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FROM: **Ernie Niemi**

SUBJECT: **COMMENTS ON DRAFT EA FOR MIDNIGHT RESTORATION PROJECT**

The DEA's discussion of economic impacts falls far short of widely accepted professional standards applicable to this context. Most notably, neither the DEA's two-paragraph statement of economic impacts nor the "Economic Resource Specialist Report" on which the statement is based satisfy the requirements of these documents:

Principles and Requirements for Federal Investments in Water Resources.[1] This document, prepared in response to the 23007 Water Resources Development Act, requires a collaborative, transparent process for decision-making, and maximizing the net public benefits regarding projects, plans, and programs that the Federal government undertakes whose purposes either directly or indirectly alter water quantity, quality, ecosystems, or related land management. To satisfy this document, the DEA must be revised to:

- Provide a comprehensive description of the ecosystem services (benefits to humans) that the project area would deliver to society, both near and far, under each alternative.
- Fully describe—in monetary, quantitative, or qualitative terms, as appropriate—the economic importance of differences in ecosystem services under the two alternatives.
- Demonstrate that the preferred alternative would maximize net public benefits.
- Provide a transparent explanation of the decision-making process, both for selecting key economic assumptions that influence the economic analysis and for selecting the preferred alternative.

Guidance for Assessing Changes in Environmental and Ecosystem Services in Benefit-Cost Analysis. This guidance describes best practices for satisfying the requirements coming from the Principles and Requirements. These best practices include providing a clear investigation and assessment of the economic importance of changes in ecosystem services that will or might occur under each alternative. To satisfy these requirements, the DEA must be revised so that it clearly and transparently completes these five analytical steps:

[1] Alternatively, the DEA fails to comply with the agency's declarations that actions taken within the scope of the 2012 Planning Rule will comply with the Principles and Requirements.

Step 1. Ensure that the temporal and spatial scope of the analysis is sufficiently broad to reflect important ecosystem services in the baseline and across alternatives.

Step 2. Describe the linkages between each alternative and the future supply of ecosystem services, to determine which ecosystem services should be included in the analysis.

Step 3. To the extent feasible and appropriate, monetize, quantify, or qualitatively describe the important effects of the regulatory alternatives on ecosystem services, and address uncertainty.

Step 4. Aggregate estimated ecosystem-service changes and report them in a table, along with other benefits, costs, and transfers.

Step 5. Incorporate monetized, quantified, and qualitatively described ecosystem-service benefits and costs into a narrative describing all benefits, costs, and transfers.

National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change. This document establishes an obligation for the agency to revise the DEA so that it goes beyond its assessment of the potential impacts of climate change on risks of wildfire and ecosystem stresses. Using the best available science, the revised DEA must provide an accurate and clear assessment the impacts of each alternative on levels of greenhouse gases in the atmosphere. Relevant requirements include [citations deleted]:

- As part of the NEPA documents they prepare, agencies should quantify the reasonably foreseeable gross GHG emissions increases and gross GHG emission reductions for the proposed action, no action alternative, and any reasonable alternatives over their projected lifetime, using reasonably available information and data.
- To facilitate readability, agencies should include an overview of this information in the summary sections of EISs and, when relevant, in the summary section of EAs.
- NEPA requires agencies to consider the reasonably foreseeable direct and indirect effects of their proposed actions and reasonable alternatives (as well as the no-action alternative).[81] The term "direct effects" refers to reasonably foreseeable effects that are caused by the action and occur at the same time and place. The term "indirect effects" refers to effects that are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects generally include reasonably foreseeable emissions related to a proposed action that are upstream or downstream of the activity resulting from the proposed action.
- Using the SC-GHG [social cost-greenhouse gases] to provide an estimate of the cost to society from GHG emissions—or otherwise monetizing discrete costs or benefits of a proposed Federal action—does not necessitate conducting a benefit-cost analysis in NEPA documents. As described in Section IV(B), the SC-GHG estimates are useful information disclosure metrics that can help decision makers and the public understand and contextualize GHG emissions and climate damages. Agencies can use the SC-GHG to provide information on climate impacts even if other costs and benefits cannot be quantified or monetized.

Specifically, to satisfy this requirement, the revised DEA must provide an accounting of the economic harms that will result from increases in atmospheric greenhouse gases generated by

the proposed logging will generate. This accounting must include the best available science regarding these social harms.[2]

Ernie Niemi Is President of Natural Resource Economics, which is solely responsible for these comments. He also is Co-Director of the national Forest Carbon Coalition. He has more than 40 years of experience applying the principles and standards of benefit-cost analysis in the context of complex natural-resource-management decisions. Representative experience includes:

- Member, U.S. Secretary of Agriculture's Large-Cost Fire Independent Review Panel
- Member, Technical Team for the Northern Spotted Owl Implementation Team for the Washington Board of Forestry
- Amicus brief summarizing *More Benefits for More People: Potential Economic Benefits from Managing Washington's State-Owned Lands with Less Emphasis on Timber Production and More Emphasis on Conservation and Restoration.* Submitted to the Washington State Supreme Court, Conservation Northwest, et al., v. Commissioner of Public Lands Hilary Franz.
- Developed an integrated system for identifying areas of greater ecological and socioeconomic potential for restoration of riparian areas. *U.S. Environmental Protection Agency*
- Evaluated the relationships between America's forested ecosystems and regional economies. *U.S. National Science Foundation*
- Developed recommendations for improving the design and implementation of policies for managing complex forest resources, and for monitoring their effectiveness. *U.S. Forest Service*
- Developed recommendations for improving the design and implementation of policies for managing complex forest resources, and for monitoring their effectiveness. *U.S. Forest Service*
- Described the economic effects of designating critical habitat for the marbled murrelet in Oregon, Washington, and California. *U.S. Fish and Wildlife Service*
- Described the potential economic costs to Montana, New Mexico, Oregon, and Washington of a business-as-usual approach to climate change. *Climate leadership Initiative, University of Oregon*
- Worked with organized labor, distressed rural communities, and urban neighborhoods to identify potentially feasible sustainable industries and jobs. *Center for Watershed and Community Health, University of Oregon*
- Described the positive economic consequences of forest-management approaches emphasizing sustainability and stewardship. *Washington Environmental Council*
- Described the economy's response in the Pacific Northwest to logging reductions. *American Fisheries Society*
- "The Social Cost of Carbon." *Reference Module in Earth Systems and Environmental Sciences.*
- Characterized the economic benefits, costs and risks—and their distribution among different income and ethnic groups—of alternatives for managing flooding in the Green River Basin. *King County, Washington*
- Analyzed the costs and benefits, and the implementation and monitoring requirements of options for restoring the ecosystem of the Puget Sound Basin. *Puget Sound Partnership*

[2] To satisfy this requirement the revised DEA should consider at least the research findings found in these documents:

- Talberth, J., and E. Carlson. 2024. Forest Carbon Tax and Reward: Regulating Greenhouse Gas Emissions from Industrial Logging and Deforestation in the US.
- Foley, T., D.deB. Richter, and C. Galik. 2009. Extending Forest Rotation Age for Carbon Sequestration: A Cross-Protocol Comparison of Carbon Offsets of North American Forests.
- Sohngen, B., and S. Brown. 2008. Extending timber rotations: Carbon and cost implications.
- Diaz, D.D., S. Loreno, G.J. Ettl, and B. Davies. 2018. Tradeoffs in Timber, Carbon, and Cash-flow under Alternative Management Systems for Douglas-fir in the Pacific Northwest.
- Law, B.E., and M.E. Harmon. 2011. Forest Sector Carbon Management, Measurement and Verification, and Discussion of Policy Related to Mitigation and Adaptation of Forests to Climate Change.
- Ricke, K, L. Drouet, K. Caldeira, and M. Tavoni. 2018. Country-Level Social Cost of Carbon.
- Hudiberg, T.W., S. Luyssaert, P.E. Thornton, and B.E. Law. 2013. Interactive Effects of Environmental Change and Management Strategies on Regional Forest Carbon Emissions.
- Pearce, J.M., and R. Parncutt. 2023. Quantifying Global Greenhouse Gas Emissions in Human Deaths to Guide Energy Policy.
- Qiu, M., J. Li, C.F. Gould, and others. 2024. Mortality Burden from Wildfire Smoke Under Climate Change.