coeur Alaska Settle Over Alleged Kensington Mine Pollution Discharges: Company Will Pay Fines After 2015 Inspection Reveals Violations of Multiple Env'tl. Rules*, Press Release (Aug. 8, 2019), available at <https://www.epa.gov/newsreleases/epa-and-coeur-alaska-settle-over-alleged-kensington-mine-pollution-discharges>.

⁸⁵⁷ Associated Press, *Coeur Alaska fined \$170,000 for Kensington Mine violation*, FAIRBANKS DAILY NEWS MINER (May 5, 2017); Peter Segall, *Acid mine drainage found at Kensington Mine: State Dep't Issues a Notice of Violation to Company for Violating Water Quality Standards*, JUNEAU EMPIRE (Sept. 30, 2008).

⁸⁵⁸ Bonnie Gestring & John Hadder, U.S. Gold Mines Spills & Failures Report: The Track Record of Env'tl. Impacts Resulting from Pipeline Spills, Accidental Releases and Failure to Capture and Treat Mine Impacted Water, EARTHWORKS (July 2017).

⁸⁵⁹ Elizabeth Harball, *State Raises Concerns about Red Dog Mine Spill Cleanups*, ALASKA'S ENERGY DESK (Aug. 3, 2019), available at <https://www.ktoo.org/2019/08/03/state-raises-concerns-about-red-dog-mine-spill-cleanups/>.

⁸⁶⁰ Bonnie Gestring, *Alaska Metal Mines: The Track Record of Impacts to Land and Water from the Failure to Capture and Treat Wastewater (2020)* [hereinafter Gestring 2020], available at <https://earthworks.org/wp-content/uploads/2021/09/AK-MINE-POLLUTION-REPORT-2020.pdf>.

⁸⁶¹ Red Dog Mine - Stream Contamination (attached to comments previously submitted by the Center for Science and Public Participation).

⁸⁶² Pogo Mine reports 90,000-gallon spill of cement like backfill, ALASKA DISPATCH NEWS (May 8, 2015).

⁸⁶³ Sumitomo Metal Mining Pogo, LLC, *2011 Annual Activity and Monitoring Update*, (Apr. 12, 2012), available at

The potential for spills is a major concern that was not adequately analyzed in the FEIS or in those other EISs and that needs to be addressed in the SEIS. A new third-party comparative analysis of projected versus actual spills for the five largest operating mines in Alaska indicate that the existing models used to determine spill risks has failed in Alaska over the past 40 years.⁸⁶⁴ The report tallied more than 8,150 total spill incidents associated with the five mines, releasing over 2.3 million gallons and 1.9 million pounds of hazardous materials since 1995. This data is at stark odds with the projections in the original environmental reviews conducted at the time of mine permitting, which provided no projection at all for total on-site and transportation-related spills for all 50 hazardous materials. The 8,150 spills included 114 truck accidents, which spilled ~6,000 gallons and 1.6 million pounds of hazardous materials. Truck accident spills occurred 26.5 times more frequently than was predicted when the author applied the model most commonly used in the EIS process to predict truck accident spills at all five mines for all hazardous materials, and to ground-truth the accuracy of the model against actual spills.

The potential for wastewater releases from the hardrock mines with downstream impacts were also not adequately analyzed in the FEIS. Research has identified wastewater releases as a common occurrence at modern operating hardrock mines in the U.S., with significant impact to surface and/or groundwater resources, and associated beneficial uses. For example, a 2012 review of 14 out of 16 operating U.S. copper mines, accounting for 89 percent of copper production in the U.S., found that 100 percent experienced spills and other accidental releases and 92 percent failed to capture and treat wastewater, resulting in significant water quality impacts.⁸⁶⁵ A similar 2019 review of 14 out of 15 operating copper mines, accounting for 99 percent of U.S. copper production, found that 93 percent failed to capture and treat wastewater, resulting in significant water quality impacts.⁸⁶⁶ A 2020 report that analyzed the five major operating mines in Alaska found that 100 percent experienced at least one major spill or accidental release of hazardous materials, 80 percent failed to capture and treat mine wastewater resulting in water quality violations, and 80 percent were out of compliance with federal laws to protect clean air or water in the last three years.⁸⁶⁷

The FEIS failed to quantitatively or qualitatively describe these types of spill impacts to environmental resources within the Ambler Mining District. The FEIS states that “it is not

<http://dnr.alaska.gov/mlw/mining/largemine/pogo/pogo2012/pogo2012ppt.pdf>.

⁸⁶⁴ Susan Lubetkin, Alaska Mining Spills: A Comparison of the Predicted Impacts Described in Permitting Documents and Spill Records from Five Major Operational Hardrock Mines (Apr. 2022) (attached).

⁸⁶⁵ BONNIE GESTRING, EARTHWORKS, U.S. COPPER PORPHYRY MINES REPORT: THE TRACK RECORD OF WATER QUALITY IMPACTS RESULTING FROM PIPELINE SPILLS, TAILINGS FAILURES AND WATER COLLECTION AND TREATMENT FAILURES (Jul. 2012, rev. Nov. 2012).

⁸⁶⁶ Bonnie Gestring, *U.S. Operating Copper Mines: Failure to Capture and Treat Wastewater*, EARTHWORKS (May 2019), available at https://earthworks.org/cms/assets/uploads/2019/05/FS_Pebble-FAILURE-TO-CAPTURE-AND-TREAT-WASTEWATER.pdf.

⁸⁶⁷ Gestring 2020.

possible to state with specificity the spill impacts from mining because no specific mining proposal has been made.”⁸⁶⁸ Instead, it points to the BLM’s Donlin Gold EIS Section 3.254 for an analysis of spill risks and impacts that it says would be similar to those in Ambler.⁸⁶⁹ This is inadequate. The FEIS must provide an analysis of the potential effects of accidental releases and failure to capture and treat wastewater within the document, not point the reader to another somewhat irrelevant EIS. Furthermore, the Donlin Gold Mine is only one mine, whereas, the Ambler Mining District is contemplating the reasonably foreseeable development of multiple mines in multiple locations. At this point, it is also inappropriate for the agencies to claim they do not have sufficient information to analyze any of the spill risk since there is ample information about Trilogy’s Upper Kobuk development to do so. The SEIS should evaluate the potential effects of small, medium and large spills of processing chemicals, fuel, concentrate, tailings, or other potentially harmful releases. It must also evaluate the potential for uncontrolled seepage through the waste rock pile, tailings impoundments, processing ponds, and other potential sources. The FEIS must also include the potential direct, indirect and cumulative effects of a complete tailings dam failure, given the increased rate and severity of tailings dams failures globally.⁸⁷⁰

The SEIS should also consider the impacts associated with acid mine drainage or metals leaching that continues in perpetuity, requiring water treatment. Water treatment in perpetuity is required at the Red Dog and Kensington Mines, and will undoubtedly be necessary at some of the sites that are considered reasonably foreseeable operations in the FEIS. The SEIS should account for the potential for long-term or perpetual water treatment. For the Arctic deposit, Trilogy’s initial estimated cost of closure was based on 200 years of water treatment and management, but it later modified this time horizon for its cost estimates to 100 years while at the same time acknowledging water treatment would likely be required in perpetuity.⁸⁷¹ The FEIS failed to evaluate the cumulative impacts associated with disposal of any water treatment waste products, the need for long-term power for water treatment facilities, periodic repair and reconstruction of water treatment facilities, active management, and the inevitable failures that occur when operating water treatment facilities in perpetuity. This analysis should include the potential for interruptions or loss of water treatment facilities from wildfire, storms, earthquakes, power loss, lightning strikes or other potential impacts. For example, water treatment plants at modern mines in Montana that require water treatment in perpetuity have been disrupted or disabled by lightning strikes, storm events, and vandalism.⁸⁷²

⁸⁶⁸ 2 FEIS at H-39.

⁸⁶⁹ *Id.*

⁸⁷⁰ LINDSEY NEWLAND BOWKER & DAVID CHAMBERS, *THE RISK, PUBLIC LIABILITY & ECONOMICS OF TAILINGS FACILITY FAILURES* (Dec. 7, 2015).

⁸⁷¹ Trilogy Metals Inc., Arctic Project, Northwest Alaska, USA, NI 43-101 Technical Report on Prefeasibility Study, at 1-29 (Feb. 20, 2018) [hereinafter Arctic Prefeasibility Study]; Arctic Feasibility Study at 20-17, 20-19.

⁸⁷² WARREN McCULLOUGH, ET AL., *ZORTMAN: DEALING WITH EXTREME WEATHER EVENTS* (undated), available at https://www.mtech.edu/mwtp/2012_presentations/Warren%20McCullough.pdf.

The SEIS should consider the direct, indirect and cumulative hydrologic effects of the four projects in the Ambler Mining District on specific surface and groundwater resources, including groundwater drawdown associated with dewatering the open pits or underground tunnels; water use for processing, dust control, etc.; and water use for maintaining tailings pond water covers or other reclamation activities, and any other water uses for mining and associated activities. None of these additional water uses were adequately accounted for in the FEIS. The SEIS should quantify the potential effects of hydrologic impacts to specific wetlands, surface and groundwater resources from mining activities. For example, the total average inflow for the open pit at the Arctic deposit is estimated to run up to 3,800 cubic meters per day, and the tailings management facility will be designed to store approximately 3.0 million cubic meters of water,⁸⁷³ yet the FEIS failed to quantify the estimated water use at the four mines or make any effort to analyze the potential effects on the associated water resources. According to the FEIS, water would be allowed into the pit to create a pit lake at the Arctic Project.⁸⁷⁴ Water from the pit lake would be treated and discharged.⁸⁷⁵ Despite the recognition that the Arctic Project would use these pit lakes, FEIS failed to adequately analyze the impacts of managing those lakes in perpetuity to prevent long-term waterfowl and wildlife impacts, water quality impacts to surrounding surface or groundwater aquifers, or downstream impacts to subsistence users and resources.

The FEIS also failed to adequately analyze the amount of surface disturbance associated with exploration and mineral development. Table 2-10 in Appendix H of the FEIS described the potential surface disturbance associated with production, but it did not describe how these figures were estimated. The FEIS acknowledges that the surface disturbance could be 50 percent larger, however it fails to provide a range of minimum and maximum surface disturbance impacts.⁸⁷⁶ The SEIS must describe how these surface disturbance estimates were developed, and provide a reasonable range, including a maximum and minimum. Without that information, it is impossible to determine the full extent of potential impacts. The DEIS also states that no effort was made to estimate gravel needs associated with the proposed mining activities.⁸⁷⁷ Without this information it is impossible to evaluate the potential impacts associated with excavating gravel resources for mineral development, including the access roads from the mining operations to the Ambler Road.

The FEIS further failed to adequately analyze the impacts of the secondary access roads that would be necessary to connect the proposed Ambler Road to the four projects considered reasonably foreseeable for development. For example, Trilogy's 2020 technical report for the Arctic Deposit states that "to connect the Arctic Project site and the existing exploration camp to the proposed AMDIAP road a 30.7 km access road (the Arctic access road) will need to be built" and that there will be a wide range of other project elements.⁸⁷⁸ Map 10 provides very rough

⁸⁷³ Arctic Feasibility Study at 9-12; Arctic Prefeasibility Study at 1-26.

⁸⁷⁴ 2 FEIS at H-16.

⁸⁷⁵ *Id.*

⁸⁷⁶ *Id.* at H-23.

⁸⁷⁷ *Id.*

⁸⁷⁸ Arctic Feasibility Study at 1-14; *see also id.* at 1-15 ("The Project will require three different self-contained camps, equipped with their own power and heat generation capabilities,

locations for the access roads that are considered to be necessary for the four deposits that are considered to be reasonably foreseeable for development.⁸⁷⁹ However, no specific information is provided about these routes, and there does not appear to be any baseline data to characterize the resources along these routes.

The SEIS needs to provide data to identify the size or type of road, the number of culverts, river and stream crossings, wetlands affected, presence or absence of NOA, air quality, wildlife and wildlife habitat, water quality, subsistence and cultural resources, or the myriad of other resources that could be affected by the direct, indirect and cumulative effects of these roads. The SEIS should incorporate the latest information from Trilogy about what it plans to permit with the Corps of Engineers for its Upper Kobuk Development.

Because the FEIS was so deficient in analyzing the impacts of these connected actions, the SEIS needs to include a robust analysis of the impacts of these access roads, including the impacts of gravel mining to develop the secondary access roads, loss of wildlife habitat, impacts to water resources, loss of subsistence resources, increases in fugitive dust, noise impacts, and a myriad of other impacts. The FEIS's generalized statements about such impacts were not a sufficient hard look at the actual impacts likely from these reasonably foreseeable project elements.

X. THE FEIS FAILED TO ADEQUATELY CONSIDER SIGNIFICANT ADVERSE IMPACTS TO PUBLIC HEALTH.

There are a number of issues related to public health BLM must consider in the SEIS that were not adequately addressed in the FEIS. Impacts to public health could result from changes in diet and nutrition; exposures to contaminants from construction, use of the road, and mining; safety issues along the corridor; acculturative stress; and economic impacts — to name just a few. These impacts extend to not only individuals directly using or working at the mines, but also to nearby communities even if they are not directly connected to the road. In the SEIS BLM must closely analyze the impacts from traffic, construction, operation of the road, gravel mining, and any mining activities on air quality in the local communities, including from the potential use of gravel with naturally occurring asbestos.

As described herein, the FEIS provided insufficient information regarding the details of this project (e.g., traffic volume, location of gravel mines, construction activities) to engage in a meaningful analysis of the related health impacts. The FEIS was also either inaccurate or inadequate in its analysis of impacts to important resources such as air quality, fisheries, and water quality, which are critically important resources that directly relate to public health. For the

water treatment plant, sewage treatment plant, and garbage incinerator. The existing 90-person exploration camp will be used to start the construction of the Arctic access road. A 185-person construction camp will be constructed at the intersection of the AMDIAP road and Arctic access road, and will be decommissioned once construction is complete. The permanent camp will be constructed along the Arctic access road, closer to the planned processing facility. The 400-person permanent camp will be constructed ahead of operations to support the peak accommodation requirements during construction.”).

⁸⁷⁹ 2 FEIS at H-123, map 10.

communities along the road corridor, changes in subsistence resource availability from the development could impact food security and the health benefits of established social networks dependent on wild resources, which can in turn have serious mental health and other ramifications. Moreover, compromised food security has the potential to have direct and secondary impacts to individuals' nutrition and wellness and may increase the risk of chronic conditions, including diabetes and some forms of cancer.

For the SEIS process, BLM should fully revise the analysis contained in the FEIS to address these shortcomings and to adequately characterize impacts to public health. Additionally, BLM should require AIDEA complete multiple-year surveys to provide necessary baseline data for the SEIS and a revised Health Impact Assessment (HIA). This information is needed to understand adverse health impacts on local communities, and subsistence impacts inherent from this proposed project.

In addition to missing information, the public comment period on the prior HIA was severely curtailed. BLM failed to provide the HIA for public review and comment at the same time as the prior draft EIS, and only released the HIA after public inquiry, with a short window of time left in the comment period. Additionally, the FEIS does not summarize or incorporate important findings from the HIA, making it difficult for members of the public to review the documents in a comprehensive way. The SEIS should address these deficiencies, complete a new HIA that contains extensive public input from affected communities, and incorporate the important findings regarding significant adverse health impacts that are likely to occur as a result of the proposed Ambler Road.

The HIA and FEIS also failed to adequately consider the full range of impacts to public health as a result of the proposed road and mines. For instance, public health in much of Alaska is already under stress from climate change, with health implications related to the introduction of new diseases; damaged water and sanitation infrastructure; an increase in anxiety and depression; and increasingly dangerous hunting and harvesting conditions limiting subsistence activity.⁸⁸⁰ The HIA is largely silent regarding the health impacts of this project in the context of the changing climate.

Importantly, there is naturally occurring asbestos in the bedrock along portions of the proposed route and near the Ambler Mining District, as described elsewhere in these comments. If asbestos-laden gravel is used in the road construction, there is tremendous potential for adverse health impacts to anyone involved in road construction, traveling along the proposed gravel road, or in nearby communities. AIDEA intends to use 42.23 million cubic yards of gravel for construction and maintenance. Given the size of this project and the high occurrence of asbestos-laden soil in the region, it will be difficult, if not impossible, for AIDEA to locate sufficient asbestos-free gravel sources for construction of this project, as discussed elsewhere in these comments. AIDEA plans to add more gravel annually to the road, which will lead to ongoing gravel mining and construction for the life of the project, increasing the opportunity for exposure to asbestos.

⁸⁸⁰ See State of Alaska, Dep't of Health & Social Servs., Assessment of the Potential Health Impacts of Climate Change in Alaska VI-VII (2018).

Instead of analyzing the significant impacts asbestos would cause to human health in the region, the FEIS and BLM ROW indicate AIDEA plans to do initial surveys to determine the presence of asbestos after project approval. BLM cannot avoid analyzing the significant adverse health impacts to road users and local communities based on AIDEA's bare assertions that it would avoid the use gravel containing NOA, particularly since it is not even clear in light of the lack of baseline studies that there is sufficient asbestos-free gravel to build this project. The FEIS also acknowledged that there is still the potential AIDEA may use gravel with asbestos. BLM needs to fully analyze the potential impacts and risks associated with the use of contaminated gravel, which it has not done in the FEIS. BLM also needs to analyze and include mitigation measures that will provide greater safeguards to protect individuals from exposure.

Finally, the HIA and FEIS failed to identify meaningful and enforceable management actions to avoid and minimize impacts to health in the communities in the vicinity of the road corridor. BLM must not overlook the very important fact that communities in the region will be subjected to severe adverse impacts from pollution and contamination associated with this project, as described elsewhere in these comments describing impacts to air quality, wildlife, water resources, and the like. Communities are also likely to experience serious mental health issues associated with the changes to the region and their way of life that need to be analyzed.

Beyond these obvious health impacts, the SEIS must fully assess impacts to communities along the Ambler Road corridor from interactions with construction activities and workers. This includes the risks of increased traffic accidents, as well as higher rates of communicable diseases being transmitted within the communities. There are also statistically significant ties between resource development projects and exacerbated rates and issues related to missing and murdered Indigenous women. The proposed development's impacts to culturally important lands, resources, and traditional practices for communities within and around the road corridor can also increase stress and harm residents' mental health. Concerns over land use changes, and the associated impacts to particular resources and ways of life, can cause stress, anxiety, and depression. Such impacts must be fully analyzed and considered in the SEIS, with mitigation measures assessed to minimize and avoid such deleterious health impacts.

XI. THE SEIS MUST SIGNIFICANTLY REVISE BLM'S SUBSISTENCE ANALYSIS.

The proposed Ambler Road would span 211 miles through a magnificent and largely undeveloped landscape that Alaska Native people have lived in for thousands of years. The southern Brooks Range supports numerous Alaska Native communities and a host of species those communities rely on for subsistence, spiritual practices, kinship, and cultural identity. The Ambler Road project is a significant threat to these communities' ways of life. As described in specific resource sections above, gravel mining, construction, maintenance, and use of the road — not to mention the mining and regional development the road would facilitate — will severely impact caribou, sheefish, salmon, birds, moose, bear and other important subsistence species. Because there were serious deficiencies in the FEIS's prior consideration of subsistence impacts, the SEIS must consider all of these direct, indirect, and cumulative impacts to subsistence species and subsistence users.

As BLM has partially recognized, the agency’s analysis of subsistence impacts to date has fallen short of this requirement.⁸⁸¹ Specifically, and as discussed in greater detail above, BLM has acknowledged that its subsistence analysis under Section 810 of ANILCA was “deficient” because the agency failed to adequately discuss “vegetation-related impacts on caribou and subsistence”⁸⁸² or dewatering related impacts on fish and subsistence users.⁸⁸³ BLM has committed to addressing both issues on remand and has indicated the agency plans to “supplement” unspecified portions of its NEPA analysis.⁸⁸⁴ In addition, the agency has indicated the SEIS will consider new information showing that “Yukon River salmon runs plunged in 2021 to historic lows” and that there have been significant declines in the Western Arctic Caribou Herd’s (WACH) population over the last two years.⁸⁸⁵ While Groups agree that BLM must revise its ANILCA Section 810 analysis and consider the alarming population trends for WACH and Yukon River salmon, those revisions alone would be far too limited. As described below, the FEIS failed to include necessary baseline data and failed to properly consider the full extent and magnitude of the proposed road’s likely subsistence impacts. This approach failed to meet BLM’s obligations to analyze and mitigate subsistence impacts under NEPA and ANILCA, and requires significant revision as part of the agencies’ supplemental analysis.

A. The SEIS Must Provide Comprehensive Subsistence Data.

In order to meaningfully analyze the proposed project’s long-term and likely permanent subsistence impacts, the agencies must first establish a holistic picture of the current extent of subsistence uses and subsistence use areas in the region. Gathering a full picture of subsistence uses is imperative to adequate analysis in the SEIS because the proposed project’s “changes to the ecology and social system might be so great as to disable local adaptation.”⁸⁸⁶ The subsistence data relied on in the FEIS, data collected by the Alaska Department of Fish and Game (ADF&G), was inadequate for this purpose. Rather than reflecting long-term subsistence use patterns, ADF&G data provided a snap shot of subsistence use. As described in a report by Dr. Annette Watson, submitted with Groups’ comments on the prior draft EIS:

The need for a large territory to successfully practice subsistence by a community is often masked through studies using single-year harvest data points, which is the typical way that ADF&G collects subsistence use data. Figure 1 shows that the lifetime subsistence use areas for just these eight villages along the proposed Ambler Road will be bisected by each of the three proposed routes of the Ambler Road, but the map also shows that these subsistence patterns range far southward and westward to include areas along the Yukon River and Kotzebue Sound.⁸⁸⁷

⁸⁸¹ AVC Remand Mot. at 2, 14–17.

⁸⁸² *Id.* at 14.

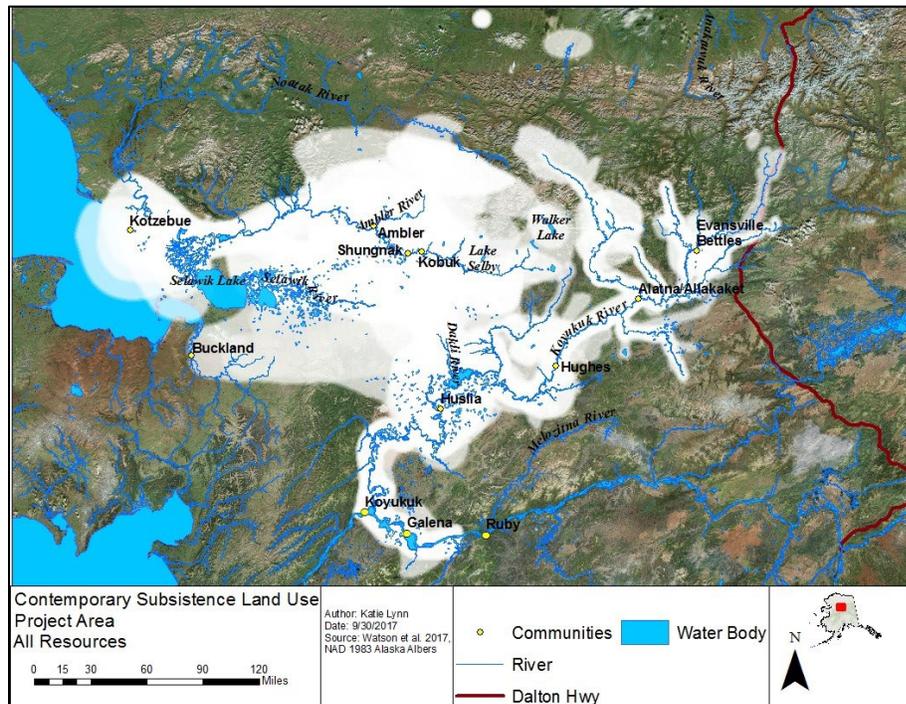
⁸⁸³ *Id.* at 16.

⁸⁸⁴ *Id.* at 2.

⁸⁸⁵ *Id.* at 16–17.

⁸⁸⁶ Dr. Annette Watson, Watson Research Group, LLC, Impacts Upon Subsistence by the Ambler Road and its Alternate Routes, 2 (Oct. 29, 2019).

⁸⁸⁷ *Id.* at 4-5.



As Dr. Watson’s analysis indicates, gathering and mapping subsistence harvest data using a lifetime temporal scale will reveal extensive and overlapping ranges for subsistence uses and subsistence use areas throughout the southern Brooks Range and along the proposed road corridor. This approach is appropriate because the Ambler Road, mining in the Ambler Mining District, and associated development in the area will permanently impact subsistence communities in the region. In fact, every potential route of the proposed road to the Ambler Mining District will produce significant changes to subsistence patterns at both the village and regional scales.⁸⁸⁸ For example, Alternatives A and B cross critical spawning and harvest areas for chum salmon and whitefish.⁸⁸⁹ Both routes could also “disrupt the more southerly migrations of the Western Arctic Caribou herd, and the area currently referred to as its winter range south of the Kobuk River could also become a “peripheral” range for the herd.”⁸⁹⁰ All of the proposed routes would particularly impact subsistence harvests of Western Arctic Caribou, salmon,

⁸⁸⁸ *Id.* at 3 (“unequivocally, the subsistence patterns will change significantly with any of the Ambler Road alternatives”).

⁸⁸⁹ *Id.* (“Although the longest, the most southerly route (Alternative C) may present the least impact to subsistence patterns, because that route: (1) crosses the fewest areas of intensive subsistence harvest from Inupiat peoples, though this written opinion has not considered the subsistence use areas by residents of Rampart; (2) mimics at least one traditional overland travel route between the Kobuk and Koyukuk Rivers; and (3) potentially presents the greatest opportunity for future cash-based economies for Athabascan residents along the Koyukuk River, for construction and annual road maintenance, as well as for tourist economies if the road becomes accessible by the public.”).

⁸⁹⁰ *Id.* at 12.

whitefish, and moose.⁸⁹¹ In light of these concerning impacts, the agencies should collect lifetime subsistence use data and conduct a comprehensive study of the subsistence impacts of this project for *each* of the 53 subsistence study communities identified in the FEIS and incorporate that information into the SEIS.⁸⁹²

B. The SEIS Must Adequately Analyze Subsistence Impacts and Provide Effective Mitigation.

One significant issue the SEIS must correct is BLM's failure to account for direct and indirect mining impacts on subsistence resources and users. As described throughout these comments, mining in the Ambler Mining District and the Ambler Road are connected actions that must be analyzed concurrently in the SEIS. BLM's failure to do so in the FEIS greatly diminished the impacts large-scale mining would have on subsistence resources. This was a significant failing. Hardrock mining in the Ambler Mining District will compound the road's impacts on subsistence resources and the subsistence communities that depend on them. Considering the reduced population size and continuing downward trend of the WACH and Yukon River salmon, the agencies must account for the full extent of mining impacts on these important subsistence species and the subsistence hunters that depend on them.

The SEIS must also adequately account for the possibility that the proposed project will contaminate fish stocks relied on by subsistence users. Fugitive dust, atmospheric deposition, plant tissues, and roadway runoff are all ways PAH, mercury, and other harmful, toxic trace components can accumulate in fish.⁸⁹³ This possibility is particularly important for Alternatives A and B, because these routes cross critical subsistence fish habitats and could have cascading impacts "at a much broader spatial scale, affecting chum salmon harvest by all the villages that lie southward of the road within the drainages of either the Kobuk or the Koyukuk River—all the way to the mouth of the Yukon or to Kotzebue Sound."⁸⁹⁴ Despite this risk, impacts related to waterway contamination were not adequately addressed in the FEIS. While the FEIS indicates that "[f]uel spills and erosion may" contaminate waterways and fish, BLM simply noted that perceived contamination may cause subsistence users to avoid consuming fish from certain areas.⁸⁹⁵ The subsistence analysis does not address the likelihood of unhealthy bioaccumulation in the region's fish as a result of the proposed project, the health impacts that could result should subsistence users unknowingly ingest contaminated fish, or which waterways and species may be most at risk. This information must be addressed in the SEIS. For example, more information is needed to understand the impacts from road construction and potential toxins from runoff on spawning areas and post-emergent and young sheefish, which are "of special cultural importance

⁸⁹¹ *See id.* at 1–2 ("The most critical season of subsistence is currently late summer into falltime, largely dominated by fishing, berry picking, and moose harvest, though subsistence occurs throughout the area year-round; construction and pollutants coming from this new road could disturb critical habitat for chum salmon and whitefish, and disturb resident hunters, fishers, and gatherers, particularly during the fall subsistence round.").

⁸⁹² 1 FEIS at 3-138.

⁸⁹³ Frissell DEIS Report at 11–14.

⁸⁹⁴ Watson, *supra* at 14.

⁸⁹⁵ 1 FEIS at 3-145.

because of their extended season of availability and proximity to communities.”⁸⁹⁶ In the SEIS, the agencies must consider how contaminants will be controlled and describe risks to subsistence users in order to meet their obligations under FLPMA, ANILCA 810, and the Clean Water Act.⁸⁹⁷

The agencies’ impact analysis in the SEIS must also reflect the fact that subsistence is a community-level economic system that is important to the cultural and spiritual health of communities. In the FEIS, BLM’s analysis of direct and indirect effects of the project and alternatives was entirely silent on potential impacts to culture, spirituality, community cohesion, or identity. In so doing, BLM diminished significant cultural impacts associated with lost or reduced subsistence harvest opportunities. The SEIS must correct this approach by fully incorporating cultural impacts into the agencies’ analysis of subsistence impacts in recognition of the fact that subsistence activities “strengthen community and family social ties, reinforce community and individual cultural identity, and provide a link between contemporary Alaska Natives and their ancestors.”⁸⁹⁸

The agencies’ supplemental analysis must also provide adequate mitigation in order to prevent unnecessary harm to subsistence resources and users as required by NEPA. In the FEIS, BLM failed to meet this obligation by imposing largely ineffective mitigation measures. In fact, BLM acknowledged that many of the subsistence mitigation measures included in the FEIS were unlikely to effectively mitigate against the project’s subsistence impacts.⁸⁹⁹ Measures applied for specific subsistence resources similarly failed to satisfy BLM’s responsibilities under NEPA. For example, the FEIS briefly notes that the proposed project may impact fish as “[s]tream and riverbeds may experience increased sedimentation or alteration over time due to the presence of culverts and bridge piers.”⁹⁰⁰ Purportedly addressing this concern, the FEIS indicates AIDEA’s crossings will “protect natural flow patterns and minimize negative effects” and that culvert inspection will be required.⁹⁰¹ However, details tucked away Appendix N reveal that these mitigation measures are conceptual at best and would be of limited usefulness even if they were successfully implemented. Specifically, Appendix N indicates that culverts for the project have not yet been designed⁹⁰² and there is neither a plan nor a schedule for providing culvert

⁸⁹⁶ Frissell DEIS Report at 5–6.

⁸⁹⁷ For instance, pursuant to FLPMA, BLM must “protect the interests of individuals living in the general area traversed by the right-of-way who rely on the fish, wildlife, and other biotic resources of the area for subsistence purposes” and incorporate terms and conditions or mitigation measures to adhere to this requirement. 43 U.S.C. § 1765(b)(iv).

⁸⁹⁸ 1 FEIS at 3-137.

⁸⁹⁹ See 3 *id.* at N-46 to -47 (imposing a measure requiring AIDEA to “consult” with local communities that is expected to be “minimally or partially effective at disseminating information to the broader communities but would be a forum to encourage such dissemination.”); see also *id.* (recognizing that a measure requiring AIDEA to minimize disturbing activities as “practicable” and “when possible” would be largely ineffective at reducing subsistence impacts).

⁹⁰⁰ 1 FEIS at 3-147.

⁹⁰¹ *Id.* at 3-147.

⁹⁰² 3 FEIS at N-19 (“All stream crossings would be designed based on site-specific information, such as fish species presence, seasonal in-stream flows and peak discharge, and

inspections.⁹⁰³ As described above, many of these future studies this project design are described in BLM's ROW and AIDEA's Plan of Development, further underscoring that such necessary information was not included or considered in the prior FEIS. Further, Appendix N indicates that, even if AIDEA were required to submit an inspection plan, the measure would be ineffective for Alternatives A and B.⁹⁰⁴ This is unacceptable. As BLM admits, "if culverts and bridges are not properly maintained or if erosion control measures are not taken, fish migrations could be disrupted or blocked, which could reduce fish availability for subsistence users."⁹⁰⁵ The SEIS must protect against this and other significant subsistence impacts by requiring much more robust mitigation measures and transparently addressing shortcomings of any proposed measures.

C. The SEIS Must Revise BLM's Analysis of Cumulative Impacts to Subsistence Users.

As a threshold matter, any valid analysis of the Ambler Road's cumulative impacts to subsistence must include the reasonably foreseeable future action of the road being opened to public use. Failing to acknowledge this foreseeable outcome was a fundamental failing of BLM's previous subsistence analysis. Rather than address this foreseeable outcome, the FEIS addressed AIDEA's proposal to allow for limited commercial deliveries through a permit system.⁹⁰⁶ This was inappropriate because AIDEA has cited no authority for its proposal to limit public access and the entity's proposal lacks even the most basic details. As a result, the FEIS overlooked significant and irreversible subsistence impacts that must be considered in the SEIS. Public access to the road would significantly increase traffic and likely significantly increase competition from out-of-region hunters. Multiple studies show these newcomers often have greater fiscal resources to out-compete locals for access to subsistence resources.⁹⁰⁷ The SEIS should consider this consequence and also address a recent study demonstrating that road-connected communities have substantially lower subsistence harvests than non-road-connected communities. While BLM briefly acknowledged this study in the FEIS, the agency simply pushed the study aside.⁹⁰⁸ Further, the SEIS should address impacts due to poaching by outside workers. Though the FEIS "assume[ed] no road users authorized by AIDEA (e.g., construction workers, vehicle operators) would be allowed to hunt or fish from project facilities,"⁹⁰⁹ it's

floodplain regime (50- to 100-year flood events)").

⁹⁰³ *Id.* at N-33 ("AIDEA would submit culvert and bridge inspection and maintenance plans to the Authorized Officer for approval prior to construction and would adhere to the maintenance schedules and stipulations outlined in the plans.")

⁹⁰⁴ *Id.* at N-33 ("If AIDEA were required to submit inspection and maintenance plans to the Approved Officer that included assessing fish passage conditions for culverts and bridges only within the BLM-managed portions of the routes, this measure would be ineffective at reducing potential impacts for most streams crossed by Alternatives A and B, since much of the land traversed by those routes are not managed by the BLM.")

⁹⁰⁵ 1 FEIS 3-147.

⁹⁰⁶ *Id.* at 3-156.

⁹⁰⁷ *Id.* at 21-22.

⁹⁰⁸ 2 *id.* at H-89.

⁹⁰⁹ 1 *id.* at 3-145.

unclear how they or any other future mining company will restrict hunting by its employees during their leisure time. In the SEIS, the agencies must consider this and all other impacts to subsistence associated with opening the road to public use permanently.

The SEIS's analysis of the proposed road's cumulative impacts must also be revised to account for numerous relevant future activities that BLM overlooked. In the FEIS, BLM addresses some foreseeable actions that could contribute to subsistence impacts in Appendix H including, development of "[the] Arctic, Bornite, Sun, and Smucker projects[]; use of the Ambler Road for commercial access; use of the Ambler Road for commercial use by local communities and Native Allotment owners; and secondary access roads connecting the Ambler Road to other mining areas and claims, Air Force lands, and local communities."⁹¹⁰ However, the agency failed to consider numerous relevant and foreseeable development projects across Arctic Alaska that would, when combined with the proposed Ambler Road, significantly impact subsistence resources and users. Most notably, BLM failed to mention cumulative impacts resulting from oil development activities in the Arctic National Wildlife Refuge Coastal Plain, National Petroleum Reserve-Alaska (NPR-A), and offshore in the Arctic Ocean — despite acknowledging these actions are reasonably foreseeable elsewhere in the FEIS.⁹¹¹ This failure rendered BLM's cumulative analysis of subsistence impacts inadequate. As these future actions are likely to impact the same subsistence resources as the Ambler Road, their cumulative impact in combination with the proposed road and mining must be analyzed in the SEIS.

The SEIS must also correct BLM's inconsistent findings regarding subsistence impacts in the cumulative case. While inadequate overall, BLM's analysis in Appendix H did address some impacts to subsistence in the region, recognizing, for instance:

- Subsistence impacts due to climate change including “changes in the predictability of weather conditions such as the timing of freeze-up and breakup, snowfall levels, storm and wind conditions, and ice conditions” affecting “individuals’ abilities to travel to subsistence use areas when resources are present in those areas;”
- “One of the proposed mines (Sun) and Alternatives A and B would be located upstream of sheefish spawning habitat and could damage that habitat and impact subsistence resources for downstream communities;”
- Communities that do not experience “economic benefits of development are more vulnerable to the impacts of the same development and less able to adapt to environmental and social changes resulting from the development;”
- “Construction of additional access roads to mines, communities, and other locations will contribute to fragmentation of habitat for resources such as caribou and moose, which would remove usable habitat for these resources and in the case of caribou could cause changes in range distribution;”

⁹¹⁰ 2 *id.* at H-87.

⁹¹¹ *Id.* at H-32 to -33.

- “Mining and further road development could have population-levels effects on certain fish species, particularly if mine activities result in contamination or impact to Kobuk River sheefish spawning grounds;” and
- That “public access to the area via a road or ROW would contribute to” the existing “key” issue of sport hunting related subsistence impacts.⁹¹²

Despite recognizing these and other significant adverse cumulative impacts, the FEIS flatly concluded that “the cumulative impacts to subsistence resulting from the Ambler Road, other reasonably foreseeable developments, and climate change *could result* in reduced harvesting opportunities for local residents and alterations in subsistence harvesting patterns.”⁹¹³ This conclusion does not align with the facts found both in the FEIS and in the ANILCA 810 section, and fails to adequately inform the public of the risks posed by the proposed project in combination with other reasonably foreseeable future actions. In the SEIS, the agencies must explain their conclusions regarding the cumulative case, as “[a]ny changes to residents’ ability to participate in subsistence activities, harvest subsistence resources in traditional places at the appropriate times, and consume subsistence foods could have long-term or permanent effects on the spiritual, cultural, and physical well-being of the study communities by diminishing social ties that are strengthened through harvesting, processing, and distributing subsistence resources, and by weakening overall community well-being.”⁹¹⁴

XII. BLM MUST COMPLETE A ROBUST ENVIRONMENTAL JUSTICE ANALYSIS.

In the SEIS, BLM must account for the full scope of potential impacts to minority and low-income populations from all phases of the project including all lingering impacts following the project’s cessation. Executive Order 12898, requires all federal agencies to “make achieving environmental justice part of their mission by identifying and addressing, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.”⁹¹⁵ Addressing the severe environmental justice (EJ) impacts flowing from the Ambler Road will require BLM to revise its analysis and adopt robust targeted mitigation measures.

In the FEIS, BLM acknowledged that subsistence and public health impacts “would be among the most important high and adverse effects” and that all action alternatives “could have disproportionately high and adverse impacts to residents of EJ communities.”⁹¹⁶ However, the overall analysis of those impacts and ways to address them were lacking in the FEIS. BLM’s supplemental analysis must consider whether the project may lead to additional significant adverse effects. For example, according to a recent report outlined above, large-scale mining projects located in remote, isolated communities are correlated with impacts such as high poverty

⁹¹² *Id.* at H-86–88.

⁹¹³ *Id.* at H-85 (emphasis added).

⁹¹⁴ *Id.* at H-89.

⁹¹⁵ Executive Order No. 12898, Fed. Actions to Address Env'tl. Justice in Minority Populations and Low-Income Populations (Feb. 16, 1994), *available at* <https://www.archives.gov/files/federal-register/executive-orders/pdf/12898.pdf>.

⁹¹⁶ 1 FEIS at 3-134.

and unemployment rates, poorer health, lower education attainment, and long-term out-migration.⁹¹⁷ As minority and low-income status is the norm in the region proposed for the Ambler Road, such adverse environmental justice impacts are likely to be severe and to reverberate throughout the region. An analysis of the likelihood, magnitude, and duration of all such likely environmental justice impacts is necessary to fully analyze the proposed project.

The SEIS must also squarely address the extent to which environmental justice impacts would be offset by any beneficial impacts, which was not adequately addressed in the FEIS. The FEIS indicated that environmental justice impacts would be “partially offset by increased employment opportunities, expanded public services, and reductions in the cost of living due to changes in the logistics of delivering fuel and freight in some communities.”⁹¹⁸ In reaching this conclusion, BLM failed to address whether any benefits such as increased construction and mining job opportunities would persist once road construction ends, or after large-scale mining activities cease, or how the agency’s finding would differ if the road is eventually opened to the public. In addition, BLM’s assertion that impacts would be “partially offset” lacks specificity. As outlined below, additional details regarding the extent to which identified offsets may counteract adverse impacts to low-income and minority communities are necessary to transparently analyze the project’s impacts and ensure adequate mitigation is required.

The SEIS must describe the extent to which employment opportunities may impact low-income and minority communities. As described above, economic benefits from the proposed project will be inconsistent, and often have “flickering” effects that lead to a boom and bust economy.⁹¹⁹ With this in mind, BLM must analyze whether minority and low-income communities will realize meaningful benefits from employment opportunities arising in boom years. Robust analysis is necessary because, unlike the project’s adverse impacts, employment opportunities associated with the project “would not disproportionately fall to EJ communities.”⁹²⁰

The SEIS must also explain the assumption that trucking fuel and supplies hundreds of miles by road would appreciably lower the cost of living within impacted communities. This analysis is necessary because there are significant unknown costs and impacts associated with use of the road, and AIDEA has been unclear and at times misleading in representing whether and how the road might be used to facilitate such deliveries. Specifically, AIDEA intends to charge yet-to-be determined fees and tolls for all community deliveries.⁹²¹ AIDEA also intends to limit permits for supply deliveries and emergency transportation to “less than one truck or bus per week.”⁹²² For those supply and fuel deliveries that are permitted, there is no clear plan for transporting deliveries from the road to communities. The FEIS speculated that individual

⁹¹⁷ Thomas Power & Donovan Power, *The Social Costs of Mining on Rural Communities* (Aug. 21, 2019).

⁹¹⁸ 1 FEIS at 3-137.

⁹¹⁹ Thomas Power & Donovan Power, *The Social Costs of Mining on Rural Communities*, Prepared for Friends of the Chilkat and Klehini Rivers (Aug. 21, 2019).

⁹²⁰ 1 FEIS App. F, Table 14, at F-19.

⁹²¹ *Id.* App. H, at H-26.

⁹²² *Id.* App. H, at H-25.

communities could hire commercial transportation to move fuel and supplies from the road to “staging areas where the communities could access it” and that local residents might form their own companies to perform this service.⁹²³ No information regarding the cost of either option was provided in the FEIS. Even if savings for goods and fuel were realized, any benefits would be limited to Kobuk and two or three other communities.⁹²⁴ The more than 40 remaining environmental justice communities would see no benefit from reduced costs.⁹²⁵ It is also misleading for AIDEA to be representing that there would be significant economic benefits when the road in fact would not connect to most of the communities along the corridor, and BLM should not just take those representations on their face. In the SEIS, BLM must include details about the true costs associated with use of the road in order to transparently determine the extent to which communities may realize reduced fuel and supply costs. BLM also needs to clarify the scope and nature of any such plans and analyze the impacts likely to occur from additional use of the road, transport of goods across roadless areas (since the majority of impacted communities will not connect to the road), or the need for additional infrastructure, such as staging areas for such deliveries. AIDEA has never been transparent or clear about how the road might be used in this regard, and as such those plans were not adequately analyzed in the FEIS.

In addition, the SEIS must explain how public services like healthcare and emergency services would be expanded. Although the FEIS stated low-income and minority communities would benefit from expanded public services,⁹²⁶ the HIA merely indicates that improved access to clinics and lower cost clinical supplies “could occur” without further explanation.⁹²⁷ The HIA similarly concludes that more efficient emergency evacuations are a “potential” outcome⁹²⁸ without addressing the fact that emergency transportation services will be limited to use the road once a week.⁹²⁹ Notably, the consensus among healthcare providers is that any possible improvements in health services would result from mining development — as opposed to the Ambler Road itself.⁹³⁰ If BLM does not consider mining development a connected action in its supplemental analysis, the agency should refrain from accounting for possible benefits associated only with the mining development scenario in assessing environmental justice impacts. The SEIS should also include an expanded analysis explaining how environmental justice impacts may be appreciably offset by expanded public services, including which services may expand and which communities are likely to benefit.

For those impacts that will not be appreciably offset, BLM must adopt targeted mitigation measures. Executive Order 12898, commits BLM to address disproportionately high and adverse impacts on minority populations and low-income populations to the “greatest extent practicable.”⁹³¹ In the FEIS, BLM did not include specific environmental justice mitigation

⁹²³ *Id.*

⁹²⁴ *Id.* App. F, Table 14, at F-19.

⁹²⁵ *Id.* App. F, Table 13, at F-17 to -18.

⁹²⁶ *Id.* at 3-137.

⁹²⁷ HIA at 110.

⁹²⁸ *Id.*

⁹²⁹ 1 FEIS App. H, at H-25.

⁹³⁰ HIA at 110.

⁹³¹ Executive Order No. 12898, Fed. Actions to Address Env'tl. Justice in Minority

measures and instead relied on measure adopted to address subsistence, socioeconomic, and public health impacts.⁹³² None of the mitigation measures proposed directly address the significant adverse environmental justice impacts likely to flow from the project including an increase in food-insecure households and psychological stress.⁹³³ Given these severe impacts, BLM should consider a measure requiring AIDEA to provide monetary support to the communities that will be most impacted. Such a measure would help communities respond by developing programs needed to minimize environmental justice impacts (such as cultural programming, recording of subsistence areas, food assistance, and increased access to healthcare). BLM must also consider road design and proximity to communities with an eye towards environmental justice. Once strategies to minimize impacts are identified they should be developed as tangible and detailed mitigation measures.

XIII. THE EIS DOES NOT ADEQUATELY ANALYZE IMPACTS TO SOCIOECONOMIC SYSTEMS.

In the SEIS, BLM's socioeconomic analysis must meaningfully discuss the project's impacts on all relevant communities and account for the limited duration of the economic benefits of the Ambler Road and associated mining. In the socioeconomic section of the FEIS, BLM focused on some of the project's economic impacts without adequately addressing community concerns regarding public health, community cohesion, and lost traditions.⁹³⁴ In the FEIS, BLM briefly acknowledged community members' concerns about the negative impacts the project would have on traditional ways of life and cultural practices but then dismissed all such concerns as inevitable. The FEIS explains:

Public comments on the Draft EIS, including those from project area communities, expressed concern over how the project would further change the way of life for people living in rural communities. Many commenters cited the cultural practices of their ancestors, subsistence activities that sustain them, and traditions that get passed from generation to generation. They then described how these qualities of life have changed since the late 60s/early 70s when oil and gas development on the North Slope began and the Dalton Highway and TAPS were built. They describe their history of living on the land, how they feel connected to it, and how they rely on its resources, and how the introduction of roads, mines, and pipelines has brought more people to the area, more encroachment on the land, and more competition for resources.⁹³⁵

Populations and Low-Income Populations § 1 (Feb. 16, 1994), *available at* <https://www.archives.gov/files/federal-register/executive-orders/pdf/12898.pdf>.

⁹³² 3 FEIS at N-46.

⁹³³ 1 *id.* at 3-137.

⁹³⁴ 1 FEIS at 3-124 to -134.

⁹³⁵ *Id.* at 3-133.

Waving these concerns off, the FEIS simply states that “opportunities for access and development” change “the lifestyle and culture of Alaska Native communities.”⁹³⁶ BLM then concluded, without explanation, that “isolated communities will continue to experience encroachment in areas that they have relied on for cultural and traditional practices.”⁹³⁷ This statement sidesteps necessary analysis by presuming the project’s negative impacts — degradation of the region’s communities, cultures, and ways of life — are inevitable and is not an adequate analysis of the full range of socioeconomic impacts likely to occur from this project. Comments from affected communities, especially those grounded in past experience in the region, are integral to BLM’s analysis of socioeconomic impacts. Rather than dismissing such comments, the SEIS must meaningfully incorporate those community concerns into its analysis.

Consistent with Joint Secretarial Order No 3403, BLM must incorporate Indigenous knowledge from affected communities into its supplementary analysis. On November 15, 2021, Secretary of the Interior Haaland signed an order requiring BLM to “consider Tribal expertise and/or Indigenous knowledge as part of Federal decision making relating to Federal lands, particularly concerning management of resources subject to reserved Tribal treaty rights and subsistence uses.”⁹³⁸ In implementing this order, the Director of BLM issued Permanent Instruction Memorandum No. 2022-011 committing BLM to “evaluate and incorporate Indigenous Knowledge in its analysis and decision-making.”⁹³⁹ BLM must significantly revise its analysis of socioeconomic resources and all other relevant resources to comply with these directives and meaningfully incorporate traditional knowledge.

BLM’s supplemental analysis must also account for the broad array of socioeconomic impacts that were insufficiently addressed or diminished in the FEIS. According to a recent report, large scale mining projects sited in rural, relatively isolated communities are statistically correlated with long-term out-migration, high poverty and unemployment rates, poorer health and lower education attainment.⁹⁴⁰ Market volatility for mineral commodities often leads to significant fluctuations in employment and payroll levels, i.e., a “flickering” economy and ultimately a “boom-bust economy,” which often weighs against communities investing in the social infrastructure and prevention plans needed to mitigate the influx of a large, transient workforce.⁹⁴¹ Transient mine employees, typically young, single, males, employed in block

⁹³⁶ *Id.* at 3-133 to -134.

⁹³⁷ *Id.*

⁹³⁸ Sec’y of the Interior and Sec’y of Agric., Joint Order No. 3403, Fulfilling the Trust Responsibility to Indian Tribes in the Stewardship of Federal Lands and Waters, § 3 (Nov. 15, 2021), available at <https://www.doi.gov/sites/doi.gov/files/elips/documents/so-3403-joint-secretarial-order-on-fulfilling-the-trust-responsibility-to-indian-tribes-in-the-stewardship-of-federal-lands-and-waters.pdf>.

⁹³⁹ Director of Bureau of Land Mgmt., Permanent Instruction Memorandum No. 2022-011, Co-Stewardship with Federally Recognized Indian and Alaska Native Tribes Pursuant to Secretary’s Order 3403, § 5 (Sept. 13, 2022), available at <https://www.blm.gov/sites/default/files/docs/2022-09/PIM2022-011%20+%20attachment.pdf>.

⁹⁴⁰ Thomas Power & Donovan Power, The Social Costs of Mining on Rural Communities, Prepared for Friends of the Chilkat and Klehini Rivers, August 21, 2019.

⁹⁴¹ *Id.*

shifts (two weeks on two weeks off) are likely to be disruptive to the broader social community and are often associated with:

- Increased alcohol and substance abuse, violence, morbidity, and mortality;
- Increased violent crime including physical and sexual assault;
- Increased pressure on law enforcement agencies;
- Increased presence of convicted felons including drug dealers and registered sex offenders;
- Undermining of Indigenous peoples' and other residents' ways of life and traditions; and
- Increased conflict among residents along income, employment, and racial lines as the community fragments under the pressure of substantial transience among workers and residents.⁹⁴²

While the average non-indigenous resident of a community is clearly impacted by the transient nature of the mining industry, for the Indigenous residents this impact may be greatly multiplied. The Indigenous cultural structure is even less similar to the block-structure of the new mining working schedule; subsistence hunting and fishing, oral tradition, traditional jobs, and community relations can be strained for Indigenous people that are hired on by mines.⁹⁴³

Adequate analysis of socioeconomic impacts will also require baseline data that was lacking from the prior analysis. In the FEIS, BLM failed to provide baseline data needed to contextualize project impacts. For example, the FEIS noted the project may “facilitate increases in substance abuse” and referenced Appendix H and the Health Impact Assessment (HIA) for further information.⁹⁴⁴ However, Appendix H and the HIA simply reiterate that the project may increase rates of substance abuse.⁹⁴⁵ Neither source provides regional baseline information about existing rates of substance abuse or existing sociocultural impacts from such abuse in affected communities.⁹⁴⁶ BLM also did not address how generational socioeconomic impacts resulting from substance abuse may persist long after the short lifespan of the proposed project. This is especially concerning because the HIA indicates “there are significant concerns surrounding mental health and wellness: particularly alcohol use, marijuana, occasional meth, opioids, a lot of domestic violence, substance abuse resulting in physical injuries in the area.”⁹⁴⁷ The project’s contribution to these socioeconomic issues cannot be assessed without adequate baseline data and analysis assessing the project’s short-term economic benefits alongside potentially long-term or permanent negative impacts.

⁹⁴² *Id.*

⁹⁴³ *Id.*

⁹⁴⁴ 1 FEIS at 3–132.

⁹⁴⁵ 2 FEIS, App. H, at H-83; New Fields, Health Impact Assessment 107 (Sept. 25, 2019) [Hereinafter HIA].

⁹⁴⁶ *See e.g.* 2 FEIS App. H at H-83; HIA at H-39 (relying on state-wide rates of adolescent substance abuse because regional surveys lack “scientific rigor”).

⁹⁴⁷ HIA at H-91.

BLM's supplemental analysis must also fully evaluate all of the project's socioeconomic impacts. The socioeconomic section of the FEIS largely focused on economic impacts and, where BLM drew conclusions regarding the project's net effects, those conclusions related exclusively to easily quantifiable economic impacts. For example, noting the project would create jobs, BLM concluded mining would provide an "overall" economic benefit for the region.⁹⁴⁸ This conclusion is questionable for two reasons. First, as BLM did not consider mining in the Ambler Mining District a connected action, the agency should not rely on the economic benefits of mining in assessing the socioeconomic impacts of the Ambler Road. Second, the agency did not quantify or draw conclusions about the costs associated with various socioeconomic impacts in order to fairly draw this conclusion. For example, BLM notes the project would result in psychological stress and increased communicable diseases but did not address the expense of additional health and community services. These costs may be significant because "[t]here is a lack of law enforcement" and "no behavioral health services available" in the affected communities.⁹⁴⁹ Ignoring social impacts because they are more difficult to express in monetary terms implicitly places a zero value on them. In fact, most social impacts can be quantified. Those social impacts, in no particular order, include:

- The distribution of income: poverty rates and large income differentials;
- Quality of life and environmental quality;
- Crime levels: property crimes as well as violent crimes;
- The relocation of convicted felons to booming mining areas;
- The health of the local population: disability, morbidity, and mortality rates;
- Public service needs;
- Substance abuse levels and overdose deaths;
- Educational achievement;
- Impact of non-traditional mine work schedule on community and family;
- Added stress to local services from the influx of non-local mine workers;
- The impacts of mining on the Indigenous and Aboriginal people of the area; and
- The shift of risk and responsibility away from worker's organizations (unions) and the mining companies and onto the individual miner.

BLM must quantify and analyze these and all related impacts in order to accurately draw conclusions about the project's net socioeconomic impacts, and to develop and consider specific and enforceable mitigation measures to avoid or minimize such impacts.

In addition, BLM's analysis must transparently address the fact that adverse impacts associated with the project will likely persist long after any potential socioeconomic benefits have subsided. In the FEIS, BLM did not clearly distinguish between the temporary nature of possible beneficial aspects of the proposed action (e.g., jobs from construction), and the project's long-term adverse socioeconomic impacts. Specifically, the FEIS found that the project would "have an overall beneficial impact on the economic well-being of individuals and families" in impacted communities as a result of benefits such as increased revenues and employment.⁹⁵⁰ In

⁹⁴⁸ 1 FEIS at 3-133.

⁹⁴⁹ HIA at H-91.

⁹⁵⁰ 1 FEIS at 3-132 to -133.

reaching this conclusion, BLM did not address the relative impact of lasting adverse impacts including the loss of jobs and economic activity when the road is no longer in use and large-scale hard rock mining in the Brooks Range ceases or, alternatively, the long-term socioeconomic harms likely to occur from increased access across this region if the road stays in long-term.⁹⁵¹ The FEIS also failed to analyze the socioeconomic impacts that would result if the road were to be opened to the public in the future or if additional large-scale mining were to occur in the region and use of the road were to increase dramatically. This approach resulted in a lopsided analysis that downplayed the project's negative impacts. In its supplemental analysis, BLM must contextualize the project's economic impacts by weighing them against the project's likely permanent social impacts.

Finally, the socioeconomic section's alternatives analysis must provide enough detail to compare the alternatives on their merits. The sociocultural alternatives section in the FEIS compared economic impacts between alternatives but, regarding social and health impacts, merely listed some "potential" health impacts for each alternative.⁹⁵² BLM is required to "[d]evote substantial treatment to each alternative considered in detail . . . so that reviewers may evaluate their comparative merits."⁹⁵³ A general list of "potential" impacts does not constitute a meaningful analysis.

XIV. BLM MUST ADEQUATELY ANALYZE ARCHEOLOGICAL AND CULTURAL RESOURCES.

The Ambler Road is proposed to span a vast region that has been used by Alaska Natives for thousands of years and is replete with yet-to-be identified cultural resources. Under NEPA⁹⁵⁴ and Section 106 of the National Historic Preservation Act (NHPA), BLM is required to consider the Ambler Road's impact on the region's cultural resources and historical properties. This includes any properties of "religious and cultural significance" to Tribes.⁹⁵⁵ In carrying out its responsibilities under Section 106, BLM must consult with any Tribe that attaches religious or cultural significance to historic properties that may be affected.⁹⁵⁶ Key to this process is the agency's responsibility to establish an "area of potential effects" (APE) within which historic properties must be identified.⁹⁵⁷ Once identified, the NHPA requires agencies to assess historical properties and resolve any adverse effects to such resources prior to a final agency action.⁹⁵⁸

BLM's process to date — rushing to approve the project without adequate Tribal consultation or basic data — falls far short of what NEPA and the NHPA require. While BLM has acknowledged that its Section 106 process was "deficient," the agency limited the scope of its review on remand to "revisit[ing] their consultation obligations," and supplementing

⁹⁵¹ *Id.*

⁹⁵² See, e.g., *id.* at 3-130.

⁹⁵³ 40 C.F.R. § 1502.14(b).

⁹⁵⁴ 40 C.F.R. §§ 1502.16(g), 1508.8(b), 1508.14, 1508.27(a), (b)(3);

⁹⁵⁵ 54 U.S.C. §§ 302706(b), 306108; 36 C.F.R. § 800.2(c)(2)(ii).

⁹⁵⁶ *Id.* § 302706(b).

⁹⁵⁷ 36 C.F.R. § 800.4(a)(1).

⁹⁵⁸ 54 U.S.C. § 302706(b); 36 C.F.R. § 800.2(c)(2)(ii).

unspecified portions of its NEPA analysis.⁹⁵⁹ This narrow review is insufficient. While groups agree that robust Tribal consultation is integral to correcting BLM's deficient analysis, BLM must address the full extent of the legal deficiencies in its cultural resource analysis. As described below, the scope of these legal failings necessitates a fully revised analysis.

In addition, given BLM's admission that its process violated the NHPA, clarification regarding the status of the Corps 404 permit is needed. Although the Corps' permit is subject to the NHPA, the Corps has not indicated that it will review its permit in light of BLM's deficient process.⁹⁶⁰ As with BLM, the Corps also needs to address the deficiencies with the NHPA process and consideration of archaeological and cultural resources as part of this remand process.

A. BLM Must Gather Baseline Data and Address the Deficiencies with the Section 106 Consultation Process.

On remand, BLM must engage in robust Tribal consultation and collect significant missing data in order to adequately protect the region's unidentified historical, spiritual, and cultural resources. As part of BLM's initial NHPA Section 106 analysis, the agency commissioned a "Data Gaps Analysis" to identify unknown cultural resources.⁹⁶¹ The report found that "[t]he amount of investigation completed to date in the Project alternative corridors is *insufficient for understanding the nature and range of both ethnographic and archaeological resources in the Project study area or for assessing the effects of the proposed Project on those resources.*"⁹⁶² In plain terms, the report found BLM did not have enough baseline information on what resources were in the project area to determine how these resources would be impacted. Although the NHPA and NEPA require analysis of cultural and archeological resources prior to issuing a right-of-way for the Ambler Road, BLM did not identify historic properties, assess possible adverse effects to those properties, or provide for necessary avoidance and mitigation measures as part of the EIS process. Instead, the agency held consultation meetings focused on establishing a process to locate cultural resources under a Programmatic Agreement (PA). The PA papered over the almost complete lack of baseline data regarding cultural and historical resources in the project area and postponed all substantive aspects of the NHPA process until after the ROD was adopted.⁹⁶³ This severe lack of baseline information is only further

⁹⁵⁹ AVC Remand Mot. at 2, 20.

⁹⁶⁰ 2 FEIS, App. J at 1 ("Whereas, the U.S. Army Corps of Engineers (USACE) has jurisdiction over activities that would discharge dredge or fill material into waters of the U.S., including wetlands, and has determined that the Project will require a permit, pursuant to Section 404 of the Clean Water Act (33 USC 1251 et seq.), making the Project an Undertaking and, therefore, subject to the NHPA and is an Invited Signatory").

⁹⁶¹ *Id.* App. K, HDR Alaska, Inc., Ambler Road EIS Cultural Resources: Data Gap Analysis Report 26 (September 2018) [hereinafter Data Gap Analysis Report].

⁹⁶² Data Gap Analysis Report at vi (emphasis added).

⁹⁶³ 1 FEIS at 3-161 ("Due to a lack of evaluation and comprehensive cultural resources and ethnographic investigations in the project area, non-evaluated resources within the APE will be evaluated" through the Programmatic Agreement's "process for identifying additional historic properties and resolving potential adverse effects through avoidance, minimization, or mitigation.").

highlighted by AIDEA’s attempts to gather that information after-the-fact as part of its summer fieldwork studies.⁹⁶⁴

While BLM has recognized that this process “constrained” tribal consultation and plans to “revisit their consultation obligations,” the agency has not yet acknowledged the need to fill the data gaps as part of that engagement.⁹⁶⁵ It is not clear that the agency’s vague intent to “supplement” its NEPA analysis contemplates gathering the extensive data needed to properly inform the SEIS. If BLM is to engage in a meaningful dialogue with Tribes, the agency must gather significant data to facilitate input regarding the protection of cultural resources *before* reaching a final decision. For example, the Data Gaps Analysis Report found 516 previously recorded sites within all three alternatives and “likely dozens or even hundreds of additional sites along the routes that have not yet been recorded.”⁹⁶⁶ At the time of that report, almost 500 National Register of Historic Places designations remained unevaluated in the project area.⁹⁶⁷ Regarding the historic, prehistoric, and paleontological sites in the project area, the Data Gaps Analysis Report states:

[A]rchaeological survey coverage is low and the majority of previous inventories occurred 10 or more years ago. Furthermore, studies focusing on ethnographic resources are limited in the Project study area and though several AHRS sites were identified as potential ethnographic resources, further research is required. Most AHRS sites lack NRHP determinations of eligibility, which are required under Section 106 to assess Project effects on historic properties. In addition, the locations of ancillary features for all Project alternatives (material sites, landing zones, etc.) have yet to be identified. This information will be required to identify all cultural resources that may be affected by the proposed Project. As this analysis was primarily focused on information contained within the AHRS database, other sources of information regarding cultural resources should be considered in future project planning.”⁹⁶⁸

The Data Gap Analysis Report also recommends individual studies for aerial and pedestrian field surveys, RS2477 claims, cultural resource investigations, and consultation on paleontological resources.⁹⁶⁹ Although the report indicates there is an overall “high likelihood that archaeological resources will be located along any of the routes,”⁹⁷⁰ BLM issued the FEIS

⁹⁶⁴ See, e.g., Letter from Lindsay Simmons, N. Land Use Research Alaska, LLC to Robert King, BLM State Archaeologist re: Permit Application for Cultural Resource Surveys of the Ambler Access Project Direct Area of Potential Effect on Bureau of Land Management Managed Lands on the South Side of the Brooks Range Between the Dalton Highway and Ambler, Alaska (June 8, 2022).

⁹⁶⁵ AVC Remand Mot. at 20.

⁹⁶⁶ Data Gap Analysis Report at 30.

⁹⁶⁷ *Id.* at 41.

⁹⁶⁸ *Id.* at iv.

⁹⁶⁹ *Id.*

⁹⁷⁰ 1 FEIS at 3-160.

without pursuing recommended studies.⁹⁷¹ This was a significant error that was incompatible with meaningful consultation and thorough analysis. All the cited consultations and studies must occur as part of the SEIS process, and not after the agencies have already approved the project.

B. The Programmatic Agreement Must be Revised to Protect Archeological and Cultural Resources.

As part of its supplemental analysis BLM must revise the PA to consider all possible impacts to cultural resources and establish a sufficiently broad APE. In the PA, BLM established an unduly narrow one-mile-wide APE corridor on either side of the road route within which AIDEA must “inventory archaeological, historic, and ethnographic resources.”⁹⁷² This narrow band is too small to meaningfully capture potential effects on landscape-level Traditional Cultural Properties, Sacred Sites, traditional use areas, and cultural landscapes. In the SEIS, BLM must adopt an APE that is wide enough to capture impacts such as noise, pollution, lights, vegetation destruction, or cumulative impacts along the road corridor as well as from large-scale mining in the Ambler Mining District. BLM did not perform this analysis in the FEIS. In fact, BLM itself recognized impacts may extend beyond the APE.⁹⁷³ The experts hired to author the Data Gap Analysis report utilized a far wider scope of analysis—their study area was 10 miles wide.⁹⁷⁴ In the SEIS BLM must establish an appropriate APE that accounts for all possible impacts and the vast scale of potential cultural resources within this region.

The SEIS must also clarify BLM’s analysis related to direct and potential effects. The FEIS describes the area for direct effects as a 250-foot wide, and “in some cases (such as water crossings or steep terrain) 400-foot-wide corridor, plus a 100-foot buffer on both sides of the corridor.”⁹⁷⁵ It is unclear from this description what standards will be used to determine when a wider, more protective 400-foot wide corridor is applicable. Will the 400-foot corridor be applied to all water crossings? How steep of grade would warrant an additional corridor? In addition, the FEIS states that “[d]irect effects would also be considered for the footprint of all ancillary features (e.g., vehicle turnouts, work camps, storage and staging areas, material sources, airstrips, access roads, and maintenance stations or any other project features), plus a 100 foot buffer around the ancillary features.”⁹⁷⁶ It is possible under this interpretation of the buffers that a historic property could be located a mere 100 feet from a gravel mine. BLM must clarify in the SEIS if it intends to apply the 250-foot or 400-foot buffer to ancillary features. BLM’s description of the buffers must be detailed enough to allow for public comment on the applicant’s proposed plans. BLM should consult with communities to determine how large of a buffer is appropriate to protect historical properties.

⁹⁷¹ *Id.* at 3-161.

⁹⁷² *Id.* at 3-160 to -161.

⁹⁷³ 1 FEIS at 3-161 (“While some effects may be present beyond the APE in certain areas (e.g., the road may be visible for more than 1 mile away when viewed from higher ground), it is unlikely that the eligibility or significance of any historic properties would be changed; therefore, the effect would not be considered adverse.”).

⁹⁷⁴ Data Gap Analysis Report at 7.

⁹⁷⁵ 2 FEIS, App. J, Attachment B at B-1.

⁹⁷⁶ *Id.*

The SEIS must also correct BLM's failure to account for all impacts to cultural resources, including impacts related to future public access. In the FEIS, BLM concluded, without analysis, that the road's visibility and other impacts were unlikely to adversely impact historic properties.⁹⁷⁷ This assumption is unsupported. Under the NHPA, adverse effects on historic properties include the "[i]ntroduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features."⁹⁷⁸ The SEIS must recognize that the construction, operation, and maintenance of a roadway within a previously undisturbed region will create a significant visual, auditory, and polluting impact on the landscape. Those impacts, along with impacts from the large-scale mining the road will usher in, may diminish the integrity of historic or sacred sites. The SEIS must also consider impacts that may result from the road being made public in the future. The FEIS reflects that there are no mechanisms to ensure the Ambler Road will actually remain closed to the public. If opened to the public, an influx of people using the road would substantially increase the risk of damaged or stolen artifacts. Since BLM has yet to analyze the quantity and significance of the artifacts and historic properties in the roadway corridor, the full scope of this risk is unknown. BLM supplemental analysis must account for the risk that artifacts will be damaged or stolen, analyze the scenario and potential impacts of a public road, and present mitigation measures specific to protection of cultural resources as part of the SEIS.

XV. THE FEIS DID NOT EFFECTIVELY ACCOUNT FOR, OR MITIGATE, IMPACTS TO RECREATION AND TOURISM.

The prior decision-making process did not adequately account for the full range of foreseeable impacts to recreation and tourism. Recreation and tourism activities in the corridors of the proposed Ambler Road rely on the solitude and primitive and unconfined recreation values of the area. Although the FEIS cites these values as pertaining to Gates of the Arctic, they are applicable across the entirety of the project area. There are no trails and most access is by floating, powerboat, or plane. The FEIS acknowledged that the road will materially change the recreationalist and tourist experience, as many tourist destinations are likely to overlap via at least sight or sound with the proposed alternatives. Travelers' backcountry trips, where they would have multiple days of travel on either side of the road corridor, would be likely to cross the road at some point. Industrialization of the Southern Brooks Range with this road will forever change the composition of the landscape, and alter recreationalists and tourists desires to visit the area.

The FEIS fails to account for the changes in flight patterns due to construction and use that would materially change user experiences. Alternatives A and B for the road would also travel close to areas of high recreational value, near Walker Lake and several wilderness lodges. The lodges offer unparalleled access to nature experiences. The FEIS did not account for the fact that globally there are very few locations with such large swaths of roadless areas available for recreational experiences. The roadway itself, traffic, increased and varied flight patterns, and hardrock and gravel mining along the corridor would all substantially impair these values.

⁹⁷⁷ 1 *id.* at 3-161.

⁹⁷⁸ 36 C.F.R. § 800.5(a)(2)(v).

BLM cites several mitigation measures that appear good in theory, but lack the ability to actually reduce impacts. BLM fails to account for the likely scenario where the road is opened to more development or will allow for individual, private access to the road. These likely scenarios must be analyzed in a revised FEIS.

The SEIS should include mitigation measures to account for unauthorized poaching and recreation. BLM's previous mitigation measures to prohibit use of the proposed Ambler Road and airstrips by the public and AIDEA employees, agents, contractors and their employees lacked measures to ensure enforcement. There was no indication of specific measures AIDEA has planned to prohibit outside hunters from poaching on the right of way. Efforts to curb hunting on the Delong Mountain road have failed to prevent poaching activity to such an extent that AIDEA no longer attempts to enforce restrictions. It is unclear how any restrictions would be implemented or guaranteed here. For enforcement, there is no indication if BLM also intends for AIDEA to coordinate with Alaska State Troopers for enforcement or if the Alaska State Troopers would budget for this task. BLM must include enforceable measures, to prevent against unauthorized use of the road. There should be defined actions that will be taken in the event of hunting and access violations. AIDEA is responsible for mitigating the issues with poaching caused by opening the area with road access.

BLM must account for the cost, noise and prolonged disturbance from operation and removal of the road. Any tourism business that manages to survive the construction of the road will then deal with the ongoing transport traffic. It is not clear how many mines will result from the industrial access so it is also unclear how many vehicles per day will travel the transportation route. BLM must clarify these issues.

BLM should develop a plan to decrease impacts during high-use recreation seasons. Currently the FEIS lists that it will minimize use "as much as possible" during these times. "As much as possible" is not quantifiable and is so vague as to be virtually meaningless. The SEIS should set out information on who is recreating in the area and when, including businesses that derive income from this recreation. None of that baseline information was collected or adequately analyzed in the FEIS, so there is no way to know if activities will be minimized. Construction and tourism seasons are likely to have substantial overlap. BLM should address the lack of adequate mitigation measures related to recreation in the SEIS.

XVI. THE PRIOR EIS FAILED TO ADEQUATELY CONSIDER ECONOMIC IMPACTS.

The SEIS must provide an accurate assessment of the costs of the road and independently verify AIDEA's claims regarding economic benefits and feasibility. These costs should then be compared those against the economic and other harms local communities are likely to experience due to the Road. Such an analysis is needed for the agencies to take the required hard look at the Ambler Road's social and economic impacts, both locally and state-wide.

A. The SEIS Must Accurately Assess the Costs of Road Construction and Maintenance and Provide Verified Assessments of Any Purported Economic Benefits.

Road costs and financing must be considered, as those will have important, negative impacts on the state economy. It is not clear that the revenue from this project will break even with the cost of development, impacts to local communities, or the risk to the environment. The SEIS must account for the construction, operations, maintenance, financing and unknown reclamation costs of the project, and should not rely exclusively on AIDEA's cost projections, which potentially vastly underestimate the project costs. BLM should consider costs for similar road projects, and earlier projected costs for the Ambler Road, which inexplicably decreased in AIDEA's most recent economic assessment.

This region of Interior Alaska is largely roadless, making road construction and maintenance extremely expensive because materials and workers would be transported significant distances via a gravel road or by air. Portions of the proposed route are underlain by permafrost, which raises road design and construction costs and technical challenges, as well as maintenance costs for the life of the road. Additionally, the road would require numerous river and stream crossings. Because of the high cost of bringing materials and labor to this remote region and technical challenges with the road proposal, the project's cost estimate should be developed with great care, including utilizing sensitivity analyses that include a range of costs for particular variables.

BLM must develop an accurate cost estimate for the SEIS. In developing a cost estimate, one road-building company stated in 2016 that:

[t]he realities of road building have much to do with a number of variables: location, terrain, type of construction, number of lanes, lane width, surface durability, and the number of bridges, to name a few, according to the American Road and Transportation Builders Association.

But, in general, it costs much more to build an entirely new road than to rehabilitate or add new lanes to an existing byway . . . And as you might expect, it costs more to build in mountainous areas than on stable, flat land . . . Nonetheless, here are the daunting numbers: constructing a two-lane, undivided road in a rural locale will set you back somewhere between \$2 and \$3 million per mile.⁹⁷⁹

These cost estimate factors do not account for all conditions for the proposed Ambler Road, which should include the higher costs of: transporting materials and labor to a remote Alaska locale; construction in a permafrost region; and the many culverts and bridges needed to ensure that streams, rivers wetlands, and fisheries are not damaged. As a result, it is not unreasonable to expect that the cost of the proposed 200+ mile Ambler Road could be 1 billion dollars or more, particularly when accounting for the significant maintenance costs. AIDEA's estimates, however, are significantly less than that amount, which is problematic and needs to be addressed.

⁹⁷⁹ Frank Elswick, Midwest Industrial Supply Inc., Canton, OH (Jan. 5, 2016), *available at* <https://blog.midwestind.com/cost-of-building-road/>.

BLM must include an accurate cost estimate in the SEIS. As has been done for the Knik Arm Bridge and Juneau Access, there should be an independent analysis of road costs prior to proceeding.

The prior FEIS inaccurately touted the Ambler Road’s purported economic benefits from mining development while simultaneously downplaying the significant negative impacts the road would have on the state and regional economy. The FEIS states, without citation, that the Ambler mining district “has major mineral exploration and development potential. It is characterized as one of the world’s largest undeveloped copper-zinc mineral belts.”⁹⁸⁰ But elsewhere the FEIS acknowledges that “[e]conomic feasibility is still being determined for specific mine developments.”⁹⁸¹ The presence of mineral resources that do not have demonstrated economic viability should not be conflated with economic benefits in the future. Moreover, the FEIS describes the “multiple public benefits related to the project purpose, including direct employment for road construction and operation, indirect employment related to mining, revenues paid by mining companies to local and state governments and Alaska Native Corporations.”⁹⁸² Yet there is no data to demonstrate that any of the indirect benefits will materialize.

The SEIS should identify for the Arctic, Bornite, Smucker and Sun deposits considered in the FEIS, which portions of those deposits are inferred, indicated, or measured resources. That information is important to provide the public with accurate information about the uncertainties associated with these deposits. The SEIS must provide current and reliable data rather than relying on speculation by AIDEA regarding potential economic benefits, and its economic projections must be based on those mineral deposits for which there is sufficient data to support economic projections. To date, none of the deposits have not been demonstrated to contain proven mineral reserves or be economically feasible absent AIDEA footing the bill for road access.

While AIDEA has stated that “mines using the road to haul ore to market would pay a user fee that would pay back the financing used for the road’s development and construction,”⁹⁸³ AIDEA has not developed a clear and credible financial plan that shows this to be the case. Although Appendix H assumes at least four mines will be viable, there does not exist compelling evidence that will occur. A credible financial plan that assumes several different mine development scenarios should be considered in the SEIS in order for the public and decision-makers, including mining companies who might access the Ambler Mining District, to understand the likelihood of this road’s construction. Notably, mine developers exploring in the region — such as Canadian company Trilogy Metals — have not documented the amount they expect to reimburse the state for road costs.

⁹⁸⁰ 1 FEIS at H-72.

⁹⁸¹ *Id.* at H-2.

⁹⁸² *Id.* at H-3.

⁹⁸³ AIDEA, Ambler Access – EIS Project (Sept. 2019), available at http://www.aidea.org/Portals/0/PDF%20Files/PFS_Amdiar.pdf.

Although AIDEA often cites to the DeLong Mountain Road to access the Red Dog Mine as a financially successful example of the state building a road to support mining, there are notable differences between the DeLong Mountain road and the proposed Ambler Road that would greatly increase costs for the latter. These differences include the DeLong Mountain road's substantially shorter length, its flatter terrain for construction, its tidewater access, having far fewer water crossings, and, perhaps most importantly, the Red Dog Mine owner's 1986 signed agreement to reimburse the state for the road's financing, construction, use, operation, and maintenance costs.⁹⁸⁴

If AIDEA utilizes General Obligation Bonds to fund road construction, the state would be required to pay back those bonds regardless of the level of mine industry funding for the road or the state's credit rating would be jeopardized. Moreover, any financial outlay by the state in the near future would have negative impacts as it would exacerbate the state's fiscal problems and cause reductions in state expenditures in other areas,⁹⁸⁵ and it would be an irreversible commitment of the state's limited financial resources. The SEIS should analyze how this commitment of state financial resources will impact other state uses of the money, as well as what it would mean if the state's credit rating goes down should one or more of the mining companies in the Ambler Mining District go bankrupt.

Any shortfalls in toll revenues from the mining industry to pay for construction, operation, maintenance, reclamation, and debt servicing would be paid by the state and would have a large negative impact on Alaska's already-struggling economy. At a time when Anchorage is planning to shutter elementary schools due to significant budget shortfalls, the state can ill-afford a financial boondoggle like the Ambler Road.⁹⁸⁶ The assumptions behind projected toll revenues need to be included in the SEIS, as well as any commitments by mine operators to pay those costs.

A recent independent study of Ambler Road financing and economic benefits puts many of AIDEA's claims regarding the road's financial viability in doubt.⁹⁸⁷ According to the study, the State of Alaska has systematically failed to address the real costs, risks, and liabilities of financing the proposed Ambler Road. The study found that moving forward with the road is unlikely to bring in any revenue for the state.⁹⁸⁸ Additionally, the road may put AIDEA's credit rating in danger, limiting its ability to provide low-cost loans for Alaska businesses. Even under the best-case scenario, the state would see returns of five to ten times less than it could make from simply investing the money in low-risk bonds. Despite all this, the state continues to spend

⁹⁸⁴ Agreement for the Financing, Construction, Use, Operation, and Maintenance of the DeLong Mountain Transportation System between the Alaska Industrial Development Authority and Cominco American Inc. (June 30, 1986).

⁹⁸⁵ For a discussion of the state's fiscal problems, see for example this National Public Radio interview entitled Alaska's State Government Faces Big Budget Cuts, *available at* <https://www.npr.org/2019/07/13/741391200/alaskas-state-government-faces-big-budget-cuts>.

⁹⁸⁶ Katie Anastas, Anchorage School District Administrators Recommend Closing 6 Elementary Schools, ALASKA PUBLIC MEDIA, Oct. 18, 2022.

⁹⁸⁷ Powers Consulting, An Economic Analysis of the Proposed Alaska Ambler Access Road (Dec. 2021) (attached).

⁹⁸⁸ *Id.*

significant money on the road, even though the economic conditions AIDEA has laid out for construction of the road may never, in fact, be met.

Even accepting the state's cost estimates, the total expenditures that will be required to build, maintain, and then decommission the proposed industrial corridor total about \$1.4 billion. AIDEA has stated that it will not move forward with the road until it has signed lease agreements with the mining companies that will commit the mining companies to pay tolls that, collectively, will more than cover the full costs of building and operating the project. However, AIDEA is already actively spending and allocating large sums of money, including up to \$30 million for the 2022 field season for pre-construction activities, without any assurance of economic recovery of those funds.

There is reason to doubt the rentals and royalties from use of the road will justify the various costs and liabilities associated with the road permitting, pre-construction, construction, maintenance, and reclamation. AIDEA's projected economic benefits from the road are justified by a set of overly optimistic and unrealistic assumptions. First, it assumes there will be at least four mines. The AIDEA-sponsored economic analysis and the BLM FEIS accepted AIDEA's assumptions that rely on the premise there will be at least four mines in the Ambler region that, combined, will pay for the road. Indeed, AIDEA says it will not proceed with construction until all four mines have signed leases committing themselves to paying the full costs of the road. However, at this point, only one of those mines has undergone a feasibility analysis. None have permits. Despite that, AIDEA is continuing to waste state resources advancing this project.

Second, AIDEA's economic analysis assumed an additional 20 years of road life without any basis. The 2020 Ambler Access Road FEIS analyzed a road that had a fifty-year life, which was also authorized by the terms of BLM's right-of-way.⁹⁸⁹ In most previous analyses, the road's life was assumed to be 30 years because that was the longest-term financial markets allowed for municipal revenue bonds of the sort that AIDEA would sell to finance the construction of the Road. In the FEIS, BLM accepted AIDEA's optimistic assumptions that it would pay off the bonds in 30 years and make another 20 years of profit, even though the mining companies, ore deposits, mining technology, and markets cannot not be identified at this point in time.⁹⁹⁰ There is no basis for this assumption.

Third, AIDEA's projection of economic benefits assumes mines will be able to pay for the road despite evidence to the contrary. According to the FEIS, the road will cost \$1.4 billion to finance, build, maintain, and ultimately deconstruct. Arctic, the only mine that has done a final feasibility study attempting to lay out costs, underestimates its likely toll and maintenance costs by nearly half. As stated in the Powers Report, "What becomes clear when we use the payments presented by the only mine that has been developed far enough to have a final Feasibility Study, is that the Ambler Access Road, as presented in the FEIS, cannot pay for itself."⁹⁹¹

Although AIDEA represents the road investment as riskless, AIDEA is unlikely to secure the \$1.4 billion in bonds needed to build the road unless it puts state money, its credit rating, or

⁹⁸⁹ BLM ROW at 1.

⁹⁹⁰ Powers Consulting at 5.

⁹⁹¹ *Id.* at 7.

both on the line. Mineral investments are generally perceived to be high risk by investors. While AIDEA can generally secure lower interest financing than mining companies, that is unlikely to be the case when they are attempting to finance a road dependent on the return from speculative mining unless AIDEA backs the loans with state money and/or loan insurance.

Ignoring the flaws in AIDEA's studies and projections, under a best-case revenue scenario, AIDEA projects a return to the state of 5 to 10 times less than the state would make from simply investing the money in bonds. The Cardno Report, which underestimates the cost of the road by over \$500 million, only projects a rate of return on AIDEA's investment of 0.6%:

Expressed as a percent of the capital investment in the Ambler Access Road (assumed to be \$875 million including the cost of money), the annual net revenue would be about 0.6 percent of the capital investment. Both represent relatively low returns on the investment despite the billion dollars of gross revenues collected in tolls. Over the last decade, the actual yield on relatively safe 30-year, high-quality market corporate bonds has been between 6 percent (January 2010) and 3 percent (April 2021).⁹⁹²

Despite AIDEA's reliance on an Impacts Report by the University of Alaska dated June 28, 2019, the third-party economic analysis indicates that the road will provide little to no economic benefit to local communities:

While the multi-national mining companies may see substantial positive economic impacts from the proposed Ambler Access Road mines, the local people and local economies will see little of those projected economic benefits for the simple reason that the small, isolated villages cannot supply either the inputs the projected mines will need to operate or the goods and services on which employees at the mines are likely to want to spend their mining paychecks.⁹⁹³

In other words, third-party economic analysis has determined that AIDEA's continued investments in this project are highly speculative, and that the applicants are pushing this project forward devoid of data that would indicate that the state will recoup its costs, let alone create local jobs and bring significant financial returns to the state. Instead, they are relying on extremely optimistic assumptions regarding financing a \$1.4 billion environmentally destructive project reliant on at least 50-year of mining activity requiring at least four major mines in a region that has yet to have a single mine that has begun the federal permitting process.⁹⁹⁴ The SEIS must fully consider this information rather than rely on AIDEA's unreasonable estimates of financial feasibility in order to take a hard look at the Ambler Road's economic impacts. This concern also extends to the NPS's EEA, where the agency was expressly directed to consider economic concerns as part of its analysis.

⁹⁹² *Id.* at 20.

⁹⁹³ *Id.* at 31.

⁹⁹⁴ *Id.* at 17.

B. The FEIS Must Consider the Adverse Economic Impacts of the Road and Mineral Development on Local Communities.

Any impacts to subsistence resources will have disproportionate impacts to the local economy because store-bought food is expensive. Those impacts must not be dismissed by claiming that these communities will reap the benefits of wage employment and thus, that any effects from the project will be low. The road will not connect directly to any communities in the region, making it illogical to assume that any community will benefit from lower costs for food, fuel, or other local needs, or experience increased employment.

Unlike the speculative economic benefits to a private mining company, the adverse economic impacts of mineral development on local communities are measurable and highly likely if the road moves forward as proposed. Mineral deposits are finite resources, and resource extraction of hardrock minerals is often associated with “boom and bust” economic impacts. The FEIS failed to take a hard look at the negative socio-economic impacts associated with mining, particularly in remote areas.

The report from Constance Delannoy, submitted during the prior draft EIS process, provides a quantitative discussion of the ways in which BLM and AIDEA underestimate the adverse economic impacts to local communities.

Overall, the Alaska Industrial Development and Export Authority (AIDEA) predicts that the road construction would bring about 300 jobs per year of the 4-year construction phase (EIS). However, not all those jobs would source workers from the communities in the project zone. Given the employment rate and population density of the local villages in the study area (BLM, 2019), **an optimistic estimate would be that about 10% of those jobs (30) would go to people from local communities.**⁹⁹⁵

AIDEA’s estimate of a 10% employment rate for local communities are not explained, given that the road does not connect to communities and therefore it’s unclear how local residents would access these construction sites. Nonetheless, AIDEA’s own rosy assumptions still result in a negative impact to communities. According to the Alaska Department of Labor and Workforce Development, a construction worker earned \$23.84 per hour (there is no wage information about road work specifically). Assuming 40 hours a week for 52 weeks, the annual wage for this job comes to \$49,587. For all 30 jobs, this would sum up to \$1,487,616 for local communities during road construction.⁹⁹⁶ Further, using AIDEA’s own numbers, Ms. Delannoy estimates that local communities would receive a total income of \$2,244,341 per year while the mine is in operation and the road is maintained.⁹⁹⁷ Finally, across all communities reachable by

⁹⁹⁵ Constance Delannoy, Economic Review of the Ambler Project 2 (Oct. 16, 2019) (previously submitted).

⁹⁹⁶ *Id.* at 2.

⁹⁹⁷ *Id.* at 3.

spur roads (if any), the total gains across villages in the study area would sum up to \$993,276 a year.⁹⁹⁸

These numbers are inherently uncertain, as well. As Ms. Delannoy notes:

While it may seem that the communities that the mine would impact would benefit from the activities after the mine is in operation, we caution against taking those estimates for granted: there are many unknowns past the 4-year road construction period, most notably about the economic impacts from mining operations on jobs, cost of living or subsistence lifestyle of the local communities. The considerations of these factors past the road construction phase are mostly absent from the EIS, which includes only rough estimates of the number of mining jobs created, without consideration of the life cycle of the mine or external factors that may impact its performance. In addition, while local communities would benefit from the creation of mining jobs, they may have more to lose on the long-term from the disturbance to herd migration patterns and vegetation, which would not be easily reversed once mining operations cease.⁹⁹⁹

However, the FEIS falls far short in its estimates regarding costs. According to a report conducted by National Parks Service, taking into consideration impacts on fishing from nearby streams that may be impacted by the road, as well as impacts to caribou and moose hunting, they predicted an average loss of income of \$8,700 per household per year for communities off the road system.¹⁰⁰⁰ This would amount to an average loss of **\$3,158,100 per year** in the project zone.¹⁰⁰¹ This loss would essentially be a certainty, unlike the speculative nature of the economic gains if members of the local community were able to gain employment during road construction. This is not guaranteed, and the mineral potential in the Ambler Mining District is likewise uncertain, as described above. BLM must address these issues in the SEIS.

Additionally, while some, but not all, local communities would gain from reduced cost of utilities under the assumption that spur roads would be built and that costs of permits to use it are negligible, the gains would not be enough to offset the loss from subsistence hunting and fishing. Across these two categories — heat/electricity (gain) and subsistence resources — local communities would lose **\$2,164,824** annually.¹⁰⁰²

The SEIS should full revisit AIDEA's projections and account for subsistence costs to take a hard look at the economic impacts associated with the proposed road, including negative economic impacts associated with health problems in local communities, along with impacts to subsistence resources.

⁹⁹⁸ *Id.*

⁹⁹⁹ *Id.* at 4.

¹⁰⁰⁰ NPS Subsistence Study at 41.

¹⁰⁰¹ Delannoy at 4.

¹⁰⁰² *Id.* at 3.

XVII. THE FEIS FAILED TO ADEQUATELY ANALYZE THE IMPACTS ON SOUNDSCAPES FROM CONSTRUCTION AND USE OF THE PROPOSED AMBLER ROAD.

Maintaining the natural soundscape along the corridor of any proposed Ambler Road alternative is crucial to retaining the area's values. The FEIS previously identified noise as a primary impact of the Ambler Road, but failed to analyze the impacts in a cohesive manner. Namely, the FEIS did not establish a sufficient baseline and used outdated data that was inapplicable to the majority of the proposed alternatives. The FEIS also largely ignored noise impacts from the construction phase of the project, even though these activities are some of the most significant. The analysis of likely noise impacts during the proposed road's operations was also inadequate, and did not sufficiently account for site specific factors, increases in air traffic, or habitat fragmentation. The FEIS did not fully analyze the foreseeable development impacts of road construction, operation, and mining activities on the natural soundscape. BLM must perform soundscape studies for all the alternatives in order to make an informed decision and ensure noise impacts are adequately mitigated.

First, BLM does not establish a baseline soundscape. Other EIS's for roadway impacts in the Arctic provide soundscape analyses that start with a baseline soundscape and then predict the likely change from the road construction and development.¹⁰⁰³ The acoustic environment, or soundscape, is comprised of the terrain, vegetation or ground cover (*e.g.* water, land, foliage), atmospheric conditions (wind/weather), and distance from the sound's source and decibels for perception. All these factors must be established along the roadway corridors under the various alternatives. The project area is largely undeveloped and remote, extending 211 miles for Alternative A, 228 miles for Alternative B respectively, and 332 miles for Alternative C. BLM does not describe the current ambient noise conditions, which will vary across all alternatives based on geographic features, proximity to communities and subsistence use areas (*e.g.* human noises including snowmachines and guns), and frequent flyways (to area communities, Utqiagvik, Kotzebue, lodges, and backcountry areas). BLM should consider these variables and articulate the sound pressure level, frequency and duration of noise, maximum combined noise, and distance to the background noise from new projects. BLM must establish baseline conditions in the SEIS in order to assess the intensity of impacts the proposed Ambler Road would have on the soundscape.

BLM's approach to calculating soundscape impacts contained misplaced and incorrect modeling assumptions. BLM requested NPS take data from a previous 2015 study within Gates of the Arctic and apply the results broadly to all alternatives. This small, site specific data sample is outdated and inadequate to account for the actual conditions of the proposed Ambler Road. The 2015 Big Sky Acoustics study (data collected in 2013 and 2014) only calculates impacts for

¹⁰⁰³ See, *e.g.*, 1 Bureau of Land Mgmt., Final Supplemental Environmental Impact Statement for the Alpine Satellite Development Plan for the Proposed Greater Mooses Tooth Two Development Project 295, Table 108 (2018)., (presenting existing passive noise at project site); 1 U.S. Environmental Protection Agency, Final Supplemental Environmental Impact Statement for the Red Dog Mine Extension 3-284–285 (2009) [hereinafter Red Dog 2009 Final SEIS] (looking at ambient noise levels).

the northern and southern alternatives through Gates of the Arctic.¹⁰⁰⁴ While we appreciate that NPS updated the Big Sky Study as part of the prior process,¹⁰⁰⁵ the analysis is still inaccurate. The underlying data is stale, as this region of the Arctic has seen significant changes, including increased warming and climate variability, as well as sound impacts from exploration near the road corridor. These factors are important to determining the impacts of noise. To calculate the temperatures in the area, the FEIS relied on 2014 data from the general source website, Weather Underground at the Ambler Airport.¹⁰⁰⁶ It is unclear how these weather conditions are applicable for the entire proposed project — in some instances the road is hundreds of miles away from this point. The weather data provided is insufficient and cannot replace studies that assess the actual baseline conditions in the area.

Second, the FEIS's analysis of impacts to the acoustic environment was deficient for a number of reasons. For example, the FEIS did not account for reasonably foreseeable expansions or conditions of the proposed Amber road. In reality, and as stated throughout the FEIS, the mining district has the capacity for numerous mines and the proposal acknowledges some other vehicles will use the road. Limiting the assumptions in these ways does not account for the reasonably foreseeable, and likely use, of the proposed Ambler Road. BLM must use the actual project conditions, and reasonably foreseeable use to analyze soundscape impacts.

The FEIS soundscape analysis also assumed vehicles will travel at the same speed, 45 miles per hour, across the duration of the road. This is not reflected elsewhere in the FEIS, as no speed limits appear to be identified or required as mitigation measures. Moreover, given the differences in jurisdiction across the road, it is unclear how any speed limit might be meaningfully imposed. Since BLM appears to assume the road may have different speed limits, these areas must be identified and the appropriate changes to the soundscape considered.

In addition, all alternatives of the proposed Ambler Road stretch for vast distances through the Arctic and require detailed analysis of site-specific conditions. BLM not only applies outdated calculations and incorrect project assumptions, but the 2015 Big Sky Acoustics report information was collected from a small part of the proposed project area within Gates of the Arctic (road sections 26 miles (northern alignment) and 18 miles (southern alignment) long respectively). The study focused exclusively on the area along the Kobuk River corridor and Walker Lake.¹⁰⁰⁷ As a high human use/recreational area, the ambient noise will be different than the rest of the project area. Sound impacts are very specific to the nearby terrain, and BLM must do baseline and impacts studies to understand the scope and intensity for these impacts. In addition, this data is also viewed through the lens of the NPS, who is required to manage Gates of the Arctic for its natural and pristine qualities. Through this lens the majority of discussion on sound is related to recreational activities. BLM must consider differences in management along different parts of the road corridor. This data was extrapolated in the FEIS to represent the soundscape across the hundreds of miles of proposed roadways. But the conditions near the

¹⁰⁰⁴ Big Sky Acoustics, LLC, Ambler Mining District Industrial Access Road Emtl. Sound Analysis 5 (Nov. 12, 2015) (hereinafter Big Sky Acoustics).

¹⁰⁰⁵ 1 FEIS, App. D, att. A (showing continued reliance on 2014 data).

¹⁰⁰⁶ *Id.* at 2.

¹⁰⁰⁷ Big Sky Acoustics at 6.

Kobuk River and Walker Lake are not applicable to the rest of the project area, and BLM should analyze noise impacts in different site-specific locations in the SEIS and consider impacts to uses beyond recreation.

Without basis, BLM tied the buffer distance given in the FEIS for roadway noise, 2.5 miles, to the noise impacts analysis for the Red Dog Mine.¹⁰⁰⁸ It is unclear how this conclusion was reached or how this number was derived. The DeLong Mountain Road for Red Dog sets a different disturbance boundary: a 2.3 mile perimeter.¹⁰⁰⁹ BLM must explain this inconsistency and perform calculations for buffers that take into account for site-specific factors for the proposed Ambler Road. Red Dog Mine is a much shorter road, in a different part of Alaska, with different operating and project conditions for deriving temporal noise impacts (*e.g.* terrain, proximity to animal and bird habitat and communities, aircraft flight patterns, primary recreation corridors, and reasonably foreseeable/cumulative effects from mine development). Realistic models will consider the specific impacts to all potentially affected areas.

Egregiously, BLM's analysis of soundscape impacts and the noise disturbance boundary exclusively apply to roadway use, but not the multi-year construction phase. AIDEA's Ambler proposal sets construction at different levels of intensity and development including changes to the width of the road from a single and double lane roadway. BLM must consider:

- Blasting
- Pile Driving
- Building Bridges
- Building Communications Towers
- Vehicle Operation
- Gravel Mining
- Construction Camps (AIDEA proposes construction camps every 40-45 miles along the road corridor. These locations would have a helipad and encompass five acres each).¹⁰¹⁰

All the above activities will have different noise parameters and levels of intensity. BLM identified the potential that construction would result in high intensity noise, but previously failed to analyze what those would look like across the proposed roadway alternatives. Those noise impacts will be significant, and localized in different areas depending on construction conditions and phases. For example, the mining of gravel and number of overflights are both significantly impactful noise activities that will change locations and intensities throughout this period. These activities are not currently considered in the soundscape analysis and will create significant noise impacts. While the FEIS mentioned the noise impacts from all construction, it did not predict the noise impacts for the construction camps. BLM should include the total number of camps and their projected noise levels in its SEIS analysis. BLM must

¹⁰⁰⁸ 1 FEIS at 3-35.

¹⁰⁰⁹ *Compare id.* at 3-35 (2.5-mile buffer), with 1 Red Dog 2009 Final SEIS at 3-287, fig. 3.44 (2.3-mile buffer).

¹⁰¹⁰ 1 FEIS at 2-7.

perform studies and modeling of the soundscape impacts from construction activities for the three phases of the road development for all alternatives.

The FEIS also failed to account for any noise impacts from road maintenance. Maintenance of the proposed Ambler Road will be ongoing throughout the life of this project, and there would be specific noise impacts from grading, sanding, and snowplowing. BLM must consider the noise impacts of this equipment, and the duration and frequency of these activities.

The SEIS must also account for the noise impacts from reasonably foreseeable increases in air traffic. The proposed construction of long-term maintenance station includes the development of an airstrip every 70 miles along the highway. BLM predicts there will be one or two flights weekly to each station in order to change out crews during use and three or four flights per week in the six years of construction. Planes are one of the most disturbing impacts on the landscape, and BLM must consider the location of these future disturbances.

BLM must also consider areas of frequent use. Just because sound impacts cannot be heard in town at a certain village — the FEIS cites to Bettles/Evansville and Kobuk at eight to nine miles from the road¹⁰¹¹ — does not mean these residents will not be substantially impacted. Residents frequently travel in the areas surrounding their villages for a variety of activities, including subsistence harvesting. It is foreseeable that residents of these and other communities will be traveling within hearing distance for subsistence and other activities, and that such activities will be curtailed because of the sounds impacts to wildlife. BLM should consult with all communities to ascertain how communities utilize areas with noise impacts.

The FEIS also did not adequately consider habitat fragmentation from noise impacts. The FEIS acknowledged that impacts to caribou migration patterns will exist, but failed to assess the intensity or duration of any of these impacts. Merely acknowledging that fact is not sufficient and does not allow for any further analysis to compare the alternatives against each other or to develop potential mitigation measures. The deterrence factors of road noise should be considered in the SEIS to fully consider potential mitigation of these impacts.

The FEIS failed to consider mitigation to reduce or eliminate noise impacts in the project area and to nearby communities and users of the region. The FEIS states that AIDEA's design features "would reduce noise during construction and operation, such as keeping vehicles and mufflers in good operating condition."¹⁰¹² This cites back to Section 2.4.4, which appears to contain a list of vague ways AIDEA might propose reducing noise during construction, such as "use of quieter equipment."¹⁰¹³ It is unclear how the agency was able to analyze the effectiveness of those design features when AIDEA has yet to design those measures. BLM must define what at point equipment is considered, quieter, or newer or older. BLM suggests that noise may also be mitigated by pointing sources away from noise-sensitive locations, not idling equipment, and driving equipment forward instead of backward. This measure is illogical for road construction as the very nature of road building is back blading (driving equipment backwards) dragging material, scraping, banging and making excessive amounts of noise and vibration. The

¹⁰¹¹ *Id.* at 3-37 to -38

¹⁰¹² *Id.* at 3-37.

¹⁰¹³ *Id.* at 2-14.

accumulative impacts of bombing and dredging during construction would make tourism untenable and disturb wildlife in the area. As such, BLM must also identify “noise sensitive locations” that it references in this design feature.

Appendix N provides one single measure to reduce noise: that AIDEA would develop and comply with a Noise Management Plan.¹⁰¹⁴ This is wholly inadequate to account for reduction in noise impacts during phased construction and operation of the proposed road. This appears to only be a suggested measure, and does not describe any plan development or what conditions would be required. These purported mitigation measures lack any particulars and contain no restrictive language. In the SEIS, BLM should develop and require such a plan that implements reduction techniques that would be effective along the entirety of each proposed alternative. Analysis of any mitigation plan is required to weigh the alternatives and should be laid out in detail in the SEIS for the public to comment and critique.

BLM should consider whether noise barriers are a viable option for the proposed Ambler Road. BLM must consider costs and other impacts for a noise fence instead of dismissing such a tool offhand. Similarly, BLM should consider reduction of vehicle speed as a viable way to reduce noise. This mitigation measure could be applied uniformly or in specific locations where impacts are heightened. The FEIS does not currently mention such a measure. BLM must mitigate noise impacts during both construction and road use.

Additionally, the FEIS’s consideration of cumulative effects is inadequate because BLM does not account for the reasonably foreseeable scenario where the road is opened to the public. Public use could lead to increased noise from additional vehicle traffic, hunting, and other human activity along the road corridor. As described elsewhere in these comments, this outcome is likely and will undoubtedly alter most assumptions made in the FEIS and its impacts must be considered in the SEIS.

In sum, the SEIS should provide a more robust analysis and studies to consider noise impacts during construction and use of the proposed Ambler Road. BLM must calculate and set disturbance boundaries considering the site-specific conditions along the entirety of all alternative’s corridors. BLM should perform a soundscape baseline and analysis that pertains to the conditions and alternatives of this proposed project during the remand process.

¹⁰¹⁴ 3 *id.* App. N at N-22.