

Peer and Public Review Overview

Wildlife Resources of the Nushagak and Kvichak River Watersheds, Alaska. Final Report. April 2013.

About the document

- The U.S. Fish and Wildlife Service (USFWS) prepared a report (*Wildlife Resources of the Nushagak and Kvichak River Watersheds, Alaska. Final Report. April 2013*) (herein referred to as the wildlife report) which summarizes known information related to brown bear, moose, caribou, wolf, waterfowl, bald eagle, shorebirds, and landbirds in the Bristol Bay region of Alaska, with a focus on the Nushagak and Kvichak watersheds. These species were selected for review because of their importance to ecosystem function, their direct link to salmon, or their importance to local and Alaska residents. The U.S. Environmental Protection Agency (EPA) is conducting a watershed assessment of the Nushagak and Kvichak watersheds in response to requests from various organizations, under the authority of the Clean Water Act. EPA has requested assistance on their assessment from the USFWS, as the agency with responsibilities and expertise for the nation's fish and wildlife resources. This wildlife report is a small portion of the larger EPA assessment (*An Assessment of Potential Mining Impacts on Salmon Ecosystems of Bristol Bay, Alaska*); EPA's assessment includes an evaluation of fish resources and hydrology of the region, and an ecological risk assessment related to potential effects of large scale mineral development on fish, wildlife, water quality, and humans. In addition to providing information on baseline wildlife conditions in the Bristol Bay region for the EPA assessment, the information in the USFWS wildlife report may be used for Statewide or regional land use planning, completion of environmental documentation for permitting of development projects, or activities related to Landscape Conservation Cooperatives in Alaska.
- The wildlife report describes, to the extent that existing data allow, habitat use, food habits, behavior, interspecies interactions, productivity and survival, populations, subpopulations, genetics, human use and interactions, and management for wildlife with a focus on the Nushagak and Kvichak watersheds. It describes the relationships of these wildlife species (brown bear, moose, caribou, wolf, and bald eagle) or species guilds (waterfowl, shorebirds and landbirds) with salmon. The wildlife report also discusses dependence of wildlife on marine derived nutrients (MDN) transported to these watersheds by salmon, and the role of wildlife in distributing MDN through the ecosystem, to the extent this information is available.

About the peer review process

- The peer review process for the EPA watershed assessment, which included the USFWS wildlife report was completed by EPA in September 2012.
- The USFWS wildlife report was initially included as Appendix C of the draft EPA assessment. The assessment, including all appendices, underwent public and peer reviews. The process, draft and final assessments, peer review report, and public comments can be found here: <http://yosemite.epa.gov/R10/ECOCOMM.NSF/Bristol+Bay/bristolbay>).

- In addition to the EPA peer and public review process, the USFWS wildlife report underwent an internal review process which included review and comment by agency biologists (listed in Appendix A), and a technical and editorial review by an independent scientist/editor.
- The USFWS will make the final wildlife report available to EPA and the public on our website at: <http://alaska.fws.gov/fisheries/fieldoffice/anchorage/environmental.htm>

Peer review comments relevant to USFWS wildlife report and responses

- The USFWS reviewed the *Final Peer Review Report, An Assessment of Potential Mining Impacts on Salmon Ecosystems of Bristol Bay, Alaska* dated September 17, 2012. Many comments in the peer review report involved the EPA focus on salmon mediated effects of mining and the lack of discussion about direct or indirect effects of mining on wildlife. These are not summarized here because they are not relevant to the USFWS wildlife report. The scope of the EPA's assessment was an EPA decision and is explained in their report. The USFWS report provides baseline information for selected wildlife species or guilds and scientific information about links to salmon through MDN. It does not, with a few minor exceptions, discuss direct or indirect effects of mining, roads, or any other human caused disturbance.

Peer review comments relevant to the USFWS draft wildlife report contained as Appendix C of the EPA report, along with the USFWS response (blue italics) are provided in the following bullets.

- Page 24: The summary write ups for several species of wildlife (Appendix C) are very good regarding natural history and some potential impacts. Information in Appendix C tends to focus on the proposed mine site and less on the proposed haul road and game management units in the Kenai Mountains.

USFWS response: We acknowledge the comment regarding quality of Appendix C. Information in Appendix C is intended to focus on the entire Nushagak and Kvichak River watersheds to the extent that data exist. To the extent that a potential mining related road is within the Nushagak and Kvichak River watersheds, information about selected wildlife species is included in Appendix C. Information about selected wildlife species on the Cook Inlet side of the Chignik Mountains is not included in the wildlife report. The Kenai Mountains are not in the Nushagak and Kvichak River watersheds.

- Page 25: A variety of authors have obviously contributed to the documents and it appears that the direction given to them or their interpretation of goal statements varies. For example, if one of the goals of the assessment is to evaluate the risk to wildlife due to risk to fish (Executive Summary, page 1, last para) it's not clear why so much verbiage in Appendix C (wildlife) is devoted to species such as caribou that are not closely associated with fish. Information in Appendix C could be used to assess direct impacts if the scope of the assessment is expanded. For example, if the goal is to assess the impact of potential mining on the ecosystem (see Executive Summary page 1, para 1), the information on caribou in Appendix C is more relevant. The apparent diversity of goal statements cited

in the main assessment gives mixed messages regarding the clarity of the presentation (see more detailed discussion below).

USFWS response: The scope of Appendix C is broader than that of EPA's assessment because it is a USFWS document prepared to serve various purposes including Statewide or regional land use planning, completion of environmental documentation for permitting of development projects, or activities related to Landscape Conservation Cooperatives in Alaska. The former Appendix C is now a separate USFWS report which is cited by the assessment but is no longer an appendix of the assessment. However, information in the USFWS report document has been used by EPA to provide a more complete assessment of overall watershed resources at risk due to potential mining, and to strengthen the assessment of risks to wildlife from fish-mediated effects of the mine in the final assessment

- Page 88: Appendix C provides a comprehensive discussion of non-fish wildlife and the relation of those populations to salmon. However, the Assessment itself (Volume 1) provides only a brief summary in Chapter 2.2.3, which could allow a cursory reader to perhaps conclude that wildlife populations have little risk of impact from the hypothetical Pebble project. Is this the intent of the Assessment authors? A more in-depth reading of Appendix C allows inferring potential consequences to wildlife and birds of “salmon-mediated” impacts of mining development.

USFWS response: We acknowledge the comment about the comprehensive discussion of wildlife and the relation of selected species to salmon in Appendix C. Appendix C could be used as the basis of an assessment of potential impacts of mining on wildlife, but any decision relative to scope of the assessment with regard to potential impacts of mining on wildlife is the responsibility of EPA.

- Page 89: The appendix dealing with wildlife was quite detailed and well done and it would serve the main report well for the authors to include critical information from this appendix.

USFWS response: We acknowledge the comment regarding the quality of Appendix C. Comments related to the scope of the assessment are not specific to Appendix C and are the responsibility of EPA.

- Page 94: The discussion of wildlife species in Appendix C is very good but little of the insight provided in these descriptions of hunted or trapped species is reflected in the assessment of impact of potential mining practices on wildlife. I cannot help but wonder (i.e., mixed message) why Appendix C is so thick and so little of the good information in Appendix C is reflected in the assessment document. For example, the impact of noise and human presence related to mining and roads is addressed on page 54 (Appendix C). Such an impact on certain sensitive species could be equal to or greater than the loss of wildlife habitat in the mine footprint.

USFWS response: We acknowledge the comment about the quality of Appendix C. Comments related to the scope of the watershed assessment are not specific to Appendix C and are the responsibility of EPA.

- Page 94: I anticipate that any discussion of Alaskan ecosystems will include some discussion of the less charismatic fauna (small mammals and songbirds) and the functions they provide.

USFWS response: The USFWS selected key species to include in Appendix C and the selection method is described in the report. We certainly concur that small mammals are important from an ecosystem perspective, but they are less linked to fish or to public concerns than the selected species. Songbirds were included in the wildlife report under landbirds.

Public comments relevant to USFWS wildlife report and response

- U.S. Geological Survey (doc. #4607): Within the draft document itself, descriptions and projections often refer directly to the need for scientific baseline data. It would be beneficial to reviewers if the types and dates of baseline data collected and used for the assessment were listed in an appendix. For example Appendix B refers to “key” fish habitat conditions that include elevation, slope and groundwater, and yet data for none of these are presented; similar issues exist for Appendix C and wildlife distributions.

Without more detail we cannot address this general comment.

- The Pebble Partnership (doc. #4962): Appendix C contains several flaws. Most notably, (a) the methodology is based on one endpoint, salmon; and, (b) the assessment emphasizes the importance of marine derived nutrients, yet also states that nutrients derived from headwater streams are a driving factor in nutrient load and distribution in the terrestrial environment. Furthermore, the inherent uncertainties associated with the predictive assessment approach are, in fact, unreasonable because the assessment is based on worst case mining scenarios using outdated mining practices, some of which occurred over a century ago. On this basis alone, the predictive assessment is fundamentally flawed.
- *The comment states that Appendix C is flawed but provides two examples which refer to a “predictive” assessment, yet the purpose of Appendix C was to provide a descriptive, not predictive, assessment of wildlife resources of the Nushagak and Kvichak watersheds. The USWFS report describes the process for how wildlife species were selected for baseline characterization. This included those that have a direct link to salmon, are of special interest to local or Alaska residents, or those for which the USFWS has direct statutory responsibility.*
- The Pebble Partnership (doc. #4962): Appendix C, page 28. An example of one of the weaknesses of predictive models that are not validated with local data is presented on this page. The brown bear population estimates are extrapolated from population densities obtained from other watersheds. Using bear population estimates derived from another

location (as well as population estimates derived for any other species) to represent conditions in the Bristol Bay watershed can severely under- or over- estimate population densities. Information is lacking in the assessment to evaluate whether it is reasonable to assume that wildlife populations estimates derived from outside the Bristol Bay watershed are applicable.

The USFWS wildlife report (see p 19-20 of current wildlife report (population)) specifically states: "Population density estimates for the Nushagak and Kvichak watersheds are not currently available, but recent aerial distance sampling surveys in portions of the watersheds and in nearby watersheds provide some data." We do not disagree with the comment but no revision of the USFWS report is required.

- Northern Dynasty Minerals Limited (docs. #4611): The Appendices provided in Volume 2 of the Draft Assessment (Appendices A-D) have several inconsistencies and weaknesses. In general, the discussion of the factors supporting the exceptional productivity of the Bristol Bay area appeared to conflate cause and effect.

Comment noted but without more detail we cannot respond.

- Northern Dynasty Minerals Limited (docs. #4611.7): In Appendix C there are several instances where statements and conclusions are not substantiated with supporting evidence. For example, the text states that "Southwest Alaska, including the Nushagak and Kvichak watersheds, possesses intact, naturally functioning terrestrial ecosystems that still support their- historic complement of species, including large carnivores. Such ecosystems, containing historic levels of biodiversity, are becoming extremely rare globally." The author's comparison of historical to present levels of biodiversity is not supported by baseline historical data on regional species assemblages and diversity.

This comment states "there are several instances where statements and conclusions are not substantiated with supporting evidence" and it provides one example. Regarding that single example, we made several clarifying edits as part of an internal review (on page 6 of the final version of the report. Our message is that southwest Alaska is ecologically intact and this includes large carnivores. We are unaware of any information which contradicts this statement, and none was provided by the commenter. Several citations for the statement regarding the intact nature of the Nushagak and Kvichak watersheds were provided in the public review draft of the report. We see no reason to for additional documentation. No other examples of unsubstantiated statements or conclusions were provided by the commenter.

Contact

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