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**Sivuuq**

**Golovin**

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**Kuuyuk**

**Mary's Igloo**

**Qawiaraq**

**Nome Eskimo**

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**Solomon**

**Anuutaq**

**St. Michael**

**Taciq**

**Stebbins**

**Tapraq**

**Teller**

**Tala**

**Unalakleet**

**Unalaqliq**

**Wales**

**Kirjigin**

**White Mountain**

**Igaluk /**

**Nutchirviq**

September 28, 2018

To: North Pacific Fishery Management Council

Re: Kawerak comments on the September 2018 draft of the Bering Sea Fisheries Ecosystem Plan

Dear Council Members,

Thank you for the opportunity to provide comments on the September 2018 draft of the *Bering Sea Fisheries Ecosystem Plan* (FEP). We greatly appreciate the efforts of the FEP Team and Council staff working on this document.

Additionally, we appreciate the efforts of the Team and staff to incorporate recommendations from the partnership of Bering Sea indigenous organizations and communities representing 148 communities across the Bering Sea region. This partnership submitted three comment letters to the FEP Team via Rose Fosdick of the Ecosystem Committee to help improve the TK, subsistence, and tribal-related aspects of the FEP document. Many of these comments have been incorporated, and we feel the document is much better for it.

We recommend the FEP Team and Council staff continue to work to incorporate into the FEP document the information and recommendations in the three aforementioned letters which have been submitted by the indigenous partnership, as well as the Kawerak letter to the Ecosystem Committee regarding the Public Involvement aspects of the FEP submitted on August 24. We also recommend the Team and staff continue to work with the members and facilitators of the indigenous partnership as the core FEP document evolves towards a final version. While many comments have been incorporated from the above-noted letters, a number of key recommendations have yet to be incorporated, or need further refining. For example, Kawerak feels important areas still needing attention include, though are not limited to, the following:

- **Conceptualizing Traditional Knowledge (TK): We feel there remains some important conceptual issues which remain to be worked out in how the text is currently written.** For example, there appears to be confusion about the distinctions between TK and other forms of indigenous knowledge. Additionally, there is still concern about the conceptualization of the value of TK and its role for Council processes.

For example, regarding the discussion of TK in paragraph 4 of section 6.3.4 on page 80: While there is improvement here from previous drafts, the erroneous insistence upon a dichotomization of scale between TK and western science found in previous drafts of the FEP is still maintained here but with somewhat different words than used previously. The problems with this have been pointed out in previous indigenous partnership letters, and are fundamentally based on a mistaken understanding of TK as being more limited in its scope and applicability than western science. We thus recommend rewording these sentences: "At the same time, commonly, LK and TK can provide fine-scale

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ecosystem observations that are unobtainable by larger scale scientific efforts. As a form of best available social science, fine-scale LK and TK can be used alone or results may be combined with large scale scientific efforts to paint a more complete picture of the ecosystem than either type of information produces on its own” to something like the following: “At the same time, TK and in some cases LK can provide fine-scale, long-term, or *in situ* ecosystem observations that are often unobtainable through scientific efforts. As a form of best available social scientific information, TK, sometimes LK, and the social science of them can be used alone, or results may in some cases be combined with other scientific efforts to paint a more complete picture of the ecosystem than either type of information produces on its own.”

There are some other parts of the text which, as currently stated, appear to marginalize the value of TK, and as such the text could be improved. For example, the paragraph following from the above is not necessary, and possibly inaccurate as well. And the paragraph following that maintains that TK will be allowed to influence decision-making “to the extent practicable”; we would argue that from the perspectives of legal mandates (particularly the MSA National Standards), tribal rights, and values (e.g. valuing TK equally with western science, a well-established principle in social science), it is requisite that such a caveat be removed.

- ❧ **Subsistence Maps: There remain issues related to the inclusion of subsistence maps (we are highly opposed to the inclusion of the existing maps in this document for reasons which have been outlined in the indigenous partnership's communications with the FEP Team and Council staff).** Regarding Figure 6-16 in Chapter 6, and regarding Appendix A: The recommendations from the indigenous partnership have not been taken regarding these maps, and we strongly feel that they should be. As was noted in the letter dated August 28, 2018:

We request that you remove Figure 4-21 [now Figure 6-16] and Appendix A (including its associated maps) from the FEP. In our May 2018 comment letter, we also requested that you remove these maps and, alternately, reference them for the reader, if necessary. As we previously described, Western Alaska communities feel very strongly about the use of their spatial data and the need to be consulted and collaborated with prior to spatial data being interpreted, incorporated into, or otherwise used in new documents. If the FEP team believes that it is important to alert the reader to the existence of these maps (and others – ADF&G maps are not the only maps relating to subsistence that exist), we suggest a short paragraph in the subsistence section that notes where these and other maps can be located (see below for recommended language). We would also note that the Council is very familiar with restrictions on information from particular groups – the commercial fishing industry, for example (see e.g. the top of page 45, or near the end of page 49, in the current [previous] draft FEP). Tribes and communities have similar, and different, concerns as industry such as confidentiality, interpretation of data, among others. Additionally, while Tribes and communities often want to share their information and knowledge (including in spatial format), it is most appropriate to contact Tribes and communities directly, and develop and have existing relationships, prior to considering the use of any data they have provided outside of the context in which they originally shared it. This is true even if consent forms or other agreement documents were signed at the time of original data sharing. Spatial representations are inherently static, the information which they are referring to changes regularly, and those data require expert interpretation in order to be used appropriately. Standards for the use of traditional knowledge, and other culturally-specific

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information, are constantly evolving. The Tribes and communities represented in this comment letter have requested that the maps be removed, and that request should be honored.

Recommended paragraph: “Spatial information regarding marine subsistence use areas is available for some regions and some communities. Examples of such information include ADF&G maps hosted on the AOOS portal, the Oceana and Kawerak Synthesis, the Arctic Atlas created by Audubon, Kawerak and others, the Northwest Arctic Borough’s mapping project, and others (e.g. Oceana and Kawerak 2014, Smith et al. 2017, NWAB 2016). Readers interested in such spatial representations should consult the original source documents, preferably in consultation with the communities which provided the information.”

- **Tribal Consultation and Coordination Activities:** NOAA/NMFS Tribal Consultation activities are very important for Council processes. These Consultation activities should be improved, and such improvements, along with a tighter integration between those and Council processes should be both desired and encouraged by the Council. NOAA/NMFS Tribal Consultation activities are not only legally mandated but are also a crucial aspect of EBFM practices. We have noticed that some of the language about the importance of Tribal Consultation activities has been removed from this draft of the document, and encourage a more robust discussion of Tribal Consultation and its value. For example, this paragraph was removed from a previous draft, and we recommend it be added back: “NMFS has a responsibility for government-to-government consultation with tribal governments, and the NMFS Alaska Regional Office is encouraged to conduct formal consultation with federally-recognized tribes in the Bering Sea region and share that information with the Council. Council staff are encouraged to develop collaborative relationships with bearers of LK and TK, through communications with tribal governments, community organizations, Alaska Native organizations, fisheries organizations, individuals, and others, as well as through reviews of existing literature pertaining to LK and TK in the Bering Sea region.”
- **Discussion of indicators: We are extremely skeptical of the value of indicators work for sociocultural phenomena.** Table 2.1, for numbers 12, 13, and 14, demonstrate some of the problems of using indicators for highly complex sociocultural phenomena; they are generally overly simplistic, reductive, and often misleading. As such, we recommend critical examination of such discussion or removing textual discussion of indicators for sociocultural phenomena, which does not have a successful track record in the non-economic social sciences.
- **FEP tracking and feedback: We recommend incorporating language and examples reflecting an attention to the concerns of indigenous communities in this tracking/feedback process for the FEP.**
- **Description of the Bering Sea ecosystem and oceanographic characteristics (section 6.2):** We understood that this was originally envisioned as a more extensive discussion, though it has been trimmed down to very limited text with some graphics, with the bulk of the work being moved to a future date during the development of a Conceptual Model Action Module. We feel that perhaps this is not an adequate

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discussion in the core FEP, however, and that a robust description of the characteristics of the ecosystem (including species within it), from western science and TK perspectives, would be fitting for a Fishery Ecosystem Plan. If that will not be the case, then the Conceptual Model Action Module plan should centrally include plans to thoroughly incorporate TK about the Bering Sea ecosystem.

- **Regarding the public involvement plan (chapter 5 and Appendix C):** We recommend all the points from Rose Fosdick's letter to the Ecosystem Committee (August 24, 2018) be incorporated into these sections; it appears a number of points have not been incorporated, including into the Appendix. We also recommend the Appendix be organized differently than in terms of 'time commitments.'
- **Chapter 9 remains to be fully developed, and we suggest using the inputs of the indigenous partnership's letters.** Some areas of chapter 9, particularly those brought over from Appendix B in the previous draft, need substantial revision, and among other things contain significant factual inaccuracies (e.g. the description of the Kawerak-Oceana synthesis re: subsistence use data); again, for this information, please see the aforementioned partnership's letters for more details.
- **We feel that Figure 6-7 could be reworked to better effect to represent the relationships it is discussing.** In its current form it also appears to have some problematic implications, such as appearing to suggest that subsistence is only conceptualized in terms of removals and habitat degradation, which is not the case (e.g. subsistence practices, particularly through the use of TK, entail their own forms of natural resource management and stewardship). The indigenous partnership's third letter to the FEP Team had a suggested replacement for this figure, and we continue to recommend that.
- **Regarding Action Module discussions:** In the section about the List of Action Modules (chapter 4) and the Preliminary Study Plans for Action Modules (Appendix B), it appears that not many of the recommendations from the Bering Sea partnership of indigenous communities and organizations were incorporated, and we encourage the FEP Team and Council staff to review and incorporate those.
- **Section 6.1.1 currently lacks adequate recognition, and accurate information, regarding a number of co-management and regulatory bodies for resources in the project area.**
- **Regarding the posters on pages 76-77 and the associated text:** please see the recommendation in the indigenous partnership's third letter (dated August 28, 2018).
- **Impacted Communities and their Resources:** We concur with the FEP's additional attention to Alaskan communities outside Bering Sea coastal areas, and with the discussion on the pitfalls of understanding what a fishing community is. However, we would note that there are complexities here that are both social and non-social in terms of understanding the ecosystem. While we applaud the broadened way of conceptualizing this issue, we do think perhaps a different way of

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addressing this could be used. As the draft indicates, subsistence communities further inland are heavily influenced by, and concerned with, the resources and actions within the off-shore Bering Sea federal fishery zone. Perhaps there is not a need to come up with an arbitrary 50-mile scope but rather describe these complexities more textually? This is a case where a graphical and tabular approach is overly reductive to the complexity of the ecosystem.

Again, we commend the work of the FEP Team and Council staff to produce this document, and are pleased to see the ways it has improved from earlier versions to the current draft. We feel that it is making strong headway towards completion as a final document. We also believe that with continued work in its progress towards a final document, it can be further improved, and we hope our feedback is useful in that process. We are committed to continuing to assist the FEP Team and Council staff, as our capacity permits, to provide feedback on the document as it evolves, and we hope that a working relationship will continue. Please contact me if you have any questions ([mbahnke@kawerak.org](mailto:mbahnke@kawerak.org), 907-443-4231).

Sincerely,  
KAWERAK, INC.



Melanie Bahnke  
President

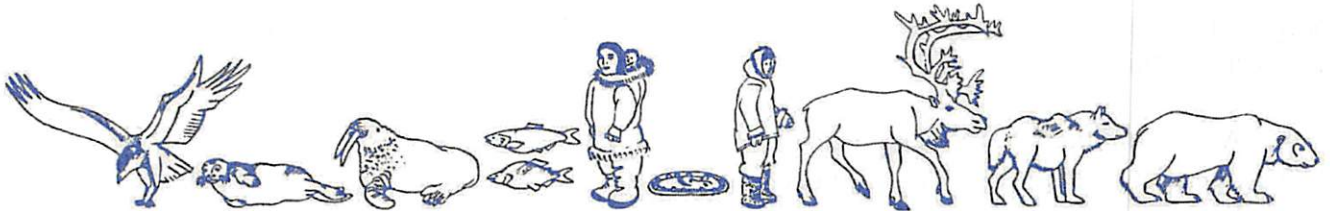
Enclosures: Indigenous partnership FEP comment letters (3), Public Involvement Comment letter

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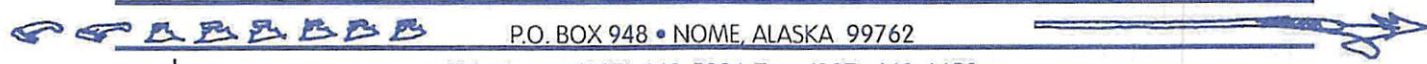
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May 1, 2018

To: Diana Evans, Bering Sea FEP Co-Chair  
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From: Rose Fosdick, Ecosystem Committee Member  
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Re: Stage 1 FEP inputs from indigenous organizations and communities (Regarding pages 66-77 of current BS FEP draft; For the Bering Sea FEP Team)

- Enclosures:
- Letter and Inputs below
  - Line-Numbered Draft Bering Sea FEP document excerpt (pp. 66-77)
  - Kawerak, Inc. April 5, 2018 Comments to the Council on B Reports Outreach paper
  - Aleut Community of St. Paul April 5, 2018 Comments to the Council on B Reports Outreach paper
  - Bering Sea Elders Group April 5, 2018 Comments to the Council on B Reports Outreach paper
  - Co-Production of Knowledge Diagram (reference acceptable, do not reproduce)

Dear Diana,

Please find enclosed comments for your consideration on revising the current Draft Bering Sea Fishery Ecosystem Plan document.

Per the last Ecosystem Committee meeting, and discussions involving Julie Raymond-Yakoubian (Social Science Program Director at Kawerak) and Brenden Raymond-Yakoubian (of Sandhill.Culture.Craft, consultant to Kawerak), I am submitting these comments on behalf of several of the organizations and communities which represent

indigenous peoples in and related to the FEP project area. The organizations and communities who are signatories to this letter are as follows:

- Aleut Community of St. Paul Island
- Association of Village Council Presidents
- Bering Sea Elders Group
- City of St. George, Pribilof Islands
- Kawerak, Inc.
- Tanana Chiefs Conference

These comments are based on the most currently available document online found here:

[http://www.npfmc.org/wp-content/PDFdocuments/membership/EcosystemCommittee/Meetings2018/DRAFT\\_BSFEF.pdf](http://www.npfmc.org/wp-content/PDFdocuments/membership/EcosystemCommittee/Meetings2018/DRAFT_BSFEF.pdf)

These comments pertain to pages 66-77 of the document (the TK and Subsistence sections). We have also attached these pages, extracted, from the document and added line numbering to help facilitate your review of our comments. Some of our partner organizations are still working to compile information relating to pages 66-77 to send along to you; when that is ready we will forward it to you as well.

We appreciate the work Council staff and FEP team members have done on the draft FEP document to date, the conversations they have had with those working with our organizations, and the willingness to continue a dialogue in crafting the FEP. Upon review, we felt there were a number of very encouraging developments in this portion of the draft FEP. We hope you find the enclosed comments helpful in your work.

If you have any questions, please direct them to either Julie Raymond-Yakoubian or Brenden Raymond-Yakoubian. Their contact information is provided below. They are eager and willing to help you integrate these recommendations and ideas into the FEP document.

Julie Raymond-Yakoubian:

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Phone: (907) 443-4273

Brenden Raymond-Yakoubian

Email: [brenden@SandhillCultureCraft.com](mailto:brenden@SandhillCultureCraft.com)

Phone: (907) 434-1413

Additionally, we will be submitting at least two more 'batches' of information with regard to the rest of the FEP draft document. One will be in regard to the Ecosystem Description section, and the other will be in regard to the remainder of the draft FEP document.

Thank you for your work on, and attention to, this.

Best,



Rose Fosdick (Ecosystem Committee Member)

On behalf of:

- Aleut Community of St. Paul Island (Amos Philemonoff, President)
- Association of Village Council Presidents (Vivian Korthuis, CEO)
- Bering Sea Elders Group (Fred Phillip, Ambassador)
- City of St. George, Pribilof Islands (Pat Pletnikoff, Mayor)
- Kawerak, Inc. (Melanie Bahnke, President)
- Tanana Chiefs Conference (Victor Joseph, President)

## **General Comments**

1. There are a few other comments we can make right now on items in other sections which may be of assistance in working on pp. 66-77. This is not exhaustive.
  - A. Page 5, Footnote 1: We would recommend using the definition of TK used in Raymond-Yakoubian et al. (2017: 133).
  - B. Page 41: Regarding this statement, and similar notions: “For example, LTK is especially useful to supplement or validate local, small-scale ecosystem observations, in combination with large scale scientific efforts.” This is an erroneous understanding of TK. TK has broad applicability and scope both as a source of data and otherwise. This includes ecosystem-level (and beyond) applications and observations. This is the topic of a paper being prepared for publication in the Journal of Ethnology and Folkloristics (University of Tartu Press) by Raymond-Yakoubian and Raymond-Yakoubian (n.d.), and based in large part on a presentation by one of those authors (B. Raymond-Yakoubian 2017). The authors are happy to discuss this in greater detail directly with Council Staff. Some important considerations, in the meantime, however, include understanding that TK is constantly evolving; that communities are in contact with other communities, scientists and scientific literature, and other forms of information via a variety of sources (that is to say, they and their knowledge are not isolated); other forms of information (e.g., scientific data) become incorporated into TK to varying degrees; TK includes data and methodologies that are often not found in western scientific practice (e.g., being based on long-term *in situ* observation of phenomena that are difficult to properly and fully understand otherwise such as animal behavior); TK is not just based on and limited to local conditions and observations, and can speak to a variety of environmental and other phenomena and systems either directly or indirectly (e.g., through proxies, signals, and so on). We recommend that the language on page 41, and throughout the document, be updated to include this understanding.
2. Council staff requested some feedback on a few items related to the last Ecosystem Committee and Council meetings in February.
  - A. Regarding the E2 Council motion: Regarding the first part (outreach plan), there are some comments below, as well as in the three attached comment letters regarding Outreach pertaining to the Rural Outreach Discussion paper presented at the April Council meeting B reports; however, this perhaps will also be discussed in detail when we comment on the public involvement aspects of the draft FEP in a subsequent comment letter we will submit to you. Regarding the second part, again there is some information below, but also we envision this as being undertaken more properly in the TK and Subsistence Action Module. However we welcome the opportunity to talk about either of these more here, so if there is a desire for that, please contact us.
  - B. Regarding the bullets in the EC minutes which Dr. Figus requested information about:



- i. Regarding bullet 3: We think this is happening, it is now formally being recognized as a TK and Subsistence Action Module with two distinct though sometimes related parts.
- ii. Regarding bullet 4: We are hoping this is done through a variety of means, including, but not limited to:
  - a. Discussion of TK and subsistence and incorporation of our comments on it;
  - b. Regarding all elements including the ecosystem description – we are looking to incorporate documented TK into this discussion;
  - c. Regarding the Action Module – this will happen then – now the plan is that this will include distinct discussion of process for the incorporation of TK into Council processes.
- iii. Regarding bullet 5: Yes, this is one possible thing LTK is good for, among many others. 'Citizen science' though is not the right way to understand this/TK. This has also been happening for many years, e.g. with climate change and TK research, there is lots of information out there. TK can, for example, be a source for predicting and recognizing change. However, we are not interested in creating an observing system.
  - a. Also, keep in mind: If relationships are created and maintained, and indigenous people and ANOs are involved in Council processes (including the FEP and Action Modules) – at all stages – there will be open lines of communication and methods for sharing these types of things (e.g. Committee memberships, outreach and engagement recommendations, collaborations and co-production, etc.).

### **5.3.2 Subsistence Activities (pp 66-70)**

1. Is there a definition of subsistence that is being used, and could this be laid out here?  
Here are some suggestions and ideas:
  - A. Subsistence is a concept often used by indigenous people of the region to refer a wide variety of activities from hunting, fishing, gathering of foods, to the gathering of firewood, bones, drinking water, and other interactions with the environment that lead to food security and well-being. There are various definitions of subsistence which exist, and people may refer to any one of them in a given context (e.g. the legal definitions of subsistence are relevant to people's activities). However, in general there are specific meanings attached to the indigenous use of term. See, for example: "By the term "subsistence," the authors employ the senses commonly used by indigenous residents of this region (as opposed to, for example, the State of Alaska's understanding). The indigenous perspective on subsistence encompasses hunting and gathering related activities which have a deep connection to history, culture, and tradition, and which are primarily understood to be separate from commercial activities." (Raymond-Yakoubian et al. 2017: 133; and Kawerak, Inc. Social Science Program 2017).

2. This discussion should be expanded and broadened. It currently contains only the bare outlines of a discussion of quantitative and spatial aspects of subsistence harvests, and using a limited scope of datasets to do so. There is significantly more data available on these aspects of subsistence than are presented here (e.g. see below), but also there needs to be a more holistic understanding of subsistence presented here. For example, the FEP should include discussion of the importance of subsistence to communities on a number of levels (including spiritual, cultural, nutritional, political, social, economic, etc.), the different (e.g., legal and indigenous) conceptualizations of subsistence, ecological considerations related to subsistence (e.g. subsistence and climate change, subsistence and fisheries change, etc.) and the history of western Alaska subsistence. Here are some select key points and citations that can be made and explored:
  - A. Subsistence is centrally important to culture. See many of the references noted below.
  - B. Subsistence is a – if not the – priority for rural indigenous Alaska Native communities. See e.g. Raymond-Yakoubian and Raymond-Yakoubian 2017
  - C. Subsistence activities are highly informed by TK. See e.g. Moncrieff and Bue 2010, 2012, Moncrieff and Klein 2009, Raymond-Yakoubian 2013, Raymond-Yakoubian and Raymond-Yakoubian 2015, Kawerak 2013a, 2013b, Oceana and Kawerak 2014.
  - D. Subsistence is intricately connected to healthy – and protected – ecosystems. See, e.g., ICC 2015, Gadamus 2013, Raymond-Yakoubian and Raymond-Yakoubian 2015
  - E. Subsistence is a crucial part of identity: see, e.g., Raymond-Yakoubian 2013, Durkalec et al. 2015, Gadamus 2013, Gamble et al. 2016, Gadamus and Raymond-Yakoubian 2015, Raymond-Yakoubian et al. 2014, ICC 2015; UNESCO 2018
  - F. Subsistence is integral to social structure: see, e.g., Magdanz et al 2007, Thornton 1998, Thornton 2001, Cunsolo Willox et al. 2013, Raymond-Yakoubian 2013, Gadamus and Raymond-Yakoubian 2015, ICC 2015
  - G. Subsistence is informed by values (e.g., sharing, not wasting, etc.), and related to key cosmological principals: see, e.g., Oceana and Kawerak, Inc. (2014), Raymond-Yakoubian and Raymond-Yakoubian (2015), Raymond-Yakoubian (2013)
  - H. Subsistence is – and entails – important forms of natural resource management. See, e.g., Gadamus and Raymond-Yakoubian (2015)
  - I. There is some general overview discussion of subsistence and citations in the chapter on Subsistence in the recent Audubon Atlas (see Audubon Alaska et al. 2017) (it is useful but not perfect, e.g. it is missing consideration of the important role ANCSA played related to issues re: extinguishment of aboriginal title).
  - J. Subsistence is related to food security, though not the same. See e.g. the Kawerak

White Paper for a discussion of this (Subsistence is not the same thing as food security, but they are closely connected. The definition of ‘food security’ can be found in ICC Alaska’s 2015 food security report. This report also discusses the many components of food security and drivers of food in/security. Subsistence is connected to intergenerational relationships, intra- and inter-community relationships, traditional and indigenous knowledge, relationship to place, identity, human-animal and human-environment relationships, rules for being in and with the environment, etc.)

3. This short section relies almost entirely on ADF&G data, and so separates out information into three ADF&G regions in this part of Alaska. The way ADF&G divides regions isn’t the way communities typically categorize themselves regionally; usually it is by ANCSA region – so, for example, the Kawerak region, the AVCP region, etc. Also one result of this is that the division currently being used in the text ends up including a broad area that is not inside the project area. ADF&G has the majority of the quantitative subsistence information in the state, though other organizations have also done harvest surveys (see, e.g., Raymond-Yakoubian 2013, Ahmasuk et al. 2008, AMBCC, USFWS).
4. Also, as noted above, there is more information about subsistence – including other forms of data – that are not just harvest surveys. That is to say, subsistence data is not just about harvest surveys. (Additionally, please bear in mind the limitations associated with subsistence harvest surveys, e.g. they are often done only sporadically, can be inaccurate or out-of-date, etc. For example, in the case of the Pribilofs, the most recent data are from 1996.) Some other important sources are noted below. The sources suggested below, and others, provide information on subsistence in general (including harvest information), as well as perspectives on the holistic nature of subsistence activities and traditional knowledge. This includes information about food harvest and preparation, sharing, values, identity, intergenerational relationships, the challenges posed by western management frameworks and policy, and other related topics:
  - Fienup-Riordan, A. (1984, 1986, 1990a, 1990b, 1999, 2000, 2014)
  - Fienup-Riordan, A. Brown, C., N.M. Braem (2013)
  - Fienup-Riordan, A. and C. Moncrieff (2017)
  - Ernest Burch Jr’s work for the northern Bering Sea (and areas further north)
  - Some of Henry Huntington’s work, such as Huntington et al. (2013)
  - All of Kawerak’s work (see, e.g., <https://www.kawerak.org/socialsci.html/>)
  - Oceana and Kawerak, Inc. (2014)
  - Raymond-Yakoubian, B., L. Kaplan, M. Topkok, and J. Raymond-Yakoubian. (2014)
  - Raymond-Yakoubian, B. and J. Raymond-Yakoubian (2015, 2017)
  - Raymond-Yakoubian, J. (2012, 2013, 2016, 2017 – in press)
  - Raymond-Yakoubian, J., Y. Khokhlov and A. Yarzutkina (2014)
  - Raymond-Yakoubian, J., B. Raymond-Yakoubian, and C. Moncrieff (2017)
  - Raymond-Yakoubian, J. and V. Angnaboogok (2017)

- Raymond-Yakoubian, J. (2009, revised 2010)
- Gadamus, L. and J. Raymond-Yakoubian (2015)
- Gadamus, L., J. Raymond-Yakoubian, R. Ashenfelter, A. Ahmasuk, V. Metcalf, and G. Noongwook (2015)
- Gadamus, L. and J. Raymond-Yakoubian (2015)
- Myers, K., R. Walker, N. Davis, J. Armstrong, W. Fournier, N. Mantua, and J. Raymond-Yakoubian (2010)
- Anderson, D.B. (1992, 2007)
- Anderson, D.B, and C.L. Fleener (2001)
- Anderson D.B. et. al. (2004, 2013)
- Barker, J.H. (1993)
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## 5. Comments on Maps and Mapping

- A. Regarding the maps, we strongly recommend that you take these out of the document.

Instead, referencing their existence via citations (and/or other subsistence-related maps) would be appropriate. Western Alaska communities feel very strongly about the use of their spatial data and the need for them to be consulted and collaborated with prior to spatial data being interpreted, incorporated into, or otherwise used with regard to any documents. They are very concerned about resource managers and policy makers making decisions based on out-of-date maps, maps being used without consultation with the Tribes and TK holders who created them, and without people being aware of potential gaps in spatial data. If western Alaska community spatial data is included in this document, many of these Tribes are likely to contact you directly asking for their maps/spatial data to not be included. Spatial data is inherently static, changes regularly, and requires expert interpretation in order to be used appropriately.

### **5.3.3 Local and Traditional Knowledge (pp 70-77)**

1. One word that seems to be missing from the FEP discussions of TK is rights. The recognition and incorporation of TK is not only important as a means to inform products and policies but also as a form of recognition of the rights of indigenous peoples and communities to have their cultural values, history, and perspectives taken into account in the development of those products and policies.
2. Page 71, Defining Local and Traditional Knowledge overview section (lines 186-215):
  - A. What is needed here is to break out LK and TK from each other. Their combination is not a reality in the world but an artifact of their combination (e.g., in legislation) via contrast to other knowledge bodies. Put another way, LTK is not a thing in and of itself, it is a combination of two terms/two knowledge areas – LK and TK – which are often set in contrast to western science.
  - B. Also, it is important to keep in mind that TK and LK are not on par with each other. For example, TK is based on thousands of years of accumulated knowledge, while LK can be ascribed to the knowledge base of an individual person accumulated within a short period of time. LK is also more narrow, in that it is based generally on the interaction of an individual (or group) solely in terms of their observations restricted to a particular (localized) spatial area. LK – like TK – has been defined in many ways, but generally comes down to knowledge (often specialized, unique, or detailed, and thus deserving of attention) that is based on – and defined in terms of its scope – a person or group's engagement with a particular (“local”) environ. TK obviously includes such types of knowledge, but is more expansive than this (and differently conceived in general, as well). (It is also worth bearing in mind that the use of the term/concept “LK” – e.g. in combination with TK as “LTK” – has often been done in a way which 'dilutes' attention from TK; this is something which should not be done.)
  - C. Additionally, while LK may include non-indigenous people, TK never does – it is a type of indigenous knowledge only. As such we would suggest

rewording/reconceptualizing the language in the document to distinguish these concepts.

- i. One example: The last two sentences (lines 210-214) of this section do not really portray things accurately in terms of the points made above (i.e.: “LTK is relevant not only to subsistence right issues, but also to commercial and recreational fisheries issues as well. For example, LTK knowledge holders might be members of a large-scale commercial fishing group or residents in a remote community that depends on subsistence fishing for survival.”) If we are talking about a non-indigenous large-scale commercial fishing group, for example, we are not talking about TK. Nonetheless it is important that you are pointing out that LK and TK can pertain to a variety of different issues, so we'd simply suggest some wordsmithing here to bring this in line with the conceptual distinctions while still retaining some of the ideas already contained therein.
3. Local and Traditional Ecological Knowledge (LEK and TEK) section, including diagram (pages 71 line 216 through page 73 line 288)
    - A. We'd recommend not bringing in TEK and LEK as central conceptual tools but rather discussing the fact that we can, to an extent, talk about the environmental/ecological aspects of TK and LK. This is typically done through work focused on TEK and LEK. However, as much of that work shows, this is a rather artificial distinction, as – at least for TK – the environmental aspects of TK are integrated into the rest of the knowledge body/system. Without a doubt you should discuss them when they arise in the literature if it is making a key point that you would like to make, but perhaps don't focus too much on a separate section for them, because it's too complex of an issue for the FEP to take up. One key point that a discussion of TEK can bring up, however, is that TK has strong applicability to perspectives and information on the environment and ecosystems. This is highly relevant to the FEP and should be kept/discussed here.
      - i. This is a good time to also recall the point made further above that TK has broad scope and applicability. For example, the environmental knowledge contained therein is broad in its scope and applicability. Additionally, keep in mind that TK is not just information, but also contains values and perspectives and pertains to differing worldviews.
    - B. Following from the above, we should point out some problematic aspects of the NOAA TEK definition. Here are some considerations:
      - i. As just mentioned, TEK is just an artificially distinguished subset of TK which pertains to the environment (or ecosystems, or the ecological aspect of TK – it's been coined many ways). It's artificial because in practice you can't really distinguish this kind of TK from the other interconnected parts (e.g. pertaining to conduct, ritual, spirituality, ethics, values, etc.).

- ii. The NOAA 2017 TEK definition is problematic because of the use of “local environment” at the end of it. To reiterate a general comment made earlier above, this can perpetuate a mistaken understanding of TK, one that is unfortunately very common amongst Alaska natural resource managers, which limits the scope and applicability of TK to local environments. There are many reasons this is not true (as will be discussed in the forthcoming paper based on B. Raymond-Yakoubian 2017), but one important one is that it is based on the inaccurate view of indigenous communities as isolated from each other, whereas in fact they are now, as in the past, in constant communication across great distances, and the knowledge from this communication can be integrated into any one person or communities' TK. Additionally, TK can tell us many things about aspects of the ecosystem which are far beyond what western scientists and management might expect (e.g. through the unique information gathered during long-term *in situ* observations of the environment; through observations which have broad spatial scope because e.g. they are widely applicable, are based on ecosystem concepts, are based on integrated knowledge from other regions, etc.; as well as through other means e.g. identifying proxies and signals of information 'elsewhere'; etc.).

C. Page 71, Line 226:

- i. We would suggest that discussion of “tradeoffs” be expanded throughout the FEP document, if it is to be used at all, for a number of reasons. The concept of tradeoffs implies that various considerations can be weighed or considered against each other. A potential positive of this notion is that the different considerations should be made explicit. There are, however, serious drawbacks. One is that there is no standard way of evaluating between different considerations and values in many instances. Additionally, there needs to be an explicit discussion of power in these considerations (e.g. which considerations have, or are granted, more power than others, and why). Further, it becomes crucially important to understand what all the various considerations are; we agree wholeheartedly that the thorough attention to Tribal considerations, and social science, can help in this process.

D. Page 71, Lines 239-240 (Footnote 14):

- i. Background: There have been arguments made that the Council should engage in Tribal Consultation. However, the reason the Council does not do Tribal Consultation is not a lack of staffing capabilities (which would not be a valid reason to ignore a mandate), but rather that the Council has issued a legal opinion that they are not required to do this Consultation. NOAA/NMFS, however, is required to carry out Tribal Consultation, and has a Tribal Consultation policy. Whether or not NOAA/NMFS does an adequate job at this is another matter. Another matter, and one which is entirely within the control of both

NOAA/NMFS and the Council, is (addressing) the disconnect which exists currently between NOAA/NMFS Tribal Consultation activities and Council decision-making processes. These should be integrated together so that every action that the Council is taking is informed by the relevant results of Tribal Consultation on that particular issue.

- ii. Recommendation:
  - a. Discuss more the importance of outreach by the Council (and developing further modalities for that) to Tribes, ANOs, and communities. Also the importance of a cohesive notion of why this is being done (e.g., two-way conversation rather than “telling” people what the Council is doing) and how it is being done.
  - b. Develop an idea of “engagement” – something that goes beyond outreach but is not consultation.
  - c. Discuss the importance of NMFS Tribal Consultation as it relates to the Council process, and the importance of integrating NMFS Tribal Consultation with Council processes.
  - d. The above can be incorporated into the short/medium/long-term sub-sections of the “Operationalizing LTK in the Council Process” sub-section.
  
- E. Figure 5-19 (Page 72) – Diagram:
  - i. We think this could do without a diagram. But if there was one, it would have LTK at the top, with two branches coming off of it: LK and TK. Probably though it is not worth further breaking off LEK and TEK, which would just be sub-aspects of each of those, respectively (though if you kept them, the descriptions that are there – sans the “example uses” – are fine.). The example uses though are perhaps not as useful, because of the lack of distinction between the environmental and other aspects of TK, for example. One could just say that TK can inform all of these, and other, discussions (incorporation into ecosystem analyses and/or allocation decisions, creating action alternatives, informing implementation of a rule or communication with the public, and so on to include other things as well).
  
- F. This is relevant in a few places, perhaps including the diagram – discussion of ways that TK can be used in the Council process could be added. See e.g. Raymond-Yakoubian et al. 2017. Some ways, for example: to inform analyses and decision-making, to make management more adaptable, to understand climate change, to input observations (long term, short term, and *in situ*) into management and science, to inform discussions of values which underlie nearly all Council decisions, to challenge particular assumptions about management and science models, to highlight Tribal



perspectives, to assist in the processes of working towards equity, and so on.

G. Page 72 Line 245 to Page 73 Line 288 (discussion of best available science):

- i. It would be good to talk about the discussion of best scientific information available (BSIA) in the MSA/National Standards (see National Standard 2) in terms of TK and social science of TK (see e.g. Raymond-Yakoubian et al. 2017), and also potentially integrating ideas in the Charnley article into that discussion.
- ii. The Charnley article could be good to use to some extent in that it supports use of social science and TK as best available science. The article might also be valuable to consider along with other sources for the Action Module.
- iii. There is a lot of the over-emphasis on the 'local' in the understanding of TEK being presented in the Charnley excerpt here (keep in mind problems associated with emphasizing the 'local' with regard to TK as we've mentioned elsewhere in these comments). This preoccupation with the 'local' leads to fairly strange concepts like “placebased individuals,” as if there are human beings who are not place-based. There is also an overemphasis on the “E” part of TK.
- iv. The issue of differences/contradictions between TK and western science and management is a complex one. It is true that in a policy and management context they should be worked through in a co-equal process. However, there are pitfalls associated with the use of TK in natural resource management processes that people need to be very cognizant of beforehand. These processes involve power relationships and value judgments (see e.g. discussions of “trade-offs” which is a fairly noxious concept but illustrates that decisions will be made based on values and power). Additionally, working through this process of TK, science and management is both politically and epistemically fraught (see e.g. Nadasdy 1999, Schreiber and Newell 2006). Succinctly discussing these issues might be of value here to multiple audiences (including managers) because a big goal of the FEP has been to increase transparency, and this is part of the decision-making process that people need to be more critical, aware, reflexive, and transparent about.
- v. Re Lines 287-288, see comments elsewhere above about conceptualization and talking about terms. In any case, yes, we suggest you just mainly focus discussions on the terms TK, LK, and LTK.
- vi. It is important to keep in mind throughout that TK is equivalent to western science in value.

H. Page 73 Line 290 to Line 317 (“Implications for Council Management Strategies”)

- i. One thing to remember that when we are talking about TK, we are not just talking about data, which is how a lot of this section currently reads. The knowledge

bodies and systems (traditional and otherwise) of indigenous people inform – and speak to – all aspects of life. Therefore, there are many aspects of TK which can inform Council decision-making that don't just have to do with TK-as-data. For example, there is the issue of values – TK highlights particular values associated with interactions with the environment which can inform decision-making in a broad sense (e.g., the importance of subsistence, the importance of not wasting, the importance of sharing). Additionally, it is important to keep in mind that even just in the data-only view of TK, as we noted above TK has a very wide applicability and scope, far greater than many natural resource managers realize. That is another reason why it is important that managers do not just assume they know where/when TK can and can't be relevant, but are always engaged in an ongoing process to seek out this information as part of a relationship with communities and knowledge-holders, and to always cast a wide net. (NMFS tribal consultation, for example, could be crucial to developing an understanding of where and how TK can be used. The consultation process is also crucial for relationship-building.) This is especially crucial in the environment that Alaskan fisheries science and management bodies are currently in now, where they have very little internal capacity and expertise to understand and utilize TK (and scientific documentation and analysis of TK) – in other words, it's important to think broadly and even humbly, and to seek out the expertise of communities and organizations working on behalf of communities (e.g., regional non-profits).

- ii. The sentiment in the second paragraph of this section about not simply trying to integrate TK into western science is a good one. This is one good reason why the sentence on page 41 of the Pre-Draft FEP which states: “For example, LTK is especially useful to supplement or validate local, small-scale ecosystem observations, in combination with large scale scientific efforts” needs to be removed, as discussed in other comments above (being based on the erroneous view of TK as limited in scope and applicability compared to its western science counterpart.)
  - iii. With regard to the third paragraph of this section, we would suggest adding more explicit mention of the important need for a tight connection between NMFS Tribal Consultation and the gamut of Council processes and actions.
  - iv. Regarding the final paragraph in this section, and footnote 16, it is suggested that this process for best practices be developed, but that it be undertaken in the TK and Subsistence Action Module, including through the inclusion of TK holders themselves and a variety of other experts working in and with Alaska Native communities and organizations.
- I. Page 74 Line 327 to Page 75 Line 302 (“Operationalizing LTK in the Council Process”)
- i. An additional checklist concept could also be utilized with regard to Council

actions, wherein for each action it is ensured that a variety of TK-related steps have been taken – Tribal Consultation undertaken (on an ongoing basis) and its products integrated into the Council process, TK resources consulted, outreach, communication and collaboration avenues pursued and opened to TK holders, etc.

- ii. See also the recommendations made in the Raymond-Yakoubian *et al.* 2017 Marine Policy paper, as well as the recent Outreach comments submitted to the Council by Kawerak, the Aleut Community of St. Paul Island, and the Bering Sea Elders Group (see attached).
  - a. For example, an important step that is noted in the Marine Policy paper (among others) would be increasing capacity – e.g. at the Council, AFSC, and other bodies regarding TK and social science of it (especially anthropology). For example, adding to Council staff a social scientist with expertise in documenting, analyzing, and applying TK.
- iii. Some more discursive and cultural suggestions could be noted as well – e.g. increasing the awareness of and education regarding TK, tribal, and subsistence concerns amongst Council members and staff. And, as another example that could be discussed here, there is the issue of how promoting ongoing discourse about the ways bringing TK – and thus tribal voices – into the process can enable a more explicit discussion of values associated with fisheries management, of other concerns which may have been under-represented in the past e.g. preservation of indigenous culture and lifeways, of a more complex understanding of the role of humans in the ecosystem and the impacts of management on humans, etc.
- iv. The Council could encourage and support more research and projects related to TK, indigenous communities, and integrating western science and TK (e.g. to address urgent priorities, such as the status of marine mammals and sea birds around the Pribilof Islands). This could be done, for example, through the research priorities process. Tribes have recently expressed a strong interest in participating, in a meaningful way, in that process (e.g., see transcript of the oral testimony by Kawerak at the April 2018 NPFMC meeting).
- v. It might be worth having some caution regarding the Social Science Planning Team (SSPT), whose expertise, direction and vision are not yet entirely clear and have morphed quite a bit from their origins. If such a body were to have an important role moving forward, it would be appropriate for experts (e.g. TK holders, and social science of TK experts) who work in or with Tribes and Alaska Native organizations to be brought into such a committee, and not just agency and Council staff. It would be good to not rely on just one body for achieving particular aims related to TK, and the Council should be open to going outside their traditional sources and their traditional makeups (e.g. plan teams and committees, with Council and agency staff – a willingness to consult with others/other groups would be a positive, as well as bringing in others not typically

involved into plan teams and committees e.g. Alaska Native organization-based experts).

- vi. Recommend removing the discussion of the Arctic Borderlands project. We are not really familiar with it, but it seems to be an observing system that uses citizen science type methods and local knowledge. Not necessarily a bad example of an observing system, but not really TK/western science co-production. There is not a lot of information on its effectiveness.
- vii. A great long-term set of goals are equitable, meaningful, and effective co-management and knowledge co-production on all policy, research, and management activities.
- viii. Recommend removing the discussion about Usher 2000 given the different context and some problematic aspects of the suggestions (e.g., TEK can be highly relevant for an EIS; for example, in the Pribilof Islands region, traditional and indigenous knowledge has guided local management and monitoring efforts of subsistence harvests of northern fur seals. These data, which have been collected annually since 2001 by the Tribal Government Ecosystem Conservation Office, informed the Environmental Impact Statement for the Management of the Subsistence Harvest of Northern Fur Seals on St. Paul Island, Alaska. These data were valuable in shaping the alternatives that were selected within the EIS and provided essential context and reasoning for the preferred alternative structure (NOAA NMFS 2017).)
- ix. Add: Co-production of knowledge. Tribes would like to be directly involved on an equal level in policy, management, research, etc.; co-production is one process through which to achieve this. There is a considerable amount of literature on this topic; Behe, Daniel, and Raymond-Yakoubian have discussed an Alaska-focused approach (2018, and forthcoming; the attached co-production diagram is from the 2018 presentation, which may be referenced but not reproduced).
- x. It is important to keep in mind here and elsewhere that TK is equivalent to western science in value.
- xi. Add to medium-term: Working to develop capacity related to TK and non-economic social science at Council-related institutions.
- xii. Add to short-term: More work towards building relationships with Tribes, ANOs, and other representative bodies
- xiii. Add to short-term: Encourage NMFS to fulfill their Tribal Consultation responsibilities, and have NPFMC designate a staff person to liaise with NMFS specifically on this issue and for developing a more regular and rigorous mechanism for communicating information from Tribal Consultation activities.

- xiv. Add to medium-term: Form formal partnerships with Tribes and ANOs to collaborate on TK-related topics
  - xv. Add to medium-term: Get/encourage/facilitate more indigenous representation on the Council and Council bodies. For example, Tribal Seats on the Council are highly desired thing by indigenous communities.
  - xvi. Medium-term: Re: the liaison idea, this is a good idea, though bear in mind this person would possibly not be necessarily an expert related to LTK themselves, but rather an expert in outreach, which is an important distinction to keep in mind.
  - xvii. Add to short or medium-term: Develop a formal process for evaluating engagement strategies.
  - xviii. Add to short or medium-term: Develop a formal process for evaluating progress towards the other goals and steps noted above.
- J. Page 75 Line 403 to Page 77 Line 493 (“Information Resources for LTK”)
- i. Per conversations with Council staff, it is our understanding that this section will probably mostly go away, and what may remain here could be a discussion of some ways and locations in which people may look to find information about LTK, rather than an annotated description of certain LTK sources. This is a good idea, because continuing down the current layout would involve including many more sources and take up too much space in all likelihood. As such, we will largely forego commentary on the annotations which are currently present, as it is our understanding they will be removed. Also, as such, we recommended that something like the information in the existing text box and lines 405-407 be expanded (however, it should be noted that the statement in lines 405-407 is probably not the best approach. The AFSC is not likely to be the best source of information regarding communities, TK, and the relevant social science, as the AFSC historically has had very little capacity in these regards. The best sources would be places like those mentioned in the text box, among others – e.g., people at and works produced by indigenous organizations and communities, academics, other agencies, and so on.) (Also: because the AFSC works so closely with the Council and its staff, we additionally encourage the AFSC to build relationships with Tribes and Alaska Native organizations as pertains to research and data issues.)
  - ii. Following from the above, other things that could be included are:
    - a. Mention of academic journals such as Marine Policy, Arctic Anthropology, and so on with considerable amounts of publications related to LTK and the marine environment

- b. Other sources at organizations and communities in the project region, e.g.:
  - 1. Aleut Community of St. Paul Island Ecosystem Conservation Office: <https://www.aleut.com/>
  - 2. Aleut International Association: <https://www.aleut-international.org/>
  - 3. Aleutian Pribilof Islands Association: <https://www.apiai.org/>
  - 4. Association of Village Council Presidents: <http://www.avcp.org/>
  - 5. Bering Sea Elders Group: <http://www.beringseaelders.org/>
  - 6. Bristol Bay Native Association: <https://www.bbna.com/>
  - 7. Tanana Chiefs Conference: <https://www.tananachiefs.org/>
- iii. Some wordsmithing: Kawerak Social Science Program, Kawerak Eskimo Heritage Program, Kawerak Marine Program (hyperlinks are all good)
- iv. One point worth mentioning even though the entire description is probably being removed: Some of the annotation descriptions are not accurate. In particular, the Kawerak-Oceana synthesis states this: “Some seasons for certain species are missing maps. Data for subsistence use was patchy and old.” There are particular reasons for the first sentence that this is the case (this is not necessarily a simple issue of a data gap). The second sentence was misinterpreted from the text; this is a comment on the state of subsistence data as of the time the project leads began their work; the project itself documented and utilized extensive and up-to-date subsistence information.
- v. An important thing to think about, and this may be one of a few good places to discuss it: There is a big need for an increase in capacity at the relevant entities related to the Council (e.g., the Council staff, Council members, committee members, AFSC, NPRB) with regard to TK and non-economic social science (especially cultural anthropology pertaining to TK). This can and should come in the way of additional individuals with these areas of expertise but also increased education and awareness by those who might not be in those fields/have that expertise. For example, having a compendium of information resources is great, but it is just as important to know how to use it. This is a key aspect of figuring out how to get information resources about TK integrated into the Council process, because a common statement we hear is that the Council does not know how to process this data. This is less of a problem of the data not being in a format the Council is traditionally used to processing and more a problem of lack of capacity within the Council to help process different types of data in ways that can be brought into Council decisioning (as well as a need to broaden, perhaps in innovative ways, the ways different data can be used by the Council).

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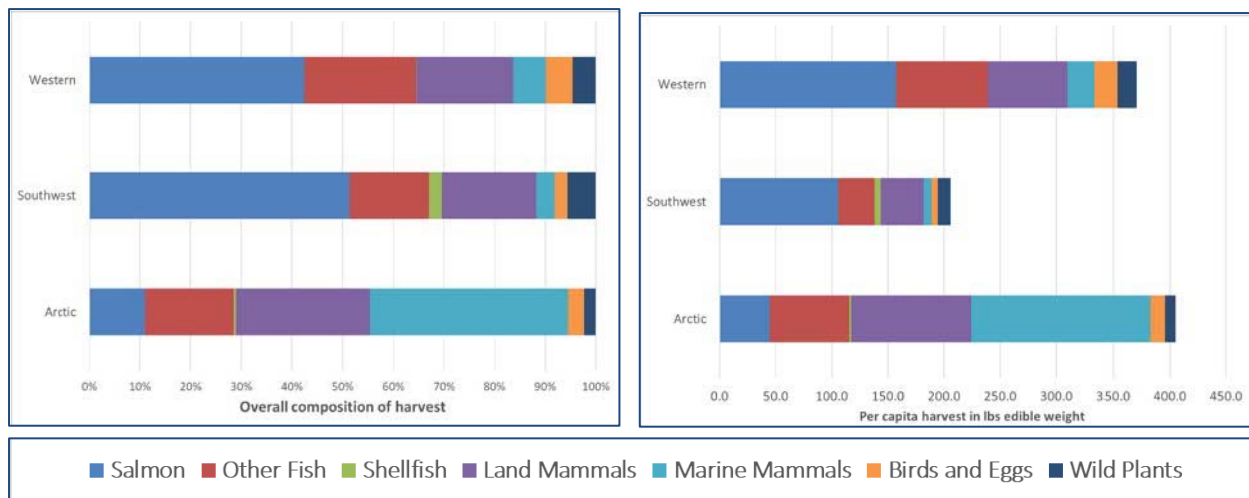
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1 **5.3.2 Subsistence activities**

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3 Harvest and use of wild resources in coastal communities in the Bering Sea is diverse across the region, as  
4 well as between neighboring communities. Figure 5-15(a) shows the overall composition of harvest (based  
5 on pounds edible weight) for three areas of Alaska; the Arctic which is the north slope of Alaska to Norton  
6 Sound, Western which mainly comprises Yukon and Kuskokwim River area communities, and Southwest  
7 which is Bristol Bay, the Alaska Peninsula and the Aleutian Islands. Figure 5-15(b) shows the same  
8 composition in terms of overall per capita harvest of pounds (lbs) edible weight. In Southwest  
9 Alaska for example, in lbs edible weight, salmon make up 51% of the harvest, while in the Arctic the  
10 largest source of protein comes from marine mammals at 39% of the harvest in lbs edible weight (Fall  
11 2016). The Arctic area also has the highest per capita harvest of wild foods at 405 lbs per person, while  
12 Western Alaska have an average harvest of 370 lbs per person, and Southwest Alaska an average harvest  
13 of 205 lbs per person (Figure 5-15(b)). Both Southwest and Western Alaska, as shown in Figure 5-15(a),  
14 are mainly comprised of fisheries resources, with a broader diversity of resource harvested in Western  
15 Alaska, and in the Arctic marine mammals are dominant in the diet. Of the recommended daily  
16 allowance of protein, residents of the Arctic region receive 259%, Western Alaska 237%, and 131% in  
17 Southwest Alaska from locally harvested wild sources (Fall 2016).

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19 **Figure 5-15 Subsistence harvest composition in 2014 in the western, southwestern, and Arctic coastal areas**  
20 **of the Bering Sea, in terms of (a) overall composition and (b) composition in terms of overall per**  
21 **capita harvest in pounds.**



Source: Adapted from Fall (2016) by D. Holen.

43 Figures NN to NN show the locations of harvest by coastal communities in the three regions of the Bering  
44 Sea illustrated above; Arctic, Western, and Southwest. The data used in Figures 1 and 2 represent all  
45 rural communities in these three regions of Alaska where data is available (see Fall 2016), while Figures  
46 NN to NN are maps from select coastal communities in those three regions. The communities noted on  
47 the maps represent recent studies where face-to-face household surveys were completed between 2008  
48 and 2015. The data represent a single calendar year of harvest effort. Data was collected at the  
49 household level and include either a census of smaller communities to a stratified sample of larger  
50 regional hub communities in the Bering Sea region such as Bethel, Kotzebue, and Dillingham. Typically,  
51 data collection occurs between January and April for the previous calendar year to ensure an adequate  
52 recall survey takes place so only activities conducted during the study year are recorded. Spatial data  
53 collection methodology is consistent across the study communities and the methodology as well as other  
54 characteristics such as sample size for each study are described in study reports (Braem et al. 2017; Evans  
55 et al. 2013; Fall et al. 2012; Holen et al 2012; Holen et al. 2011; Hutchinson-Scarborough & Koster *in*  
56 *prep*; Ikuta et al. 2016; Magdanz et al. 2010, Rufola et al. 2017). Final scale detailed maps are also found

57 in the reports by community and in some cases by individual species. Data was collected using point data  
58 for specific harvest locations, line data for areas where fishing may occur along rivers or trap lines are set,  
59 and polygon data that shows a general harvest area for berries for example, or a search area for land  
60 mammals or marine mammals. The shape used best represents the activity as described by the respondent  
61 to characterize their harvest and use as specifically as possible. Although point data for specific harvest  
62 locations for land mammals such as moose and caribou, and marine mammals such as seals is collected,  
63 the data is not included in the maps based on agreed upon confidentiality standards and only general  
64 search areas are shown. The Alaska Department of Fish and Game, Division of Subsistence provided the  
65 GIS data through a data sharing agreement with Davin Holen, Alaska Sea Grant, College of Fisheries and  
66 Ocean Sciences, University of Alaska Fairbanks.

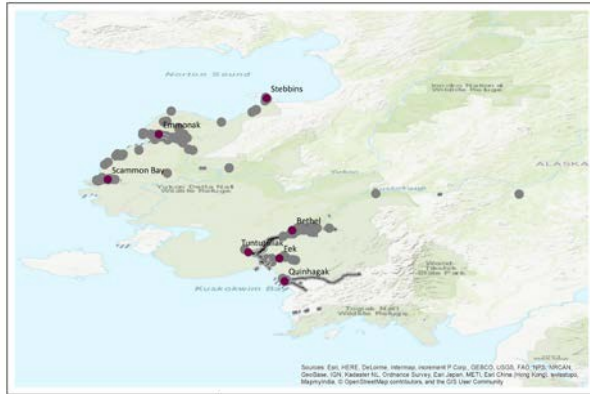
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68 The maps are designed to show the diversity of harvest by coastal communities in the Bering Sea region.  
69 In the Arctic, the maps represent the coastal communities of Deering (study year 2013), Diomedea (2013),  
70 Golovin (2012), Kivilina (2007), Kotzebue (2014), Noatak (2007), Norvik (2012), Point Hope (2014),  
71 Point Lay (2012), and Shishmaref (2014). In Western Alaska, the maps represent the coastal  
72 communities of Bethel (study year 2012), Eek (2013), Emmonak (2008), Quinhagak (2013), Scammon  
73 Bay (2013), Stebbins (2013), and Tuntutuliak (2013). In Southwest Alaska, the coastal communities  
74 represented in the maps are Akutan (study year 2008), Clark's Point (2008), Dillingham (2010), Egegik  
75 (2015), King Salmon (2007), Manokotak (2008), Naknek (2007), Pilot Point (2015), South Naknek  
76 (2007), Togiak (2008), and Ugashik (2015). Each of the maps correlates to a category in Figures NN and  
77 NN, salmon, other fish including freshwater and marine fishes, shellfish including crab and clams, land  
78 mammals including large land mammals, small land mammals and furbearers that are eaten by residents,  
79 birds and eggs including migratory waterfowl, resident upland birds, and sea ducks, and wild plants  
80 which includes berries and other edible plants.



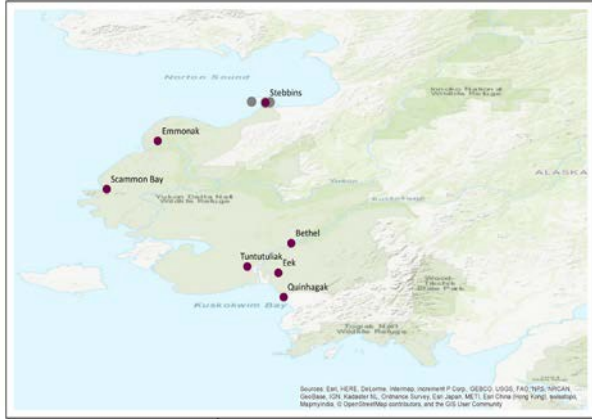
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**Figure 5-16** Locations of subsistence harvest around communities in the western coastal areas of the Bering Sea, based on studies from 2008, 2012, and 2013.

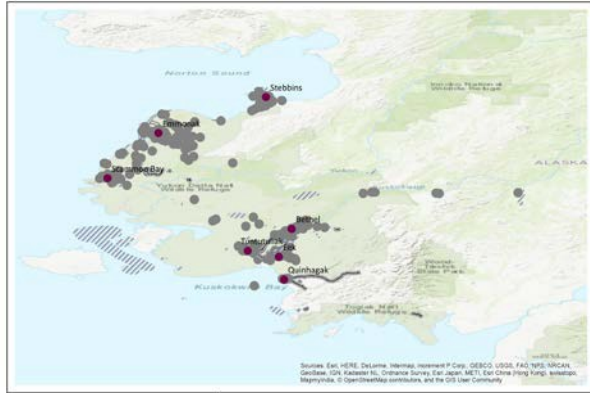
(a) salmon



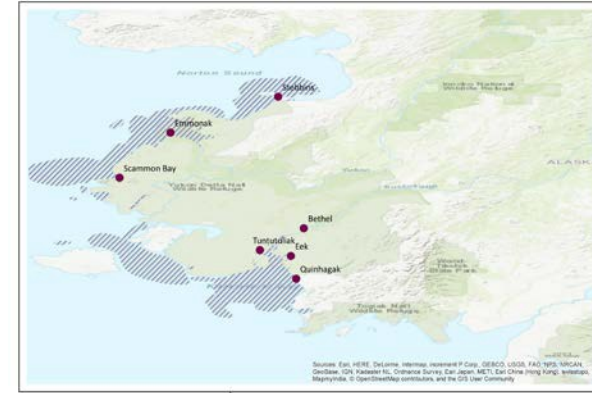
(b) shellfish



(c) other fish

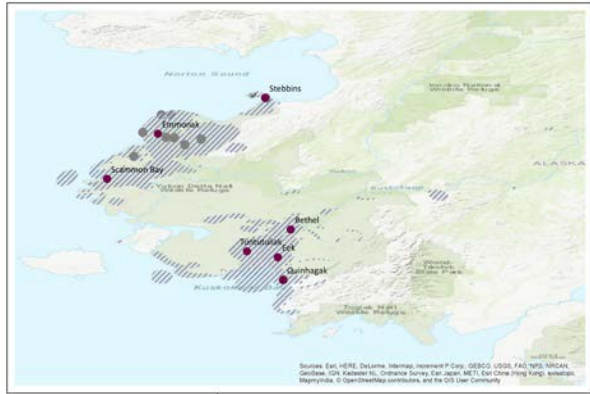


(d) marine mammals

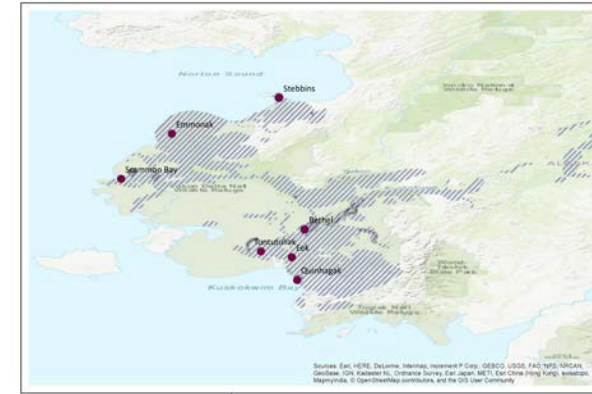


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(e) birds and eggs



(f) land mammals

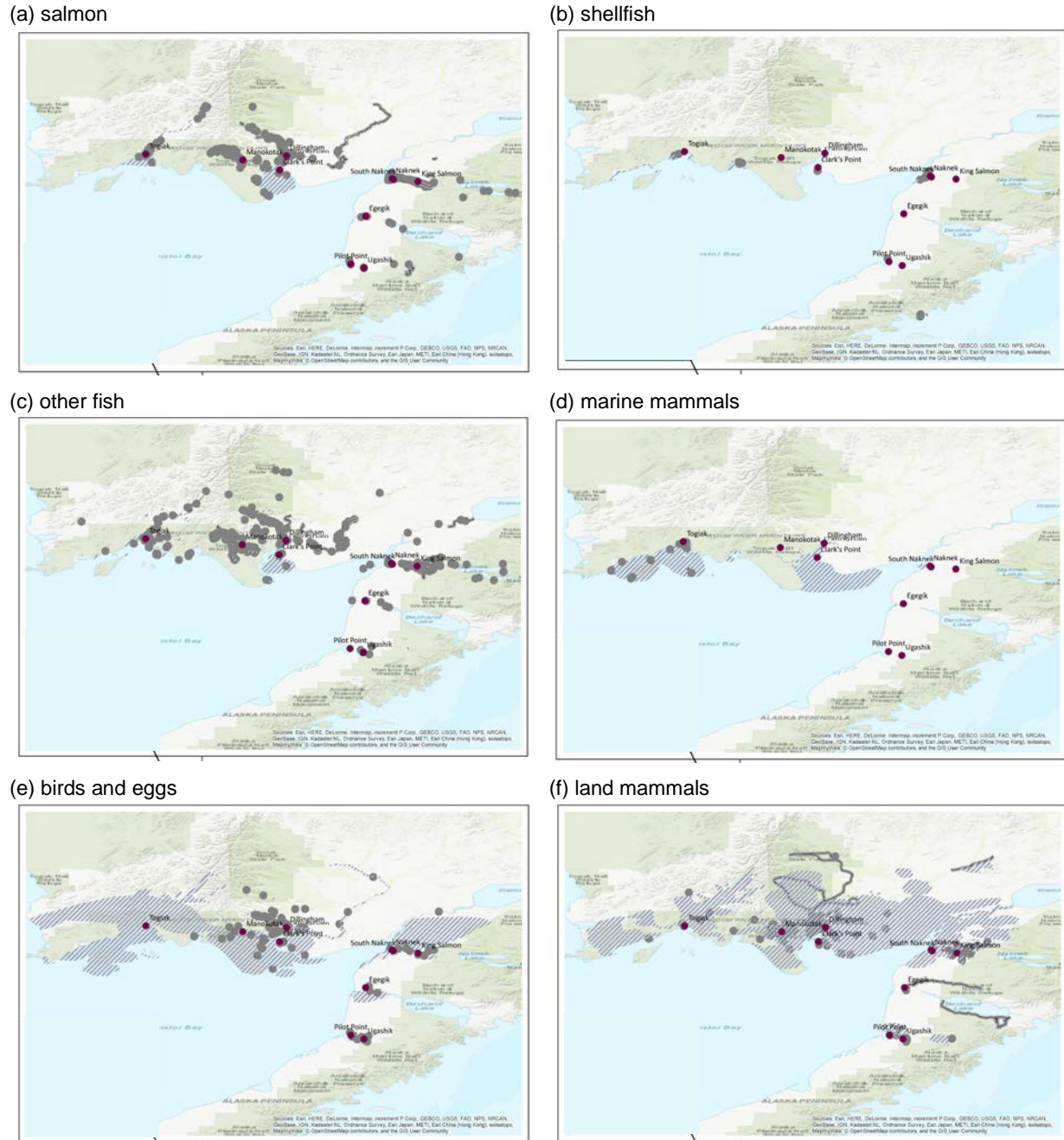


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Source: Braem et al. 2017 (Stebbins), Fall et al. 2012 (Emmonak), Ikuta et al. 2016 (Eek, Quinhagak, Scammon Bay), Runfola et al. 2017 (Bethel)

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**Figure 5-17** Locations of subsistence harvest around communities in the southwestern coastal areas of the Bering Sea, based on studies from 2007, 2008, 2010, and 2014.

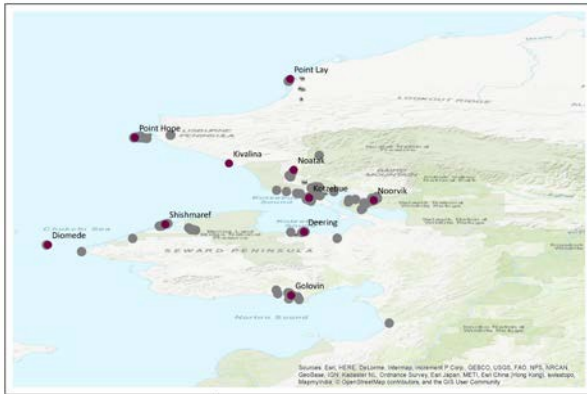


Source: Evans et al. 2013 (Dillingham), Fall et al. 2012 (Akutan, Togiak), Holen et al. 2012 (Clark's Point, King Salmon, Manokotak, Naknek, South Naknek), Hutchinson-Scarborough & Koster in prep. (Egegik, Pilot Point, Ugashik).

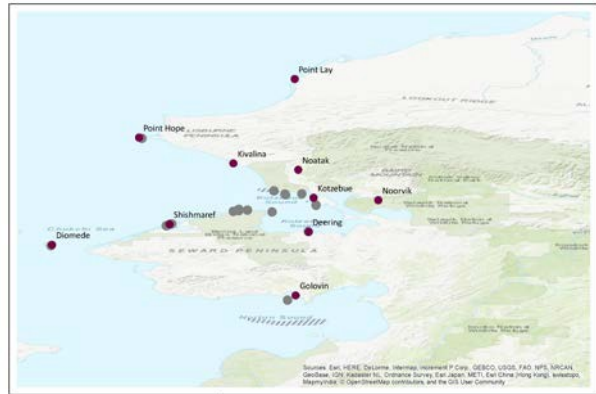
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**Figure 5-18** Locations of subsistence harvest around communities in the Arctic coastal areas of the Bering Sea, based on studies from 2007, 2012, 2013, and 2014.

(a) salmon

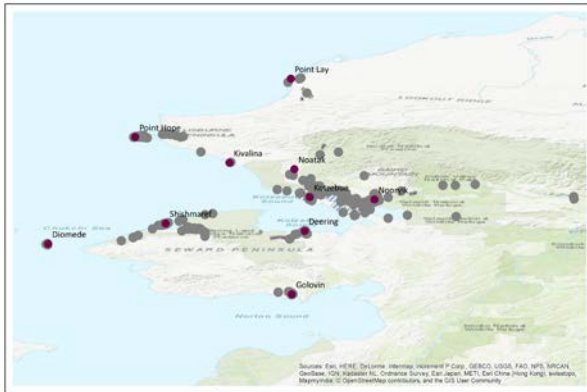


(b) shellfish

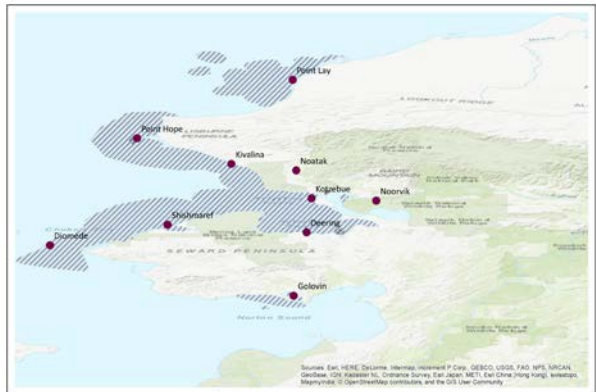


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(c) other fish

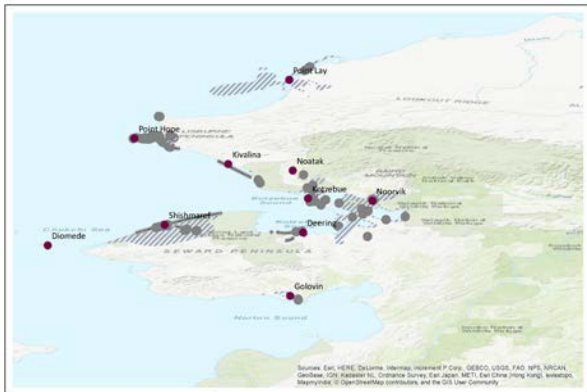


(d) marine mammals

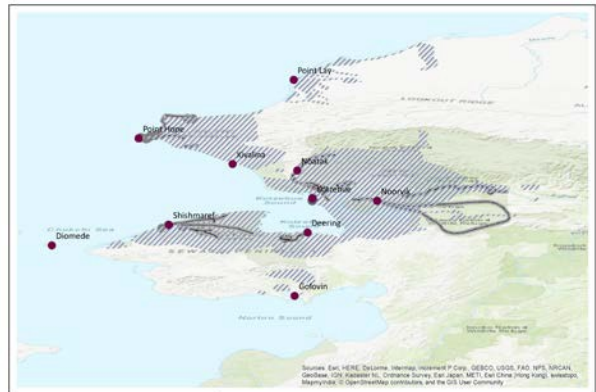


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(e) birds and eggs



(f) land mammals



Source: Braem et al. 2017 (Diomedede, Golovin, Kotzebue, Norvik, Point Hope, Point Lay, Shishmaref), Magdanz et al. 2010 (Kivilina, Noatak).

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### 5.3.3 Local and Traditional knowledge

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In ecosystem-based fisheries management (EBFM), “the point is to not necessarily include more complex data or analytical approaches but rather to be more comprehensive in the range of factors being considered to manage a fishery” (Patrick and Link, 2015). One way that the North Pacific Fishery Management Council (hereafter, the Council) intends to become more comprehensive in managing the Bering Sea ecosystem is through the incorporation and integration of local and traditional knowledge (LTK) into fisheries management.

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186 **Defining Local and Traditional Knowledge (LTK)**  
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188 LTK broadly includes the observations and experiences of local people in a region who may be, but are  
189 not necessarily, indigenous. Local knowledge is the product of knowledge formation and dissemination  
190 based on personal, shared and inherited experience (Martin et al., 2007). It is a way of knowing, a  
191 worldview, that is connected to a specific place, or locale. Bearers of local knowledge are often relatively  
192 small groups of people, living in or connected to a common geographic location. These people may or  
193 may not be indigenous to the area or base their understandings on knowledge that evolves over many  
194 generations (PFRCC, 2011). Traditional knowledge is:

195  
196 *a living body of knowledge which pertains to explaining and understanding the universe,*  
197 *and living and acting within it. It is acquired and utilized by indigenous communities and*  
198 *individuals in and through long-term sociocultural, spiritual and environmental*  
199 *engagement. [Traditional knowledge] is an integral part of the broader knowledge*  
200 *system of indigenous communities, is transmitted intergenerationally, is practically and*  
201 *widely applicable, and integrates personal experience with oral traditions. It provides*  
202 *perspectives applicable to an array of human and nonhuman phenomena. It is deeply*  
203 *rooted in history, time, and place, while also being rich, adaptable, and dynamic, all of*  
204 *which keep it relevant and useful in contemporary life. This knowledge is part of, and*  
205 *used in, everyday life, and is inextricably intertwined with peoples' identity, cosmology,*  
206 *values, and way of life. Tradition – and [traditional knowledge] – does not preclude*  
207 *change, nor does it equal only 'the past'; in fact, it inherently entails change. (Raymond-*  
208 *Yakoubian et al., 2017)*  
209

210 In the Bering Sea Ecosystem, LTK is relevant for all fisheries sectors and all aspects of fisheries  
211 management. LTK is relevant not only to subsistence right issues, but also to commercial and recreational  
212 fisheries issues as well. For example, LTK knowledge holders might be members of large-scale  
213 commercial fishing groups or residents in remote communities that depend on subsistence fishing and  
214 harvesting (e.g., marine mammals, seabirds) for survival.  
215

216 Local and Traditional Ecological Knowledge (LEK and TEK)  
217

218 NOAA Fisheries recognizes the value of local and traditional ecological knowledge (LEK and TEK) as  
219 they relate to EBFM of our Nation's fisheries. Local ecological knowledge (LEK) generally refers to what  
220 people know about the particular environments in which they work or subsist that is acquired through  
221 observations and experience (NOAA, 2007). Traditional ecological knowledge, or TEK, is the  
222 compendium of environmental knowledge indigenous people have accumulated over numerous  
223 generations observing and interacting with the local environment (NOAA, 2017). TEK involves  
224 indigenous peoples with self-determined ways of life and political sovereignty.<sup>14</sup>  
225

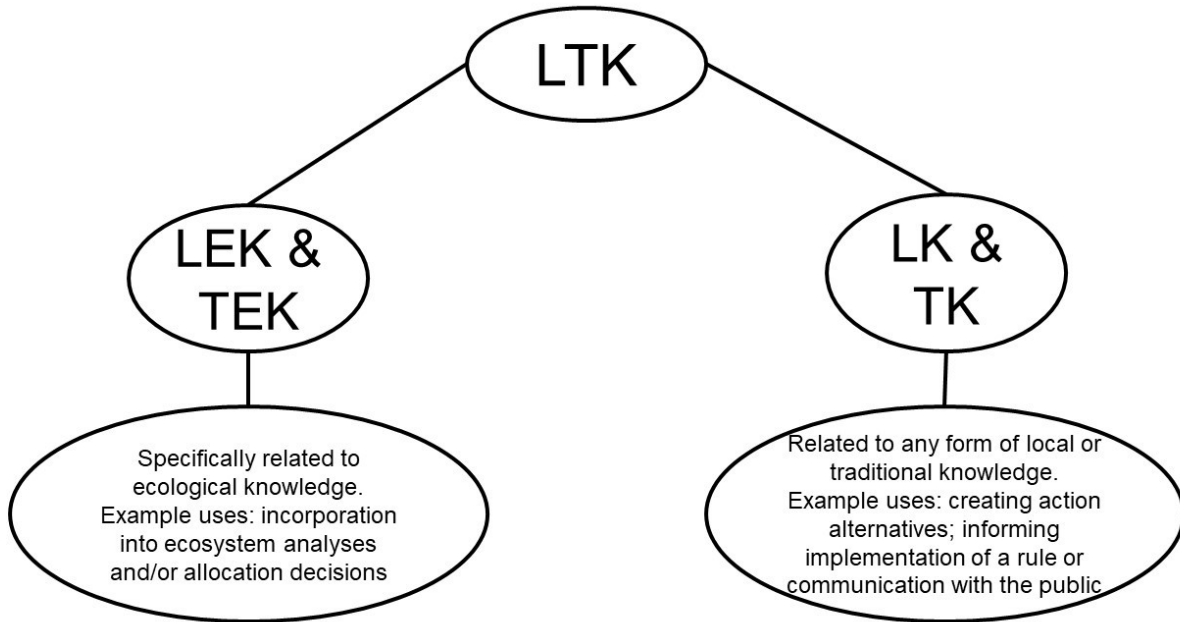
226 The Bering Sea fishery ecosystem plan is part of a 'next generation' of FEPs aimed at assessing tradeoffs  
227 between environmental, economic, and social costs and benefits of management decisions (Marshall et  
228 al., 2017). As such, this ecosystem plan explicitly includes the human dimension, and aims to continue  
229 making forward strides in formalizing the use and review of social science. Social science information  
230 obtained through LTK includes (but is not limited to) local ecological knowledge (LEK) and traditional  
231 ecological knowledge (TEK) (Figure 5-19).  
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239 <sup>14</sup> There is some concern from stakeholders that Tribal consultation is legally mandated but not happening. Formal consultations lie  
240 outside scope of current Council staffing capabilities, but might be able to be developed between NMFS staff and Tribes.

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242

Figure 5-19 Schematic illustrating the relationship between LTK, TEK, and LEK.



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244

Recent academic work has identified evaluative criteria for how best available social science—especially qualitative social science—might be incorporated into the Council process alongside other forms of best available science (Huntington, 2013; Charnley et al., 2017; Raymond-Yakoubian et al., 2017). Qualitative social science “does not seek a single or generalizable truth, but rather uncover[s] multiple perspectives and interpretations” of the world (Charnley et al., 2017). Qualitative social science can take many forms, including methods that utilize the TEK of indigenous people. Traditional and local ecological knowledge is:

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*not an information source of last resort when others are limited; traditional and local ecological knowledge can provide a rich source of scientific information to consider in any best available natural or social science effort. Traditional ecological knowledge (TEK) constitutes a body of knowledge and insight about species or ecosystems that has developed through engagement with the environment in specific places and been transferred over multiple generations (Berkes et al., 2000; Huntington, 2000). Like TEK, local ecological knowledge (LEK) includes knowledge regarding species or ecosystems that is gained through extensive personal observation of and interaction with local ecosystems, and is shared; but it is more recent... These unique forms of knowledge are not simply “anecdotal”, but rather can provide valuable ecological information based on long-term observations of and interactions with natural resources for which there may be no other long-term data sets. TEK and LEK are fundamentally tied to the placebased individuals and communities who hold and transmit this knowledge, and as such, are often excluded from best available social science (BASS) that seeks to generalize information for wider application. There are many methods (both quantitative and qualitative) for producing robust and reliable information about TEK and LEK; this information should be subjected to the same standards for BASS as information on other topics, depending on which of... three categories (scientific, suggestive, supplementary) it falls under. The most useful integration of TEK and LEK into BASS is likely to occur through collaborations between conventional scientists, natural resource managers, and TEK/LEK knowledge holders in which the latter are included at the start of the process, and are treated as equal participants in the effort. Although it may take*

273 *considerable time to build relationships of trust, expertise to navigate cultural differences, and a*  
274 *willingness to transform standard practices of collecting BASS, the potential outcome is likely to*  
275 *be more equitable and inclusive science-based management. There are several examples of such*  
276 *collaborations in the USA that combine different forms of knowledge for a more complete*  
277 *understanding of natural processes and phenomena (e.g., Beaudreau and Levin, 2014; Finlayson*  
278 *and McCay, 1998; Knapp and Fernandez-Gimenez, 2009; Vellucci, 2007). Of course, the TEK*  
279 *and LEK held by different groups, and western scientific knowledge, may also be quite different*  
280 *or contradictory. Such cases call for collaborative processes to vet differences and find*  
281 *productive ways of moving forward. When attempting to include TEK and LEK as a source of*  
282 *BASS, it is important to recognize that some TEK and LEK is sacred or proprietary; and, that use*  
283 *and engagement with TEK or LEK and its knowledge holders should follow established local*  
284 *protocols for free, prior, and informed consent (c.f. Harding et al., 2012; Williams and Hardison,*  
285 *2013). (Quotation source: Charnley et al., 2017)*  
286

287 LEK and TEK may be understood as offshoots or more specific aspects of LTK. Therefore, LTK will be  
288 used for the remainder of this document, to refer to LTK, LEK, and TEK.  
289

### 290 **Implications for Council Management Strategies**

291

292 With the understanding that LTK may not be relevant in every ecological research and management  
293 activity, LTK will be “promoted on its merits, scrutinized as other information is scrutinized, and applied  
294 in those instances where it makes a difference in the quality of research, the effectiveness of management,  
295 and the involvement of resource users in decisions that affect them” (Huntington, 2000).  
296

297 The intent is for LTK to be incorporated into the Council decision-making process *from the beginning*  
298 *through meaningful collaboration with local and indigenous peoples throughout the Bering Sea region.*  
299 *LTK will not simply be integrated into Western science, as it currently exists in the Council process.*  
300 *Instead, to the extent practicable, space will be made for LTK to influence the decision-making process*  
301 *on a case-by-case basis, and in forms that LTK knowledge holders feel are appropriate and relevant.*  
302

303 NMFS has a responsibility for government-to-government consultation with tribal governments, and the  
304 NMFS Alaska Regional Office is encouraged to conduct formal consultation with federally-recognized  
305 tribes<sup>15</sup> in the Bering Sea region and share that information with the Council. Council staff are  
306 encouraged to develop collaborative relationship with bearers of LTK, through communications with  
307 tribal governments, community organizations, Alaska Native organizations, fisheries organizations,  
308 individuals, and others, as well as through reviews of existing literature pertaining to LTK in the Bering  
309 Sea region.  
310

311 Best practices will be outlined<sup>16</sup> for how LTK may be gathered, communicated, and considered *from the*  
312 *beginning* of the Council decision-making process. Emphasis is placed on developing appropriate ways to  
313 build relationships between LTK knowledge holders and Council members, Council staff, and other  
314 groups (e.g., the SSC, AP), at all levels of the Council process. Short-term perspectives may be developed  
315 that focus on making space for LTK in the existing management process. Medium and long-term  
316 perspectives may be developed that focus on ways for LTK knowledge holders to inform the evolution of  
317 federal fisheries management in the North Pacific, to more closely reflect the standards of EBFM.  
318  
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322  
323 <sup>15</sup> Politically sovereign federally-recognized tribes within the Bering Sea region can be identified for consultation, from the list at →  
324 <https://www.bia.gov/regional-offices/alaska/tribes-served>.

325 <sup>16</sup> Best practices could be outlined in this document, or at a later date as assigned to another group (the SSPT, for example) with  
326 input from stakeholders; perhaps best practices in a general way could be put in here, and specifics hashed out later?

327 Operationalizing LTK in the Council Process

328  
329 *Implementation of EBFM is not a single large action but rather a series of ongoing and cumulative*  
330 *actions leading to comprehensive management. (NMFSPD 01-120)*

331  
332 The following represents some initial suggestions for short, medium, and long-term actions that the  
333 Council could consider in the process of developing best practices for LTK.

334  
335 **Short-term**

- 336  
337
  - A question may be added to the analytical template used by Council staff, that reads, “Are there  
338 sources of LTK relevant to this topic?”
  - Prepare a compendium of information resources for LTK. Some of these resources are listed in  
339 the section that follows.

340  
341  
342 **Medium-term**

- 343  
344
  - Forming a subcommittee for LTK within the recently formed Social Science Planning Team  
345 (SSPT) offers a potential route for incorporating LTK of indigenous peoples into the Council  
346 process in a way that makes use of existing resources. The SSPT could facilitate meaningful  
347 contributions of LTK to ongoing analyses, as well as thoughtful review of completed analyses.  
348 The SSPT could further facilitate the longer-term goals for LTK to take part in evolving the  
349 Council management process to reflect EBFM. The SSPT might consider inviting a member from  
350 an agency (e.g., ADFG) with expertise in LTK work.
  - The Council could consider forming an LTK Committee to allow for a dedicated space in the  
351 existing Council process for LTK to inform management.
  - The Council could appoint/hire an LTK liaison staffer, who would facilitate the inclusion of LTK  
352 at all levels of the Council process. Some other organizations have dedicated staff liaisons for this  
353 purpose (i.e., US Fish & Wildlife Service).

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357 **Long-term**

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  - The Council might consider how to shift towards an adaptive co-management approach (Berkes,  
360 2009) that more fully incorporates LTK into the process at all stages. One example of this type of  
361 approach is the Arctic Borderlands Ecological Knowledge Co-Op<sup>17</sup>.

362  
363 **NOTE:** Usher (2000) describes four categories of TEK for use in Environmental Assessment and  
364 management using a case study from Canada. A similar approach might be considered for incorporation  
365 into the Bering Sea FEP (paraphrased):  
366

367 **Category 1:** Factual/rational *knowledge about the environment.*

368 **Category 2:** Factual *knowledge about past and current use of the environment.*

369 **Category 3:** *Values about the environment*, including culturally based value statements about how  
370 things should be, and what is fitting and proper to do, including moral or ethical statements about how  
371 to behave with respect to animals and the environment, and about human health and well-being in a  
372 holistic sense.

373 **Category 4:** Culturally based cosmology; *the knowledge system itself.*  
374  
375  
376  
377  
378  
379  
380  
381

382  
383 <sup>17</sup> <https://glosbe.com/en/fr/Arctic%20Borderlands%20Ecological%20Knowledge%20Co-op>; <https://www.arcticborderlands.org/about-us>

384 According to Usher (2000), each category of TEK has different potential uses within existing fisheries  
385 management structures and processes. If the management process is conceptualized in terms of four  
386 phases of public review (as is the case in Canada), uses of TEK might look like (paraphrased):  
387

388 **Phase 1: Scoping**

389 Recommendation→ *Categories 2, 3, and 4 are often a good fit*

391 **Phase 2: Preparation of an Environmental Impact Statement (EIS)**

392 Recommendation→ *All categories might be included, but often no TEK is appropriate for a formal EIS*

393 **Phase 3: Public Review**

394 Recommendation→ *Categories 1, 2, and 3 are often a good fit; Categories 1 & 2 might be technical-  
395 based or community-based, while Category 3 TEK is more likely to be community-based*

396 **Phase 4: Monitoring/Follow-up**

397 Recommendation→ *Category 1 TEK is often a good fit (because the legal stipulation for follow-up in  
398 Canada is 'to verify the accuracy of the [EIS] and determine the effectiveness of mitigation measures')*  
399

400  
401  
402  
403 **Information Resources for LTK**  
404

405 The Alaska Fisheries Science Center and the Alaska Fisheries Information Network (AKFIN) maintain a  
406 database with information about Bering Sea Communities, which may be consulted during planning  
407 stages of these collaborative activities. Other resources may be consulted on an issue-by-issue basis:<sup>18</sup>  
408

409 **Bering Sea LTK Resources**  
410

411 Arctic Research Consortium of the United States <https://www.arcus.org/>

412 Principles for the conduct of research in the arctic <http://ankn.uaf.edu/IKS/conduct.html>

413 Products of social science research with Bering Strait communities [www.kawerak.org/socialsci.html](http://www.kawerak.org/socialsci.html)

414 Heritage Program Archives [www.kawerak.org/ehp.html](http://www.kawerak.org/ehp.html)

415 Marine Program at Kawerak [www.kawerak.org/marine.html](http://www.kawerak.org/marine.html)

416 A video about best practices for research on the North Slope <https://vimeo.com/197939591>

417 Information about the North Slope <http://www.leadershipandstrength.com/collaboration/>

418 Database maintained by the University of Alaska Fairbanks <http://jukebox.uaf.edu/site7/>

419 Principles and guidelines for the protection of the heritage of indigenous people  
420 <http://ankn.uaf.edu/IKS/protect.html>

421 Research ethics: a source guide to conducting research with indigenous peoples  
422 <http://www.indigenousgeography.net/ethics.shtm>

423 Source of information about changes related to climate change around the region (mix of LEK and  
424 TEK) <http://adapталaska.org/stories/>  
425  
426

427 *Bering Sea Elders Advisory Group: The Northern Bering Sea*  
428

429 This resource is explicitly “not an in-depth inquiry into traditional ecological knowledge of the natural  
430 history of species and their environment”. It includes maps of the Bering Sea and coastal areas which  
431 were developed through interviews and mapping activities with experts from tribes, local commercial  
432 fishermen, and the Coastal Resource Service Areas. Accompanying these maps are biological descriptions  
433 from a combination of western science sources, information produced by TEK related to the subsistence  
434 or local commercial use of certain species, cultural practices, and short anecdotal quotes describing  
435 specific knowledge of the resource provided by community elders. Migratory routes included in these  
436 maps illustrate routes from both TEK sources as well as NOAA DATA.  
437  
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440  
441

<sup>18</sup> This list is a work in progress



442 The maps depict areas used for hunting walrus, seals, whales, and important habitat areas for each of these  
443 species, such as migratory routes. Additionally, this book contains maps with general areas for harvesting  
444 subsistence fish and shellfish, as well as areas for small-scale commercial fisheries for halibut, herring,  
445 salmon and crab. Areas that elders and hunters believe to be important habitat for eiders were also  
446 illustrated, as these areas are also thought to be ecologically important to marine mammals. Often species  
447 are grouped together in terms of their distribution on the maps, so use of the maps for species- level  
448 information may not be feasible. It seems that the biological information is strictly generated from  
449 western science, while harvest data and information on cultural comes from TEK, leaving questions for  
450 how to really utilize the TEK portion of this in the FEP.

451  
452 BS FEP species maps which incorporate TEK:

- 453 • Pacific walrus (subsistence use areas & migratory routes)
- 454 • All seals (subsistence use)
- 455 • Bearded, ribbon, ringed, spotted seals (migratory routes)
- 456 • All whales (category includes bowhead, beluga, gray as one) (subsistence use)
- 457 • Beluga whales (subsistence use, feeding grounds, migratory routes)
- 458 • Bowhead whales (subsistence use, feeding grounds, migratory routes)
- 459 • Shellfish: clams, mussels, king crab, shrimp (subsistence use, commercial harvesting)
- 460 • Blue and red king crab (subsistence use, commercial harvesting)
- 461 • Herring, salmon, halibut (migratory routes, commercial harvesting, subsistence)
- 462 • Area of potential growth for commercial halibut fishery

463  
464  
465 *Oceana and Kawerak: Bering Strait Data Synthesis*

466  
467 This resource includes ecological information specifically about the Bering Strait, not the entire Bering  
468 Sea, using data from both TEK and Western scientific studies. The primary source of TEK used in the  
469 synthesis is the Kawerak Ice Seal and Walrus Project (ISWP). This synthesis consists of seasonal  
470 subsistence use areas for bowhead whales, belugas, walruses, polar bears, seals, fish (grouped as one  
471 category) & invertebrates (grouped as one category). Additionally, local community experts used their  
472 traditional knowledge to edit landfast ice extents in the ISWP which was used in this document.

473  
474 Data limitations: subsistence use areas only cover regions where they are hunted, many of these species  
475 are migratory and conservation policies would need to reflect habitat and prey throughout life history. See  
476 Concentration Area maps to fill in these data gaps. Some seasons for certain species are missing maps.  
477 Data for subsistence use was patchy and old. Any information that conflicted with ISWP data or local  
478 expert experience was removed from analysis.

479  
480 Species-level fish distributions within this synthesis did not employ TEK, however a different [Kawerak](#)  
481 [document](#) includes a non-salmon subsistence harvest survey in five Bering Strait communities, followed  
482 by semi-structured ethnographic interviews with local experts. Spatial information was documented  
483 during interviews and a map was produced for each community. This report documents local knowledge  
484 regarding when, where and how residents harvest non-salmon fish; information about fish abundance and  
485 biology; the cultural values associated with fish; climate change observations; community concerns  
486 related to fishing; and other topics.

487  
488 *Ecological Atlas of the Bering Sea*

489  
490 The Atlas has represented TEK as expressed in subsistence-use areas and species use patterns. The Atlas  
491 contains spatial information derived from Kawerak's ISWP. Natural history maps (species' ranges and

492 concentrations) for BS FEP species where TEK was used: Pacific walrus, ice seal, beluga whale.  
493 Additionally, TEK data was used for the “subsistence harvest by species” maps.

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496

#### 5.3.4 Other human and non-consumptive activities

497 Some human and non-consumptive activities are detailed below. This list is not meant to be exhaustive,  
498 but instead it is meant to highlight and summarize a broad spectrum of human and non-consumptive  
499 activities.

500  
501  
502

##### Recreational fisheries

503 Recreational fisheries are currently not a significant factor in the Bering Sea ecosystem, due to the  
504 relative remoteness of the ports. Most recreational fishing occurs nearshore, and less than 1% of all  
505 halibut removals were those recreationally caught in the Bering Sea.

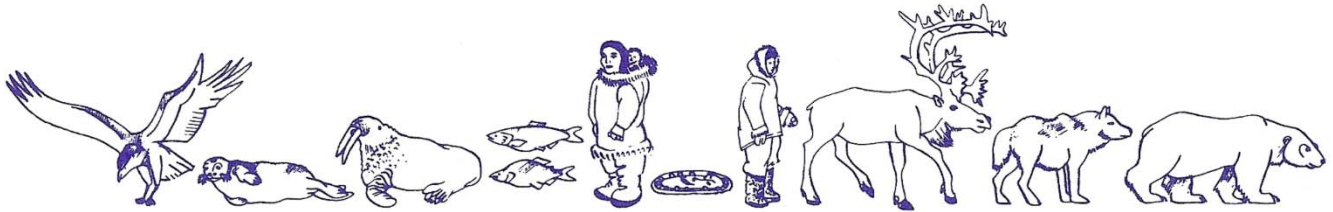
506  
507  
508

##### Transportation

509 Several types of vessels travel through the Bering Sea (Figure 5-20). Bering Sea shipping is dominated by  
510 traffic through the Aleutian Islands between North America and East Asia, particularly during the  
511 summer and fall. In U.S. waters, this traffic is dominated by fishing vessels and vessels serving  
512 communities and industrial activity in the area (Nuka Research and Planning Group, LLC 2016) (Figure  
513 5-21). Commercial fishing vessels operate in the southern Bering Sea year-round, traveling back and forth  
514 from fishing grounds to ports and processing plants. Cargo ships and containerships carry processed  
515 seafood to global markets throughout the region. Tankers, cargo ships, and barges carry goods and  
516 materials to communities in western Alaska. The hub port of Nome receives fuel deliveries from barges  
517 for transport to outlying communities. The Arctic Marine Shipping Assessment found that community  
518 supply activity, primarily by tug/barge combinations in the Bering Sea region, is likely to grow as  
519 populations increase in the Arctic (Arctic Council 2009).

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As a chokepoint between the Arctic and Pacific Oceans, shipping activity in the Bering Sea and the  
Bering Strait is expected to continue expanding as Arctic sea ice retreats and both trans-Arctic shipping  
and resource extraction increase. Shipping between Europe and Asia through this region could increase  
significantly if global climate change opens a summer shipping route through the Arctic.



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April 2, 2018

To: North Pacific Fishery Management Council  
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Anchorage, AK 99501  
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[diana.evans@noaa.gov](mailto:diana.evans@noaa.gov))

Subject: *Discussion Paper: Review of Council Rural Community Outreach*

Council members,

Thank you for the opportunity to comment on the discussion paper "Review of Council Rural Community Outreach." Kawerak has reviewed this paper and has a variety of comments, below. We hope these are useful as the Council continues work to develop outreach, engagement and collaborations with rural and indigenous communities.

General comments:

It is good that this paper was written to review where Council outreach stands and what has been done. What it really highlights, though, is how sparse Council outreach has been. There are many different concepts discussed in this paper and they need to be separated, distinctly discussed and then combined into a holistic plan for Outreach, engagement and collaborations. We discuss this, with recommendations, further below:

- We believe that outreach should be on-going, as well as project-specific. Developing longer term relationships and understandings through on-going outreach will make project-specific outreach more effective.
- Related to this, allowing and soliciting Tribal and community participation in Council committees is highly valuable. For example, the recent work that the Ecosystem Committee (and staff) has been doing, with the participation of Tribes, Alaska Native organizations, and others is an important step in cultivating long-term relationships built on trust, respect and understanding. Work there is related to the incorporation of Traditional Knowledge, TK holders and social science regarding TK and subsistence into Council processes to ensure that decisions are made with the best available information and that processes are inclusive and equitable.
- It is not entirely clear, from this paper, what the purpose of outreach is, from the perspective of the Council, though it seems to be focused on primarily providing

information to the public (in its various forms). Outreach can also be a vehicle through which to obtain feedback from communities, but in order to do so, it must be planned and structured for that outcome. We recommend that Council outreach activities have two components: sharing information about Council actions, and soliciting and documenting feedback from Tribes and the public about those actions. We would emphasize that outreach activities are not the appropriate place to document Traditional Knowledge (TK), though it is an appropriate place to ask about Traditional Knowledge, talk about collaborations, and determine how Tribes, communities, TK holders and others can work together to ensure their knowledge and concerns become a part of Council processes.

- It would be helpful to have a recognition that there are ‘rural’ communities which are primarily non-indigenous, and rural communities that are primarily indigenous (and also are the location of a Tribe). This recognition is necessary because Indigenous People and Tribes have special rights, such as Tribal Consultation.
- There needs to be expanded discussion that recognizes that ‘outreach’ is a completely different activity than the incorporation of TK into NPFMC documents and decisions. Additionally, ‘outreach’ is a completely different activity than co-production of knowledge work. While there is a sentence in Section 3.1 that acknowledges this, in other sections the distinctions are not as clear.
- ‘Co-production of knowledge’ is a process, based on equity, that can be used to incorporate/ understand/work with both TK and western science
- The paper would benefit from a discussion of what the Council has learned through its outreach activities and how what has been learned has been utilized by the Council.
- While the NPMFC may not be responsible for the formal Tribal Consultation process, they are responsible for ensuring that information from Consultation is used in their decision-making. This means the Council must have a direct link to Consultation through NOAA/NMFS, and a framework in place that allows them access to Consultation information on a regular and as-needed basis. There needs to be a stronger connection between NMFS Consultation activities and the NPFMC process. NMFS also needs to do a much better job at Consultation activities. For example, Tribes have not been regularly notified of ongoing and new research activities. The Council can emphasize the importance of that work to their activities and request actions from NMFS.
- The Council should emphasize and reaffirm their commitment to working with Tribes and addressing Tribal concerns. There is nothing preventing the Council from doing or saying this. (Just like there is nothing preventing the Council from participating in NMFS Consultation activities, or encouraging NMFS to do more Consultation.)
- We recommend a discussion about the prohibitive cost for many Alaska Native individuals and organizations to participate in Council processes. These costs are one of the reasons why targeted outreach is needed. Actions to level the playing field for rural and indigenous residents who want to be part of the Council process are needed.
- Because the Council does not currently have the capacity to determine when and how to do outreach (e.g. via an outreach specialist), they should rely on a Rural Outreach Committee and others to guide them on Outreach activities. This should include guidance on on-going and action-specific outreach: how to do on-going outreach, which actions may require targeted outreach, who may be affected by or interested in Council actions, what types of outreach are appropriate, and when and where to do targeted outreach.

#### Section 1:

- The request to the Council by Tribes and Alaska Native organizations was broader than re-visiting outreach activities, but also regarding how the Council actively engages with communities, regional organizations and tribes – beyond outreach and in terms of collaborations, knowledge exchange and in other ways.

#### Section 2:

- Does the Council still keep a ‘running calendar’ or regional meetings that may provide outreach opportunities?
- What progress has been made in ‘developing regional partnerships’ – as was recommended by the ROC?
- Has the Council received yearly reports on Consultation from NMFS? Does the NPFMC think that additional Consultations would be useful?

#### Section 3:

- A clarification is needed here regarding recent public comments at Council and Ecosystem Committee meetings. Public testimony has certainly called for additional outreach activities to indigenous and rural communities, but it has also asked, directly, for more involvement of indigenous people, organizations, and knowledge to be incorporated into NPMFC processes. These are requests for outreach, collaboration and co-production (but they cannot all be grouped under ‘outreach’).
- Top of page 5: delete “Native Alaskan” and replace with “Alaska Native”

#### Section 3.1:

- Page 5: footnote 4 on page 5 is not the correct citation. This is the correct citation: Carolina Behe, Raychelle Daniel and Julie Raymond-Yakoubian. 2018. Understanding the Arctic Through a Co-production of Knowledge. Workshop at the Alaska Marine Science Symposium, Anchorage, AK. January 23-24, 2018.
- Regarding this sentence - “Developing the proper relationships and trust to develop and document traditional knowledge, or a co-production paradigm can take years to decades.” It is our understanding that the Council does not directly do research. Additionally, while it is correct that relationships can take a long time to develop, but we suggest presenting this in a positive light. For example, “It can take many years to develop the proper relationships and trust to effectively and equitably work with Traditional Knowledge and Traditional Knowledge holders, particularly with a co-production framework.” There is a large volume of Traditional Knowledge that has been documented from communities all over Alaska which is relevant to and available for Council use, and Tribes, communities and organizations that are extremely willing to work with the Council to ensure that such knowledge is appropriately incorporated into Council processes.

#### Section 3.2:

- We are glad that a Social Science Plan Team has been created. It is not necessarily ‘likely’ that the SSPT ‘will have the expertise to review and advise the Council on integration of traditional knowledge and co-production of knowledge’, however. In order to ensure this, the Council must appoint team members that have the experience and knowledge to ensure this happens. The current team has one anthropologist who has worked in Alaska – this is good. We are not familiar with the experience that any of the SSPT members may have with TK or co-production.

There are no TK holders or indigenous people on the SSPT; we recommend that additional people be added and that the SSPT also collaborate with other experts.

Section 4:

- This section discusses the success of past outreach: “Council’s project-specific outreach program has been successful, and improved communication between the Council and rural communities” By what means is the Council measuring success? Just because Council members and staff attended and presented information at more events doesn’t necessarily mean that rural communities have a greater understanding of the Council and what they do, or that they have increased opportunities to provide feedback. They might - but how was this impact evaluated for this paper? We encourage the Council to develop tools to measure the success of their outreach, engagement, collaborations and other community-centered work.
- We agree that the ROC should be re-convened (and new membership solicited) so that it can continue to provide outreach guidance on an on-going and action-specific basis. We recommend the Council and ROC also seek the guidance of others with expertise in this area, including Alaska Native Organizations. We also recommend that the Council develop in-house expertise in outreach. We recommend that a reconstituted Committee have a broader scope and also take up topics such as engagement, consultation, collaborations, partnerships, etc.
- There have been long periods of time where it appears that the Council has not done much outreach while, at the same time, there were Council activities ongoing that could have been the focus of outreach activities.
- We hope that the BSFEP team and the SSPT will collaborate. We would like more details regarding how this collaboration will take place. We recommend that TK holders, Alaska Native organizations, and social scientists from outside the Team be actively recruited to participate in any collaborations.

Thank you for considering our comments and recommendations regarding this discussion paper and outreach activities. If you have questions or would like to further discuss this, please contact me at 907-443-4273 or [juliery@kawerak.org](mailto:juliery@kawerak.org), or Rose Fosdick at 443-4377 or [rfosdick@kawerak.org](mailto:rfosdick@kawerak.org).

Sincerely,



Julie Raymond-Yakoubian  
Social Science Program Director  
KAWERAK INC



2050 VENIA MINOR ROAD  
PO Box 86  
ST. PAUL ISLAND, ALASKA 99660



April 11, 2018

To: Diana Evans, Bering Sea FEP Co-Chair  
Deputy Director, North Pacific Fishery Management Council  
605 W 4th Ave, Suite 306  
Anchorage, AK 99501  
Email: [diana.evans@noaa.gov](mailto:diana.evans@noaa.gov)  
Phone: (907) 271-2809

Re: DRAFT Stage 1 FEP Inputs from indigenous organizations  
Regarding pages 66-77 of current BS FEP draft  
For the Bering Sea FEP Team

Aang ~ Dear Diana:

The Aleut Community of St. Paul Island Ecosystem Conservation Office (ACSPI) would like to express our sincere appreciation to the North Pacific Fishery Management Council, the Bering Sea Fishery Ecosystem Plan Team, Council Staff, and others for inviting Tribal participation into the Bering Sea Fishery Ecosystem Plan (BS FEP) development and refinement. We extend our thanks to the Plan Team and Council staff for taking this fundamental step towards fostering a productive dialogue focused on crafting traditional knowledge. The ACSPI is excited to be a part of this process. We have provided input on draft comments regarding pages 66-77 of the BS FEP that are submitted to you from Rose Fosdick (Kawerak, Inc.). We have included here reference to the public testimony that was provided during the April 2018 Council meeting regarding the Rural Outreach Discussion paper, authored by Steve MacLean. W

e look forward to providing further input on all sections of the document and being actively engaged in all steps of the development of the BS FEP document. Please feel free to contact me at any time via email at [lmdivine@aleut.com](mailto:lmdivine@aleut.com) or phone at 907-257-2636.

Sincerely,

Lauren Divine

Co-Director, Ecosystem Conservation Office  
Aleut Community of St. Paul Island

Ecosystem Conservation Office

### **Comment provided during B Reports**

Good afternoon, my name is Lauren Divine and I represent the Aleut Community of St. Paul Island. I would like to provide comments on the Rural Outreach Discussion paper. At the February Council meeting, we commended the Council for opening the door to community involvement and input. The Ecosystem Committee chairs did a great job of accommodating tribes and communities. Tribal representatives shared specific concerns and recommendations regarding the respective ecosystems in which we live, and we all shared positive testimony about that meeting and noted the huge opportunity in front of the Council.

The recommendation to the Council in February from Tribes was broader than how to better perform outreach to communities. Outreach is a very different activity than engaging tribes, co-production of knowledge, incorporation of traditional knowledge into the fishery management process, and other activities that may be cached under “outreach”. As the discussion paper notes, the Council has been effective at providing information to the public on project-specific matters and conducting outreach via community visits. However, outreach efforts should also obtain feedback from communities, but in order to do so, it must be planned and structured for that outcome. Developing longer term relationships and understandings through on-going outreach *and engagement* will make project-specific outreach more effective. There are certainly opportunities to develop and improve engagement, where communities have a more active role in the Council process without necessarily having to attend and track all meetings.

For example, Bering Sea Fishery Ecosystem Plan Team is currently walking this outreach and engagement road we are discussing, as well as developing ways to incorporate traditional knowledge into the Plan, which was part of the Council recommendation from February. We encourage the Council to consider creating an ad-hoc committee that will work closely with the Bering Sea Fishery Ecosystem Plan Team, the Social Science Plan Team, and tribes and native organizations to explore, pilot and evaluate strategies for outreach as the Bering Sea FEP is developed. Some may worry that these efforts slow down the process, but I suggest that’s not necessarily true. The FEP Team has already begun to work more closely with tribes and communities outside of Council meetings and it has not hindered the timeline. Tribal and community engagement throughout the development of the FEP will improve the overall content and quality of the final document and will provide opportunities to evaluate outreach and engagement efforts as they occur. Again, the opportunity to improve



community involvement and engagement is in front of you. Forward progress has been made since the February Council meeting through the Bering Sea Fishery Ecosystem Plan Team. In summary, we encourage you to support and guide outreach and engagement efforts more directly through an ad-hoc committee. An ad-hoc committee is a great to develop, pilot, refine, and evaluate potential outreach and engagement strategies.

Thank you.

### **Comment provided during Staff Tasking**

Good morning, my name is Lauren Divine and I represent the Aleut Community of St. Paul Island. I would like to speak again to the Rural Outreach Discussion paper. We recommend that the Council support and guide outreach and, more importantly engagement efforts, through a variety of ways. I have two recommended next steps.

First, we appreciate the idea of a dedicated committee for Engagement and Outreach. This week, you have heard recommendations for the reconstitution of the Rural Outreach Committee with solicitation for new membership. If the Council favors this action, I encourage you to strategically consider how to receive nominations from traditionally underrepresented Tribes and rural Alaskan communities and seek participation from external experts who have positive experience working with communities. You also heard requests through the week to create an ad-hoc committee that explores more flexible and creative ways to directly and indirectly engage with Tribes and communities to improve two-way communication, especially in the direction of information, concerns, perspectives, and traditional knowledge coming to and being integrated in the Council process. Whether a committee is reconstituted, or an ad-hoc committee is created, a new scope and direction is needed so that the group is directed to focus on ways to achieve meaningful engagement, and be able to work outside of Council structure to improve relationships across the Gulf of Alaska, Bering, Chukchi and Beaufort Seas through a variety of outreach strategies, such as those we recommended in February.

Second, another next step the Council can take is developing a request for proposals document that specifically seeks input from Tribes, ANOs, and rural communities regarding what these stakeholders see as working and not working in the Council outreach process, make recommendations for additional outreach and engagement strategies that are responsive and meaningful from a community perspective, and provide recommendations for how to improve communication and engagement

outside of the Council process. The input that the Council receives from an RFP will be helpful to an engagement committee if reconstituted or created ad-hoc, to the Social Science Plan Team, and other committees and plan teams in the future. We hope the Council will consider taking these two steps- creating an Engagement Committee that works actively and creatively towards effective engagement, and soliciting an RFP to receive input and outreach and engagement suggestions from Tribes and communities- as next steps within staff tasking. Thank you.

Recommendations from February:

- 1. Integration into decisions relevant to our region**
- 2. Council Staff attend tribal conferences and venues**
- 3. Series of workshops to provide space for community engagement**
- 4. Encourage processes that foster co-production of knowledge**



## Bering Sea Elders Group

April 8, 2018

North Pacific Fishery Management Council  
605 W. 4<sup>th</sup> Avenue, Suite 306  
Anchorage, AK 99501

*Delivered in person at the April 2018 Council meeting and via email to [shannon.gleason@noaa.gov](mailto:shannon.gleason@noaa.gov).*

Dear Council members,

The Bering Sea Elders Group (BSEG) respectfully submits these comments on the April 2018 Discussion Paper: Review of Council Rural Community Outreach. BSEG thanks you again for the opportunity to take part in the Ecosystem Research Workshop last month in Seattle, and we appreciate the Council's efforts to draft this Discussion Paper.

BSEG is eager to broaden the opportunity for community involvement at Council and committee meetings. We believe it is important for affected communities to have regular input as part of the Council's process. BSEG encourages the Council to commit to an inclusive process that lets affected communities meaningfully participate in the Council and committee meetings. BSEG understands and appreciates the reality that Council meetings have full agendas, but we encourage the Council to incorporate community feedback in a way that does not put strict time limitations on community comments.

At the same time, it is important for the Council to recognize the burdens of participating in the Council process. For those of us who live in rural Alaska, traveling to the Council meetings is often prohibitively expensive. It requires not only the funds to pay for airfare and hotel, but also substantial time away from our traditional subsistence practices. In short, we must take time away from feeding our families in order to advocate for our ability to feed our families.

With that in mind, we encourage the Council to continue the issue-specific outreach as outlined in the Discussion Paper. It is particularly important to continue to have Council members travel to communities and engage directly with a broad cross-section of community and tribal members, many of whom cannot travel to Anchorage. In addition, we urge the Council to develop a more extensive community engagement strategy, which will provide broader opportunities for the Council and communities to share information.

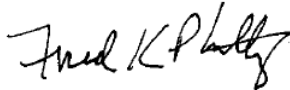
In addition, BSEG recommends that the Council create a plan for ensuring that traditional knowledge informs Council documents and decisions. There is a large volume of Traditional Knowledge that has been documented from Northern Bering Sea communities that is relevant to the Council. BSEG and others would welcome the opportunity to work with the Council to

ensure that such knowledge appropriately informs Council processes. We understand that the Bering Sea FEP core document, as well as action modules, may provide this opportunity and we strongly encourage the Council to move forward in this direction. BSEG believes that collaboration and exchange of knowledge will lead to stronger management information and informed decisions. Furthermore, towards that end, BSEG recommends that the Council consider a co-production of knowledge approach that brings together both science and Traditional Knowledge through an equitable process.<sup>1</sup>

Finally, BSEG encourages the Council to reaffirm its commitment to working with tribes and address tribal concerns. To this end, BSEG encourages the Council to have a direct link to tribal consultation conducted by NOAA, and specifically the National Marine Fisheries Service (NMFS) and should ensure that information from consultations is used in the Council's decision-making processes. We ask the Council to develop a framework that will give it access to consultation information on a regular basis.

BSEG thanks you for the Discussion Paper and we look forward to building a more robust relationship between the Council and our communities.

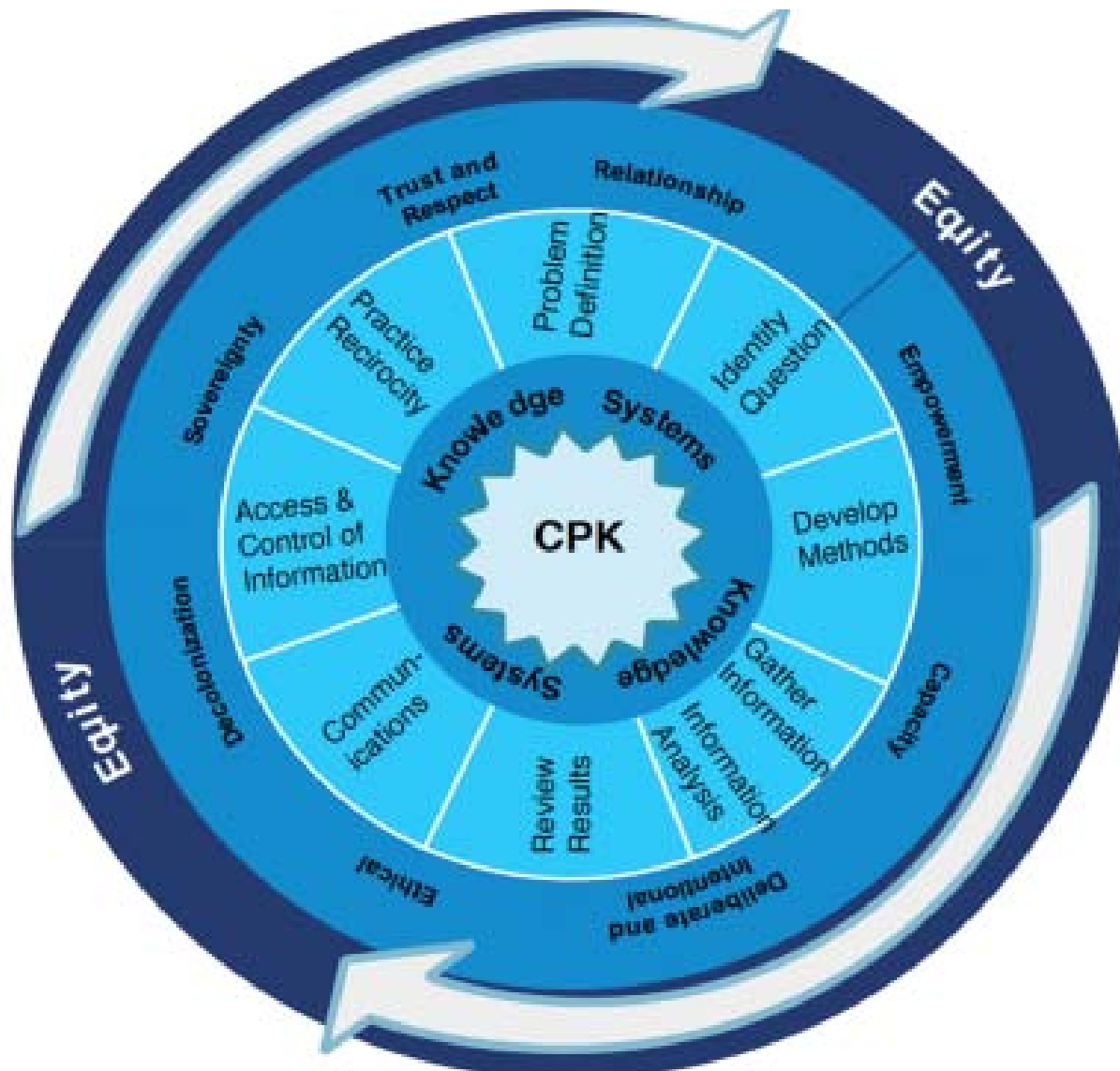
Quyana,

A handwritten signature in black ink that reads "Fred K Phillip". The signature is written in a cursive, slightly slanted style.

Fred Phillip, Ambassador  
Bering Sea Elders Group

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<sup>1</sup> Behe, C., R. Daniel, and J. Raymond-Yakoubian. 2018. Understanding the Arctic through a co-production of knowledge approach. Workshop at the Alaska Marine Science Symposium, Anchorage, Alaska, January 23-24, 2018.



DRAFT diagram  
April 2018

[carolina@iccalaska.org](mailto:carolina@iccalaska.org)  
[julierey@Kawerak.org](mailto:julierey@Kawerak.org)  
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SERVING THE  
VILLAGES OF:  
BREVIG MISSION  
COUNCIL  
DIOMEDE  
ELIM  
GAMBELL  
GOLOVIN  
KING ISLAND  
KOYUK  
MARY'S IGLOO  
NOME  
SAVOONGA  
SHAKTOOLIK  
SHISHMAREF  
SOLOMON  
STEBBINS  
ST. MICHAEL  
TELLER  
UNALAKLEET  
WALES  
WHITE MOUNTAIN

June 12, 2018

To: Diana Evans, Bering Sea FEP Co-Chair  
Deputy Director, North Pacific Fishery Management Council  
605 W 4th Ave, Suite 306  
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Phone: (907) 271-2809

From: Rose Fosdick, Ecosystem Committee Member  
Kawerak, Inc.  
P.O. Box 948  
Nome, AK 99762  
Email: [rfosdick@kawerak.org](mailto:rfosdick@kawerak.org)  
Phone: (907) 443-4377

Re: Stage 2 FEP inputs from indigenous organizations and communities (Regarding all pages in current BS FEP draft except chapters 4, 5, 6, and Appendix A; For the Bering Sea FEP Team)

Dear Diana,

Please find enclosed comments for your consideration on revising the current Draft Bering Sea Fishery Ecosystem Plan document.

Per the February Ecosystem Committee meeting, and discussions involving Julie Raymond-Yakoubian (Social Science Program Director at Kawerak), Brenden Raymond-Yakoubian (of Sandhill.Culture.Craft, consultant to Kawerak) and Council staff, I am submitting these comments on behalf of several of the organizations and communities which represent indigenous peoples in and related to the FEP project area. The organizations and communities who are signatories to this letter are as follows:

- Aleut Community of St. Paul Island
- Association of Village Council Presidents
- Bering Sea Elders Group
- City of St. George, Pribilof Islands
- Kawerak, Inc.
- Tanana Chiefs Conference

These comments are based on the most currently available document online found here:  
[http://www.npfmc.org/wp-content/PDFdocuments/membership/EcosystemCommittee/Meetings2018/DRAFT\\_BSFEP.pdf](http://www.npfmc.org/wp-content/PDFdocuments/membership/EcosystemCommittee/Meetings2018/DRAFT_BSFEP.pdf)

These comments are a follow up to the first letter I sent on behalf of this partnership on May 1, 2018. We hope that those comments were useful to the FEP Team. The comments in the present letter pertain to all of the pages of the document except Chapters 4, 5, 6, and Appendix A.

We continue to appreciate the work that Council staff and the FEP Team has done on the FEP document, and your continued interest in working with our organizations to improve the document. We hope you will find the enclosed comments helpful in your continued work on the FEP. In addition to contributing to the overall work of the FEP Team on the FEP document, we also request that the comments in this letter be used during the upcoming June 14<sup>th</sup> FEP Team sub-group meeting devoted to work on goals and objectives.

If you have any questions, please direct them to Julie Raymond-Yakoubian and Brenden Raymond-Yakoubian. Their contact information is provided below. They are eager and willing to help you incorporate these recommendations and ideas into the FEP document.

Julie Raymond-Yakoubian  
Email: [juliery@kawerak.org](mailto:juliery@kawerak.org)  
Phone: (907) 443-4273

Brenden Raymond-Yakoubian  
Email: [brenden@SandhillCultureCraft.com](mailto:brenden@SandhillCultureCraft.com)  
Phone: (907) 434-1413

Additionally, we will be submitting at least one more letter with inputs, which will be in regard to the rest of the FEP draft document – regarding Chapter 4, the rest of Chapter 5 which we have not yet reviewed (i.e. Chapter 5 other than pages 66-77, some of which is not yet available to the public), Chapter 6 (for which draft text is not yet available to the public), and an updated version of Appendix A when it becomes available. When they become available, please contact Julie and Brenden with the current versions of those portions of the FEP, as they can communicate this information throughout our partnership of organizations; this will assist in the timely review of these draft sections by our partnership, as we need time to compile information from all of our organizations.

Thank you for your work on, and attention to, this.

Best,



Rose Fosdick (Ecosystem Committee Member)

On behalf of:

- Aleut Community of St. Paul Island (Amos Philemonoff, President)
- Association of Village Council Presidents (Vivian Korthuis, CEO)
- Bering Sea Elders Group (Mellisa Heflin, Executive Director)
- City of St. George, Pribilof Islands (Pat Pletnikoff, Mayor)
- Kawerak, Inc. (Melanie Bahnke, President)
- Tanana Chiefs Conference (Victor Joseph, President)

## General Comments

### 1) Chapter 1: Introduction

A) Page 4, Paragraph 1: This is one reason why increasing capacity at the AFSC and the Council to incorporate expertise related to Traditional Knowledge (TK) and non-economic social science is so crucial – because there is a long-standing strong relationship between management, policy, and research.

### B) 1.1: Purpose of the FEP

1) Re: page 5, footnote 1: As noted in our May 1 2018 letter, we would recommend using the definition of TK used in Raymond-Yakoubian et al. (2017: 133), which is used later in the draft FEP document. (The 2015 TK definition currently used in the draft pertains to the environmental aspects of TK.)

A suggested re-wording of this footnote would thus be:

Local and Traditional Knowledge (LTK) are two different types of bodies or systems of knowledge. Traditional Knowledge (TK) is a form of indigenous knowledge and is a living body of knowledge which pertains to explaining and understanding the universe and living and acting within it. It is acquired and utilized by indigenous communities and individuals in and through long-term sociocultural, spiritual and environmental engagement. A more detailed definition of TK can be found in Raymond-Yakoubian et al. 2017. Local Knowledge (LK) describes knowledge of a person or group – non-indigenous or indigenous – that is based on observations, experiences, and other engagements with a particular environ.

2) Page 5, first paragraph after the bullets: Perhaps change your phrasing in this paragraph to “best available science (including social science)” so as not to seem as though you are setting social science off from other types of science.

3) Page 5 – While this may not be strategically a good thing to point out, the FEP also offers the opportunity – in addition to helping formalize some EBFM-friendly ad hoc processes already in place – to help institutionalize some existing EBFM-friendly institutions which are in place but are not well-adhered to by the Council (e.g. the mandates in National Standards 2 and 8, and EO 13175).

4) Page 6 – There does not appear to an explicit discussion of tradeoffs in this draft. 'Tradeoffs' as a concept is a generally noxious one, because it implies that some aspects related to the impacts of management – such as tangible impacts on subsistence communities' abilities to ensure the survival of their people and cultures – should be subject to such an analysis. However, if a discussion of tradeoffs is undertaken in this document, it should be robust, transparent, and complex – and would need to include discussions of power inequities, the biases



and assumptions behind certain tradeoffs when they are made, the basis for which tradeoff decisions are made and the necessity for those to be publicly acknowledged, etc. This is not present in the current draft of the FEP and does not naturally flow out of it just from the laying out of the rest of the information therein. We encourage the Council to engage in this kind of critical thinking and discussion. Without these discussions, decisions will continue to be made using unstated and opaque assumptions. In summary, while we do not favor the concept of 'tradeoffs' itself, if it were to be developed, we would encourage it to be robustly developed here, especially before this document goes 'live' to the Council as a draft later this year.

#### C) 1.2: Background/EBFM Theory

- 1) Page 8 – last bullet on the page – replace socio-economic with “social science”; socio-economic research is just one very narrow band of research and generally does not include other aspects of social science research (such as scientific – e.g. anthropological – discussions of TK), whereas the broader term “social science” also includes economic as well as socio-economic analyses (among other things).
- 2) Page 9 – last bullet on the page. Two comments:
  - i) Also mentioned earlier, but we recommend saying simply “best available science (including social science)” rather than bifurcating these, which implies social science is not science.
  - ii) While social science can be related to LTK and its incorporation into Council processes, it is not the same thing (for example: there is social science that is worth considering that does not pertain to LTK, and there is information from TK and other indigenous/tribal interests that can and should be incorporated into Council processes that does not require a scientific “go between” to do so). Thus we suggest adding an additional bullet which pertains to just the LTK issue.

#### 2) Chapter 2: Goals and Objectives

##### A) Objectives

- 1) Overall comments
  - i) The logic of this ordering is not entirely clear. Why does only Process Objective 1 lead to the Bering Sea Ecosystem Objectives? Process Objectives 2-13 are also connected to that as well.
  - ii) Additionally, the ecosystem objectives are not properly ecosystem objectives. All of the stated ecosystem objectives (1-5 on page 13) read like process

objectives. They could be reworded to read like ecosystem objectives, at least in some cases. For example, #1 could state something like the Bering Sea fisheries ecosystem should provide for [or be managed in a way which provides for] subsistence uses which meet the needs and desires of Alaska Native communities.

iii) We recommend objectives be relevant and clearly formulated.

## 2) 2.3.1 Process Objectives

- i) Re: Page 12, section 2.3.1 process point 10: This is not worded well, and seems like a hodge-podge of issues all in one point. We strongly recommend breaking these out into separate points. For example, we would like to see one point which states something like: “Incorporate Traditional Knowledge, Tribal concerns, subsistence information and needs, and social science into Council processes, and make improvements to increase the active, robust, meaningful, and equitable involvement and access of Alaska Native communities and individuals in those processes as well.”
- ii) Re: Page 12, section 2.3.1 process point 12, sub-bullet 3 (re subsistence needs and TK) – the logic of this is not clear, perhaps remove “and traditional knowledge” because this is part of ecosystem information, and just keep the bullet as “consider subsistence needs.” You could add TK to the top level of the point, i.e.: “Establish a process to use ecosystem information (including Traditional Knowledge) to inform decisions for adaptive management, to: [...]”

## 3) 2.3.2 Bering Sea FEP Ecosystem objectives

- i) See Overall Comment 1) ii) above with regard to the formulation of these objectives
- ii) Re: page 13, objective 1, we do not feel there is value in this approach. Indicators have an extremely poor record of application to sociocultural systems. For example, even the indicators suggested here would tell you little to nothing in terms of information about subsistence needs for those three species, and even less about subsistence needs as a whole (indicators about 3 species would tell you very little about subsistence needs across the entire Bering Sea region). Additionally, they would actually be, as is the case with many indicator studies for sociocultural systems, probably of negative value, because they would provide a false, yet seemingly authoritative (by dint of their qualitative nature), sense of having accurately assessed something via measurement.
- iii) Re: Page 13, objective 3: This is very broad and it is unclear what is meant here. We would like to see some draft language about how this is currently

being envisioned, as it has substantial potential impacts. Also, how often would this be revisited, updated, and re-evaluated? Please also see our earlier comments about trade-offs. It would also be a mistake, we feel, to restrict this to just the Climate Change Action Module.

- iv) Re Page 13, objectives 4 and 5: Again these are very broad and unclear, and we would like to see updated language about how this is being envisioned, because they have substantial potential impacts.

### 3) Chapter 3: Assessment of EBFM in current Bering Sea fishery management

- A) A lot of the discussion in Chapter 3 seems to be rather excessive in comparison to the space allocated to discussions elsewhere of Traditional Knowledge and Subsistence, for example, and is often made in the vein of communicating how the Council is doing things related to EBFM exceptionally already, which is not the case in a number of key respects. Is it possible to address this imbalance in the text? There is also, in general, very little discussion in the draft FEP of current notable failures and gaps related to Council management as it relates to ecosystems (in the Bering Sea and elsewhere). Issues directly related to TK, subsistence, and the consideration of indigenous concerns are one suite of areas in this regard, but there are other issues which are well-known often for other reasons, including significant problems with a number of key species e.g. salmon and fur seals. This type of critical self-evaluation is a key aspect of the scientific process and it should be the same for management and policy, and the FEP can be a useful tool for this attempt to improve our processes to achieve better results.
- B) Page 16: Re Plan Team discussion: Plan team membership has in the past been exclusionary towards others besides Federal and State government agencies, though been lax enough to include other non-indigenous participants e.g. academics. For some reason, the sovereignty of Alaska Native Tribes has not been recognized, whereby representatives of Alaska Native Tribes and regional non-profit tribal consortiums have not been included within the “.gov” circle. This is something which should be changed in the future. It is worth noting here that when speaking of Plan Team membership, this has been restricted to Federal and State government agency membership to bring attention to this deficit.
- C) Page 16: Re Plan Team discussion: The Council's charge for the Social Science Planning Team (SSPT) appears to have grown considerably in recent times. Though still in a nascent form, so far this potentially promising development has followed a similar pattern to a number of other Council-related processes wherein external non-indigenous individuals and organizations have their voices and expertise invited, heard, valued, and recognized, but indigenous organization individuals, expertise, and concerns are left on the sidelines, even when they are the foremost experts on the relevant topics.

- D) A noticeable gap in the Council process description (see Pages 14-17 text, and Figure 3-2) exists in the document in terms of NMFS Tribal Consultation – which should be an ongoing relationship and should be inputted into every Council decision – as well as in terms of a rigorous outreach and public involvement plan. This is reflective of a gap relating to this in reality, but it should be reflected as part of the process in the description nonetheless (and any gaps related to it – e.g. how it is or is not undertaken – discussed as well).
- E) Regarding sub-section 3.2 and 3.3 (pages 17-22): We have a number of overarching comments which pertain to these subsections as a whole. A number of these comments have been provided to the Plan Team during previous Team meetings but do not appear to have been incorporated or addressed in the current draft.
- 1) The overall list of EBFM measures which are Council-related and noted here should be seen as being true in the theoretical or ideal sense, i.e. that this EBFM 'infrastructure' is there, but it isn't necessarily always carried out in actual practice. Perhaps this can be incorporated in this chapter – in terms of how things can be improved – or perhaps somewhere else. For example, regarding National Standards 1 and 8, and EO 13175, these are areas where it has been shown that the Council could make improvements in terms of Tribes, tribal consultation, and subsistence communities, and is not currently meeting its mandates.
  - 2) In terms of 3.2 (Magnuson-Stevens), National Standard 2 is missing, and should be added to this list (in both senses – as existing infrastructure which supports EBFM in the Council, but also as an area that could be improved, especially with regard to the incorporation of LTK and social science of LTK).
  - 3) The discussion of EO 13175 is problematic. First, as noted above, the description of the EO highlights that this work has not been done as pertains to Council-related processes. There should be discussion here about how the Tribal Consultation process should be undertaken by NMFS as well as how this should be dovetailed into Council processes. Additionally, the second paragraph in this sub-section has a number of issues. First, the actions of the Rural Outreach Committee do not meet the requirements of Tribal Consultation. It is important to understand the difference between outreach/public involvement/public engagement and Tribal Consultation. Additionally, the Rural Outreach Committee has been essentially defunct for quite some time now, so it is not accurate to say that it is part of the scaffolding supporting meeting objectives such as those outlined here; if anything, it points to a problem.
  - 4) There was discussion at a Plan Team meeting about talking about EBFM as it relates to State of Alaska fisheries, though this does not seem to have made it into the current draft. We support the Plan Team making this addition. This is valuable from an ecosystem perspective, as ecosystems cross jurisdictional boundaries. Additionally, the state/federal management divide is an ecosystem management gap which subsistence communities feel the impacts of quite

strongly.

- 5) It would be good to see discussion about how the ESA, Council processes, and subsistence can be understood in connection with each other.
  - 6) It would be good to see discussion about how the MMPA, Council processes, and subsistence can be understood in connection with each other. Additionally, co-management issues related to the MMPA need to be discussed.
  - 7) Re the summary at the bottom of page 21 to the top of page 22: Again, we reiterate there needs to be a more robust discussion of the Council consideration of “tradeoffs” (e.g. how this is done, what values inform it, etc.)
- F) Regarding sub-section 3.4:
- 1) This FEP should, among other things, help move future FMP work closer to the goal of a thorough and systematic use of EBFM, so it would potentially help to consider shortcomings in this regard as pertains to previous FMP work so as to point to fruitful ways forward.
- G) Regarding sub-section 3.5:
- 1) Notably largely missing from the sub-sections in 3.5 is discussion of TK, tribal efforts, working with indigenous communities and organizations, and social science of TK – either in terms of their informing Council activities on particular issues or in terms of sources of information external to the Council which provide relevant information on those issues (as, for example, ADF&G and NPRB are noted). There are important projects and initiatives being conducted in the Bering Sea region from the TK, Tribal, and social science perspectives which address the protection of marine food webs, monitoring ecosystem health, habitat conservation, evaluating the effects of different fisheries management actions, the impacts of environmental harm such as bycatch, interconnections with sea birds and marine mammals, and adaptive management and climate change. A number of these works, projects, and initiatives were identified in the previous letter we sent in early May, though there are many others as well. Among other things, this highlights the need for more robust inclusion and partnership with indigenous communities and organizations in Council-related research, management, and policy processes so that the Council can become aware of these efforts and incorporate the valuable information they produce. For areas where the Team feels there was significant consideration of these issues, if there are any, it would help to acknowledge here the role of that in the research, management or policy processes (in addition to the few which were mentioned in this section).
  - 2) Regarding 3.5.3 in particular:
    - i) There needs to be a more complex discussion of tradeoff analyses, because we

feel they are insufficiently just, rich, and transparent. Additionally, a number of the other EBFM infrastructure noted earlier could allow for better work in this regard on the part of the Council (e.g. EO 13175 Tribal Consultation).

- ii) The AFSC has to-date done very little with regard to information related to TK and non-economic social science.
- 3) Discussion of bycatch would also be a good place to discuss the social, cultural, ecological, and economic impacts of fishery and management activities, as well as discussions of values and different principles of natural resource management and environmental stewardship.

#### H) Section 3.6:

- 1) The discussion of what the on-ramps section of the FEP is doing and showing (and should be doing/showing) seems to still be a little unclear, as it also appeared to be during earlier FEP Plan Team meetings. There is not discussion, for example, of ways stakeholders can make inputs into Council processes, or how research “questions” are and should be generated, both of which can be significant EBFM on-ramp issues. Finding a way to incorporate these would also help with the FEP's goal of increasing transparency related to the Council process.
- 2) There could be more explicit mention of TK and Tribal roles in the on-ramps discussion. Depending on the vision for this section – i.e. is this going to reflect the current state of affairs, the ideal state of affairs, or how things might be after the FEP is in place – this could take a number of forms. For example, from indigenous organizations and communities, as well as social science literature, EBFM-related information could contribute to the 7 noted on-ramps, e.g. via:
  - i) Regarding environmental observations
  - ii) Research priorities and questions
  - iii) Research that has already been conducted
  - iv) Data on subsistence harvests and observations made during subsistence activities
  - v) More robust sociocultural information than indicators (e.g. for contextual ecosystem information)
  - vi) Data from subsistence practitioners on the impacts of regulation and fishing activities
  - vii) Data from subsistence practitioners and TK holders on management principles and ideas for adaptive management

viii) Council-related public outreach and engagement activities – as an on-ramp for stakeholders into the Council process, and an on-ramp for information from stakeholders into the Council process

ix) Tribal Consultation inputs to NMFS feeding into the Council process. (As a broader point, also, discussions in the “other directions” would also be useful. E.g. currently the text indicates it will discuss “Inputs to NMFS and other agencies,” though as just noted, there can be key EBFM-related information flowing the other way as well (e.g. results from Tribal Consultation).)

I) Section 3.7: With regard to this, there needs to be discussion about gaps related to the NMFS Tribal Consultation activities – e.g. the lack of robust ongoing relationships with Tribes as relates to fisheries issues, and the lack of integration of data from Tribal Consultation feeding systematically into Council processes. Both of these are hugely important for ecosystem-based approaches to fisheries management.

4) Chapter 4: How Will the FEP Function?

A) We will comment on this chapter in the next letter.

5) Chapter 5: Synthesis of the Bering Sea Ecosystem

A) Please see our earlier letter for comments relating to pages 66-77 (TK and Subsistence sub-chapters)

B) We will comment on the rest of this chapter when the full draft text for sub-chapter 5.2 is available.

6) Chapter 6: Risk Analysis – Placeholder

A) When a draft of this is available, please send it along so we can provide feedback.

B) On the broad topic of the concept of “risk” in ecosystem conceptualization and analysis: Brenden Raymond-Yakoubian and Kerim Aydin had an email dialogue during an FEP Team meeting regarding the framework for conceptual models and what sort of approach might be used (e.g. simple descriptive, SPEC, risk profile, etc.). As there is not currently text for this chapter to review, we aren't sure if this is germane here, but Mr. Raymond-Yakoubian's comments about that in the past may be useful in considering how this chapter is drafted. Additionally, they are germane to many considerations about the use of the concept of “risk” in general. Here they are:

*Regarding the use of a risk profile perspective to frame conceptual models, there is something which could be added to such an approach to improve it - that would be to also add a*

*somewhat 'opposite' perspective and considerations (as compared to risk) to the framework as well - for lack of a better term, let's call that 'ecosystem well-being'. Therefore, in addition to looking at risk-related issues for each element (a more 'negative' type assessment - i.e. what are the risks of negative impacts), one would also think about each element in the 'positive' sense - that is, thinking about things like what would be the most optimal state of that element within the ecosystem? Therefore you'd have negative and positive goals (e.g. avoidance and risk management vs optimization) and perspectives.*

*With just one side - the risk side - we could potentially get in the situation of 'when all you have is a hammer; everything looks like a nail.' For example, think about subsistence. When you think about it in the risk assessment sense, you can think about, e.g., how can we minimize impacts to subsistence resources and communities, etc. This is of course a very important way to think about things, and a good perspective to take and set of concerns to address. However, additionally, when you also think about things in the 'positive sense' - you can also now consider other issues which are very important to consider as well: what are the co-optimal states of the ecosystem and subsistence economies (and how can we get to those states)?; how do subsistence lifeways act as forms of positive ecosystem management, stewardship, and resilience in the face of social and environmental changes (and how can that be accounted for, supported, promoted, etc.)? And so on. The models we use will be richer if they look at things both ways - through the 'risk' lens and the 'ecosystem well-being' lens.*

*Part of what the FEP Team would be doing here is, in a way, choosing useful metaphors, but which choices are made for that can make fairly profound but not necessarily conscious impacts on how we think about the ecosystem and the ways it's managed - and in this case having these two sides of the coin together might be better than having just one.*

## 7) Chapter 7: List of Action Modules

- A) All of the Action Modules and their components should include the participation of both TK holders from the Bering Sea region and non-economic social scientists.
- B) Assessment and gap analysis of Council's Bering Sea fishery management with respect to EBFM best practices Action Module: We agree that this is a potentially good topic for an Action Module. Gaps will include the incorporation of TK, subsistence, and non-economic social science data in EBFM. This module should tie-in with the TK and Subsistence Action Module in order to address those gaps.
- C) Conceptual Model Action Module:
  - 1) We would like to see a conceptual model that includes both humans and other elements of the ecosystem. 'Pressures and drivers' cannot be understood without a consideration of human interactions. Conceptualizations of the ecosystem without humans are highly incomplete. Even species-specific conceptual models should include humans. Work on several conceptual models has begun at previous FEP team meetings; we hope this work continues and pays particular attention to the role of humans and their various interactions in and with the Bering Sea ecosystem.



D) Climate Action Module:

- 1) A vulnerability analysis of 'key species and fisheries' to climate change should also include human communities dependent on or affected by federal fisheries and federal fishery management. There has been a great deal of work done on the impacts of climate change to human communities and this should be included in the Action Module.

E) Research Tracking Action Module:

- 1) We agree that it would be useful to have a method by which to track research that is potentially relevant to, and used in, Council decision-making. This should also include Traditional Knowledge documentation and non-economic social science research. Tribes and Tribal organizations should also be identified as potential partners in this Module as some of them conduct research and some have research-focused programs.

F) Develop a protocol for using subsistence information in management Action Module:

1) General Comments:

- i) This Action Module should be modified to be a 'Traditional Knowledge and Subsistence Information Action Module'. It should include two separate sections, each devoted to developing processes to incorporate, on the one hand, subsistence information, and on the other hand, TK, into Council processes.
- ii) This Action Module should acknowledge that subsistence is not the same thing as Traditional Knowledge and that Traditional Knowledge is not 'reducible' to subsistence. TK informs subsistence, and partially derives from subsistence activities, but also speaks to and is informed by many other things. TK has information to contribute to the science and management of fisheries that extends beyond subsistence.
- iii) The Action Module should include a discussion of the specific MSA guidance that is the basis for the inclusion of non-economic social science information (including TK and subsistence information) in decision-making. Raymond-Yakoubian et al. 2017 has identified the relevant guidance and could be referenced.
- iv) This Module should be 'process-focused'. This was part of the original vision for the BS FEP document and, since initial development, it has been noted in multiple venues by various people and organizations that this Module is needed to provide guidance on process-related issues.

- v) The module should outline a process for the incorporation of non-economic social science data and TK into Council documents and processes. (Raymond-Yakoubian et al. 2017 has laid out some recommendations regarding this.) This process should explicitly include TK holders and communities. It should also outline any concurrent processes, such as Tribal Consultation with NMFS.
  - vi) The module should include guidelines for evaluating non-economic social science data. Charnley et al. 2017 could be used as one of several references in this section.
  - vii) The Action Module should include discussion of increasing capacity at the Council and NOAA/NMFS levels to understand TK and non-economic social science. The need for staff with education, training and skills in this area should be discussed – if these processes are developed, but there are no staff able to carry them out, no progress will be made.
- 2) Specific Comments re: sub-section 7.4 (pp. 92-93):
- i) Re: Box 1: We recommend discontinuing use of the terms “traditional data” and “traditional use data” as they are not commonly used by Tribes or in social science. More accurate terms would be, among others: Traditional Knowledge information, subsistence information, and subsistence use data.
  - ii) Re: Box 1: We recommend removing this sentence: “Organizations such as the Alaska Marine Conservation Council and the Bering Sea Elders [Group], and Pew Charitable Trusts, Oceana, and Kawerak, Inc. have begun working to describe and document the subsistence use patterns of Alaska Native communities in the Bering Sea region.” There are other organizations that have done this type of work also, and some of the organizations listed have not participated in this kind of work. Additionally, this sentence implies that research on subsistence is nascent, which is not the case.
  - iii) Re: Box 1: This section should describe what was noted above: e.g. that the Module will develop a process for the incorporation of non-economic social science data and TK into Council documents and processes, will include guidelines for evaluating non-economic social science data, and will include a discussion of potential mitigation actions and discussion of how to increase capacity at the Council level to do these things.
  - iv) Re: Box 2: Any mitigation measures must be developed in collaboration with Tribes and NMFS should also be involved through their Tribal Consultation responsibility.
  - v) Re: Box 2: Other purposes that this Action Module will be to define a process for the incorporation of non-economic social science data and TK into Council

documents and processes, to lay out guidelines for evaluating non-economic social science data, and to develop a plan to increase capacity at the Council level to do the former.

- vi) Re: Box 3: This section should also discuss how processes for inclusion of TK, subsistence, and non-economic social science data will improve Council decision making by giving them access to a more complete picture of the ecosystem and the potential impacts of their actions.
- vii) Re: Box 3: It should also note responsiveness to National Standard 2.
- viii) Re: Box 3: Consider removing these sentences: “Management measures may be changed by consideration of subsistence data, but there are likely to be many circumstances when subsistence resources or subsistence use would not be affected by a management decision. Where management measures may be changed, the Council may, ultimately, be more responsive to National Standard 8, when fishing communities also rely on subsistence resources.” These sentences read as attempts to minimize the importance of the consideration of subsistence issues as well as the potential for fisheries activities and management in the federal fishery to impact subsistence communities. Additionally, the second sentence seems to imply that the Council's attention will potentially only be concerned with communities that fish in the federal fishery and also have subsistence practitioners, rather than the broader understanding of the scope of consideration of fisheries (activities, management) impacts on and relationships to communities which includes communities which are located outside the federal fishery. It is this broader scope which appears to have been universally agreed upon as a focus of consideration (e.g. related to the FEP, this Action Module, and the proper scope of federal fishery management and policy, especially as it relates to ecosystem-based thinking), and that should not be undermined here.
- ix) Re: Box 4: The processes developed through this module will be incorporated into the overall Council process and their decision-making.
- x) Re: Box 5: We disagree that the “major hurdle to incorporating traditional use data into management decisions has been the collection of data and preparation of data products.” The major hurdles, from our perspective, have been lack of capacity on the Council and NMFS (AFSC) side, and a lack of will on the part of the Council and AFSC to include Traditional Knowledge, subsistence and non-economic social science data. There is a large amount of this data available, but it has mostly not been used in Council-related processes.
- xi) Re: Box 5: We suggest removing this sentence: “The State of Alaska Division of Subsistence reports, and the Northern Bering Sea Mapping Project and Bering Strait Marine Life and Subsistence Use Data Synthesis are products

that have made subsistence use and subsistence species occurrence data available to fishery managers.” There are many other sources of data regarding subsistence that are available.

- xii) Re: Box 5: We suggest removing this sentence: “The collection and preparation of these data products are major undertakings that the Council is not staffed to accomplish. The Council will, therefore, continue to rely on other organizations to collect and prepare subsistence data.” The Council should have equitable and sufficient distribution of staffing related to economic and non-economic data analysis and collection. Please see our other comments regarding institutional capacity.
  
- xiii) Re: Box 5: We agree with the recognition that partnerships will be needed with Alaska Native Organizations in order to complete this Action Module. Our organizations are willing to partner with you on this. We also believe that partnerships with Alaska Native Organizations are needed on all of the Action Modules, and we are also willing to partner on other Modules.
  
- xiv) Re: Box 5: It should be noted that not all spatial information documented by Alaska Native Organizations is available to the public. Specific data-use agreements would need to be established for the sharing of much of that data. Please see our individual documents, or contact staff, for more information about this. Additionally, publicly-available spatial information (e.g. ADF&G spatial information) should not be used without the permission and formal consent of the Tribe or community that initially provided it. There are many reasons – ethical, best practices, practical, and otherwise – for this guidance, and we are happy to discuss this topic further if you would like more information.
  
- xv) Re: Box 5: In terms of partnerships to “ensure data quality and ensure that data and products are in a form that is useful to fishery analysts,” we recommend caution. If “fishery analysts” are properly trained non-economic social scientists, there is no need to change the format of data to make it ‘useful’, and there is very little value in data that has been drastically changed in format to make it something that is familiar-looking to those who are not properly trained.
  
- xvi) Re: Box 5: Similarly, expertise is needed on a continual basis, not just when initially building up a library or database of TK/subsistence/non-economic social science information.
  
- xvii) Re: Box 6: Outreach, involvement and partnering with Tribes, Tribal organizations and other experts is essential for this Action Module. We are committed to assisting to the fullest extent possible.

## 8) Chapter 8: Public Involvement Plan

- A) Please also see, attached to our previous letter, comments from Kawerak, St. Paul, and BSEG regarding a draft 'Rural Community Outreach' paper presented at the April 2018 Council meeting. While these comments were not specific to the FEP, they are relevant to developing a plan for Tribal and public involvement in the FEP development process and implementation, and outline many of our major recommendations regarding engagement in general.
- B) It should be noted in this section that participation in the Council process is expensive and time-consuming. As a result, not all interested parties can participate at the level that they want to, and some cannot participate at all – including in the FEP process. To illustrate this, we offer our assistance in developing a short 'vignette' that lays out some of the barriers to participation (e.g. the costs and other barriers for a person from a small, rural, Tribal community).
- C) Page 101: We suggest revising the first part of the first sentence of the last paragraph to: "The primary Federal mandate for Tribal consultation is Executive Order 13175 [...]"
- D) While many Alaska Native Organizations have been involved in the development of the FEP, a specific engagement and involvement plan is yet to be developed. We strongly encourage this to be completed as soon as possible.

## 9) Preparers, Glossary, References

- A) We recommend using Kawerak's definition of Traditional Knowledge in the Glossary and throughout (found in Raymond-Yakoubian et al. 2017). This definition was developed in collaboration with many Bering Sea Tribes and has been endorsed, for the purposes of this FEP document, by the Tribal organizations that are commenting via this letter and the previous FEP comment letter.
- B) The State of Alaska's Salmon and People Well-being Working Group has recently developed a definition of well-being that is potentially well-suited for the FEP. This definition is: "A way of being with others that arises when people and ecosystems are healthy, and when individuals, families, and communities equitably practice their chosen ways of life and enjoy a self-defined quality of life now and for future generations" (<https://alaskasalmonandpeople.org/wp-content/uploads/2018/03/SASAP-Booklet-2nd-printing-small.pdf>). We suggest that this definition of well-being be included in the FEP.

## 10) Appendix A

- A) Appendix A appears to currently only be a very rough draft. Is there more updated text that could be made available for review?

## **Citations**

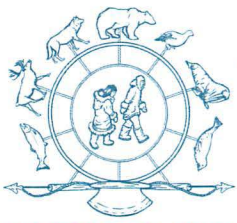
Charnley, S., C. Carothers, T. Satterfield, A. Levine, M. Poe, K. Norman, J. Donatuto, S. Breslow, M. Mascia, P. Levin, X. Basurto, C. Hicks, C. Garcia-Quijano, and K. St. Martin (2017) Evaluating the best available “social” science for natural resource management decision-making. In *Environmental Science and Policy* 73: 80-88.

Raymond-Yakoubian, B. (2017) *Sounds and Discourses of Knowing: The Extents of Indigenous Knowledge and the Cross-Cultural Epistemic Assumptions of Alaskan Natural Resource Management*. Paper presented at the University of Tartu Arctic Workshop, Tartu, Estonia, May 2017.

Raymond-Yakoubian, B., and J. Raymond-Yakoubian (n.d.) *The Scope and Extents of Indigenous Knowledge and the Cross-Cultural Epistemic Assumptions of Alaskan Natural Resource Management*. In preparation for publication in the *Journal of Ethnology and Folklore*, University of Tartu Press, Tartu, Estonia.

Raymond-Yakoubian, B. and J. Raymond-Yakoubian (2015) “Always taught not to waste”: Traditional Knowledge and Norton Sound/Bering Strait Salmon Populations. 2015 Arctic-Yukon-Kuskokwim Sustainable Salmon Initiative Project 1333 Final Product. Kawerak Social Science Program, Nome, Alaska.

Raymond-Yakoubian, J., B. Raymond-Yakoubian, and C. Moncrieff (2017) “The incorporation of traditional knowledge into Alaska federal fisheries management” in *Marine Policy* 78 (2017): 132–142.



**KAWERAK, INC.**

August 28, 2018

*REPRESENTING*

**Brevig Mission**

*Sitaisaq*

**Council**

**Diomedea**

*Inaliq*

**Elim**

*Niviarcaurluq*

**Gambell**

*Sivuqaq*

**Golovin**

*Chinik*

**King Island**

*Ugiuvak*

**Koyuk**

*Kuuyuk*

**Mary's Igloo**

*Qawiaraq*

**Nome Eskimo**

*Sitnasuak Inuit*

**Savoonga**

*Sivungaq*

**Shaktoolik**

*Saktuliq*

**Shishmaref**

*Qikiqtaq*

**Solomon**

*Anuutaq*

**St. Michael**

*Taciq*

**Stebbins**

*Tapraq*

**Teller**

*Tala*

**Unalakleet**

*Uᅇalaqᅇiq*

**Wales**

*Kiᅇigin*

**White Mountain**

*Iᅇaᅇuik /*

*Nutchirviq*

To: Diana Evans, Bering Sea FEP Co-Chair  
Deputy Director, North Pacific Fishery Management Council  
605 W 4th Ave, Suite 306  
Anchorage, AK 99501  
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From: Rose Fosdick, Ecosystem Committee Member  
Kawerak, Inc.  
PO Box 948  
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Re: Third letter with FEP inputs from Bering Sea partnership of indigenous organizations and communities (regarding entire currently-available FEP draft document)

Dear Diana,

Please find enclosed comments for your consideration on revising the current Draft Bering Sea Fishery Ecosystem Plan document.

Per the February Ecosystem Committee meeting, and discussions involving Julie Raymond-Yakoubian (Social Science Program Director at Kawerak) and Brenden Raymond-Yakoubian (of Sandhill.Culture.Craft, consultant to Kawerak) with Council staff, I am submitting these comments on behalf of several of the organizations and communities which represent indigenous peoples in and related to the FEP project area. The organizations and communities who are signatories to this letter are as follows:

- Aleut Community of St. Paul Island
- Association of Village Council Presidents
- Bering Sea Elders Group
- Bristol Bay Native Association
- City of St. George, Pribilof Islands
- Kawerak, Inc.
- Tanana Chiefs Conference

The included comments are based on review of the most currently available FEP documents posted online, found under the July 24, 2018 Ecosystem Committee meeting heading, here:

<https://www.npfmc.org/committees/ecosystem-committee>

**KAWERAK, INC.**

PO Box 948 • Nome Alaska 99762 • 907.443.5231 • [www.kawerak.org](http://www.kawerak.org)

Advancing the capacity of our people and tribes for the benefit of the region.

These comments pertain to the entirety of the available draft FEP document. As the FEP Team's approach to the document has changed somewhat since the last draft, we felt it would be best to focus on reviewing the entire document, including sections we have reviewed previously. Please still continue to also utilize our previously submitted comments (in two previous letters), in addition to those provided in this letter. In general, we will not repeat those comments in this letter.

We understand that some sections of the draft FEP are still not available for review. These sections may contain discussion which could be enhanced through the incorporation of Traditional Knowledge (TK) and tribal perspectives, including documented TK. However, it is our understanding that there will not be sufficient time to review those currently-unavailable sections before the draft document goes to the Council in October. As such, our individual organizations and communities will provide such additional inputs (and likely others) through the regular public comment process, if they are able, and we hope you will incorporate those comments into the FEP at that time.

We appreciate the work Council staff and FEP team members have done on the draft FEP document to-date, the conversations they have had with those working with our organizations and communities, and the willingness to continue a dialogue in crafting the FEP. Upon review of the new draft document, we felt there were a number of very encouraging developments in the draft FEP as it has evolved, and we commend plan team members and Council staff on their work, including their efforts to consider and incorporate the inputs from our partnership. We hope you find the enclosed comments helpful in your continuing work.

If you have any questions, please direct them to either Julie Raymond-Yakoubian or Brenden Raymond-Yakoubian. Their contact information is provided below. They are eager and willing to help you integrate these recommendations and ideas into the FEP document.

Julie Raymond-Yakoubian  
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Phone: (907) 443-4273

Brenden Raymond-Yakoubian  
Email: [brenden@SandhillCultureCraft.com](mailto:brenden@SandhillCultureCraft.com)  
Phone: (907) 434-1413

Thank you for your work on, and attention to, this.

Best,  
KAWERAK, INC.



Rose Fosdick (Vice President, Natural Resources Division, and Ecosystem Committee Member)

On behalf of:

- Aleut Community of St. Paul Island (Amos Philemonoff, President)
- Association of Village Council Presidents (Vivian Korthis, CEO)
- Bristol Bay Native Association (Ralph Andersen, CEO)
- Bering Sea Elders Group (Mellisa Heflin, Executive Director)
- City of St. George, Pribilof Islands (Pat Pletnikoff, Mayor)
- Kawerak, Inc. (Melanie Bahnke, President)
- Tanana Chiefs Conference (Victor Joseph, President)



## Comments

### A) General and Other Comments

1. Please continue to also utilize our partnership's previously submitted comments (found in two previous letters; e.g. for areas where those comments have not yet been incorporated), in addition to those provided in this letter. In general, we will not repeat those earlier comments in this letter.
2. We greatly appreciate the work the FEP Team and Council staff have done to-date on incorporating the inputs our partnership has provided, and hope you will continue to do so. We feel this incorporation to-date has resulted in an improved document.
3. While some regions have been able to contribute more citations and documents that have been referenced in our partnership's letters as compared to other regions, that should not be taken to mean those regions with less of these references do not have an equal volume and quality of TK and tribal perspectives to contribute to the Council process. Additionally, the letters from this partnership should in no way be taken as substitutes for developing working relationships and open channels with tribal communities and organizations across the Bering Sea region, to engage their voluminous (though in some cases undocumented) perspectives, concerns, and information (including TK).
4. Regarding the FEP graphic (document: FEP\_ProcessGraphics0718.pdf) – Figure 3 (on the third of the four pages in the PDF) – we recommend finding a way to incorporate another group type in order to graphically include other potential partners e.g. indigenous research organizations, academic research institutions, etc. The best spot for this might be to modify the “Partner agencies” bubble in title and content; a second possible location instead might be the “Public/Stakeholders” bubble. We also recommend adding into section 3.4 (which is where we understand this figure will be placed) more clarification about the roles, inputs, and interactions related to each of the groups in these bubbles as relates to the FEP and its Action Modules.

### B) Executive Summary (pages 4-6)

1. Regarding page 4: We suggest adding the word noted in brackets to the following sentence (added without the brackets once incorporated, of course): “The Bering Sea FEP will be used to guide policy options and associated opportunities, risks, and tradeoffs affecting FMP species, [communities], and the broader Bering Sea ecosystem in a systematic manner.”
2. Regarding the graphic on Page 5:
  - a. The graphic is using incorrect language describing the TK and subsistence Action Module. Per discussions at the Ecosystem Committee, this was set to be an Action Module for developing separate processes for incorporating TK, and for incorporating subsistence information, into Council processes. Elsewhere in the draft, this Module is defined differently – as entailing developing a process for incorporating LTK [LK and TK], and for understanding the impacts of Council decisions on subsistence. This is an acceptable definition/scope, so long as the latter portion also entails developing a process for incorporating subsistence data into Council processes. We recommend using clear and consistent language throughout the document.
  - b. We suggest the TK and subsistence Action Module be moved to the shorter (nearer) time frame. The longstanding problems associated with incorporation of this information,

and even the difficulties regarding it which have come up with the FEP process, are good indicators that this is near-term pressing need for the Council. We make the same suggestion regarding Figure 2-2 on page 16.

C) Chapter 1: Introduction (pages 7-13)

1. Page 8, Footnote 1: There is a typographical mistake here – remove “resource use” from the definition (it looks like it was carried over from previous text here by accident).
2. Page 8: Regarding the following statement: “...including best practices for continuing to build strong understandings and incorporation of LK and TK in the Council process.” The recent steps at the Council to help build understandings of TK are greatly appreciated, particularly as regards this FEP and the Ecosystem Workshop, but this language implies that the Council already has strong understandings and incorporation of TK into its processes, and that is not the case. We suggest rewording this phrase as follows: “...including best practices for building strong understandings and incorporation of LK and TK in the Council process.”
3. Page 9, paragraph 4 – here we would repeat our comments in our second letter regarding tradeoffs. Some good language has been added to the document in this regard, but we feel that this could be developed further.
4. Page 10 – see the sentence with the following text: “acknowledgement of interdependent biological and human systems”. There are some instances throughout the document where the biological/ecosystems/etc. are dichotomized from humans. We aren't making a particular suggestion for rewording in any of these cases, though caution against separating humans from the ecosystem, and urge the document's authors to remember that precautionary in final crafting of language used.
5. Page 10 – see the sentence with the following text: “review of local knowledge (LK) and traditional knowledge (TK) within and alongside [natural and] social science in the fisheries management process” - we suggest adding the words in brackets (without the brackets, of course, in the final text.). Much of TK pertains to what is categorized as natural science information. TK is mostly documented by social science, but its content covers the range of different 'disciplinary' categories.
6. Page 11, LK and TK graphic:
  - a. Recommend changing the TK bullet “Acquired through long-term environmental engagement” to “Acquired through long-term sociocultural, spiritual, and environmental engagement.”
  - b. Recommend changing the TK bullet “Rooted in time and place” to “Rooted in time and place, while also being rich, adaptable, dynamic, and having wide applicability and extents.” The rationale for this is to avoid the implication of TK (and IK) as limited in scope and applicability.
7. Page 11 after TK quote:
  - a. Immediately after the TK quote, at the beginning of the next paragraph (which currently begins with “In the Bering Sea Ecosystem...” - we recommend adding the following sentence: “Every indigenous culture in the Bering Sea region has their own unique TK system.”
8. Page 11 last paragraph
  - a. We reiterate our concern with the NOAA TEK definition as outlined in a previous letter

in its emphasis on “observing and interacting with the local environment” - this is an overly narrow spatial understanding of how TEK is generated.

- b. Footnote 3: An improvement that should also be made is tighter integration of (improved) NMFS Tribal Consultation activities with the Council process. We suggest rewording the entire footnote as such: “The Council does not undertake Tribal Consultation. Tribal Consultation between NMFS and Tribes could be strengthened (e.g. more meaningful, frequent consultation activities), encouraged by the Council, and there could be a better integration of the results of Tribal Consultation with Council processes and decision-making.”
9. Page 12 paragraph 1: Some rewording is suggested here; the way this is currently written is confusing. We recommend this instead: “To further expand, LEK and TEK are components of LK and TK, respectively. They may be understood as being comprised of ecological information about the world obtained through observations, experience, and learning from others. In the case of TEK, this ecological information is learned through, and situated within, a specific indigenous cultural context in which such observations, experiences, and learning are grounded. In other words, TEK is embedded in culture and cannot be separated from it (Usher 2000:186; Nadasdy 1999). While the ecological component of LK and TK are of great interest to the Council and its bodies, we will use TK and LK for the remainder of this document, as those terms entail information including as well as beyond that which is strictly ‘ecological’, which is also of value in fisheries management.”
- a. It is more useful and less confusing to use the approach embodied in the suggested rewording further above, and say you are using the LK and TK definitions you have provided on page 11, with the understanding that LEK and TEK are encompassed within those broader concepts.
  - b. TK, IQ, YK, and so on are not necessarily the same concepts. Without having comparable definitions of each, one can’t use them interchangeably. For example, some people define and use indigenous knowledge (IK) in a way which is nearly identical to TK (e.g. ICC-Alaska does this), while others (e.g. Kawerak) use both terms to identify different things (see Kawerak white paper on terminology; IK in that paper is defined broader with TK being a 'special(ized)' subset of that). Additionally, as noted above, the language currently used in this paragraph confuses these and other issues for readers, and can be clarified and simplified. Along with that, it may be useful to readers to see it pointed out that every culture has its own TK system; thus we have suggested (further above) adding a sentence to that effect after the definition of TK is presented on page 11.
  - c. If using food security outside the context of Inuit people, we think you need to have a definition. ICC-Alaska’s definition does not apply to non-Inuit people. (Please also keep in mind there are multiple cultural groups present in the BS FEP project area.) In any case, it doesn't appear necessary to add one to this paragraph anyway.

#### D) Chapter 2: Goals and objectives (pages 14-18)

##### 1. Objectives (pages 15-18)

- a. General comment: We want to applaud the team members and staff who worked on this; there has been substantial improvement here from the last draft, and in general these are well-crafted.

- b. Page 16-17: Process Objectives
  - i. We think these are good process objectives and that they encompass our concerns in either direct or broad terms.
  - ii. Process Objectives Page 16, #7 – Recommend adding the words in brackets (without adding the brackets): “Facilitate and organize communication of ecosystem science[, knowledge] and relevant Council policy between scientists[, communities] and decision makers.”
  - iii. Process Objectives Page 16, #9: Typo suggestion to fix – add the three letters in **bold** (without the bold, of course): “Synthesize and update current scientific understandings **of** Bering Sea ecosystem processes and status, including fisheries and subsistence use, to inform fishery management.”
- c. Page 17: Research Objectives
  - i. We recommend authors consider that the research objectives noted probably will link up with multiple process objectives, and vice-versa (and, we think, this is a good thing). For example, we see many links between a number of the research objectives stated and process objectives 1, 3, 5, 6, 9, 13, and 14 as they pertain to concerns related to incorporation of TK and subsistence data, improvement of involvement of indigenous communities in the Council process, and consideration of subsistence communities.
  - ii. Research objective 4: typo – use LK in parentheses after local knowledge, not TK
  - iii. Here and elsewhere we encourage the authors to expand the ideas about research partnering to include indigenous communities and organizations, which not only have important ideas to structure research priorities, but also conduct research themselves.
  - iv. A distinct research objective could be added regarding examining and improving how Council processes fare with regard to incorporation of communities (e.g. indigenous and subsistence) communities in the process and how Council processes consider and impact these communities and their concerns.
- d. Ecosystem Goals
  - i. Regarding Goal 4 #13: Please change this to: “Support sustainable opportunities and community resilience for subsistence users and Alaska Native communities.” The change is to replace the term “Promote” with the term “Support,” so as to avoid the implication that subsistence practices are not sustainable already and need outside help to make them become so.
  - ii. We suggest you amend Goal 4 #14 to note how meeting the other ecosystem goals you have noted (1, 2, and 3) are actually significantly important to achieving the aim of ensuring healthy fisheries for subsistence communities (i.e., rebuilding/restoring/maintaining fish stocks, protecting/restoring/maintaining the ecosystem, and conserving habitat). Additionally, indigenous communities feel that not wasting is one of the most fundamental values (ecosystem and otherwise) that exists, and as such we recommend removing the “to the extent practicable” after “minimizing bycatch mortality.” Here is new recommended language: “Provide for directed fisheries, including subsistence fisheries, by achieving Ecosystem Goals 1, 2, and 3 above, and minimizing bycatch mortality.”

E) Chapter 3: How will the FEP function? (pages 19-37)

1. Page 21: This sentence is still found in the FEP and should be removed: “For example, LK and TK is especially useful to supplement or validate local, small-scale ecosystem observations, in combination with large scale scientific efforts.” This is an erroneous understanding of TK; the problems with that statement have been discussed before, especially in our partnership's first letter (dated May 1, 2018).
2. Page 23, Figure 3-2: You could consider adding an arrow directly from module results back up into the other aspects of the fishery management process as well (though they are already getting there indirectly via the core FEP), as the work for that may end up directly effecting the process for how other documents (e.g. assessments) are prepared (e.g. the Action Module describing how to incorporate TK into Council processes should be of use to managers and scientists preparing specific assessments, e.g. in terms of structuring how and what data they obtain and utilize.)
3. Page 23, Section 3-3: We recommend the addition of tribal representatives to the long-term FEP team.
4. Page 25: Regarding the following text: “Understanding that LK and TK may not be relevant for every issue facing the Council (Huntington 2000), [...]” - we recommend removing that part of the sentence. Please see our notes regarding this in our first letter of feedback. This may or may not be the case, but doesn't seem beneficial to have here as a caveat or restriction.
5. Page 27: Re: on-ramp 6, we think that, yes, social science could be added here too.
6. Page 30, Table 3-1: We are wondering if Council staff could make recommendations to our partnership about ways our member organizations and communities can make inputs regarding the EBFM Roadmap? Upon review of the roadmap, something which strikes us is that, while much of the language is stated abstractly in ways which may include the following topics, there is a noticeable dearth of explicit language relating to indigenous communities, subsistence concerns, traditional knowledge, and social science.
7. Section 3.8 (Pages 35-37): We think this is a good thing to have for the FEP (tracking and feedback mechanisms). This section appears to be in draft form, so in lieu of very specific comments, we would simply request that as the language here is developed, please incorporate language, examples, etc. which reflect an attention to concerns of indigenous communities as we have expressed in our letters to the FEP team. (E.g.: tracking to see that TK is being brought into FEP and broader Council processes, increased engagement with indigenous communities, tracking related to impacts of fisheries and their management on subsistence communities, etc.)

F) Chapter 4: Synthesis of the Bering Sea ecosystem (pages 38-65)

1. Regarding Figure 4-4 (page 41) and the related text in the preceding pages:
  - a. Regarding walrus, the Eskimo Walrus Commission (EWC) should be added here alongside USFWS as a co-management partner.
  - b. Regarding marine mammals in the Pribilofs, the Tribal governments need to be listed in the agency column (stellar sea lions, harbor seals, and northern fur seals are co-managed with the tribal governments of St. Paul and St. George).
  - c. Polar bear could be added to this list, as they are extant in the project area. Polar bear are a co-managed species between USFWS and the Alaska Nanuuq Commission

- (currently under reorganization).
- d. Ice seals are co-managed by NMFS and the Ice Seal Committee.
  - e. Birds are co-managed by the Alaska Migratory Bird Co-Management Council (AMBCC), constituted of the USFWS, ADF&G, and Alaska Native representatives.
  - f. The “regulatory” responsibilities pertaining to citizens of coastal communities could be listed as Tribes, cities, and boroughs.
  - g. Tribes (via village corporations) and Alaska Native regional for-profit corporations (Bering Straits Native Corporation, Calista Corporation, Bristol Bay Native Corporation, and The Aleut Corporation) should be added to the land section. Cities also own properties in communities.
2. Section 4.2 (starting on page 41)
    - a. Regarding section 4.2: This was the section of the FEP where the indigenous partnership was planning to assist the FEP Team and Council staff working on this document in terms of incorporating documented TK about the ecosystem along with biological understandings. Though the approach to this section has changed (i.e. to a mainly graphical approach), we still want to work with you to do this, to assist in ensuring the representations here are as inclusive of the multiple relevant knowledge systems as possible. Please update our partnership and its member organizations regarding your progress here and include us in discussions about ways to develop this section in this regard.
    - b. Humans are missing from Figure 4-5 (page 42; “Dominant species groups with ecological and management importance in the Bering Sea”)
  3. Figure 4-6 (page 43) could be reworked to better effect. We have attached a suggested replacement (see attached diagram, and point b.iii. just below)
    - a. This is partly because it's not very clear what it's conveying.
    - b. Some additional thoughts which may be of use, though perhaps the model should just be re-thought entirely.
      - i. Subsistence communities, particularly through the use of TK, also utilize their own natural resource (including fishery) management.
      - ii. Subsistence does involve removals. However, and this is an important value of thinking about TK in terms of being a window to different worldviews, it is a very common view that subsistence is seen as involved in practices which enhance the ecosystem, whereas 'removals' is typically conceived in a pejorative sense. Additionally, in many cultures (including cultures in the project area), appropriately-practiced subsistence harvesting is understood as entailing a reciprocal relationship with those species which are harvested, and may include the view that if this is done properly, it will result in more of that species returning.
      - iii. See attached document as a suggested replacement. This document maintains the core elements of the diagram, gives it a flow which seems to indicate how things work in practice, emphasizes the importance of humans (especially important as natural resource management is about managing human behavior to indirectly effect the ecosystem as well as human outcomes), while also adding some other key components which were discussed in the Homer FEP team meeting (and that are also important motivators to this FEP process – e.g. transparency re: values, knowledge, and authority/power systems).

- Note: For Other Human Activities, that included all of the things originally listed there as well as the category of “Non-consumptive activities”
  - Note: In case the attached suggested diagram doesn't convey it well, Knowledge (including western science, TK, and LK), Values, and Authority/Power are informing all that which is within the bubble below (the management process, what it acts on and informs, and what the results of and impacts of that are (in terms of outcomes and ecosystem components))
4. Section 4.3.1 first paragraph (pages 43-44): The area is defined too broadly (Utqiagvik is north of the project area), and as noted previously, these are ADF&G regional areas, not the area breakdowns which communities typically use.
  5. Page 44: Re: “key component of a relatively small and undiversified local economy.” We suggest caution in the concept of “economy” being used in the FEP. Rather than the notion of economics and economic development through the lens of scarcity, we suggest something more in line with Sahlins’ understanding of economic development as “the material enrichment of the people's way of life” (2002: 54).
  6. Page 44: Re: “Additionally, many of the communities heavily dependent on these fisheries are traditional villages” - please strike the word “traditional.”
  7. Page 52: Some typo fixes, see this suggested rewording: “Subsistence in terms of food security is a way of life for many rural residents to meet their needs for nutrition, personal, family, and community well-being, as well as spiritual and ritual ties to the land and animals, fish, and birds they harvest (Holen et al. 2017:90). The subsistence way of life continues strong traditions governing human-animal relations;”
  8. Page 52: Regarding: “practices embedded in TK that are largely dependent on social mechanisms with a cultural as well as pragmatic nature (Holen et al. 2017:90).” We suggest rewording this, we aren't clear what this is trying to say.
  9. Page 52: Regarding: “In the northern part of the Bering Sea, the Inuit: [large quote].” We recommend re-wording for clarity and fidelity to the original citation, and to expand outwards to be inclusive of other indigenous groups in the Bering Sea region, to say: “Food security allows for Inuit in the northern Bering Sea to: [large quote]. [Then, after the large quote:] Similar sentiments have been expressed regarding this topic in non-Inuit areas of the Bering Sea, though formal definitions for food security have not been developed in all these other regions.”
  10. Page 52: “key priority for rural Indigenous Alaska Native communities” - Please strike either indigenous or Alaska Native from the sentence (it's essentially repetitive in this context.)
  11. Page 53 last paragraph: Regarding this sentence: “A partnership of organizations led by the Aleutian Bering Sea Islands and Western AK Landscape Conservation Cooperatives and the Aleutian Pribilof Islands Association held a series of coastal resilience and adaptation workshops in western Alaska and the Aleutian and Pribilof Islands [...]” - this partnership did not conduct a workshop in the Pribilof Islands, please remove “Pribilof Islands” from that sentence.
  12. Page 53 last paragraph through Page 55: We recommend removing the (Figure 4-19) and (Figure 4-20) portion of the last sentence of the last paragraph on page 53, and simply replace it with references to the that project's two posters. We then suggest replacing the

posters on pages 54 and 55 with: “Alaskan Inuit Arctic Ecosystem” (on page 5 of ICC Alaska’s full food security report; ICC Alaska 2015: 5; we have attached this graphic, with a citation added to it, provided to us by ICC Alaska) and another graphic for the Aleut/Unangan people. Regarding the latter, please work directly with the tribal governments on St. Paul and St. George to request such a graphic. The rationale for this change is this: The posters currently in the document on those two pages are more specifically relating to climate change and subsistence, as opposed to just subsistence itself, and the suggested replacement graphics would be more appropriate for the broader topic of subsistence.

13. Please see our comment below in the comments on Appendix A as pertains to the figure on page 56. We request that this figure (Figure 4-21) be removed. Additionally, regarding Figure 4-21, we would also note that what this map visually shows is that indigenous people use an enormous portion of the marine environment for subsistence harvest activities. This could just as easily be stated in narrative form.
14. We recommend removing or revising the last two sentences on page 56. Per Wolfe, statistically, a household involved in commercial fisheries has a higher subsistence harvest than one not involved in commercial fisheries. However, it isn't justified to broaden that point to the statement that there's a correlation between commercial fishing and the subsistence way of life. Aside from the over-broadening of the statistical information to the statement, there are also other plausible explanatory issues involved (e.g. household dynamics). Additionally, the relationship between commercial harvest and subsistence harvest is a complex one and not subject to easy dichotomization (see e.g. Reedy-Maschner 2009, Raymond-Yakoubian and Raymond-Yakoubian 2015).
15. Page 58: “LK and TK are not limited to use as science [...]” - we recommend rewording to: “LK and TK are not limited to use with science [...]”
16. Page 58: “LK and TK can inform science by providing narrative histories [...]” - we recommend rewording to: “LK and TK can interface with science by, for example, providing narrative histories [...]” We suggest this to avoid possible implications this is the only way these knowledge systems can contribute jointly in endeavors with science, and replaced the word “inform” with “interface” to avoid the possibility of this being read as this only being possible as a one-way process or implying that TK is lesser than science.
17. Page 58-59: “Implications for Council Management Strategies” section
  - a. Is this a subsection of the LK and TK section? The header style is confusing in that regard.
  - b. We'd suggest some reorganization to this section in addition to the comments below about this section. We would suggest moving paragraph 3 up to be the first paragraph in this section, followed by what is now paragraphs 1 and 2. (The paragraph numbers we refer to below pertain to how the document currently is.)
  - c. Paragraph 1 – We suggest changing the first sentence to include LK and TK, but this also entails modifying it to avoid the problematic implication that TK is highly spatially limited to the local. Here is a suggested rewording for the first sentence: “Some benefits of including LK and TK of the marine environment for research, management, and policy include better understandings of the Bering Sea ecosystem and better inclusion of local and indigenous voices and actors in decision-making.”
  - d. Paragraph 2 – as with our comment regarding page 25 of the current document, we



- recommend dropping the first part of this sentence from Huntington 2000 (i.e.: “With the understanding that LK and TK may not be relevant in every ecological research and management activity”). We don't feel this adds to the conversation to posit this possibly true (or possibly false) caveat, and also feel it overly narrows the conceptualization of TK to just data as opposed to also having broader contributions e.g. regarding values.
- e. Paragraph 3 – regarding this sentence: “Instead, to the extent practicable, space will be made for LK and TK to influence the decision-making process on a case-by-case basis, and in forms that LK and TK knowledge holders feel are appropriate and relevant.” We'd recommend dropping “to the extent practicable” and “on a case-by-case basis,” for several reasons. We don't think it is productive to introduce from the outset significant caveats like this. Additionally, we would argue against the inclusion of such caveats from the perspectives of rights, legal mandates (e.g. the National Standards), and values (e.g. valuing TK equally with science requires caveats like these to not exist).
  - f. Paragraph 4: after the first sentence, a sentence could perhaps be added stating something to the effect of the development of a tight and thorough connection between NMFS Tribal Consultation activities and Council processes would be useful in enriching the EBFM practices of the Council.
  - g. Paragraph 5: Regarding this sentence: “Short-term perspectives may be developed that focus on making space for LK and TK in the existing management process.” We suggest slight rewording to: “Short and medium-term perspectives may be developed that focus on making space for LK and TK in the existing management process.” because in Appendix B some of the medium-term steps seem to at least partially fit under this description also.
18. Re: Transportation section (pp. 59-63):
    - a. There has been concern and work in the indigenous community related to vessel traffic as well. See, for example, the work of the Kawerak Marine Program, which has produced several reports on Arctic shipping: <http://kawerak.org/natural-resources/marine-program/>
    - b. We recommend more discussion be added about vessel traffic related to Great Circle route and movement through the Aleutian Passes.
  19. Re: Research section (page 64). A growing concern and source of discussion amongst indigenous and research communities is also the relationship between research processes and indigenous people (including impacts, interfacing different knowledge systems, etc.; see e.g. Raymond-Yakoubian and Raymond-Yakoubian 2017).
  20. Page 64: Recommend removing “Indigenous knowledge” from the end of this sentence: “the importance of local, traditional, and Indigenous knowledge gains acceptance.” While indigenous knowledge (IK) is a thing and is gaining acceptance, there hasn't been discussion of it in explicit technical terms in this FEP so it is best to remove it here to avoid confusion.
  21. Page 64 – Land and Wildlife Management subsection – Recommend adding discussion of Alaska Native entities' land and wildlife management (and co-management).
  22. Page 65: While noting again our displeasure with the concept of tradeoffs, we do think the last paragraph of this chapter could be enhanced by adding something about the importance of transparency – and how an FEP can assist in regard to that – to the types of deliberations and analyses noted in the last two sentences.

- G) Chapter 5: Assessment of EBFM in current Bering Sea Fishery Management (pages 66-90)
1. Regarding Figure 1-2 and the discussion on the preceding and following pages about the Council process, as we noted in a previous letter, a gap in the Council process description exists in the document in terms of NMFS Tribal Consultation – which should be an ongoing relationship and should be inputted into every Council decision – as well as in terms of a rigorous outreach and public involvement plan.
  2. Regarding the discussion of EO13175, we suggest adding language which indicates that it is recommended the Council integrate the results of NMFS Tribal Consultation into all of its processes. This would be an important evolution, particularly as regards ecosystem-based fisheries policy and management.
  3. While we are generally wary of the idea of “tradeoffs” analyses, we do appreciate and agree with the language which was added in the last sentence of paragraph 1 of section 5.5.3 (page 82).
  4. We appreciate and agree with the addition of the second sentence to the first paragraph of what is now section 5.5.4 (page 83) which recognizes the impacts of bycatch across key ecosystem domains.
- H) Chapter 7: List of Action Modules (pages 92-97)
1. All of the Action Modules and their components should include the participation of both TK holders from the Bering Sea region and non-economic social scientists. Our organizations are willing to consider partnering with you on forthcoming Action Modules.
  2. Re: 7.1: Assessment and gap analysis of Council’s EBFM approach against best practices:
    - a. Gaps that this Module can address include: the incorporation of TK, subsistence, and non-economic social science data in EBFM. This module should tie in with the TK and Subsistence Action Module in order to address those gaps.
  3. Re: 7.2: Create a series of conceptual models for the Bering Sea ecosystem:
    - a. We would like to see a conceptual model that includes both humans and other elements of the ecosystem. ‘Pressures and drivers’ cannot be understood without a consideration of human interactions. Conceptualizations of the ecosystem without humans are incomplete. Even species-specific conceptual models should include humans. Work on several conceptual models has begun at previous FEP team meetings; these models are incomplete; we hope this work continues and pays particular attention to the role of humans and their various interactions in and with the Bering Sea ecosystem.
  4. Re: 7.3: Evaluate the short- and long-term effects of climate change on fish and fisheries:
    - a. A vulnerability analysis of ‘key species and fisheries’ to climate change should also include human communities dependent on or affected by federal fisheries and federal fishery management. There has been a great deal of work done on the impacts of climate change to human communities, and this should be included in the Action Module.
    - b. Traditional Knowledge and other information from coastal indigenous communities should also be ‘leveraged’ for this Module.
    - c. There are many climate change-related projects that have been and are being undertaken outside of the AFSC. This other ongoing and future work should be incorporated in Module action and analysis.
    - d. Ambiguity about whether or not the Council will involve the public should be removed. Tribes and members of the public should be included at all stages of the work on this

Module.

5. Re: 7.4: Develop protocols for using LK and TK in management and understanding impacts of Council decisions on subsistence use:
  - a. General comment: Please remember that social science (of LK, TK, and subsistence), LK and TK, and subsistence data are all distinct things.
  - b. Re: 1/Synopsis: This should also include strengthening and broadening of ties to Tribes and TK holders. This synopsis should also be revised to make more clear the differences between “part A” and “part B”. We suggest this language for A: “This Action Module will develop processes for incorporating TK and LK in Council decision-making processes in the short- to long-term.” The ‘process’ part is crucial. Regarding the language for “part B,” the direction for this section as discussed at the Ecosystem Committee was regarding developing a process for the incorporation of subsistence information into Council processes. We feel that the language as it is written in part B here is good as this is a good focus, but should add that crucial aspect as well (e.g.: “In Part B, a methodology will be developed for how the Council can consider potential impacts to subsistence species, habitats that support those species, and access to subsistence resources; this will include, among other things, developing a process for incorporating subsistence information into Council processes.”
  - c. Re: 2/Purpose: We would like to ensure that this Action Module is developing processes to incorporate, rather than ‘capture’, TK information. We suggest other language such as: Other purposes that this Action Module will be to define a process for the incorporation of non-economic social science data and TK into Council documents and processes, to lay out guidelines for evaluating non-economic social science data, and to develop a plan to increase capacity at the Council level to do that.
  - d. Re: 3/How will it inform the Council process: Suggested rewording for this sentence: “This Module will guide the use of LK, TK, and subsistence data in analyses and is expected to help the Council be increasingly responsive to National Standards 2 and 8.”
  - e. Re: 4/How it will be integrated in the Council process: Suggested rewording for this sentence: “The completed Module will provide a framework and data for analysts to consider ways to make better use of non-economic social science data, LK, TK, and subsistence data along with outcomes from engagement actions (e.g., CPK processes), as well as whether fishery activities or changes in regulation are likely to impact subsistence resources or patterns of subsistence use.”
  - f. Re: 5/Estimate: We would encourage caution in terms of describing the need for LK, TK, and subsistence use information to be “in a format that can be accessed and used by analysts.” We would propose that much of the publicly available TK and subsistence information is already in a form that is usable and accessible to analysts with the proper education and training. Council staff has been lacking in such analysts in the past, and one of the changes that is needed is for the Council to have more staff with the qualifications that would allow them to undertake this work. TK and subsistence information is not inherently inaccessible, just as fisheries science data is not. However, just as one must have the proper training and education to understand commercial harvest data and fish population information, so must you have the proper training and education to effectively work with TK, subsistence, and non-economic social science information. We also argue that there is very little value in data that has been drastically

changed in format to make it something that is familiar-looking to those who are not properly trained. Expertise in this area is needed on a continual basis, not just when initially building up a library or database of TK/subsistence/non-economic social science information.

6. Re: 7.5: Aligning Council priorities with research funding opportunities:

- a. We agree that it would be useful to have a method by which to track research that is potentially relevant to, and used in, Council decision-making, and for bi-directional sharing of research results. This should also include TK documentation and non-economic social science research. Tribes and Tribal organizations should also be identified as potential partners in this Module as some of them conduct research and some have research-focused programs.

I) Chapter 8: Public involvement plan (pages 98-101)

1. We appreciate that Chapter 8 incorporates many of the ideas that our organizations and communities have submitted to the Council, and look forward to continued work with the Council on public involvement and engagement issues.
2. We feel that the language and bulleted points in this chapter should remain. We believe that these points are crucially important to discuss in this FEP as regards the FEP public involvement plan, public involvement principles and ideas for the Action Modules, and public involvement and engagement related to EBFM for federal fishery management in general. All of these categories of “public involvement” have a place in this part of the FEP (which could be conceived and titled perhaps more broadly as a “Public Involvement” chapter).

J) Chapter 9: Preparers, Glossary, References (pages 102-107)

1. Page 102: Glossary of Terms – Definition of Sociocultural: This isn't a good definition of sociocultural. Sociocultural is an adjective which specifies pertaining to society and culture.
2. Page 102: Glossary of Terms – other terms could potentially be defined here, e.g. subsistence, Traditional Knowledge, Local Knowledge, food security, co-production of knowledge, etc.
  - a. If you insert a definition of TK in this glossary, as before we recommend using Kawerak’s definition (found in Raymond-Yakoubian et al. 2017) as you have elsewhere in this draft. This definition was developed in collaboration with many Bering Sea Tribes and has been endorsed, for the purposes of this FEP document, by the Tribal organizations that are commenting via this letter and the previous FEP comment letters.
  - b. If you want to add co-production of knowledge to the glossary, we recommend citing the model developed for the North by Behe et al. 2018 noted in the current draft's references.
  - c. If you insert a definition of subsistence in this glossary, we repeat some of the notes we made in a previous letter with regard to that: Subsistence is a concept often used by indigenous people of the region to refer a wide variety of activities from hunting, fishing, gathering of foods, to the gathering of firewood, bones, drinking water, and other interactions with the environment that lead to food security and well-being. There are various definitions of subsistence which exist, and people may refer to any one of them in a given context (e.g. the legal definitions of subsistence are relevant to people's

activities). However, in general there are specific meanings attached to the indigenous use of term. See, for example: “By the term “subsistence,” the authors employ the senses commonly used by indigenous residents of this region (as opposed to, for example, the State of Alaska's understanding). The indigenous perspective on subsistence encompasses hunting and gathering related activities which have a deep connection to history, culture, and tradition, and which are primarily understood to be separate from commercial activities.” (Raymond-Yakoubian et al. 2017: 133; and Kawerak, Inc. Social Science Program 2017).

K) Appendix A: Subsistence Use Maps (pages 108-118)

1. Comment regarding Figure 4-21 (page 56) and Appendix A: We request that you remove Figure 4-21 and Appendix A (including its associated maps) from the FEP. In our May 2018 comment letter, we also requested that you remove these maps and, alternately, reference them for the reader, if necessary. As we previously described, Western Alaska communities feel very strongly about the use of their spatial data and the need to be consulted and collaborated with prior to spatial data being interpreted, incorporated into, or otherwise used in new documents. If the FEP team believes that it is important to alert the reader to the existence of these maps (and others – ADF&G maps are not the only maps relating to subsistence that exist), we suggest a short paragraph in the subsistence section that notes where these and other maps can be located (see below for recommended language). We would also note that the Council is very familiar with restrictions on information from particular groups – the commercial fishing industry, for example (see e.g. the top of page 45, or near the end of page 49, in the current draft FEP). Tribes and communities have similar, and different, concerns as industry such as confidentiality, interpretation of data, among others. Additionally, while Tribes and communities often want to share their information and knowledge (including in spatial format), it is most appropriate to contact Tribes and communities directly, and develop and have existing relationships, prior to considering the use of any data they have provided outside of the context in which they originally shared it. This is true even if consent forms or other agreement documents were signed at the time of original data sharing. Spatial representations are inherently static, the information which they are referring to changes regularly, and those data require expert interpretation in order to be used appropriately. Standards for the use of traditional knowledge, and other culturally-specific information, are constantly evolving. The Tribes and communities represented in this comment letter have requested that the maps be removed, and that request should be honored.

Recommended paragraph: “Spatial information regarding marine subsistence use areas is available for some regions and some communities. Examples of such information include ADF&G maps hosted on the AOOS portal, the Oceana and Kawerak Synthesis, the Arctic Atlas created by Audubon, Kawerak and others, the Northwest Arctic Borough’s mapping project, and others (e.g. Oceana and Kawerak 2014, Smith et al. 2017, NWAB 2016). Readers interested in such spatial representations should consult the original source documents, preferably in consultation with the communities which provided the information.”

L) Appendix B: Preliminary Study Plans for Action Modules (pages 119-144)

1. Section B.3 (“Develop protocols for using LK and TK in management and understanding impacts of Council decisions on subsistence use”) (pp. 131-137)
  - a. Part A
    - i. It appears the team is in part using this Appendix as an area to place draft-y notes and ideas that are relevant to the Action Module. If these are kept here, please see our first comment letter submitted to the FEP Team, in particular the comments about what was originally titled “Information resources for LTK.” Many of these still apply for what is now pages 134-136 (“Information resources for LK and TK”). For example, some of the annotation descriptions are inaccurate (e.g. the description of the Kawerak-Oceana synthesis re: subsistence use data), program titles are inaccurate, other suggestions were provided, etc. Also keep in mind that there are a lot of other resources and sources for data out there for TK and with regard to indigenous communities, including those that we've noted in previous letters.
    - ii. If the above section is kept, please also note for inclusion that the Aleut Community of St. Paul Island is currently undertaking a project in partnership with Audubon Alaska to conduct mapping for their region inclusive of both St. Paul and St. George.
    - iii. Page 132: we recommend, in this discussion of CPK, using the term ‘Indigenous knowledges’ or ‘Traditional Knowledge’ (depending on context), instead of ‘Indigenous knowledge’
    - iv. Page 132: we would challenge this statement from Robards et al.: “requires the integration of different ways of knowledge in order to be salient, credible, and legitimate” and the inclusion of actors on both sides of the boundary of decision making for a productive output (Robards et al. 2018:23). From our perspective, ‘integration’ is definitely not a goal of CPK. CPK acknowledges and respects different ways of knowing, and then through those knowledge systems, co-produces new knowledge and ways of knowing or thinking (which may take the form of ‘products’ - whether that be research or policy or something else). We recommend that this reference be removed.
    - v. Page 132: In our perspective, CPK is not about “local” perspectives, but rather about Indigenous perspectives, Indigenous knowledges, and other knowledge systems and perspectives.
    - vi. Page 132: rather than “Indigenous knowledge bearers”, we recommend “Indigenous people and Traditional Knowledge bearers or experts”
    - vii. Page 132: “Some other organizations have dedicated staff liaisons for this purpose (e.g., US Fish & Wildlife Service).” Just as a note – most federal agencies have Tribal liaison positions.
    - viii. Page 133: Does this very specific example need to be included? “The Council may task staff or another entity with compiling LK and TK resources (potentially through a CPK process) for use in an early warning model (conceptual or statistical) for ecosystem change, in partnership with Western science information (e.g., example of sea lions on St. Lawrence Island).”
    - ix. Page 133 and elsewhere: we don’t recommend the use of the qualifier ‘local’ when discussing communities. All communities are ‘local’. Region communities, rural communities, Indigenous communities, or just ‘communities’ would be more

- appropriate.
- x. Add to short term: More work towards building relationships with Tribes, ANOs, and other representative bodies
- b. Part B
- i. Page 136: we recommend expanding this, or removing it: “Where subsistence use data are already available, data may be incorporated into existing models that predict fishery behavior or responses to changes in conditions or regulations.” This should not be the only way that subsistence data are used.

### References

Inuit Circumpolar Council Alaska (ICC Alaska) (2015) Alaskan Inuit Food Security Conceptual Framework: How to Assess the Arctic from an Inuit Perspective. Anchorage: ICC Alaska.

Northwest Arctic Borough (NWAB) (2016) Iñuunialiqput Iiilugu Nunanŋuanun: Documenting Our Way of Life Through Maps. Northwest Arctic Borough: Kotzebue, AK.

Oceana and Kawerak, Inc. (2014) Bering Strait Marine Life and Subsistence Data Synthesis. Oceana: Juneau, AK.

Raymond-Yakoubian, B. and J. Raymond-Yakoubian (2017) Research Processes and Indigenous Communities in Western Alaska: Workshop Report. Prepared by Sandhill.Culture.Craft and Kawerak Social Science Program. Kawerak, Inc.: Nome, Alaska.

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Reedy-Maschner, K. (2009) Entangled Livelihoods: Economic Integration and Diversity in the Western Arctic. *Alaska Journal of Anthropology*, 7(2): 135-146.

Sahlins, M. (2002 [1993]) *Waiting for Foucault, Still*. Chicago: Prickly Paradigm Press.

Smith, M. A., M. S. Goldman, E. J. Knight, and J. J. Warrenchuk (2017) *Ecological Atlas of the Bering, Chukchi, and Beaufort Seas*. 2nd edition. Audubon Alaska: Anchorage, AK.

Suggested replacement for Figure 4-6

Knowledge, Values, Authority/Power  
(incl. Western science, TK, LK)

**Human Action in the Ecosystem**

Commercial Fishing  
Subsistence  
Other Fisheries

**Other Human Activities:**

(non-consumptive activities, transportation, energy, infrastructure, military, tourism, research, land and wildlife management, foreign fishing outside of BS)

**Fishery Management**

Federal  
State  
Alaska Native

\*start\* here

*Acts on, informs, impacts*

**Outcomes**

Well-being  
Culture  
Money  
Healthy Ecosystem

\*end\* here

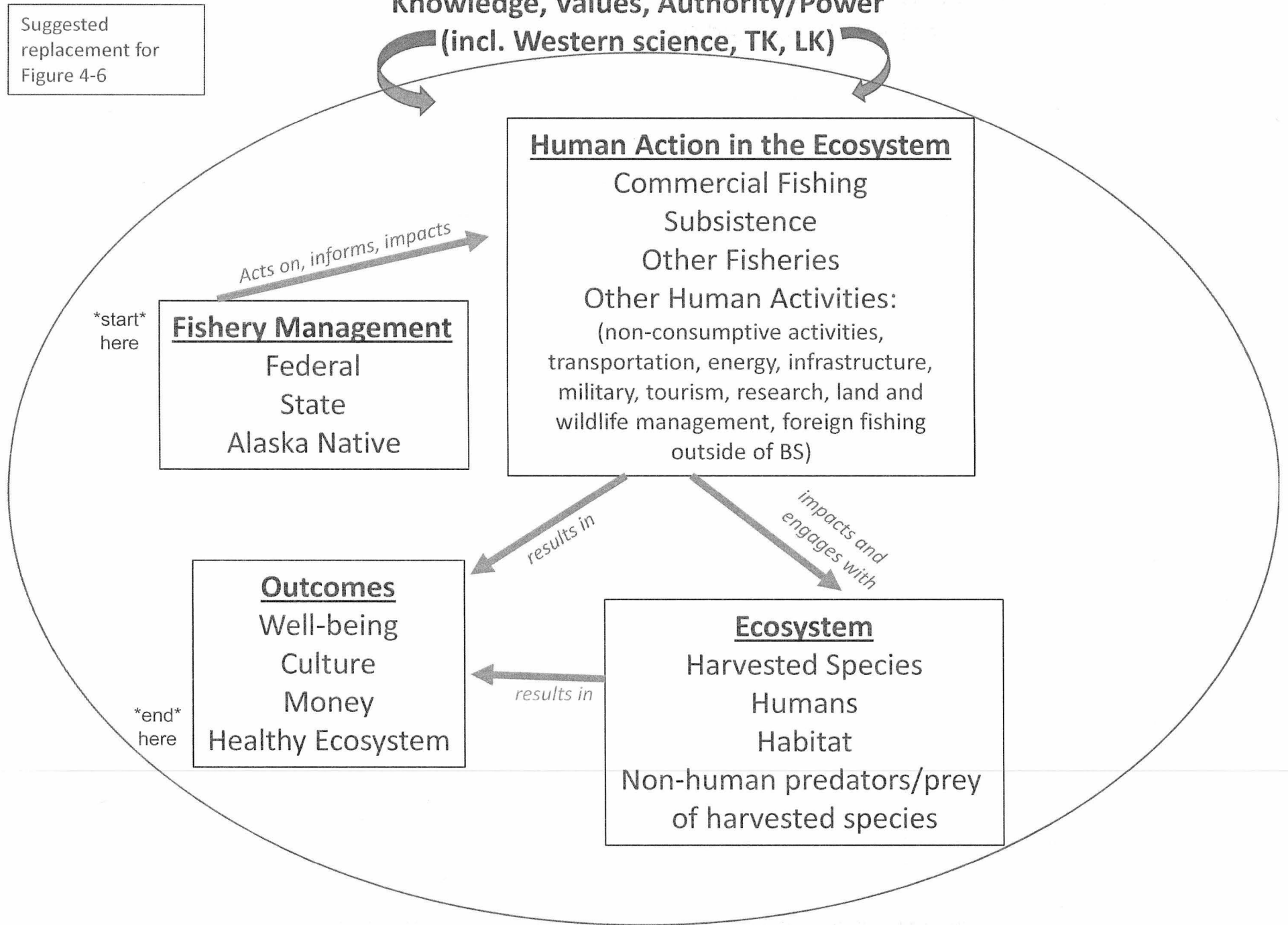
*results in*

*impacts and engages with*

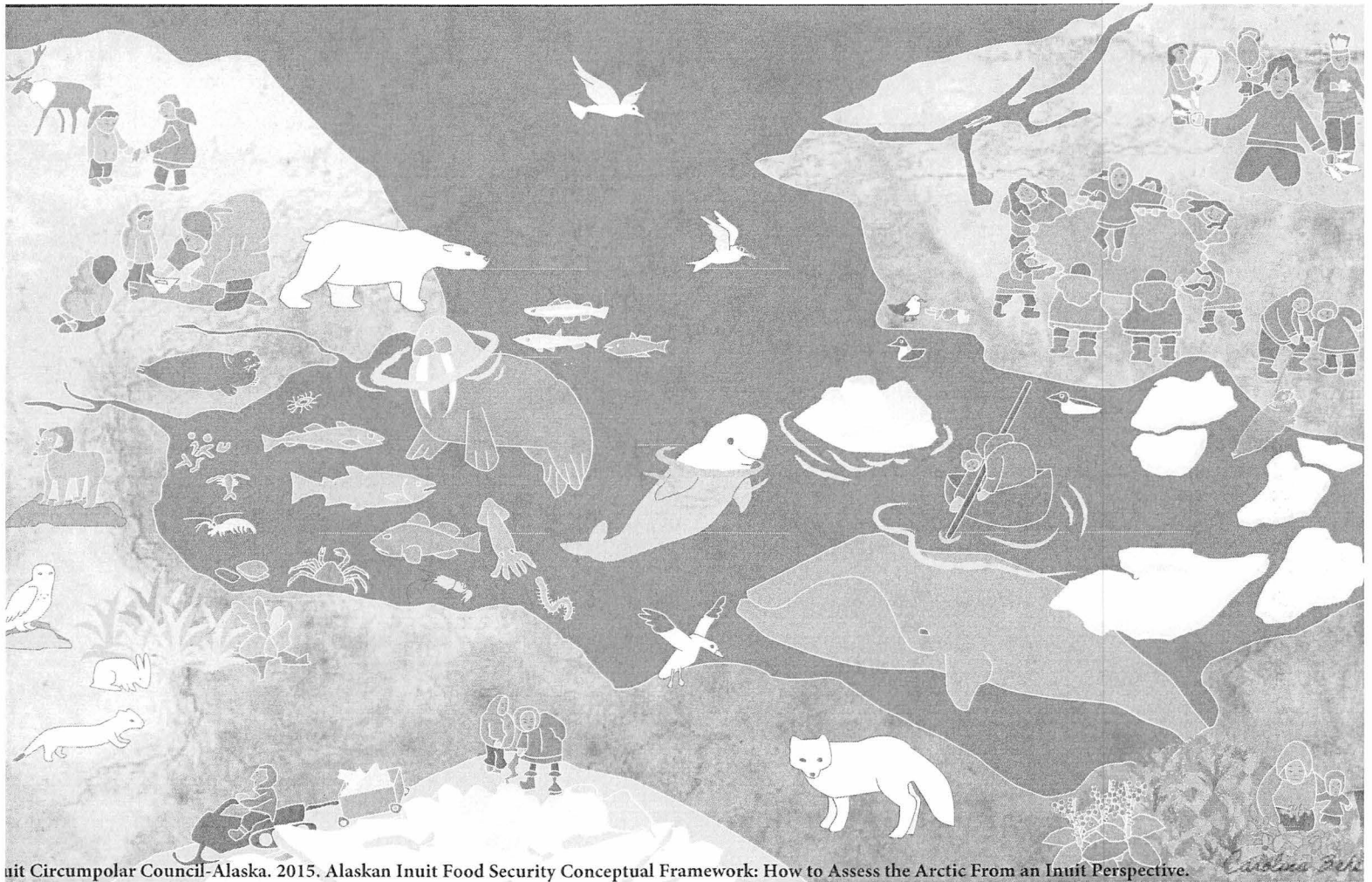
**Ecosystem**

Harvested Species  
Humans  
Habitat  
Non-human predators/prey of harvested species

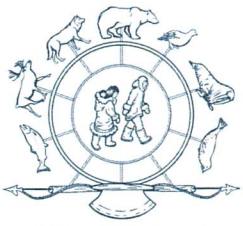
*results in*







Inuit Circumpolar Council-Alaska. 2015. Alaskan Inuit Food Security Conceptual Framework: How to Assess the Arctic From an Inuit Perspective.



**KAWERAK. INC.**

*REPRESENTING*

**Brevig Mission**

*Sitaisaq*

**Council**

**Diomede**

*Inaliq*

**Elim**

*Niviarcaurluq*

**Gambell**

*Sivuqaq*

**Golovin**

*Chinik*

**King Island**

*Ugiuvak*

**Koyuk**

*Kuuyuk*

**Mary's Igloo**

*Qawiaraq*

**Nome Eskimo**

*Sitnasuak Inuit*

**Savoonga**

*Sivungaq*

**Shaktoolik**

*Saktuliq*

**Shishmaref**

*Qikiqtaq*

**Solomon**

*Anjuutaq*

**St. Michael**

*Taciq*

**Stebbins**

*Tapraq*

**Teller**

*Tala*

**Unalakleet**

*Uᅇalaqᅇiq*

**Wales**

*Kinigin*

**White Mountain**

*Iᅇaᅇuik /*

*Nutchirviq*

August 24, 2018

To: Diana Evans, Bering Sea FEP Co-Chair  
Deputy Director, North Pacific Fishery Management Council  
605 W 4th Ave, Suite 306  
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Phone: (907) 271-2809

From: Rose Fosdick, Ecosystem Committee Member,  
Public Involvement Subcommittee Member  
Kawerak, Inc.  
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Nome, AK 99762  
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Phone: (907) 443-4377

Re: Comments on Chapter 8 of Draft FEP – Public Involvement

Dear Diana,

Please find below my comments on the current draft of chapter 8 (the Public Involvement Plan) for the Bering Sea Fishery Ecosystem Plan (FEP).

I will also be submitting to you, early next week, a third letter of comments from the Bering Sea indigenous partnership which has been working with Council Staff and the FEP Team to provide inputs on the draft FEP. You may find that some comments in that letter parallel my comments below. As such, I hope you will consider all of these comments carefully, as they cumulatively represent the perspective of dozens of communities in the Bering Sea region with regard to public involvement.

Sincerely,  
KAWERAK, INC.

Rose Fosdick,  
Vice President Natural Resources Division

*Page 1*

**KAWERAK, INC.**

PO Box 948 • Nome Alaska 99762 • 907.443.5231 • [www.kawerak.org](http://www.kawerak.org)

Advancing the capacity of our people and tribes for the benefit of the region.

## **Rose Fosdick comments on chapter 8 of current draft Bering Sea FEP**

We commend the Council and Ecosystem Committee for opening the door for tribes and rural communities to be involved in the process of the Council as they consider management plans. Rural and tribal representatives have an opportunity to participate by offering traditional knowledge and other facts about their respective ecosystem changes and impacts of various influences.

Regarding the chapter 8, it is true that the bullet points in this chapter have been, in part, taken from a variety of comment letters submitted to the Council requesting particular actions be taken with regard to public involvement, engagement, and outreach, and tribal consultation. It is also true that these bullets are currently prefaced as ideas for how public involvement for the BS FEP can be improved. Reflecting the Council's current efforts about these issues more broadly, and being forward-looking about how they can be improved, is one of the major goals for this BS FEP, and this is a perfect place to discuss those issues.

I would recommend that this chapter be conceptualized as a broader discussion of the outlines of public involvement-related issues as pertains to not only the FEP's particular process itself, but also Alaska federal fishery management in general especially as it relates to EBFM practices and principles (the latter is, also integral to the FEP itself). It should be reflective of the current state of affairs, and also be forward-looking. As such, I recommend that all of the language above the bullet points in the chapter be maintained, except the very last sentence which prefaces the bullet points as they are now; it all fits within the goal of outlining the ways the Council can and should be doing public involvement. For the rest of the chapter, I would suggest breaking it out into three sections, and eliminating the existing categories of low/medium/significant time commitments:

1. FEP public involvement plan – how to engage the public regarding the FEP, and to evaluate if it met its goals (e.g. that were laid out during scoping)
2. Public involvement principles and ideas for the Action Modules
3. Public involvement and engagement related to EBFM for Alaska federal fishery management in general

As such, I would also recommend that this chapter be re-titled to simply “Public involvement” in order to reflect the broader discussion which is in the chapter.

I would recommend we place the following bullets and items under each section (the bullets in each section below are not in any particular order). I have also slightly tweaked some of the language for some bullets, and added a few new points. Some bullet points fit into more than one category.

### **1 - FEP public involvement plan – how to engage the public regarding the FEP, and to evaluate if it met its goals (e.g. that were laid out during scoping)**

- Continue issue-specific outreach, especially continuing to have Council members and staff travel to communities and engage directly with a broad cross-section of community and tribal members (many of whom cannot travel to Anchorage)
- Hold a series of workshops to provide space for community engagement
- Integrate Tribal input into decisions relevant to their region

- Recognize the burdens of participating in the process, which is often prohibitively expensive, and requires taking time away from conducting subsistence practices in order to advocate for the right to conduct subsistence practices
- Increase awareness of and education regarding TK, tribal, and subsistence concerns among Council members and staff.
- The FEP Team should have tribal and community representatives added to it
- Form formal partnerships with Tribes and ANOs to collaborate on TK-related topics. Work to ensure that existing and future documented TK appropriately informs Council processes
- Work with tribal communities and organizations to help incorporate their perspectives, concerns, and information into the FEP document
- Evaluate the success of meeting the early goals of the FEP document through involvement of the public through normal and existing Council channels (e.g. comment periods, participation of the public at the Ecosystem Committee, etc.) as well as potentially new avenues for engagement that are currently being considered or developing (e.g. the Ecosystem Workshop, etc.) – and analysis of comments received
- Public involvement and engagement should be based on the following principles: based on the principle of equity; two-way communication and exchange of information; involvement and engagement that is robust, meaningful and inclusive
- Develop a list of key contact organizations for informing different Bering Sea communities about Council activities. Ongoing outreach and engagement could make project-specific outreach more effective.

## 2 - Public involvement principles and ideas for the Action Modules

- Each Action Module should have its own Public Involvement Plan
- Public involvement and engagement should be based on the following principles: based on the principle of equity; two-way communication and exchange of information; involvement and engagement that is robust, meaningful and inclusive
- Continue issue-specific outreach, especially continuing to have Council members and staff travel to communities and engage directly with a broad cross-section of community and tribal members (many of whom cannot travel to Anchorage)
- Develop a formal process for evaluating engagement strategies to provide broader opportunities for sharing of information between the Council and communities
- Conduct a review of existing participants in the Council process with stakeholder interests in the Bering Sea region. Who is left out? How would they would like to a) communicate; b) get information; c) provide feedback? Are there communities who prefer to not be engaged regularly by the Council? Consider developing an RFP document for seeking input from Tribes, Alaska Native organizations, and rural communities.
- Work to ensure an equitable playing field for public involvement and outreach. Specifically, work to ensure that any expansion of public involvement and outreach does not push to the side stakeholders that regularly participate in the Council meetings, the public comment process, etc., or label their input as less important than newer input.
- Hold a series of workshops to provide space for community engagement (the Ecosystem Workshop was positive first step towards workshops that include public involvement)
- Integrate Tribal input into decisions relevant to their region

- Develop a protocol for the collection and use of citizen science information, while recognizing that citizen science is not the same as LK or TK.
- Form formal partnerships with Tribes and ANOs to collaborate on TK-related topics. Work to ensure that existing and future documented TK appropriately informs Council processes
- Consider using a co-production of knowledge approach to bring together TK and science in an equitable process
- Increase awareness of and education regarding TK, tribal, and subsistence concerns among Council members and staff.
- Create a plan for ensuring that TK informs Council documents and decisions.
- Encourage processes that foster co-production of knowledge
- The FEP Action Module Teams should have tribal and community representatives added to them as well as non-economic social scientists (particularly those with experience working with TK and Alaska communities)
- Develop a list of key contact organizations for informing different Bering Sea communities about Council activities. Ongoing outreach and engagement could make project-specific outreach more effective.

### 3 - Public involvement and engagement related to EBFM for Alaska federal fishery management in general

- Public involvement and engagement should be based on the following principles: based on the principle of equity; two-way communication and exchange of information; involvement and engagement that is robust, meaningful and inclusive
- Continue issue-specific outreach, especially continuing to have Council members and staff travel to communities and engage directly with a broad cross-section of community and tribal members (many of whom cannot travel to Anchorage)
- Develop a formal process for evaluating engagement strategies to provide broader opportunities for sharing of information between the Council and communities
- Conduct a review of existing participants in the Council process with stakeholder interests in the Bering Sea region. Who is left out? How would they would like to a) communicate; b) get information; c) provide feedback? Are there communities who prefer to not be engaged regularly by the Council? Consider developing an RFP document for seeking input from Tribes, Alaska Native organizations, and rural communities.
- Work to ensure an equitable playing field for public involvement and outreach. Specifically, work to ensure that any expansion of public involvement and outreach does not push to the side stakeholders that regularly participate in the Council meetings, the public comment process, etc., or label their input as less important than newer input.
- When appropriate to a Council action, consider holding in-person meetings, video conferences, and/or teleconferences as necessary.
- Hold a series of workshops to provide space for community engagement (the Ecosystem Workshop was positive first step towards workshops that include public involvement)
- Form formal partnerships with Tribes and ANOs to collaborate on TK-related topics. Work to ensure that existing and future documented TK appropriately informs Council processes
- Incorporate community feedback in a way that does not put strict time limits on community comments

- Encourage NMFS to fulfill its Tribal Consultation responsibilities and develop a framework to provide the Council with access to Tribal Consultation information on a regular basis. Have the Council designate a staff member to liaise with NMFS about Tribal Consultation.
- Consider using a co-production of knowledge approach to bring together TK and science in an equitable process
- Identify Bering Sea tribes and communities who may be affected by current and future Council decisions
- Within existing Council groups (e.g., the Social Science Planning Team, the Ecosystem Committee), consider developing public involvement plans on a community by community basis
- Develop a list of key contact organizations for informing different Bering Sea communities about Council activities. Ongoing outreach and engagement could make project-specific outreach more effective.
- Participate in national, regional, and local conferences pertaining to tribal and rural community fishing interests (update and expand current list of possible events).
- Commit to an inclusive process that lets affected communities meaningfully participate in the Council and committee meetings, on a regular basis. For example, the Ecosystem Committee invites presentations and participation from tribes and other entities to contribute to Committee discussions.
- Consider how to receive nominations for committee membership from traditionally underrepresented Tribes and rural Alaskan communities, and seek participation from external experts who have positive experience engaging with communities
- Recognize the burdens of participating in the process, which is often prohibitively expensive, and requires taking time away from conducting subsistence practices in order to advocate for the right to conduct subsistence practices
- Increase awareness of and education regarding TK, tribal, and subsistence concerns among Council members and staff.
- Create a plan for ensuring that TK informs Council documents and decisions.
- Create a plan for ensuring commercial fisheries and fishery management does not negatively impact subsistence. Included in this is the need to develop a plan for ensuring subsistence data is incorporated into Council documents and decisions.
- Encourage processes that foster co-production of knowledge
- Increase capacity related to TK on staff at NMFS and the Council (e.g., hiring Council staff with a TK specialty)
- Hire outreach or engagement liaisons on staff at NMFS and the Council (someone qualified in outreach, but not necessarily the academic side of things, though this would be good). If the Council would like to pursue this idea, the next step would be to define roles and responsibilities of such a position.
- Encourage and facilitate increased Indigenous representation on the Council and Council bodies (e.g., Tribal seats on the Council are desired by indigenous communities)
- Develop a joint tribal consultation process and protocol with NMFS, to strengthen and improve processes for tribal consultation.
- Integrate Tribal input into decisions relevant to their region
- Consider using a co-production of knowledge approach to bring together TK and science in an equitable process

Thanks again for the opportunity to comment. Please contact me at [rfosdick@kawerak.org](mailto:rfosdick@kawerak.org) or 907-443-4377 with comments or questions.