

From: [Longan, Sara](#)
To: [Martin, John](#); [Socheata Lor](#); [Doug Damberg](#); [Mary Colligan](#); [Wendy Loya](#); [Mark Miller](#); [Leonard, Paul](#); [Jess Grunblatt](#); [Stephanie Brady](#); [Aimee Devaris](#); [John Pearce](#)
Cc: [Greg Siekaniec](#); [Sarena Selbo](#); [Karen Mouritsen](#)
Subject: Follow-up on 1002 Inter agency workshop(s) facilitated by NSSI/ Arctic LCC/ USGS
Date: Friday, January 12, 2018 2:14:48 PM

John and team:

As requested, NSSI and the Arctic LCC teams met to discuss next steps to facilitate the communication of agency actions as it relates to the 1002 effort, during future workshops to the agencies, partners, and others.

We came up with a proposed plan and ask that these are presented for consensus, and discussed at the next Interdisciplinary team meeting and during future "Oversight Group" discussions also. {NOTE: NSSI suggests using a different name since NSSI has a very specific "Oversight Group" already established.....there will be confusion moving forward. Suggestions might include "Leadership Team or Oversight Team"}

-NSSI, Arctic LCC, and USGS can facilitate a near term (Feb/March) Inter-agency workshop or symposium, allowing a forum to provide DOI efforts and outcomes to a larger network of government agencies. We would work in full coordination with resource assessment team and would benefit from getting routine guidance from the "Oversight Group" to make sure we include the appropriate audience, scope and work to ensure DOI actions, assessments and science needs are communicated to a larger network of government agencies.

-Then, the same facilitating team (NSSI, Arctic LCC, USGS) would facilitate a larger workshop to communicate outcomes and actions to a stakeholder and public group. Again, the facilitating team would follow interests and requests from the inter-agency inter-disciplinary resource assessment team and would rely upon the "Oversight Group" to weigh in on timing, audience, expected outcomes, etc.

***-The facilitating team requests an agenda item is included at the next "Oversight Group" meeting to discuss available resources, including budget, in order to assess the capacity and realistic capability of hosting and facilitating the larger (public) workshop.

-The facilitating team suggests the development of a Steering Committee, for consideration. The primary goal would be to guide and assist the efforts to develop and hold both the Inter-agency workshop and broader public outreach workshop. We realize this may likely be a smaller configuration, perhaps, of the resource assessment team - - we consider full coordination and participation with the Refuge managers, etc. to be especially key here.

We offer this proposal in order to keep the conversation going and report back on our efforts to facilitate a workshop(s). We welcome all input, modification, and suggestion.

***Also, NSSI would like to present the work Jess Grunblatt is achieving, the collection of North Slope infrastructure data, at the next Interdisciplinary team meeting. NSSI is able to share the data that has been collected, but it would be good to explain the project and learn what types of infrastructure data is most helpful to the 1002 efforts (e.g., roads, ice roads, pads, facilities, etc.), "how" best to share, and with "whom." We think we have a product that could be very helpful.

Thank you,

--

Sara Longan, PhD
Executive Director
North Slope Science Initiative (NSSI)
907-271-3431

From: [Hayes, Miriam \(Nicole\)](#)
To: [Pearce, John](#)
Cc: [Wendy Loya](#)
Subject: Re: Status of Coastal Plain Map?
Date: Friday, February 9, 2018 11:26:37 AM

Awesome - thank you both!

Nicole Hayes
Project Coordinator
Bureau of Land Management
222 W. 7th Avenue #13
Anchorage, Alaska 99513
Desk: (907) 271-4354

On Fri, Feb 9, 2018 at 8:59 AM, Pearce, John <jpearce@usgs.gov> wrote:

I just emailed Dave Houseknecht on this because their office derived the original map and has been working with DOI Solicitor's office and Murkowski staff to resolve the map issue. I asked them to get back to me before our meeting today, so I hope to have some information to share at 11 am.

JP

John M. Pearce, Ph.D.
Supervisory Wildlife Biologist
Manager, Wetland and Terrestrial Ecosystems Office
U.S. Geological Survey, Alaska Science Center
[4210 University Drive](#)
[Anchorage, Alaska 99508](#)
Tel. 907.786.7094
Email: jpearce@usgs.gov
<http://alaska.usgs.gov/staff/staffbio.php?employeeid=173>

On Fri, Feb 9, 2018 at 8:50 AM, Wendy Loya <wendy_loya@fws.gov> wrote:

Hi Nicole,

I would like to discuss how to proceed at our 11am meeting today. I need more information from our FWS team, but it sounds like the map used by USGS in legislation was not the correct map to use for boundary purposes, so USFWS will need to work with BLM to achieve the accuracy necessary.

Thank you,

Wendy

Dr. Wendy M. Loya, Coordinator

Arctic Landscape Conservation Cooperative (LCC)

Anchorage, Alaska

907 786 3532 (office)

907 227 2942 (mobile)

From: Hayes, Miriam (Nicole) [mailto:mnhayes@blm.gov]
Sent: Friday, February 09, 2018 8:13 AM
To: John Pearce; Wendy Loya
Subject: Fwd: Status of Coastal Plain Map?

For your situational awareness - the Department is asking us to draft a NOI package and it is imperative we have an accurate map and acreage to reference. Cathy Hillis, our Geospatial Manager and Cory Black on her staff will be contacting staff at FWS (cc'd on the message below) today to try and get the recent/accurate source data that is available. John - is there someone from USGS she could contact? It would be good to make sure everyone is all in agreement on the final product.

Thank you!

Nicole

Nicole Hayes
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----- Forwarded message -----

From: **Hillis, Catherine** <chillis@blm.gov>

Date: Thu, Feb 8, 2018 at 4:55 PM

Subject: Re: Status of Coastal Plain Map?

To: "Hayes, Miriam (Nicole)" <mnhayes@blm.gov>

Cc: John Brewer <john_brewer@fws.gov>, Douglas Campbell <douglas_campbell@fws.gov>, Cory Black <cblack@blm.gov>

Nicole, The FWS has not come up with the "official boundary" so I did a quick analysis based on the following:

Utilizing the UFWS 1002 Boundary released in 1995, I clipped our mashup product, Administered Lands. From ALIS case land geometry, I selected polygons representing lands excluded from the coastal plain area using the USGS's ANWR Map Plate 1 and Plate 2 11-15-17 Bus Mtg.pdf as a guide and erased these from the clipped geometry. I then calculated GIS_Acres using NAD_1983_Alaska_Albers coordinate system. Below is the resulting data. You will notice there is 1 acre of private - I believe that is a sliver created during processing. And there is 106 acres of state lands, that is likely due to the fact that the 1002 boundary is not vertically integrated with our data - once again a sliver. There is also 967 acres of Alaska Native allotments. It is unclear from the USGS map if these were to be included in the Coastal Plain. Please keep in mind that these are not exact acres and are subject to change when the official Coastal Plain boundary has been delineated by USFWS. Please let me know if you have further questions.

DEPT_NAME	AGENCY_NAME	Admin Dept. Code	Admin Agency Code	Admin Type	GIS_ACRES
Department of the Interior	Fish and Wildlife Service	DOI	FWS	Agency	1424063
State	State	ST	ST	Not Applicable	106
Private	Private	PVT	PVT	Not Applicable	1
Undetermined	Undetermined	UND	UND	Water	61690
Alaska Native Allotment	Alaska Native Allotment	NTVALL	NTVALL	Not Applicable	967
Alaska Native Lands Patented or Interim Conveyed	Alaska Native Lands Patented or Interim Conveyed	NTVPIC	NTVPIC	Not Applicable	24179
				Total w/Water	1,511,006.00
				Total w/o Water	1,449,316.00

Cathy Hillis, Geospatial Manager

Alaska State Office

907-271-3273

From: [Hayes, Miriam \(Nicole\)](#)
To: [Wendy Loya](#)
Cc: [John Pearce](#)
Subject: Re: Arctic Refuge map issue - CONTAINS SOLICITOR ADVICE - DO NOT RELEASE
Date: Friday, February 9, 2018 3:38:55 PM

Hi Wendy,
Yes - I think the "official boundary" may be fleshed out in the coming months and the boundary for purposes of estimating acreage will be based in part off the GIS data provided by FWS as well as the official survey and master title plat boundary. Will share when I have something.
Have a nice weekend!
Nicole

Nicole Hayes
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On Fri, Feb 9, 2018 at 12:04 PM, Wendy Loya <wendy_loya@fws.gov> wrote:

This is an important interpretation, but perhaps not the question BLM Cartography is asking about in preparing the map for the NOI, which I believe is: What is the official boundary of the 1002 area?

So I believe FWS needs to share a GIS file with BLM that accomplishes that, is that correct Nicole?

Dr. Wendy M. Loya, Coordinator

Arctic Landscape Conservation Cooperative (LCC)

Anchorage, Alaska

907.786.3532 (office)

907.227.2942 (mobile)

From: Pearce, John [mailto:jpearce@usgs.gov]
Sent: Friday, February 09, 2018 11:32 AM
To: Miriam (Nicole) Hayes; Wendy Loya
Subject: Fwd: Arctic Refuge map issue - CONTAINS SOLICITOR ADVICE - DO NOT RELEASE

Recent email on the map.

Nicole, if you need further information, I would follow-up with Mike.

----- Forwarded message -----

From: **Gieryic, Michael** <mike.gieryic@sol.doi.gov>

Date: Fri, Feb 9, 2018 at 11:16 AM

Subject: Re: Arctic Refuge map issue - CONTAINS SOLICITOR ADVICE - DO NOT
RELEASE

To: "Houseknecht, David" <dhouse@usgs.gov>

Cc: "Pearce, John" <jpearce@usgs.gov>, Durelle Smith <dpsmith@usgs.gov>

Dave,

b5-AC



Mike Gieryic
Attorney-Adviser
Office of the Regional Solicitor
U.S. Department of the Interior
[4230 University Drive, Suite 300](#)
[Anchorage, AK 99508](#)
Phone: (907) 271-1420; Fax: (907) 271-4143
mike.gieryic@sol.doi.gov

On Fri, Feb 9, 2018 at 10:03 AM, Houseknecht, David <dhouse@usgs.gov> wrote:

Hi Mike:

John Pearce and Durelle Smith (USGS Anchorage) have become involved in the 1002 Area map issue and are discussing it with counterparts in FWS and BLM. Has there been any decision made regarding next steps?

I'm up to my ears in technical aspects of the 1002 Area seismic data and related things, so feel free to communicate directly with John and Durelle if you choose.

On another topic, I met with SOI in DC yesterday regarding b5-AC I discussed with you last week - Karen Hawbecker, Jack Haugrud, and one other person attended from SOI. They were great - thanks for the recommendation. They plan to produce an opinion within two weeks.

Cheers,

Dave Houseknecht

U.S. Geological Survey

[12201 Sunrise Valley Drive](#)

MS 956

Reston, VA 20192

(703) 648-6466

From: [Hayes, Miriam \(Nicole\)](#)
To: [Crane, Drew](#)
Cc: [Wendy Loya](#)
Subject: Re: PLEASE REVIEW and provide comment
Date: Wednesday, February 14, 2018 11:00:44 AM

I apologize for the urgent request but at all possible we need this ASAP to communicate at our 1230 briefing today. I can simplify it to get to the bottom line if you're unable to provide edits before then but WO tends to drill into the specifics when we state something must be done. It will be an opportunity to get the messaging right the first time.

Nicole

Nicole Hayes

Project Coordinator
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On Wed, Feb 14, 2018 at 8:54 AM, Crane, Drew <drew_crane@fws.gov> wrote:

Hi Nicole,

I will try and get you my edits by noon today, COB at the latest.

Thanks!

Drew Crane
Regional Endangered Species Coordinator
Alaska Region
U.S. Fish and Wildlife Service
[1011 E. Tudor Road](#)
[Anchorage, AK 99503](#)
[907-786-3323](#)

On Wed, Feb 14, 2018 at 7:30 AM, Hayes, Miriam (Nicole) <mnhayes@blm.gov> wrote:

I am trying to incorporate this into the timeline and to stress the importance of it but need to make sure it is accurate. THANK YOU!

Nicole

Issuance of a Record of Decision will be dependent upon completion of the Section 7 ESA Consultation. Consultation shall be initiated by the BLM during development of the EIS for the proposed lease sale and exploration. Due to the presence of polar bears and their critical habitat, compliance with Section 7(a)(2) of the ESA requires an Incidental Take Statement (ITS) to document the incidental take "anticipated" (expected) due to the proposed action or an action modified by reasonable and prudent alternatives. An ITS cannot be issued without an Incidental Take Regulation (ITR) or Incidental Harassment Authorization (IHA) under the Marine Mammal Protection Act because?????????. Due to the time it takes to implement an ITR or IHA, if it is not initiated by BLM or industry in the very near future, it is highly unlikely any exploration would be able to tier to the EIS and all ground-disturbing activities (exploration) would require individual formal ESA consultation and may result in a Jeopardy Opinion (JO). A JO would prohibit compliance with Section 7 of the ESA and not allow for any ground-disturbing activities.

Nicole Hayes

Project Coordinator

Bureau of Land Management

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Desk: (907) 271-4354

From: [Brady, Stephanie](#)
To: [Miriam \(Nicole\) Hayes](#); [Fox, Joanna](#)
Cc: [Wendy Loya](#); [John Trawicki](#)
Subject: Re: Arctic CCP scoping - list of places we scoped
Date: Wednesday, February 14, 2018 12:46:09 PM

sure - so the CCP revision included the entire refuge not just the 1002 area - therefore, we included villages that were adjacent to or within the boundaries of Arctic refuge - I am looping in Joanna Fox - it would be good to chat with her as you are developing a schedule for scoping. Stephanie

stephanie_brady@fws.gov | Branch Chief, Conservation Planning and Policy | U.S. Fish and Wildlife Service | National Wildlife Refuge System | Alaska | 907.306.7448

On Tue, Feb 13, 2018 at 3:54 PM, Miriam (Nicole) Hayes <mnhayes@blm.gov> wrote:

Thanks, Stephanie. Could you provide the rationale for including Fort Yukon and Venetie? I think Venetie is probably more cut and dry but I want to ensure if there are any places we don't scope that question why we didn't we have clear rationale.

Thank you!
Nicole

Sent from my iPad

On Feb 13, 2018, at 2:40 PM, Brady, Stephanie <stephanie_brady@fws.gov> wrote:

Fort Yukon
Arctic Village
Venetie
Washington, DC
Anchorage
Fairbanks
Kaktovik
Barrow

stephanie_brady@fws.gov | Branch Chief, Conservation Planning and Policy | U.S. Fish and Wildlife Service | National Wildlife Refuge System | Alaska | 907.306.7448

From: [Hayes, Miriam \(Nicole\)](#)
To: [Wendy Loya](#)
Subject: Fwd: Coastal Plain Boundary
Date: Saturday, February 24, 2018 9:01:13 PM
Attachments: [Coast Plain.cmh](#)

fysa

Nicole Hayes

Project Coordinator
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From: Hillis, Catherine <chillis@blm.gov>
Date: Fri, Feb 23, 2018 at 4:48 PM
Subject: Coastal Plain Boundary
To: John Brewer <john_brewer@fws.gov>
Cc: Douglas Campbell <douglas_campbell@fws.gov>, "Miriam (Nicole) Hayes" <mnhayes@blm.gov>

John, would it be possible for you to review the GIS data for the Coastal Plain that I created a couple of weeks ago? I created a gdb with arcs and a poly along with topology. I am not a GIS expert, so I would really appreciate your review and corrects/suggestions. It might be helpful if I went through it with you first so you would know how I came up with it. This isn't super time sensitive, but we should probably do a review soon so that I can pass this up the chain for further review.

The attached file is a zipped file. To unzip it, download and change the extension from .cmh to .zip. Because of our email filter, we can't send out files with a .zip extension. Once you have renamed it, uncompress the file and you should have the file based geodatabase. Please call me if you have any difficulty with any of this.

Your help is appreciated - thanks!

Cathy Hillis, Geospatial Manager
Alaska State Office
907-271-3273

From: [Hayes, Miriam \(Nicole\)](#)
To: [Trawicki, John](#)
Cc: [Wendy Loya](#); [John G Brewer](#); [Catherine Hillis](#)
Subject: Re: Coastal Plain Boundary
Date: Monday, March 5, 2018 3:26:12 PM

Hi John,
BLM has to set boundaries for development of the EIS as we recognize the map used in the Tax Act does not necessarily align with the actual boundary. Our goal is to do this through collaboration with FWS and coordination with the SOL office.
Nicole

Nicole Hayes
Project Coordinator
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On Mon, Mar 5, 2018 at 9:29 AM, Trawicki, John <john_trawicki@fws.gov> wrote:

Nicole-

I will speak with John and have him coordinate with Cathy. He would like a little more information on the intended use or what the map is to represent? The map in the Tax Act does not necessarily align with the coastal plain, 1002 area boundary. There is a long legal history associated with the boundary and another map without a clear description of representation will likely cause confusion.

john t.

On Mon, Mar 5, 2018 at 6:51 AM, Hayes, Miriam (Nicole) <mnhayes@blm.gov> wrote:

Hi John,
Are you able to follow-up with John Brewer on this?

Thank you,
Nicole

Nicole Hayes
Project Coordinator
Bureau of Land Management
[222 W. 7th Avenue #13](#)
[Anchorage, Alaska 99513](#)
Desk: (907) 271-4354

----- Forwarded message -----

From: **Hillis, Catherine** <chillis@blm.gov>
Date: Fri, Mar 2, 2018 at 5:45 PM
Subject: Re: Coastal Plain Boundary
To: "Miriam (Nicole) Hayes" <mnhayes@blm.gov>

Nicole, I haven't heard back from John. Do you think you could let your FWS contact know that we are trying to get this going and need their feedback before proceeding?
Thanks!

Cathy Hillis, Geospatial Manager
Alaska State Office
907-271-3273

On Fri, Feb 23, 2018 at 4:48 PM, Hillis, Catherine <chillis@blm.gov> wrote:

John, would it be possible for you to review the GIS data for the Coastal Plain that I created a couple of weeks ago? I created a gdb with arcs and a poly along with topology. I am not a GIS expert, so I would really appreciate your review and corrects/suggestions. It might be helpful if I went through it with you first so you would know how I came up with it. This isn't super time sensitive, but we should probably do a review soon so that I can pass this up the chain for further review.

The attached file is a zipped file. To unzip it, download and change the extension from .cmh to .zip. Because of our email filter, we can't send out files with a .zip extension. Once you have renamed it, uncompress the file and you should have the file based geodatabase. Please call me if you have any difficulty with any of this.

Your help is appreciated - thanks!

Cathy Hillis, Geospatial Manager
Alaska State Office
907-271-3273

--

John Trawicki
Water Resources Branch Chief
National Wildlife Refuge System, Alaska
U.S. Fish and Wildlife Service
1011 E. Tudor Road
Anchorage, AK 99503
Work: (907) 786-3474
Mobile: (907) 360-1656

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"The single biggest problem with communication is the illusion that it has taken place"
George Bernard Shaw

From: [Hayes, Miriam \(Nicole\)](#)
To: [Wendy Loya](#)
Subject: Re: Question about stipulations and BMPs
Date: Monday, March 26, 2018 8:52:41 AM

Hi Wendy,

Yes-absolutely, one of the primary purposes of project-level NEPA is to identify specific impacts from a proposed action and potentially incorporate or apply additional mitigation to reduce or eliminate the identified impact.

Starting with the IAP, in the NPR-A the BLM has distinguished between Stipulations (i.e., those mitigation measures that will be tied to the lease) and BMPs (i.e., those mitigation measure that will be tied to the lease, and are also applicable to any/all authorizations for use, but that also have a deviation process). Additional BMPs may also be applied at the individual authorization levels based on the additional NEPA analysis.

For this EIS, BLM expects that seismic and potentially post-lease exploration could be authorized using the EIS, therefore, if we are missing specificity to inform specific stipulations or BMPs they could be written to require additional data gathering to be able to meet the objective as you highlighted below.

Hope this helps.
Nicole

Nicole Hayes
Project Coordinator
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On Fri, Mar 23, 2018 at 11:17 AM, Wendy Loya <Wendy_loya@fws.gov> wrote:

Hi Nicole,

FWS is seeking clarification on Stipulations and BMPs. Ted indicated that Stipulations are in place at the time of leasing, and are therefore put in place by the Leasing EIS. In looking at the NPRA table 2.3 of Stips and BMPs, it also appears that BMPs are put in place in the EIS, although the details of a study, for example, are to be determined during a project level EIS.

Here is an example from page 71 of the IAP where an action is prohibited unless a study can show no potential impact, with the study details TBD:

E-15 Best Management Practice

Objective: Prevent or minimize the loss of nesting habitat for cliff nesting raptors.

Requirement/Standard:

- a. Removal of greater than 100 cubic yards of bedrock outcrops, sand, and/or gravel from cliffs shall be prohibited.
- b. Any extraction of sand and/or gravel from an active river or stream channel shall be prohibited unless preceded by a hydrological study that indicates no potential impact by the action to the integrity of the river bluffs.

Our question is, can additional requirements (in some form other than Stipulations) be identified in the Project level EIS (e.g. GMT2) or Alpine EIS?

Thank you,

Wendy

Dr. Wendy M. Loya, Coordinator

Office of Science Applications -Arctic Program

US Fish and Wildlife Service

Anchorage, Alaska

907.786.3532 (office)

907.277.2942 (mobile)

From: [Wendy Loya](#)
To: [Miriam \(Nicole\) Hayes](#)
Cc: [Cindy Hamfler](#)
Subject: RE: [EXTERNAL] RE: Map
Date: Tuesday, April 3, 2018 9:41:44 AM

Cindy,

Would you be able to cancel the current request with ADFG since it was last associated with your inquiry?

Thank you,
Wendy

Dr. Wendy M. Loya, Coordinator
Office of Science Applications -Arctic Program
US Fish and Wildlife Service
Anchorage, Alaska
907.786.3532 (office)
907.277.2942 (mobile)

From: Hayes, Miriam (Nicole) <mnhayes@blm.gov>
Sent: Tuesday, April 3, 2018 7:03 AM
To: Wendy Loya <Wendy_loya@fws.gov>
Cc: Cindy Hamfler <chamfler@blm.gov>
Subject: Re: [EXTERNAL] RE: Map

Hi Wendy and Cindy,

Since this was a request for informational purposes and not necessary to inform any decision making, we will hold off on any further requests for now.

I had assumed it was an easy ask and didn't realize there was an issue with sharing the information with a federal agency since the information was already released to the public.

Cindy - if/when we enter into an MOU with the State for development of the EIS, could you draft some language pertaining to GIS information sharing that we could incorporate?

Thank you for your time on this!
Nicole

Nicole Hayes
Project Coordinator
Bureau of Land Management
222 W. 7th Avenue #13
Anchorage, Alaska 99513
Desk: (907) 271-4354

On Mon, Apr 2, 2018 at 4:20 PM, Wendy Loya <Wendy_loya@fws.gov> wrote:

Cindy and Nicole,

I think Beth is being helpful in that if we need information that is available to cooperating scientists or publically available, we should seek that first so that we don't have to go through an ADFG approval process, saving everyone time. FWS does have a map that was presented in our CCP of the PCH Range that appears to be based on Griffiths et al 2002. I believe that the map we saw in the 2017 ADFG newsletter that we requested was more updated and possibly based on a newer analyses, hard to say without metadata or even a caption.

I will check with Steve about what data he has for the PCH that would provide an update to the CCP map. If it is for discussion purposes only, it may not be hard to replicate their map. FWS would have the shapefile for the map in the CCP, and we can use that if it is determined to be the best available science.

It sounds like at some point someone (BLM, FWS or a contractor) will want to present updated range maps for Porcupine Herd, Central Arctic in the EIS and possibly the other two herds (Teshekpuk and Western Arctic) if part of a cumulative effects analyses. So, I would say that given the lead time to get approval from ADFG and especially before their staff might head out for a summer field season, BLM and FWS should agree to make a request for data (or at least a shapefile of ranges) from ADFG, after discussing the extent of data needed in our request, so that hopefully we can make one, complete request. I am happy to arrange that discussion in the next two weeks if that sounds like a good approach.

Let me know what you all think,
Wendy

Dr. Wendy M. Loya, Coordinator
Office of Science Applications -Arctic Program
US Fish and Wildlife Service
Anchorage, Alaska
907.786.3532 (office)
907.277.2942 (mobile)

From: Hamfler, Cindy <chamfler@blm.gov>
Sent: Monday, April 2, 2018 11:57 AM
To: Loya, Wendy <wendy_loya@fws.gov>
Subject: Fwd: [EXTERNAL] RE: Map

Wendy,

Do you guys have access and know where Steve's data is? When I last talked to him he was spending the winter ⁶⁵ [REDACTED]. Even after apologies from both of us, Beth does not sound happy about having gotten this request. Unfortunately, it is unlikely it will be the last request we need of ADFG as part of the Leasing EIS. Better have a more united front next time,

Cindy

BLM AK - GIS Specialist
[222 University Ave. Fairbanks AK 99709](mailto:222.University.Ave.Fairbanks.AK.99709)
[\(907\) 474-2213](tel:(907)474-2213)

----- Forwarded message -----

From: **Lenart, Elizabeth (DFG)** <beth.lenart@alaska.gov>
Date: Thu, Mar 29, 2018 at 9:26 AM
Subject: RE: [EXTERNAL] RE: Map
To: "Hamfler, Cindy" <chamfler@blm.gov>

Hi Cindy,

I will forward this on to our HQ.

Can you advise your team and other federal agencies to check with Steve Arthur (ANWR biologist) for information first before coming to ADFG. He should have a lot of the information folks may be looking for.

Beth

From: Hamfler, Cindy [mailto:chamfler@blm.gov]
Sent: Thursday, March 29, 2018 8:44 AM
To: Lenart, Elizabeth (DFG)
Cc: Caikoski, Jason R (DFG)
Subject: Re: [EXTERNAL] RE: Map

Hi Beth,

Yes, we can wait for the CAH annual range to be updated.

I can take any format, shapefiles are fine.

The use of the data right now is just for an overview map to set the stage and context of the Coastal Plain- the caribou herds that use the area, and the villages that count on those caribou herds. I'm pretty sure the caribou herds help dictate which villages they will reach out to as potential cooperating agencies on the EIS. This is just the beginning of this project. The Coastal Plain Leasing EIS (and it's GIS work) is going to be contracted to a third-party. Between FWS, BLM and the contractor, it is highly likely that we will be coming to ADF&G with other data requests when the plan really picks up steam. I don't know at the moment what maps are being requested for inclusion in the Affected Environment section of the planning document, but I haven't seen a plan yet without a caribou herd or movement map. If you would prefer this dataset not be transferred to the contractor for the Leasing EIS, please let me know. And we can relay any preferred method of communication to the contractor for future Leasing EIS data requests- prefer an in-person meeting? just a very detailed list?

Thank you,
Cindy

BLM AK - GIS Specialist
[222 University Ave. Fairbanks AK 99709](https://www.blm.gov/locations/222-University-Ave-Fairbanks-AK-99709)
[\(907\) 474-2213](tel:9074742213)

On Tue, Mar 27, 2018 at 2:21 PM, Lenart, Elizabeth (DFG) <beth.lenart@alaska.gov> wrote:

Hi Cindy,

Let me explain the map. (when I look at it, I can see where some things could be confusing).

Blue polygon = TCH annual range, I will double check the TCH range with TCH biologists.

Yellow polygon = PCH annual range;

Black hatched = CAH annual range. I am in the process of updating the CAH and hope to have a better shapefile for CAH in a week or so. Would you want to wait for the updated file?

I am assuming you are looking for shapefiles. Can you explain what you intend to use the shapefiles for as I will need to run it through our folks.

Thanks

Beth

Beth Lenart
NEAK Area Wildlife Biologist
Alaska Dept. Fish and Game
Division of Wildlife Conservation
[1300 College Rd](https://www.blm.gov/locations/1300-College-Rd-Fairbanks-Ak-99701)
[Fairbanks, Ak 99701](https://www.blm.gov/locations/fairbanks-ak-99701)
[907-459-7242](tel:9074597242)
beth.lenart@alaska.gov

From: Hamfler, Cindy [mailto:chamfler@blm.gov]
Sent: Friday, March 23, 2018 8:29 AM
To: Lenart, Elizabeth (DFG)
Subject: Fwd: Map

Beth,

Let me first echo Wendy's apologies, Cathy Hillis (my supervisor) and I didn't realize FWS were also asking you for caribou data. We didn't mean to swarm you. We are and will continue to get our roles on the Coastal Plain leasing project better organized. It's all been a bit of a scramble because things are moving so fast.

BLM's specific request for right now are updated Porcupine, Central Arctic and Teshekpuk caribou herd ranges as depicted in Nicole's email below. Might have been from an ADF&G newsletter. The caribou herd range dataset we have does not have a summer polygon (in black hatched lines) that extends beyond Kaktovik. The

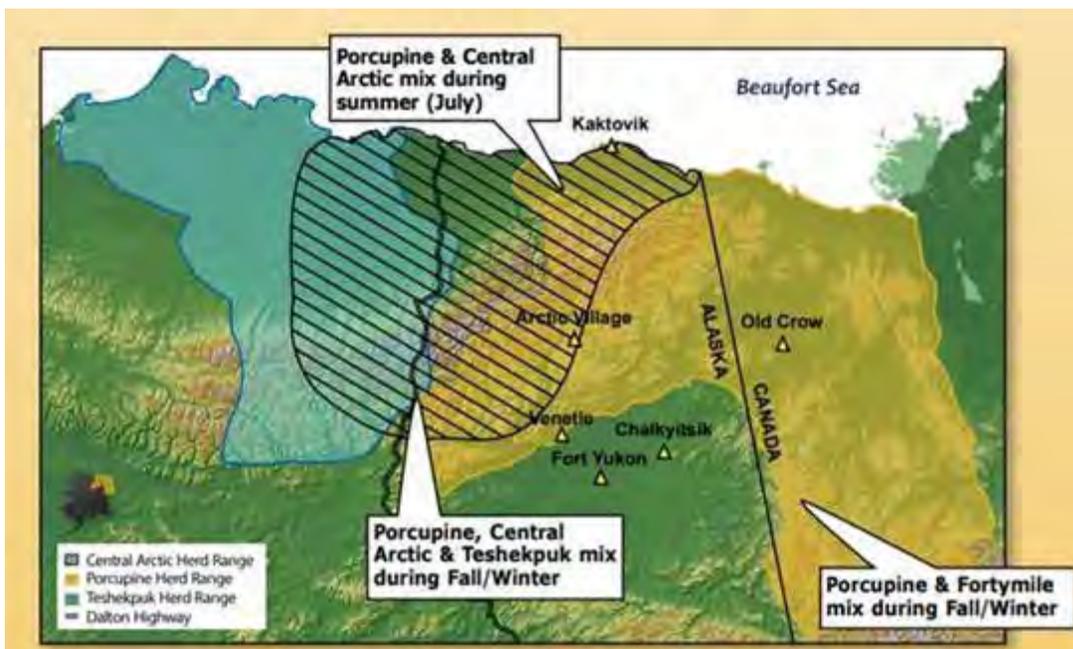
range for Teshekpuk is also quite different.

Thank you for your assistance,
Cindy

BLM AK - GIS Specialist
[222 University Ave. Fairbanks AK 99709](#)
[\(907\) 474-2213](#)

On Wed, Mar 21, 2018 at 9:39 AM, Hayes, Miriam (Nicole) <mnhayes@blm.gov> wrote:
We are looking to combine the information in these two maps (Porcupine Caribou Herd Range, ANWR boundaries, 1002 boundary, and communities in and around ANWR), can you help? The caribou map is just pulled from a ADFG Newsletter and the other one was found on the FWS refuge maps site.

Nicole Hayes
Project Coordinator
Bureau of Land Management
[222 W. 7th Avenue #13](#)
[Anchorage, Alaska 99513](#)
Desk: [\(907\) 271-4354](#)



From: [Wendy Loya](#)
To: [Steve Berendzen](#); [Joanna Fox](#); [John Trawicki](#); [Tracy Fischbach](#); [Stephanie Brady](#); [John Martin](#); [Drew Crane](#)
Bcc: [Mark Miller](#)
Subject: FW: Invitation for FWS participation - NSSI STAP Working Group on Aircraft Disturbance
Date: Tuesday, April 3, 2018 11:30:39 AM
Attachments: [2018_0326_NSSI.STAP.Aircraft.Disturbance.WG.summary_v2.docx](#)
[NSSI.STAP.Working.Groups.Overview.pdf](#)

Hi 1002 team,

Please see the email from NSSI below regarding an aircraft disturbance working group, and in invitation for participation by FWS. I think this is an important issue for us to be aware of and work closely with Kaktovik on, and participating in the working group would be a good opportunity to understand the issue in other parts of the north slope and learn what mitigation we might be able to coordinate. We can discuss at this Wednesday's meeting.

Wendy

Dr. Wendy M. Loya, Coordinator
Office of Science Applications -Arctic Program
US Fish and Wildlife Service
Anchorage, Alaska
907.786.3532 (office)
907.277.2942 (mobile)

From: Miller, Mark <memiller@blm.gov>
Sent: Tuesday, April 3, 2018 9:16 AM
To: Wendy M. Loya, PhD <wendy_loya@fws.gov>; Tracy Fischbach <tracy_fischbach@fws.gov>
Cc: Todd Brinkman <tjbrinkman@alaska.edu>
Subject: Invitation for FWS participation - NSSI STAP Working Group on Aircraft Disturbance

Wendy, Tracy -

I'm reaching out to solicit FWS participation in a NSSI STAP Working Group (WG) on the issue of aircraft disturbance. I've attached two documents - one provides an introduction to NSSI, the STAP, and role of STAP WGs. The other provides background information concerning the formation and purpose of the aircraft disturbance WG and summarizes outcomes from the WG's first teleconference, held last week.

I ask that you circulate these internally as appropriate for consideration, and let me and Todd Brinkman (WG Chair, copied here) know whether someone from the Arctic Refuge or regional office can participate. The next teleconference will happen sometime after mid-April but has not yet been scheduled.

Thanks in advance.

Mark

Mark E. Miller, PhD | Deputy Director
North Slope Science Initiative | <http://www.NorthSlopeScience.org>

0000012112

Email: memiller@blm.gov | Office: 907-271-3212 | Mobile: 907-231-9427
c/o Bureau of Land Management | Alaska State Office | State Director's Office
222 West 7th Avenue, #13 | Anchorage, AK 99513

~~~~~  
"We are drowning in information, while starving for wisdom. The world henceforth  
will be run by synthesizers, people able to put together the right information at the  
right time, think critically about it, and make important choices wisely."

-- E. O. Wilson, *Consilience*

**From:** [Wendy Loya](#)  
**To:** [Doug Damberg](#); [Steve Berendzen](#); [Joanna Fox](#)  
**Subject:** FW: [EXTERNAL] Meeting request  
**Date:** Wednesday, April 4, 2018 3:41:26 PM

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**From:** Cribley, Bud <[bud\\_cribley@fws.gov](mailto:bud_cribley@fws.gov)>  
**Sent:** Friday, March 30, 2018 7:55 AM  
**To:** Mouritsen, Karen <[kmourits@blm.gov](mailto:kmourits@blm.gov)>  
**Cc:** Gregory Siekaniec <[greg\\_siekaniec@fws.gov](mailto:greg_siekaniec@fws.gov)>; Hayes, Miriam (Nicole) <[mnhayes@blm.gov](mailto:mnhayes@blm.gov)>; Wendy Loya <[wendy\\_loya@fws.gov](mailto:wendy_loya@fws.gov)>; Serena Sweet <[ssweet@blm.gov](mailto:ssweet@blm.gov)>  
**Subject:** Re: [EXTERNAL] Meeting request

Karen,

Thank you and if you hear of anything being set up, I would appreciate you letting me know.

Thanks, again,

bud

On Fri, Mar 30, 2018 at 10:20 AM, Mouritsen, Karen <[kmourits@blm.gov](mailto:kmourits@blm.gov)> wrote:

Hi Bud, I discussed this with our Assistant Secretary yesterday. He was aware of this request and he said that he will elevate this in the Department to figure out who should attend. He said to tell you all that someone would meet with the Canadian group.  
Thank you, Karen

Karen E. Mouritsen  
Acting State Director for BLM-Alaska  
phone 907-271-5080  
cell 202-329-2030

On Wed, Mar 28, 2018 at 11:11 PM, Bud Cribley <[bud\\_cribley@fws.gov](mailto:bud_cribley@fws.gov)> wrote:

Thanks for the heads up. I will make our leadership aware of this email. Look forward to any feedback.

FYI, the solicitors here in DC are looking at this also to provide feedback.

Bud

Bud C. Cribley  
Senior Advisor for Energy with the U.S. Fish & Wildlife Service  
Office # 202-208-4331

Cell # 907-717-5141  
Office # MIB 3341  
email: [bud\\_cribley@fws.gov](mailto:bud_cribley@fws.gov)

Sent from my iPad

On Mar 28, 2018, at 7:56 PM, Mouritsen, Karen <[kmourits@blm.gov](mailto:kmourits@blm.gov)> wrote:

Thank you Bud. I will ask for guidance tomorrow afternoon when I have a call with our leadership.

Karen E. Mouritsen  
Acting State Director for BLM-Alaska  
phone 907-271-5080  
cell 202-329-2030

On Tue, Mar 27, 2018 at 8:20 AM, Cribley, Bud <[bud\\_cribley@fws.gov](mailto:bud_cribley@fws.gov)> wrote:

Karen/Greg,

I wanted to share this email with you all before I share with Greg Sheehan and Brian Steed. Any suggestions on how we can facilitate this.

Bud

----- Forwarded message -----

From: <[Danielle.Chesky@international.gc.ca](mailto:Danielle.Chesky@international.gc.ca)>  
Date: Mon, Mar 26, 2018 at 11:26 AM  
Subject: [EXTERNAL] Meeting request  
To: [bud\\_cribley@fws.gov](mailto:bud_cribley@fws.gov)

Bud,

Thanks for taking the call. As a follow up to the FWS/CWS bilateral on February 13, we were hoping to schedule a meeting with the Bureau of Land Management and FWS to further discuss the process and scientific basis that Canada can offer in regards to the opening of the Arctic Refuge. As our principals discussed on February 13, the long-standing 1987 Treaty or Agreement between Canada and the U.S. provides a sound basis for having these sorts of discussions, whereby each country can contribute its insights and expertise, especially as past scientific reviews from Canadian and U.S. agencies have suggested direct impacts from development within the 1002 lands on the Porcupine Caribou Herd that crosses the

Alaska/Yukon border. Given the strong connection and dependence on the herd by indigenous peoples in Canada, and the supporting 1987 Treaty, we would like to utilize the long-standing agreement and processes to continue our cross-border work and discussions.

As part of the upcoming trilateral meeting, Basile van Havre will be in town, supporting CWS at the Executive Table meeting through Thursday, April 12. Basile would have an opportunity to have an in-person discussion on April 13<sup>th</sup> with the respective BLM and FWS individuals. We would greatly appreciate any assistance that could be provided in securing this meeting.

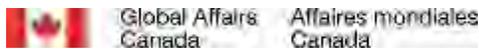
To note, we have also been in contact with DOI's International Office, who directed us to work with our FWS counterparts, given the strong cross-border work already occurring on this and other issues.

Please don't hesitate to reach out with further questions, and hope we can secure this discussion. Thank you~



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Danielle Chesky  
Environment and Energy Section, Embassy of Canada  
[501 Pennsylvania Avenue NW, Washington DC 20001](https://www.international.gc.ca/501-Pennsylvania-Avenue-NW-Washington-DC-20001)  
[danielle.chesky@international.gc.ca](mailto:danielle.chesky@international.gc.ca)  
Tel: (202) 448-6313  
Fax: (202) 448-6506  
Global Affairs Canada | Affaires mondiales Canada  
Government of Canada | Gouvernement du Canada



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**Bud C Cribley**  
Senior Advisor for Energy with the U.S. Fish & Wildlife Service  
Office # 202-208-4331  
Cell # 907-717-5141  
Office # MIB 3341  
email: [bud\\_cribley@fws.gov](mailto:bud_cribley@fws.gov)

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**Bud C Cribley**

**Senior Advisor for Energy with the U.S. Fish & Wildlife Service**

**Office # 202-208-4331**

**Cell # 907-717-5141**

**Office # MIB 3341**

**email: [bud\\_cribley@fws.gov](mailto:bud_cribley@fws.gov)**

**From:** [Loya, Wendy](#)  
**To:** [Crane, Drew](#)  
**Subject:** Re: FW: Invitation for FWS participation - NSSI STAP Working Group on Aircraft Disturbance  
**Date:** Tuesday, April 10, 2018 10:13:51 AM

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Hi Drew,  
Sounds good. We could chat on Thursday? I am in Fairbanks for the week but can give you a call....

Wendy

Dr. Wendy M. Loya, Coordinator  
Office of Science Applications -Arctic Program  
US Fish and Wildlife Service  
Anchorage, Alaska  
907.786.3532 (office)  
907.277.2942 (mobile)

On Mon, Apr 9, 2018 at 4:33 PM, Crane, Drew <[drew\\_crane@fws.gov](mailto:drew_crane@fws.gov)> wrote:

Hi Wendy,

If not too late, ES may want to participate in this working group given potential impacts to polar bears and mig birds. We can chat about who may be a good candidate.

Thanks!

Drew Crane  
Regional Endangered Species Coordinator  
Alaska Region  
U.S. Fish and Wildlife Service  
[1011 E. Tudor Road](#)  
[Anchorage, AK 99503](#)  
[907-786-3323](tel:907-786-3323)

On Tue, Apr 3, 2018 at 9:30 AM, Wendy Loya <[Wendy\\_loya@fws.gov](mailto:Wendy_loya@fws.gov)> wrote:

Hi 1002 team,

Please see the email from NSSI below regarding an aircraft disturbance working group, and in invitation for participation by FWS. I think this is an important issue for us to be aware of and work closely with Kaktovik on, and participating in the working group would be a good opportunity to understand the issue in other parts of the north slope and learn what mitigation we might be able to coordinate. We can discuss at this Wednesday's meeting.

Wendy

Dr. Wendy M. Loya, Coordinator

Office of Science Applications -Arctic Program

US Fish and Wildlife Service

Anchorage, Alaska

907.786.3532 (office)

907.277.2942 (mobile)

**From:** Miller, Mark <[memiller@blm.gov](mailto:memiller@blm.gov)>

**Sent:** Tuesday, April 3, 2018 9:16 AM

**To:** Wendy M. Loya, PhD <[wendy\\_loya@fws.gov](mailto:wendy_loya@fws.gov)>; Tracy Fischbach <[tracy\\_fischbach@fws.gov](mailto:tracy_fischbach@fws.gov)>

**Cc:** Todd Brinkman <[tjbrinkman@alaska.edu](mailto:tjbrinkman@alaska.edu)>

**Subject:** Invitation for FWS participation - NSSI STAP Working Group on Aircraft Disturbance

Wendy, Tracy -

I'm reaching out to solicit FWS participation in a NSSI STAP Working Group (WG) on the issue of aircraft disturbance. I've attached two documents - one provides an introduction to NSSI, the STAP, and role of STAP WGs. The other provides background information concerning the formation and purpose of the aircraft disturbance WG and summarizes outcomes from the WG's first teleconference, held last week.

I ask that you circulate these internally as appropriate for consideration, and let me and Todd Brinkman (WG Chair, copied here) know whether someone from the Arctic Refuge or regional office can participate. The next teleconference will happen sometime after mid-April but has not yet been scheduled.

Thanks in advance.

Mark

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Mark E. Miller, PhD | Deputy Director

0000012119

North Slope Science Initiative | <http://www.NorthSlopeScience.org>

Email: memiller@blm.gov | Office: 907-271-3212 | Mobile: 907-231-9427

c/o Bureau of Land Management | Alaska State Office | State Director's Office

[222 West 7th Avenue, #13 | Anchorage, AK 99513](#)

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-- E. O. Wilson, *Consilience*

**From:** [Laker, Mark](#)  
**To:** [Wackowski, Stephen](#)  
**Cc:** [Wright, Brian](#); [Nathan Olson](#); [Chris Noyles](#); [Tracy Fuller](#); [Bathrick, Mark](#); [Wendy Loya](#); [John Trawicki](#); [Brian Lubinski](#); [Bradley Koeckeritz](#)  
**Subject:** Re: 1002 area  
**Date:** Wednesday, April 18, 2018 1:28:28 PM  
**Attachments:** [Vote Button\\_sm.ico](#)  
[2018\\_HighResolutionOrthoimagery\\_ANWR\\_1002.docx](#)

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Steve,

Attached is a proposal Nate Olson and I submitted a few weeks ago for creating an orthomosaic of the 1002 lands at a resolution of 45cm. This is a cost w/o ground control, so the accuracy would be around 1-2 meters. With 8-10 ground control points and scale bars this can be decreased to <10cm.

Having BLM do the ground control may be most cost effective.

I haven't seen what the actual desired products and specs are, so I can't give a definitive cost estimate. If needed we have access to higher end camera systems such as a Phase One camera, Applanix mount, and IMU within FWS. I also have a very good relationship with Alaska Division of Geological & Geophysical Surveys. They have just acquired a LiDAR unit, so it may be possible to partner with them, if some LiDAR acquisition is needed.

Again, I can be more helpful knowing what the desired products are.

thx,

m

On Wed, Apr 18, 2018 at 9:09 AM, Wackowski, Stephen <[stephen\\_wackowski@ios.doi.gov](mailto:stephen_wackowski@ios.doi.gov)> wrote:

Gents-

Thanks for taking the initiative on this. Any in-house DEM capability should be looks at first, especially if it meets the data requirements for BLM and USFWS as we undertake the congressional mandated 1002 lease sale. As I am sure you all know, this is a top secretarial priority for Alaska.

I'm adding Mark Bathrick at OAS to the chain. Mark- Can you cast a net and see if we have any additional L48 capability to collect structure for motion or LIDAR/LIDAR like elevation data. I wish we had BVLOS UAS capability to do it, but 1002 is so large that manned aircraft is probably our best and only option.

-Steve

Steve Wackowski  
Senior Adviser for Alaskan Affairs

0000012121

Department of the Interior  
[4230 University Drive, Suite 300](#)  
[Anchorage, AK 99508](#)  
[907-271-5485](#)

On Wed, Apr 18, 2018 at 1:01 PM, Wright, Brian <[bwright@usgs.gov](mailto:bwright@usgs.gov)> wrote:

Mark,

In February, I was contacted by the Arctic LCC regarding elevation data available for the 1002 area. During the conversation, the FWS was making inquiries at acquiring high resolution elevation data for the 1002.

I provided an overview of the 3DEP Broad Agency Announcement and the matching federal funding for the collection of lidar at QL2 level. I noted that sfm is currently not a collection methods approved by the program to gain federal funding assistance. FWS mentioned the possibility of collecting sfm and I believe they were in contact with Matt Nolan out of Fairbanks.

The FWS is also interested in updating the hydrography for the 1002 area and has made some inquiries on possible options on how to complete.

Brian

Paul Leonard, PhD  
Science Coordinator  
[Arctic LCC](#)  
(907) 456-0445  
paul\_leonard@[fws.gov](mailto:fws.gov)

On Tue, Apr 17, 2018 at 3:56 PM, Noyles, Christopher <[cnoyles@blm.gov](mailto:cnoyles@blm.gov)> wrote:

Steve,

I've had a couple discussion with folks about the potential interest in collecting Lidar or Structure for Motion (SfM) data in the 1002 area. If you recall we talked briefly about this in our initial PB meeting with FWS. At the time, I reminded folks of the available IfSAR data which Brian Wright has delivered.

The topic of SfM has come up as an item of interest. Which is why I'm passing this info along. Mark Laker from the USFWS Kenai National Wildlife Refuge has been doing SfM for a while. I recently asked him for if anyone had approached him about the 1002 Area, he said no. I asked if had a ball park figure to fly and process the data. See below for detail. Might be a cheap in-house opportunity worth consideration. It's not Lidar but a whole lot cheaper.

Cheers,

Chris

Christopher C. Noyles  
Civil Applications Committee - Alaska Liaison  
US Department of Interior/Bureau of Land Management  
Alaska State Office, Division of Support Services  
[222 West 7th Ave # 13, Anchorage AK 99513](http://222 West 7th Ave # 13, Anchorage AK 99513)

Phone: (907) 271-5693

Personal Cell: [REDACTED]

FAX: (907) 271-3118

email: [cnoyles@blm.gov](mailto:cnoyles@blm.gov)



Click on this button to take a short survey and tell my boss how I'm doing

----- Forwarded message -----

From: **Laker, Mark** <[mark\\_laker@fws.gov](mailto:mark_laker@fws.gov)>

Date: Thu, Mar 22, 2018 at 1:48 PM

Subject: 1002 area

To: "Noyles, Christopher" <[cnoyles@blm.gov](mailto:cnoyles@blm.gov)>

Cc: Nathan Olson <[nathan\\_olson@fws.gov](mailto:nathan_olson@fws.gov)>

Chris,

Flying the 1002 area would take about 10 hours (not including ferry time) for 50 cm ortho and DSM. That's using the Aero Commander, flying at 10,000 MSL going 220 kt. I'm not sure what the current wet rate of the commander is, probably around \$2800.

Since it would only take a couple days, if someone can contract and pay for the aircraft, I will fly the mission and process the data. If they want high spatial resolution, we should set out some targets if there aren't any natural ones. I'm not sure what they have for CORS up there, we could put a mobile base in Arctic Village.

thx,

m

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Mark Laker - Ecologist  
Kenai National Wildlife Refuge  
(907) 260-2809 phone  
(907) 398-9589 cell

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Brian Wright  
National Map Liaison - Alaska  
US Geological Survey  
[4210 University Drive](#)  
Grace Hall, Room 228  
[Anchorage, AK 99508](#)  
Office/Cell: 907-201-0113  
Email: [bwright@usgs.gov](mailto:bwright@usgs.gov)

[The National Map](#) - Your Source for Topographic



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Mark Laker - Ecologist  
Kenai National Wildlife Refuge  
(907) 260-2809 phone  
(907) 398-9589 cell

**From:** [Wendy Loya](mailto:Wendy.Loya)  
**To:** [john\\_trawicki@fws.gov](mailto:john_trawicki@fws.gov)  
**Subject:** Fwd: SOW comments  
**Date:** Wednesday, April 18, 2018 1:38:42 PM

---

Dr. Wendy M. Loya, Coordinator  
Office of Science Applications- Arctic Program  
Anchorage, Alaska  
[907.786.3532](tel:907.786.3532) (office)  
[907.227.2942](tel:907.227.2942) (mobile)

Begin forwarded message:

**From:** "Jorgenson, Janet" <[janet\\_jorgenson@fws.gov](mailto:janet_jorgenson@fws.gov)>  
**Date:** April 18, 2018 at 12:33:19 PDT  
**To:** Scott Guyer <[sguyer@blm.gov](mailto:sguyer@blm.gov)>  
**Cc:** Wendy Loya <[wendy\\_loya@fws.gov](mailto:wendy_loya@fws.gov)>  
**Subject:** Fwd: SOW comments

Thanks Scott, we did see your presentation and it was very helpful. I really liked that part at the end about bogs and fens too!

Addressing your 2nd point, in writing this draft of the SOW my intent was not necessarily to do less of the helicopter work but to add more ground work. We think that it is worth it to FWS to get that ground data and they seem to be willing to pay more to get it. To cover that, I added some days to the estimate of time in the field. I have never written a SOW for a land cover map before, so I should not be the person to write the final draft. In order for people to bid on a contract like this, they may need a more firm number of plots and helicopter plots required, or at least number of field/helicopter days. It wouldn't be fair if one group made a lower bid, thinking they would do little field work and another made a higher bid planning to do a thorough job. I don't know how much detail needs to be in a SOW. For this one, I just copied a NPS one Parker Martyn sent me and then added to it. I chose to use the NPS one because the others I had gotten from you for example seemed to be work plans written by a contractor after they already had the contract. I didn't think I should plagiarize text written by a contractor. The text in the NPS SOW appeared to be written by NPS.

I have a different perspective on the need for plant species percent cover data and environmental and soils variables collected on the ground. I'm in favor of first collecting good ground data and then building your vegetation classification and map from the ground up, instead of from the top down. It shouldn't be based only on what the satellite can 'see'. The main reason for the ground data is to assign a plant community type to the plot. You need good ground data to do that, including the sedges and dominant mosses IDed to species. Later you may or may not be able to map each plant community type as a separate land cover class (depending

on if it can be separated from similar types by spectral data or spectral combined with ancillary data layers), but you still have a good plant community description. That helps you derive your plant community classification for the area. The environmental and soil variables help determine what types of sites a community type can occur on and how it relates to other types in successional or topographic sequences. For mapping, that helps map a type with ancillary data if it can't be done with spectral data alone. If the plant community type must be lumped with other types for mapping because it can't be pulled out for mapping, you can still list that plant community type as included in a certain land cover class so it adds information and usefulness to the map.

The plant community types and mapable land cover classes can be better defined by the detailed ground data. Then the larger number of helicopter-level plots can be assigned community types and classes based on percent cover cutpoints, dominant species or indicator species derived from the ground plots. So the 2 different kinds of plots work together.

I actually don't think that the satellite signatures are based only on the plant canopy layer. I think that the satellites sense more of the understory and ground surface than you might think. We have done most of our vegetation plots with point sampling, to have more consistency between different observers. Our plots done before 2000 were done by point sampling lowering pins from a frame and recording all species hit by each pin. (Now we use a laser pointer, it's faster!) I think that point sampling, especially lowering pins, gives you a better idea of what the satellite can 'see' than ocular estimates of species cover do, which usually give higher estimates than the point sampling does. From the pin-drop data we have found that the plant canopy in tundra on north slope of refuge is much more open than you would think from looking at ocular estimate data. For example, even the shrubbiest plots have <50% shrub cover, so lots of understory is showing through. Even the sedge-iest plots have less than 50% live sedge cover and usually much less. In the moist vegetation types, which cover most of the area (we have little area of wet types), sedges have ~4 dead leaves for every live one, so the whitish, still-standing dead leaves are what the satellite sees more than the live green ones. (In wet sedge tundra, the dead leaves can decompose faster because they are in standing water, but in the moist types the dead leaves are up in the air and summer is too short and cool for rapid decomposition.) I also think that instead of green plant matter, the spectral signature is more strongly affected by a lot of physical factors that we may not necessarily be trying to map such as soil moisture, surface water, shadow between plants large and small, and composition of the ground layer: moss vs. organic soil vs mineral soil. Plus the highly-reflective, light colored standing dead sedge leaves,

Well, that was a really fun digression from my other work. I love talking about this stuff.  
Janet

On Tue, Apr 17, 2018 at 9:41 AM, Guyer, Scott <[sguyer@blm.gov](mailto:sguyer@blm.gov)> wrote:

Wendy & Janet- Hey, I hope you had a chance to listen in on the AGC land cover presentation last Friday. Hopefully, Dan and I covered all the procedures of our work so it was clear how we were able to map a significant portion of Alaska. I believe the power point is available.

I did have a chance to briefly look over your SOW for the 1002 land cover. At this point I just have a few general comments:

1. **Scale and Resolution.** Just so it is clear the LandSat satellite which is the platform we used for the BLM/DU mapping projects collects imagery at a 30 meter pixel scale. That mean that each pixel represents 30 x 30 meters on the earth. It just so happens that 30m X30m is very close to 1:63,360 scale which is the scale of our quad maps. This means that each inch on the map represents 63,360 inches on the ground. Just like when you take a digital photo you can enlarge it and it may look pixelated but then you can reduce it and it looks much better, however, the actual pixels in the photo represent the same area. So if you want a final map at 1:63,360 (inch to the mile) or 1:31,680 (two inches to the mile) or 1:100,000 scale all those can be available but what is constant is that the pixel resolution will always be the same 30 meter.
2. **Field Data Collection.** When we collect field information to best describe the ecosystem we use a stratified on the ground method where we describe vegetation in each strata. While this is beneficial as supplementary information about plant associations for each vegetation class most of the data for land cover should be collected via helicopter. Not only will you be able to collect significantly more field sites the information you will be collecting is better suited for image processing. Since the satellite image only looks at the top, visible vegetated layer for each pixel understory information has limited value. Land cover classification is a broad scale method that describes the major vegetation components that make up the canopy layer in each pixel and the best way to view that and describe it is from above.
3. **NVC.** Although we have a group meeting to develop the NVC layer for Alaska and the arctic this work is not complete. In addition, once the NVC is finalized you would still have to go through the process of identifying which NVC classes can be mapped and which need to be combined into one map class. A more likely scenario is that we use the Alaska Land Cover classification (Viereck et. el) for this project and the once the work is completed derive a cross walk to the NVC.

--

*Scott Guyer*  
*Landscape Initiatives Coordinator*  
Alaska State Office  
907-223-6759 (wk cell)

*"Not the victory but the action, Not the goal but the game,  
In the deed the Glory!"*

--

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907-456-0216

--

Janet C. Jorgenson  
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Fairbanks, Alaska 99701

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**From:** [Leonard, Paul](#)  
**To:** [Laker, Mark](#)  
**Cc:** [Wendy Loya](#)  
**Subject:** Re: 1002 area imagery  
**Date:** Wednesday, April 25, 2018 11:05:23 AM

---

Hi Mark,

Earlier in this chain you mention this:

Nate Olson and I submitted a proposal a few weeks ago for creating an orthomosaic of the 1002 lands at a resolution of 45cm.

However, that proposal was not attached to the email I received. Can you pass that along?

To answer one of your questions:

Wendy is out of town this week and I am taking the lead on facilitating this discussion (From the Arctic LCC's perspective). I am meeting with Refuge staff to get specifics on desired products and resolution and will circle back with you. I will say that we have several prospective pieces that we are trying to align to achieve maximum efficiency.

Cheers,  
Paul

On Wed, Apr 18, 2018 at 11:48 AM, Laker, Mark <[mark\\_laker@fws.gov](mailto:mark_laker@fws.gov)> wrote:

Wendy,

Who is requesting this data? Who is the PI? I see FWS, and Arctic LCC mentioned, but no individuals? What is the desired product and resolution?

Even with matching funding from the 3DEP program, we can most likely do it cheaper in house and get additional products.

thx,

m

On Wed, Apr 18, 2018 at 11:37 AM, Wendy Loya <[wendy\\_loya@fws.gov](mailto:wendy_loya@fws.gov)> wrote:

Mark,

Thanks for keeping us in the loop, please include Paul Leonard in all future correspondence. Towards this conversation, we have a regional plan to pursue updated vegetation, NWI and NHD maps. We mentioned the need for snow free highly accurate SfM. Let's do our best to make sure we coordinate wherever possible for best products and cost savings.

Thank you,  
Wendy

Dr. Wendy M. Loya, Coordinator

Office of Science Applications- Arctic Program  
Anchorage, Alaska  
[907.786.3532](tel:907.786.3532) (office)  
[907.227.2942](tel:907.227.2942) (mobile)

On Apr 18, 2018, at 12:27, Laker, Mark <[mark\\_laker@fws.gov](mailto:mark_laker@fws.gov)> wrote:

Steve,

Attached is a proposal Nate Olson and I submitted a few weeks ago for creating an orthomosaic of the 1002 lands at a resolution of 45cm. This is a cost w/o ground control, so the accuracy would be around 1-2 meters. With 8-10 ground control points and scale bars this can be decreased to <10cm.

Having BLM do the ground control may be most cost effective.

I haven't seen what the actual desired products and specs are, so I can't give a definitive cost estimate. If needed we have access to higher end camera systems such as a Phase One camera, Applanix mount, and IMU within FWS. I also have a very good relationship with Alaska Division of Geological & Geophysical Surveys. They have just acquired a LiDAR unit, so it may be possible to partner with them, if some LiDAR acquisition is needed.

Again, I can be more helpful knowing what the desired products are.

thx,

m

On Wed, Apr 18, 2018 at 9:09 AM, Wackowski, Stephen  
<[stephen\\_wackowski@ios.doi.gov](mailto:stephen_wackowski@ios.doi.gov)> wrote:

Gents-

Thanks for taking the initiative on this. Any in-house DEM capability should be looks at first, especially if it meets the data requirements for BLM and USFWS as we undertake the congressional mandated 1002 lease sale. As I am sure you all know, this is a top secretarial priority for Alaska.

I'm adding Mark Bathrick at OAS to the chain. Mark- Can you cast a net and see if we have any additional L48 capability to collect structure for motion or LIDAR/LIDAR like elevation data. I wish we had BVLOS UAS capability to do it, but 1002 is so large that manned aircraft is probably our best and only option.

-Steve

Steve Wackowski  
Senior Adviser for Alaskan Affairs  
Department of the Interior  
[4230 University Drive, Suite 300](#)  
[Anchorage, AK 99508](#)  
[907-271-5485](#)

On Wed, Apr 18, 2018 at 1:01 PM, Wright, Brian <[bwright@usgs.gov](mailto:bwright@usgs.gov)> wrote:

Mark,

In February, I was contacted by the Arctic LCC regarding elevation data available for the 1002 area. During the conversation, the FWS was making inquiries at acquiring high resolution elevation data for the 1002.

I provided an overview of the 3DEP Broad Agency Announcement and the matching federal funding for the collection of lidar at QL2 level. I noted that sfm is currently not a collection methods approved by the program to gain federal funding assistance. FWS mentioned the possibility of collecting sfm and I believe they were in contact with Matt Nolan out of Fairbanks.

The FWS is also interested in updating the hydrography for the 1002 area and has made some inquiries on possible options on how to complete.

Brian

Paul Leonard, PhD  
Science Coordinator  
[Arctic LCC](#)  
[\(907\) 456-0445](#)  
[paul\\_leonard@fws.gov](mailto:paul_leonard@fws.gov)

On Tue, Apr 17, 2018 at 3:56 PM, Noyles, Christopher <[cnoyles@blm.gov](mailto:cnoyles@blm.gov)> wrote:

Steve,

I've had a couple discussion with folks about the potential interest in collecting Lidar or Structure for Motion (SfM) data in the 1002 area. If you recall we talked briefly about this in our initial PB meeting with FWS. At the time, I reminded folks of the available IfSAR data which Brian Wright has delivered.

The topic of SfM has come up as an item of interest. Which is why I'm passing this info along. Mark Laker from the USFWS Kenai National Wildlife Refuge has been doing SfM for a while. I recently asked him for if anyone had approached him about the 1002 Area, he said no. I asked if had a ball park figure to fly and process the data. See below for detail. Might be a cheap in-house opportunity worth consideration. It's not Lidar but a whole lot cheaper.

Cheers,

Chris

Christopher C. Noyles  
Civil Applications Committee - Alaska Liaison  
US Department of Interior/Bureau of Land Management  
Alaska State Office, Division of Support Services  
[222 West 7th Ave # 13, Anchorage AK 99513](http://222 West 7th Ave # 13, Anchorage AK 99513)  
Phone: (907) 271-5693  
Personal Cell: (907) 271-5693  
FAX: (907) 271-3118  
email: [cnoyles@blm.gov](mailto:cnoyles@blm.gov)

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----- Forwarded message -----

From: **Laker, Mark** <[mark\\_laker@fws.gov](mailto:mark_laker@fws.gov)>  
Date: Thu, Mar 22, 2018 at 1:48 PM  
Subject: 1002 area  
To: "Noyles, Christopher" <[cnoyles@blm.gov](mailto:cnoyles@blm.gov)>  
Cc: Nathan Olson <[nathan\\_olson@fws.gov](mailto:nathan_olson@fws.gov)>

Chris,

Flying the 1002 area would take about 10 hours (not including ferry time) for 50 cm ortho and DSM. That's using the Aero Commander, flying at 10,000 MSL going 220 kt. I'm not sure what the current wet rate of the commander is, probably around \$2800.

Since it would only take a couple days, if someone can contract and pay for the aircraft, I will fly the mission and process the data. If they want high spatial resolution, we should set out some targets if there aren't any natural ones. I'm not sure what they have for CORS up there, we could put a mobile base in Arctic Village.

thx,

m

--

---

Mark Laker - Ecologist

Kenai National Wildlife Refuge  
(907) 260-2809 phone  
(907) 398-9589 cell

--

Brian Wright  
National Map Liaison - Alaska  
US Geological Survey  
[4210 University Drive](#)  
Grace Hall, Room 228  
[Anchorage, AK 99508](#)  
Office/Cell: 907-201-0113  
Email: [bwright@usgs.gov](mailto:bwright@usgs.gov)

[The National Map](#) - Your Source for Topographic



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<2018\_HighResolutionOrthoimagery\_ANWR\_1002.docx>

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--

Paul Leonard, PhD  
Science Coordinator

[Arctic LCC](#)

101 12th Ave. Room 216

Fairbanks, AK 99701

(907) 456-0445

**From:** [Guyer, Scott](#)  
**To:** [Jorgenson, Janet](#)  
**Cc:** [John Trawicki](#); [Paul Leonard](#); [Wendy Loya](#)  
**Subject:** Re: SOW for 1002 map  
**Date:** Friday, April 27, 2018 11:14:04 AM  
**Attachments:** [SOW\\_Review\\_SG.docx](#)  
[NSSI Arctic Zone - DUFF Decision Tree -FINAL \(1\).docx](#)

---

Janet- I have reviewed the SOW and have decided to provide my comments here in an attached email instead of doing any changes to the document. I thought I would let you look over my suggestions and include those that you felt were important enough to add to the document. In addition I included the NSSI vegetation classification decision tree which shows what classes we mapped on that project. If you have any questions please let me know.

Scott

On Mon, Apr 23, 2018 at 9:37 AM, Jorgenson, Janet <[janet\\_jorgenson@fws.gov](mailto:janet_jorgenson@fws.gov)> wrote:

I made a few small edits to the SOW John sent out last week and attached the new file below.

To write this SOW, I copied a SOW from Katmai for a 'soil landscapes' map and then added stuff. The NPS SOWs are very detailed, such as having all those interim deliverables. That seemed like a good idea to me, so I kept that format. My disclaimer is that I have never written a SOW for a map before and I doubt it is ready to be released as is. We are hoping that Scott can go over it first!

--

Janet C. Jorgenson  
Botanist  
Arctic National Wildlife Refuge  
101 12th Ave, Rm 236  
Fairbanks, Alaska 99701

907-456-0216

--

**Scott Guyer**  
**Landscape Initiatives Coordinator**  
Alaska State Office  
907-223-6759 (wk cell)

***"Not the victory but the action, Not the goal but the game,  
In the deed the Glory!"***

**From:** [Jorgenson, Janet](#)  
**To:** [Guyer, Scott](#)  
**Cc:** [John Trawicki](#); [Paul Leonard](#); [Wendy Loya](#)  
**Subject:** Re: SOW for 1002 map  
**Date:** Friday, April 27, 2018 2:50:51 PM

---

Thank you very much, Scott. I will have time to make edits based on some of your comments before I pass this back to Wendy on Monday. I'll call you if I think of any questions. Thanks for taking the time to help.

On Fri, Apr 27, 2018 at 9:13 AM, Guyer, Scott <[sguyer@blm.gov](mailto:sguyer@blm.gov)> wrote:

Janet- I have reviewed the SOW and have decided to provide my comments here in an attached email instead of doing any changes to the document. I thought I would let you look over my suggestions and include those that you felt were important enough to add to the document. In addition I included the NSSI vegetation classification decision tree which shows what classes we mapped on that project. If you have any questions please let me know.

Scott

On Mon, Apr 23, 2018 at 9:37 AM, Jorgenson, Janet <[janet\\_jorgenson@fws.gov](mailto:janet_jorgenson@fws.gov)> wrote:

I made a few small edits to the SOW John sent out last week and attached the new file below.

To write this SOW, I copied a SOW from Katmai for a 'soil landscapes' map and then added stuff. The NPS SOWs are very detailed, such as having all those interim deliverables. That seemed like a good idea to me, so I kept that format. My disclaimer is that I have never written a SOW for a map before and I doubt it is ready to be released as is. We are hoping that Scott can go over it first!

--

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--

*Scott Guyer*  
*Landscape Initiatives Coordinator*  
Alaska State Office  
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*"Not the victory but the action, Not the goal but the game,*

| *In the deed the Glory!"*

--

Janet C. Jorgenson  
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907-456-0216

**From:** [Jorgenson, Janet](#)  
**To:** [Wendy Loya](#); [Paul Leonard](#); [Scott Guyer](#); [John Trawicki](#)  
**Subject:** Edits to SOW for land cover map  
**Date:** Monday, April 30, 2018 1:12:13 PM  
**Attachments:** [SOW\\_Review\\_SG\\_EditsByJJ.docx](#)

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Today is my last day of work, so I don't have time to incorporate Scott's comments into the draft SOW, but I added responses to his comments in this attached file. I hope someone else can edit/improve the SOW based on both our comments, which are all in this one file attached. Thank you, Scott, for looking at this carefully!

My home email after today is b6.

--

Janet C. Jorgenson  
Botanist  
Arctic National Wildlife Refuge  
101 12th Ave, Rm 236  
Fairbanks, Alaska 99701

907-456-0216

**From:** [Trawicki, John](#)  
**To:** [Doug Damberg](#); [Wendy Loya](#); [Steve Berendzen](#); [Joanna Fox](#)  
**Subject:** Fwd: 1002 Seismic Application  
**Date:** Tuesday, May 1, 2018 9:37:02 AM

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fyi-

----- Forwarded message -----

**From:** **Tracy Fischbach** <[tracy\\_fischbach@fws.gov](mailto:tracy_fischbach@fws.gov)>  
**Date:** Tue, May 1, 2018 at 7:15 AM  
**Subject:** Fwd: 1002 Seismic Application  
**To:** John Trawicki <[john\\_trawicki@fws.gov](mailto:john_trawicki@fws.gov)>, Stephanie Brady <[stephanie\\_brady@fws.gov](mailto:stephanie_brady@fws.gov)>

FYI -

----- Forwarded message -----

**From:** Brumbaugh, Robert <[rbrumbau@blm.gov](mailto:rbrumbau@blm.gov)>  
**Date:** Mon, Apr 30, 2018 at 12:55 PM  
**Subject:** Re: 1002 Seismic Application  
**To:** Lemons, Patrick <[patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)>  
**CC:** Hayes, Miriam (Nicole) <[mnhayes@blm.gov](mailto:mnhayes@blm.gov)>, Colligan, Mary <[mary\\_colligan@fws.gov](mailto:mary_colligan@fws.gov)>, Christopher Putnam <[Christopher\\_Putnam@fws.gov](mailto:Christopher_Putnam@fws.gov)>, Tracy Fischbach <[tracy\\_fischbach@fws.gov](mailto:tracy_fischbach@fws.gov)>

Hi Patrick,

I have been exchanging emails with SAE and the latest is that they are waiting for Teresa Imm (ASRC) to approve the updated application package. I also understand that the partnership (SAE, ASRC, and KIC) is meeting with your USFWS Director today. Not sure when that was supposed to happen. We'll be in touch as soon as something comes in.

On Mon, Apr 30, 2018 at 10:39 AM, Lemons, Patrick <[patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)> wrote:  
Hi Nicole and Robert,

Any updates for us on this or any idea when we can get a copy of their application?

Thanks,  
Patrick

On Thu, Apr 26, 2018 at 1:12 PM, Patrick Lemons <[patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)> wrote:  
Great. Thanks for the update.

Sent from my iPhone

On Apr 26, 2018, at 1:08 PM, Brumbaugh, Robert <[rbrumbau@blm.gov](mailto:rbrumbau@blm.gov)> wrote:

Hi Patrick,

As a result of the call yesterday, we agreed to give them 48 hours to put an updated package together, which would be COB Friday. If they complete it sooner, we will definitely provide a copy. USFWS input is extremely

important to this process.

On Thu, Apr 26, 2018 at 1:02 PM, Lemons, Patrick  
<[patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)> wrote:

Hi Robert and Nicole,

Any update on this and if/when we can get a copy of the application so we can start preparing for potential MMPA authorization?

Thanks,  
Patrick

On Wed, Apr 25, 2018 at 12:27 PM, Brumbaugh, Robert  
<[rbrumbau@blm.gov](mailto:rbrumbau@blm.gov)> wrote:

Thanks Nicole,

My primary goal of the 4pm meeting today will be to come out with a package of information that we can share with USFWS. The geophysical regs 43 CFR 3152 state that we have 90 days to process the application from the time it is received. If we cannot meet that timeline, we must notify the applicant in writing as soon as possible (paraphrasing).

On Wed, Apr 25, 2018 at 12:07 PM, Hayes, Miriam (Nicole)  
<[mnhayes@blm.gov](mailto:mnhayes@blm.gov)> wrote:

Hi Patrick,

There is a meeting this afternoon to discuss the application internally and I know that our Oil & Gas Team Lead (Rob Brumbaugh) has contacted Tracy about the NEPA component. We have not released a copy of it yet because every page has been marked proprietary. We hope to have that sorted out this afternoon. I will have an update for you tomorrow.

Thanks,  
Nicole

**Nicole Hayes**  
Project Coordinator  
Bureau of Land Management  
[222 W. 7th Avenue #13](#)  
[Anchorage, Alaska 99513](#)  
Desk: (907) 271-4354

On Tue, Apr 24, 2018 at 2:17 PM, Lemons, Patrick  
<[patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)> wrote:

Hi Nicole,

You may not remember but we met a few months ago over the phone while discussing 1002 issues and the MMPA. Unfortunately Drew Crane is out the rest of this week and we heard that BLM received an application to conduct seismic work in the 1002 this coming winter. Is there any chance we can get a copy of this application so that we

can start preparing for MMPA on our end? It would be very helpful to get an idea of the scope, timing, and size of the activity so we're prepared when an applicant comes in the door.

Let me know if you have any questions or if there is someone else we should direct this question to.

Thanks in advance for the help.

Patrick

--

Patrick Lemons, Ph.D.  
Chief, Marine Mammals Management  
U.S. Fish and Wildlife Service

[1011 East Tudor Road](#)  
[Anchorage, AK 99503](#)

Work: 907-786-3668

Cell: 907-717-6787

Fax: 907-786-3816

e-mail: [patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)

--

Rob Brumbaugh  
BLM-Alaska Oil and Gas Section Chief  
Division of Resources  
Bureau of Land Management  
[222 W 7th Ave., Ste 13](#)  
[Anchorage, AK 99513](#)  
907-271-4429

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--  
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Tracyann S Fischbach  
Natural Resources Planner  
National Wildlife Refuge System - Region 7  
Division of Natural Resources & Conservation Planning  
(907) 786-3369

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[Region 7 GeoPDF Map Portal](#)

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John Trawicki  
Water Resources Branch Chief  
National Wildlife Refuge System, Alaska  
U.S. Fish and Wildlife Service  
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Mobile: (907) 360-1656

"The single biggest problem with communication is the illusion that it has taken place"  
George Bernard Shaw

**From:** [Wendy Loya](#)  
**To:** [Donna Wixon](#); [Steve Berendzen](#)  
**Cc:** [Joanna Fox](#); [Nichelle \(Shelly\) Jones](#); [John Trawicki](#); [Stephanie Brady](#); [Sarah LaMarr](#)  
**Subject:** RE: Friday Seismic Application Meeting Update  
**Date:** Wednesday, May 2, 2018 10:54:20 AM

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Hi Donna,

Steve will be gathering Fairbanks staff, including someone from our ESA team for consultation. Can we set up a phone bridge so that we can also have staff call in from other parts of the state? One or two people from Anchorage, Kodiak and possibly Kenai would be good to have included.

Thank you,  
Wendy

Dr. Wendy M. Loya, Coordinator  
Office of Science Applications -Arctic Program  
US Fish and Wildlife Service  
Anchorage, Alaska  
907.786.3532 (office)  
907.277.2942 (mobile)

**From:** Wixon, Donna <[dwixon@blm.gov](mailto:dwixon@blm.gov)>  
**Sent:** Tuesday, May 1, 2018 4:31 PM  
**To:** Berendzen, Steve <[steve\\_berendzen@fws.gov](mailto:steve_berendzen@fws.gov)>  
**Cc:** Joanna Fox <[joanna\\_fox@fws.gov](mailto:joanna_fox@fws.gov)>; Shelly Jacobson <[njones@blm.gov](mailto:njones@blm.gov)>; John Trawicki <[john\\_trawicki@fws.gov](mailto:john_trawicki@fws.gov)>; Loya, Wendy <[wendy\\_loya@fws.gov](mailto:wendy_loya@fws.gov)>; Stephanie Brady <[stephanie\\_brady@fws.gov](mailto:stephanie_brady@fws.gov)>; Sarah LaMarr <[slamarr@blm.gov](mailto:slamarr@blm.gov)>  
**Subject:** Re: Friday Meeting Update

Sorry, I may have misunderstood what information you had been provided.

Last week I think you were on the phone call with Shelly, myself, the BLM State Office, ASRC, and SAExploration in regard to the seismic application they submitted for the 1002 area. They submitted an application and stamped confidential on every page. We told them that we need an application with information that may be viewed by the public. BLM is tasked with leading the NEPA (Arctic District Office) in regard to the application. Ted Murphy (BLM Associate State Director) has directed us to have a BLM/USFWS NEPA kickoff meeting this Friday from 10:30 to 12:30 at the Fairbanks Office.

It will be a project specific meeting and we would appreciate it if your staff that may be called upon to write the Effected Environment and Impact Sections of the NEPA would be able to participate.

We would like to put someone on the agenda to talk about the Polar Bear Consultation, would that be you or is there someone else we should invite?

Thank-you, please let me know if there is any other information I can provide. As soon as we get the application I will send it to you.

Donna

Donna L Wixon  
Natural Resource Specialist  
BLM Arctic District Office  
222 University Ave  
Fairbanks, Alaska 99709  
907-474-2301 Office  
907-474-2386 Fax  
[dwixon@blm.gov](mailto:dwixon@blm.gov)

On Tue, May 1, 2018 at 3:58 PM, Berendzen, Steve <[steve\\_berendzen@fws.gov](mailto:steve_berendzen@fws.gov)> wrote:

Thanks, Donna - I may have missed some earlier correspondence on this, but will this meeting be a meet and greet with general discussion, or will it get more specific with proposed areas of seismic coverage and equipment/methodology to be used? I haven't notified any staff and need a better understanding of what is expected before I encourage staff participation. Also what time were you planning to meet, and for what duration?

If you can give us a better sense of what will be discussed and what role our folks will have in this meeting, I can give you better feedback on this.

Steve Berendzen  
Refuge Manager, Arctic National Wildlife Refuge  
907-456-0253

On Tue, May 1, 2018 at 3:43 PM, Wixon, Donna <[dwixon@blm.gov](mailto:dwixon@blm.gov)> wrote:

Good Afternoon,

I don't have anything new to report, but I wanted to keep you in the loop. We are still waiting for a nonconfidential application. The last we heard a representative of ASRC and SAE were going to meet with someone from USFWS yesterday. They said state director but perhaps they meant regional director to discuss the permit. After the meeting they would make any changes to the permit request.

We have been given direction to have the meeting Friday and that is still our plan. Do you know how many people from your staff will be able to make the meeting? Are there any specific items you would like to see on the agenda?

Thank-you for your patience,  
Donna

Donna L Wixon  
Natural Resource Specialist  
BLM Arctic District Office  
[222 University Ave](mailto:dwixon@blm.gov)

Fairbanks, Alaska 99709  
[907-474-2301](tel:907-474-2301) Office  
[907-474-2386](tel:907-474-2386) Fax  
[dwixon@blm.gov](mailto:dwixon@blm.gov)

**From:** [Berendzen, Steve](#)  
**To:** [Wixon, Donna](#)  
**Cc:** [Joanna Fox](#); [Shelly Jacobson](#); [John Trawicki](#); [Loya, Wendy](#); [Stephanie Brady](#); [Sarah LaMarr](#); [Conn, Sarah](#); [Ted Swem](#); [Stephen Arthur](#); [Christopher Latty](#); [Greta Burkart](#); [Roger Kaye](#); [Joshua Rose](#); [Hollis Twitchell](#)  
**Subject:** Re: Friday Meeting Update  
**Date:** Wednesday, May 2, 2018 12:27:29 PM

---

Donna,

Thanks for the clarification. We expect to have 8 or 9 people attending from this office on Friday.

Sarah Conn and Ted Swem from the Fairbanks Field office plan to attend and will be able to address the polar bear consultation.

Steve Berendzen  
Refuge Manager, Arctic National Wildlife Refuge  
907-456-0253

On Tue, May 1, 2018 at 4:31 PM, Wixon, Donna <[dwixon@blm.gov](mailto:dwixon@blm.gov)> wrote:

Sorry, I may have misunderstood what information you had been provided.

Last week I think you were on the phone call with Shelly, myself, the BLM State Office, ASRC, and SAExploration in regard to the seismic application they submitted for the 1002 area. They submitted an application and stamped confidential on every page. We told them that we need an application with information that may be viewed by the public. BLM is tasked with leading the NEPA (Arctic District Office) in regard to the application. Ted Murphy (BLM Associate State Director) has directed us to have a BLM/USFWS NEPA kickoff meeting this Friday from 10:30 to 12:30 at the Fairbanks Office.

It will be a project specific meeting and we would appreciate it if your staff that may be called upon to write the Effected Environment and Impact Sections of the NEPA would be able to participate.

We would like to put someone on the agenda to talk about the Polar Bear Consultation, would that be you or is there someone else we should invite?

Thank-you, please let me know if there is any other information I can provide. As soon as we get the application I will send it to you.

Donna

Donna L Wixon  
Natural Resource Specialist  
BLM Arctic District Office  
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[Fairbanks, Alaska 99709](#)  
907-474-2301 Office  
907-474-2386 Fax  
[dwixon@blm.gov](mailto:dwixon@blm.gov)

On Tue, May 1, 2018 at 3:58 PM, Berendzen, Steve <[steve\\_berendzen@fws.gov](mailto:steve_berendzen@fws.gov)> wrote:

Thanks, Donna - I may have missed some earlier correspondence on this, but will this meeting be a meet and greet with general discussion, or will it get more specific with proposed areas of seismic coverage and equipment/methodology to be used? I haven't notified any staff and need a better understanding of what is expected before I encourage

staff participation. Also what time were you planning to meet, and for what duration?

If you can give us a better sense of what will be discussed and what role our folks will have in this meeting, I can give you better feedback on this.

Steve Berendzen  
Refuge Manager, Arctic National Wildlife Refuge  
907-456-0253

On Tue, May 1, 2018 at 3:43 PM, Wixon, Donna <[dwixon@blm.gov](mailto:dwixon@blm.gov)> wrote:

Good Afternoon,

I don't have anything new to report, but I wanted to keep you in the loop. We are still waiting for a nonconfidential application. The last we heard a representative of ASRC and SAE were going to meet with someone from USFWS yesterday. They said state director but perhaps they meant regional director to discuss the permit. After the meeting they would make any changes to the permit request.

We have been given direction to have the meeting Friday and that is still our plan. Do you know how many people from your staff will be able to make the meeting? Are there any specific items you would like to see on the agenda?

Thank-you for your patience,  
Donna

Donna L Wixon  
Natural Resource Specialist  
BLM Arctic District Office  
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[Fairbanks, Alaska 99709](#)  
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[907-474-2386](#) Fax  
[dwixon@blm.gov](mailto:dwixon@blm.gov)

**From:** [Hayes, Miriam \(Nicole\)](#)  
**To:** [Wendy Loya](#)  
**Subject:** info  
**Date:** Wednesday, May 2, 2018 2:20:40 PM

---

I will look for an EIS example to share of leasing only.

Also - just thinking about messaging to FWS staff for expectations tomorrow: it's their opportunity to be a member of the public and voice any known issues or concerns that should be identified in the scoping process. Also - the resource needs that have been previously identified. And anything they may be able to speak to that are impacting the resources now.

Thanks

**Nicole Hayes**  
Project Coordinator  
Bureau of Land Management  
222 W. 7th Avenue #13  
Anchorage, Alaska 99513  
Desk: (907) 271-4354

**From:** [Wixon, Donna](#)  
**To:** [Alfredo Soto](#); [Mitch Ellis](#); [Bud Cribley](#); [Christopher Latty](#); [Cindy Hamfler](#); [Debbie](#); [Greta Burkart](#); [Joanna Fox](#); [John Trawicki](#); [Joseph Keeney](#); [Joshua Rose](#); [kdebenham](#); [Lonnie Bryant](#); [Lynnda Kahn](#); [Matthew Whitman](#); [me](#); [Randy Goodwin](#); [Richard Kemnitz](#); [Robert Brumbaugh](#); [Roger Kaye](#); [Sarah Conn](#); [Sarah LaMarr](#); [Serena Sweet](#); [Shelly Jacobson](#); [Stacey](#); [Stephanie Brady](#); [Stephen Arthur](#); [Steve Berendzen](#); [Ted Murphy](#); [Ted Swem](#); [Terra Meares](#); [Wendy Loya](#); [Timothy Vosburgh](#)  
**Subject:** Information Request - DD Friday May 11  
**Date:** Monday, May 7, 2018 12:38:15 PM  
**Attachments:** [BLM USFWS Seismic Discussion Sign In Sheet 5.4.18.pdf](#)

---

Hello All,

Thank-you for participating in the Seismic Application Meeting last Friday. Attached is a copy of the sign in sheet. There were a few people that missed the sign in sheet so I added some names. If you notice I missed anyone please let me know.

As we pointed out Friday, the application is missing information that is needed to evaluate the proposed action. Please send me any questions you have about the proposed action so that I may compile them and ask the company to supply answers.

I would like all of the questions by the end of the day Friday May 11.

Thank-you,  
Donna

Donna L Wixon  
Natural Resource Specialist  
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907-474-2301 Office  
907-474-2386 Fax  
[dwixon@blm.gov](mailto:dwixon@blm.gov)

**From:** [Wendy Loya](#)  
**To:** [Patrick O'Dell](#)  
**Subject:** 1002 Seismic exploration application  
**Date:** Monday, May 7, 2018 2:35:55 PM  
**Attachments:** [Marsh Creek Plan of Operations\\_V8.1\\_F.pdf](#)

---

Hi Pat,

FYI... If you'd like to reply or be included on future correspondence regarding the seismic application that has been submitted for the 1002 area, please let Joanna Fox know, she'll be the FWS POC for the Seismic NEPA process (BLM lead) ...

**From:** Fox, Joanna <[joanna\\_fox@fws.gov](mailto:joanna_fox@fws.gov)>

**Sent:** Monday, May 7, 2018 12:06 PM

**To:** Alfredo Soto <[alfredo\\_soto@fws.gov](mailto:alfredo_soto@fws.gov)>; Christopher Latty <[christopher\\_latty@fws.gov](mailto:christopher_latty@fws.gov)>; Burkart, Greta <[greta\\_burkart@fws.gov](mailto:greta_burkart@fws.gov)>; Stephen Arthur <[stephen\\_arthur@fws.gov](mailto:stephen_arthur@fws.gov)>; Roger Kaye <[Roger\\_Kaye@fws.gov](mailto:Roger_Kaye@fws.gov)>; Joshua Rose <[joshua\\_rose@fws.gov](mailto:joshua_rose@fws.gov)>; Sarah Conn <[sarah\\_conn@fws.gov](mailto:sarah_conn@fws.gov)>; Swem, Ted <[ted\\_swem@fws.gov](mailto:ted_swem@fws.gov)>; Jennifer Reed <[jennifer\\_reed@fws.gov](mailto:jennifer_reed@fws.gov)>; John Martin <[John\\_W\\_Martin@fws.gov](mailto:John_W_Martin@fws.gov)>; Hollis Twitchell <[hollis\\_twitchell@fws.gov](mailto:hollis_twitchell@fws.gov)>; Steve Berendzen <[steve\\_berendzen@fws.gov](mailto:steve_berendzen@fws.gov)>; John Trawicki <[john\\_trawicki@fws.gov](mailto:john_trawicki@fws.gov)>

**Cc:** Bud Cribley <[bud\\_cribley@fws.gov](mailto:bud_cribley@fws.gov)>; Wendy Loya <[wendy\\_loya@fws.gov](mailto:wendy_loya@fws.gov)>; Lynnda Kahn <[lynnda\\_kahn@fws.gov](mailto:lynnda_kahn@fws.gov)>; stephanie\_brady <[stephanie\\_brady@fws.gov](mailto:stephanie_brady@fws.gov)>; Mitch Ellis <[mitch\\_ellis@fws.gov](mailto:mitch_ellis@fws.gov)>

**Subject:** Information Request - deadline: noon, Thursday, May 10

Good morning,

I will be coordinating a response to Donna's request for any additional information we believe is needed to fully evaluate the proposed seismic exploration action we discussed last Friday. I have attached the non-proprietary application for your convenience. Please review carefully and provide me any questions or additional information needs you'd like us to request of the applicant by noon Thursday, May 10. I'll compile what I receive into a single response, which will be provided to Donna by the Friday, May 11 deadline.

If I have missed anyone we should be seeking input from, please let me know.

Thank you!

Joanna

---

Joanna L. Fox  
Deputy Refuge Manager  
Arctic National Wildlife Refuge  
101 12th Avenue, Room 236  
Fairbanks, AK 99701  
(907) 456-0549

Follow us on Facebook!

[www.facebook.com/arcticnationalwildliferefuge](http://www.facebook.com/arcticnationalwildliferefuge)

*"Do what you can, with what you have, where you are." -- Theodore Roosevelt*

----- Forwarded message -----

From: **Wixon, Donna** <[dwixon@blm.gov](mailto:dwixon@blm.gov)>

Date: Mon, May 7, 2018 at 10:37 AM

Subject: Information Request - DD Friday May 11

To: Alfredo Soto <[alfredo\\_soto@fws.gov](mailto:alfredo_soto@fws.gov)>, Mitch Ellis <[Mitch\\_ellis@fws.gov](mailto:Mitch_ellis@fws.gov)>, Bud Cribley <[bud\\_cribley@fws.gov](mailto:bud_cribley@fws.gov)>, Christopher Latty <[christopher\\_latty@fws.gov](mailto:christopher_latty@fws.gov)>, Cindy Hamfler <[chamfler@blm.gov](mailto:chamfler@blm.gov)>, Debbie <[dnigro@blm.gov](mailto:dnigro@blm.gov)>, Greta Burkart <[greta\\_burkart@fws.gov](mailto:greta_burkart@fws.gov)>, Joanna Fox <[joanna\\_fox@fws.gov](mailto:joanna_fox@fws.gov)>, John Trawicki <[john\\_trawicki@fws.gov](mailto:john_trawicki@fws.gov)>, Joseph Keeney <[jkeeney@blm.gov](mailto:jkeeney@blm.gov)>, Joshua Rose <[joshua\\_rose@fws.gov](mailto:joshua_rose@fws.gov)>, kdebenham <[kdebenham@blm.gov](mailto:kdebenham@blm.gov)>, Lonnie Bryant <[lbryant@blm.gov](mailto:lbryant@blm.gov)>, Lynnda Kahn <[lynnda\\_kahn@fws.gov](mailto:lynnda_kahn@fws.gov)>, Matthew Whitman <[mwhitman@blm.gov](mailto:mwhitman@blm.gov)>, me <[dwixon@blm.gov](mailto:dwixon@blm.gov)>, Randy Goodwin <[rgoodwin@blm.gov](mailto:rgoodwin@blm.gov)>, Richard Kemnitz <[rkemnitz@blm.gov](mailto:rkemnitz@blm.gov)>, Robert Brumbaugh <[rbrumbau@blm.gov](mailto:rbrumbau@blm.gov)>, Roger Kaye <[roger\\_kaye@fws.gov](mailto:roger_kaye@fws.gov)>, Sarah Conn <[sarah\\_conn@fws.gov](mailto:sarah_conn@fws.gov)>, Sarah LaMarr <[slamarr@blm.gov](mailto:slamarr@blm.gov)>, Serena Sweet <[ssweet@blm.gov](mailto:ssweet@blm.gov)>, Shelly Jacobson <[njones@blm.gov](mailto:njones@blm.gov)>, Stacey <[sfritz@blm.gov](mailto:sfritz@blm.gov)>, Stephanie Brady <[stephanie\\_brady@fws.gov](mailto:stephanie_brady@fws.gov)>, Stephen Arthur <[stephen\\_arthur@fws.gov](mailto:stephen_arthur@fws.gov)>, Steve Berendzen <[steve\\_berendzen@fws.gov](mailto:steve_berendzen@fws.gov)>, Ted Murphy <[t75murph@blm.gov](mailto:t75murph@blm.gov)>, Ted Swem <[ted\\_swem@fws.gov](mailto:ted_swem@fws.gov)>, Terra Meares <[tmeares@blm.gov](mailto:tmeares@blm.gov)>, Wendy Loya <[Wendy\\_loya@fws.gov](mailto:Wendy_loya@fws.gov)>, Timothy Vosburgh <[tvosburgh@blm.gov](mailto:tvosburgh@blm.gov)>

Hello All,

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As we pointed out Friday, the application is missing information that is needed to evaluate the proposed action. Please send me any questions you have about the proposed action so that I may compile them and ask the company to supply answers.

I would like all of the questions by the end of the day Friday May 11.

Thank-you,  
Donna

Donna L Wixon  
Natural Resource Specialist  
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222 University Ave  
Fairbanks, Alaska 99709  
907-474-2301 Office  
907-474-2386 Fax  
[dwixon@blm.gov](mailto:dwixon@blm.gov)

**From:** [Fritz, Stacey](#)  
**To:** [Debenham, Krystal \(Melody\)](#)  
**Cc:** [Wixon, Donna](#); [Alfredo Soto](#); [Mitch Ellis](#); [Bud Cribley](#); [Christopher Latty](#); [Cindy Hamfler](#); [Debbie](#); [Greta Burkart](#); [Joanna Fox](#); [John Trawicki](#); [Joseph Keeney](#); [Joshua Rose](#); [Lonnie Bryant](#); [Lynnda Kahn](#); [Matthew Whitman](#); [Randy Goodwin](#); [Richard Kemnitz](#); [Robert Brumbaugh](#); [Roger Kaye](#); [Sarah Conn](#); [Sarah LaMarr](#); [Serena Sweet](#); [Shelly Jacobson](#); [Stephanie Brady](#); [Stephen Arthur](#); [Steve Berendzen](#); [Ted Murphy](#); [Ted Swem](#); [Terra Meares](#); [Wendy Loya](#); [Timothy Vosburgh](#)  
**Subject:** Re: Information Request - DD Friday May 11  
**Date:** Wednesday, May 9, 2018 2:00:46 PM  
**Attachments:** [NPR-A IAP ROD BMPs Subsistence Consultation H-1 H-2 H-3.pdf](#)

---

Donna, hi,

My questions and requests for more information include:

To what extent will measures similar to those included in NPR-A IAP subsistence Best Management Practices H-1 and H-2 be associated with this permit? Those BMPs are attached for reference.

Applicants for winter Oil and Gas activities in the NPR-A are typically required to consult with affected subsistence communities to plan activities and to submit documentation of consultation efforts and a Subsistence Plan with their Plan of Operation.

The Marsh Creek 3D Plan of Operations (5.0 Cultural Interface) states that it will coordinate with local communities and villages when operating in close proximity, however it only mentions meeting with Kaktovik before the seismic survey commences and documenting subsistence hunting and fishing that will be in the area at that time and keeping that information on file as a resource.

Ideally, the detailed plan of operations (with the complete information requested by Deb and Melody and other forthcoming data requests) should be presented to the potentially affected communities in time to allow for adjustments to the plan and to allow for government-to-government consultation with federally recognized tribes and ANCSA corporations if appropriate.

The Marsh Creek Plan (6.0 Oversight Panel) states that an oversight panel for Kaktovik will be developed to address subsistence issues and that that panel will report back to the communities near the project area and the agencies overseeing the project. (The plan lists Suzan Simonds of SAE as the POC for that. Should we reach out to Suzan directly for information about this oversight panel? )

It is not clear what the timeline for the oversight panel is: when and how will it be developed, how will members be selected, will its members be residents of Kaktovik only, and will it only report to Kaktovik? ('Local communities and villages" - plural - is what is stated in the Marsh Creek Plan but no other communities/villages are named).

A Subsistence Plan, if required, should include:

1. Precise meeting dates and locations.
2. The names of and contact information for subsistence representatives and the biologist hired by SAE to work with the panel.
3. Reporting on mitigation measures and conflict avoidance agreements, if any, developed

through such consultation.

4. Documentation of notification to allotment owners and camps and cabins users.
5. Procedures necessary to facilitate access by subsistence users to conduct their activities.

Thanks,

Stacey

On Wed, May 9, 2018 at 10:09 AM, Debenham, Krystal (Melody) <[kdebenham@blm.gov](mailto:kdebenham@blm.gov)> wrote:

Hi Donna-

Here are my comments on the fuel and waste sections:

#### 17.0 Fuel Supply and Storage

1. How much fuel will be used?
2. Please provide the size, type, and number of fuel storage tanks or other containers.
3. How often do you anticipate having to re-supply? How much fuel would be transported each time?
4. What type of equipment/supplies will be available on site to respond to a spill?
5. Please describe any training requirements for employees handling fuel.
6. Please provide a copy of the SPCC plan with site-specific information included.

#### 18.0 Waste Management

1. Will there be any hazardous wastes used or stored on site?
2. Please describe handling and disposal of any wastes generated during equipment maintenance and operations (used oil, etc).
3. Second paragraph states "Any wastes generated by seismic operations will be properly stored and disposed of in accordance with applicable permit stipulations and SAE controls." What types of wastes are anticipated to be generated by seismic operations?

Melody

On Mon, May 7, 2018 at 10:37 AM, Wixon, Donna <[dwixon@blm.gov](mailto:dwixon@blm.gov)> wrote:

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I would like all of the questions by the end of the day Friday May 11.

Thank-you,  
Donna

Donna L Wixon  
Natural Resource Specialist  
BLM Arctic District Office

[222 University Ave](#)  
[Fairbanks, Alaska 99709](#)  
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907-474-2386 Fax  
[dwixon@blm.gov](mailto:dwixon@blm.gov)

--

Melody Debenham  
BLM Arctic Office

(907) 474-2307  
[kdebenham@blm.gov](mailto:kdebenham@blm.gov)

--

~~~~~  
Stacey Fritz, PhD
Anthropologist/Subsistence Specialist
Bureau of Land Management Arctic District Office
Phone: (907) 474-2309; Cell: (907) 687-6549; Email: sfritz@blm.gov
Mail: 222 University Ave., Fairbanks, AK, 99709
[BLM NPR-A News Facebook Page](#)

From: [Hayes, Miriam \(Nicole\)](#)
To: [Berendzen, Steve](#)
Cc: [Loya, Wendy](#); [Doug Damberg](#)
Subject: Re: Trip to Kaktovik and Arctic Village; Scoping
Date: Thursday, May 10, 2018 12:38:39 PM

Our contractor is securing BLM rooms at Marsh Creek Inn. I would reserve a room ASAP for whoever will be going as you have identified them.

Nicole Hayes

Project Coordinator
Bureau of Land Management
222 W. 7th Avenue #13
Anchorage, Alaska 99513
Desk: (907) 271-4354

On Wed, May 9, 2018 at 6:32 PM, Berendzen, Steve <steve_berendzen@fws.gov> wrote:
Thanks, Nicole - if that's all the seating available, we'll see what we can work out.

Steve Berendzen
Refuge Manager, Arctic National Wildlife Refuge
907-456-0253

On Wed, May 9, 2018 at 2:56 PM, Miriam (Nicole) Hayes <mnhayes@blm.gov> wrote:

Hi,

I will not be told until Monday who is going to be part of the final manifest, but as of right now there are 3 VIPs, 2 BLMs, and 2 Contractors taking up seats on the chartered. Since we will only have 8 seats this will only leave 1 seat for FWS. I just wanted to provide a heads up if there is a need for FWS to either identify one person to go via BLM charter and if additional people could consider trying to be at the locations via commercial flights.

As a heads up - the press release should be going out soon announcing scoping dates and times. A decision was made to have a DC scoping meeting on 6/15 today as well.

Nicole

Sent from my iPad

From: [Whitman, Matt](#)
To: [Wixon, Donna](#)
Cc: [Alfredo Soto](#); [Mitch Ellis](#); [Bud Cribley](#); [Christopher Latty](#); [Cindy Hamfler](#); [Debbie](#); [Greta Burkart](#); [Joanna Fox](#); [John Trawicki](#); [Joseph Keeney](#); [Joshua Rose](#); [kdebenham](#); [Lonnie Bryant](#); [Lynnda Kahn](#); [Randy Goodwin](#); [Richard Kemnitz](#); [Robert Brumbaugh](#); [Roger Kaye](#); [Sarah Conn](#); [Sarah LaMarr](#); [Serena Sweet](#); [Shelly Jacobson](#); [Stacey](#); [Stephanie Brady](#); [Stephen Arthur](#); [Steve Berendzen](#); [Ted Murphy](#); [Ted Swem](#); [Terra Meares](#); [Wendy Loya](#); [Timothy Vosburgh](#)
Subject: Re: Information Request - DD Friday May 11
Date: Thursday, May 10, 2018 2:17:15 PM
Attachments: [Marsh Creek 3D Plan comments whitman.docx](#)

Find my comments and questions in the attached document.

Thanks,
Matthew

On Mon, May 7, 2018 at 10:37 AM, Wixon, Donna <dwixon@blm.gov> wrote:

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Donna

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Fairbanks, Alaska 99709
907-474-2301 Office
907-474-2386 Fax
dwixon@blm.gov

From: [Keeney, Joseph](#)
To: [Whitman, Matt](#)
Cc: [Wixon, Donna](#); [Alfredo Soto](#); [Mitch Ellis](#); [Bud Cribley](#); [Christopher Latty](#); [Cindy Hamfler](#); [Debbie](#); [Greta Burkart](#); [Joanna Fox](#); [John Trawick](#); [Joshua Rose](#); [kdebenham](#); [Lonnie Bryant](#); [Lynnda Kahn](#); [Randy Goodwin](#); [Richard Kemnitz](#); [Robert Brumbaugh](#); [Roger Kaye](#); [Sarah Conn](#); [Sarah LaMarr](#); [Serena Sweet](#); [Shelly Jacobson](#); [Stacey](#); [Stephanie Brady](#); [Stephen Arthur](#); [Steve Berendzen](#); [Ted Murphy](#); [Ted Swem](#); [Terra Meares](#); [Wendy Loya](#); [Timothy Vosburgh](#)
Subject: Re: Information Request - DD Friday May 11
Date: Thursday, May 10, 2018 3:35:38 PM
Attachments: [Keeney SAE seismic questions.docx](#)

Hi Donna,

I have only a few questions/comments in the attached document

On Thu, May 10, 2018 at 12:17 PM, Whitman, Matt <mwhitman@blm.gov> wrote:
Find my comments and questions in the attached document.

Thanks,
Matthew

On Mon, May 7, 2018 at 10:37 AM, Wixon, Donna <dwixon@blm.gov> wrote:
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Donna

Donna L Wixon
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907-474-2301 Office
907-474-2386 Fax
dwixon@blm.gov

--
Joe Keeney
Archaeologist

0000012158

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222 University Avenue
Fairbanks, Alaska 99709
907-474-2312
jkeeney@blm.gov

From: [Wixon, Donna](#)
To: [Alfredo Soto](#); [Bud Cribley](#); [Christopher Latty](#); [Cindy Hamfler](#); [Greta Burkart](#); [Joanna Fox](#); [John Trawicki](#); [Joshua Rose](#); [Lonnie Bryant](#); [Lynnda Kahn](#); [me](#); [Mitch Ellis](#); [Randy Brown](#); [Richard Kemnitz](#); [Roger Kaye](#); [Sarah Conn](#); [Sarah LaMarr](#); [Shelly Jacobson](#); [Stephanie Brady](#); [Stephen Arthur](#); [Steve Berendzen](#); [Ted Murphy](#); [Ted Swem](#); [Terra Meares](#); [Timothy Vosburgh](#); [Wendy Loya](#)
Subject: Seismic Application Questions Due today at the end of the day
Date: Friday, May 11, 2018 2:06:11 PM

Reminder: Any questions that you would like the applicant to answer in regard to the seismic plan of operations are due to me by the end of the day today.

Thanks,
Donna

Donna L Wixon
Natural Resource Specialist
BLM Arctic District Office
222 University Ave
Fairbanks, Alaska 99709
907-474-2301 Office
907-474-2386 Fax
dwixon@blm.gov

From: [Fox, Joanna](#)
To: [Wixon, Donna](#)
Cc: [Steve Berendzen](#); [Wendy Loya](#); [stephanie brady](#); [Bud Cribley](#); [Lynnda Kahn](#)
Subject: Re: Information Request - DD Friday May 11
Date: Friday, May 11, 2018 5:25:57 PM
Attachments: [FWS questions and comments re SAE seismic application.docx](#)

Hi Donna,

Attached please find a compilation of requests for more information from the seismic applicant. This document includes comments from Arctic Refuge staff, as well as specialists in our regional and headquarters offices. If you have questions or need clarification on anything in the document, please don't hesitate to contact me. There is a lot of overlap in topics, so likely quite a bit of duplication, though I attempted to eliminate that where obvious.

Thanks much,
Joanna

Joanna L. Fox
Deputy Refuge Manager
Arctic National Wildlife Refuge
101 12th Avenue, Room 236
Fairbanks, AK 99701
(907) 456-0549

Follow us on Facebook!
www.facebook.com/arcticnationalwildliferefuge

"Do what you can, with what you have, where you are." -- Theodore Roosevelt

On Mon, May 7, 2018 at 10:37 AM, Wixon, Donna <dwixon@blm.gov> wrote:

Hello All,

Thank-you for participating in the Seismic Application Meeting last Friday. Attached is a copy of the sign in sheet. There were a few people that missed the sign in sheet so I added some names. If you notice I missed anyone please let me know.

As we pointed out Friday, the application is missing information that is needed to evaluate the proposed action. Please send me any questions you have about the proposed action so that I may compile them and ask the company to supply answers.

I would like all of the questions by the end of the day Friday May 11.

Thank-you,
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Marsh Creek 3D 2018 Winter Seismic Survey Plan of Operations (PoOP): Comments and Questions

General comments:

1. Overall, narrative sections of the proposed action, i.e., Plan of Operations (PoOP) (SAExploration 2018) has a lack of applicable details for proper agency review, effects analysis, and comment.
2. Neither the BLM, which provides the lead for oil and gas permitting on federal lands, nor the Refuge Manager are listed as points of contact in the application. Many other discrepancies are annotated below.
3. The PoOP does not address the standing and relevant regulatory criteria under 50 CFR §§ 37 - Geological and Geophysical Exploration of the Coastal Plain, Arctic National Wildlife Refuge, Alaska: specifically,
 - a. application requirements (50 CFR § 37.21), notwithstanding voiding of the closure date, i.e., 31 May 1986 [50 CFR § 37.21(b) and (c)] through the enactment of the 2018 Tax Bill;
 - b. environmental protections (50 CFR § 37.31); or,
 - c. special areas (50 CFR § 37.32).
 - d. Relevant Arctic Refuge statutory purposes under ANILCA, including 2018 updates, or Refuge Administration Act/Improvement Act are not addressed.
4. A few examples of mitigation guidance for geological and geophysical exploration include the following: Clough et al. (1987) and BMPs and ROPs identified by the NPRA Final Integrated Activity Plan EIS (BLM 2012) among many other more recent NEPA documents for the North Slope oil and gas industry (USACE 2012; BLM 2014, 2015, 2016; SAExploration 2016a, 2016b; BOEM 2017).
5. There is no compliance with NEPA for the PoOP, especially in view of potential significant direct, indirect, and cumulative effects for the past, present, and foreseeable future. As a result, there is no documentation of environmental effects, whether positive or adverse, nor recommendations for mitigation including project design features, otherwise termed best management practices (BMPs) or required operating procedures (ROPs) (e.g., Clough et al. 1987; BLM 2012, 2013, 2014, 2015, 2016; SAExploration 2016a, 2016b; BOEM 2017; among others).
6. Air quality, although presumed to be a minimal effect for seismic exploration, is not addressed from a cumulative perspective with past, present and reasonably foreseeable activities for the larger airshed of the North Slope.
7. Refuge purposes include ensured continuation of subsistence opportunities. Please include a section on subsistence that includes timing and routes so that it is possible to evaluate the potential effects on subsistence users and resources.

Section 4.0

1. 1st paragraph, last sentence – for ‘what we have learned over the past several years’, are there reports documenting what has been learned, reports either by SAE, oil companies or BLM or DNR regulators? If not reports, are there trip reports or memos? If so, can FWS staff see them? What is the power to detect change and statistical inference of these studies?

2. What is your experience conducting specific activities with specific equipment at the most environmentally risky conditions (slopes and snow, soil, and vegetation conditions) that you propose to encounter? Have there been studies assessing the impacts and risks when operating under these conditions with specific types of equipment? If so, what is the statistical inference of these studies and please provide the reports and data.

Section 5.0 Cultural Interface

1. How are the concerns of Arctic Village and Venetie addressed?

Section 6.0 Oversight Panel

1. Who does the biologist hired by SAE report to? BLM? FWS? Will this be an independent contractor hired by BLM and FWS and paid for by SAE? On a project like this we would generally have FWS monitors assigned to the project to answer questions in real-time on the ground.

Section 9.0 Mobilization and Access (and follow-up monitoring and restoration related to these activities)

1. "The crews will mobilize to existing gravel pads which will allow access to the tundra and provide a resupply area for the crews" (Page 7: SAExploration 2018). These gravel pads are not identified in the PoOP – whether inside the 1002 area boundary or adjacent to it. Where are the gravel pads and travel corridors? Locations of ingress and egress?
2. SAE states "SAE will attempt to coordinate with companies to use any existing or planned trails." There are no existing trails in the permit area and what other companies do they refer to? Coordination should be happening with BLM and/or FWS in regards to avoiding sensitive areas. Also, an analysis of the effects of maintaining a stationary camp in a non-sensitive area vs. dragging it along every few days is needed. Do you have information to address these needs? How large of a gap between work areas can there be before your operations are impacted?
3. Note that the suggested ingress/egress route from Deadhorse to the 1002 area across the coastal plain, and inferring a similar, continuing route across the 1002 area, traverses critical denning habitat for the polar bear (FWS 2008, FWS 2009, FWS 2016a).
4. The stated operating period of the PoOP is 1 Dec through 31 May* annually, or upon adequate snowfall or other environmental conditions to support winter travel, until the tundra travel is closed by onset of spring weather conditions. However, this does not address:
 - a. assumed annual winter seismic exploration activity periods and phases as industry standard and convention used for reference in this review; note this would be problematic for activities during late (beyond 1 May) seasonal demobilization as breeding and calving are occurring on the coastal plain
 - b. staging of equipment outside of that annual performance window, nor ingress and egress timing to the 1002 area, such that mobilization begins at Deadhorse on 1 Dec and return by 31 May, or when conditions are such that tundra travel

- c. if (how and where) seismic surveys will be conducted when adequate snowfall or other environmental conditions are not conducive to tundra travel – including how will this be assessed/monitored to preclude soil compaction and/or vegetation damages when adequate snow is not present and the spatial inference of these surveys be (Also see questions under 10.0 Surveys and Ice Check Section);
 - d. how changing weather and climate may affect seismic survey operations with an increasingly shortened winter period
- 5. What dates and when and where will they be operating? (not enough to say “1 December to May 31”) The PoOP identifies the entire coastal plain 1002 area (1,665,280 ac) as the project area for the 2018-2019 and 2019-2020 winter seasons. There is no defined project area or project definition from which specific effects may be evaluated or mitigation recommendations offered by the Arctic Refuge Manager. A map identifying when, where, what, etc., per 50 CFR § 37.21(d)(4) is needed. The PoOP title implies the Marsh Creek environs but there is no mention of this tributary beyond the title. Please provide routes and what type of activity, storage, etc will occur at locations within the permit area. For example, if you plan to be working near any of the Refuge springs or other special areas, we will need to develop relevant stipulations and will need more information on what type of activity is proposed.
- 6. It is surprising that older technologies known to cause substantial impacts have not been updated. For example, 2 D7G CAT Dozers are listed as equipment for the sled camp (Page 17, Appendix B: SAExploration 2018). This tracked equipment, or equivalent is documented as causing the most damage to tundra, requiring decades to recover, if at all (Truett and Kertell 1992; Emers and Jorgenson 1997). Are there advances in technology that we are not aware? If so, what is the documented effectiveness and did associated surveys have a statistically valid design, what was the change detection capability, and what is the statistical inference for various vegetation and soil types, snow and soil conditions, slopes, etc.
- 7. Will SAE be allowed to mobilize, resupply, use airstrip, etc. at Point Thompson? This could reduce vehicle traffic across tundra on state land to Dalton Highway.
- 8. Are there ice or snow roads between Dalton Highway and Point Thompson that you could travel on to reduce tundra damage? If not, could you travel some of the distance on sea ice?
- 9. To assess vulnerability, inform route planning and avoid unnecessary damage, what soil and vegetation surveys will be conducted along the proposed routes and what will the spatial resolution of these surveys be? Note – that supplying this information for routes where extremely heavy equipment (e.g., camp moves, resupplies) will be moved is particularly important.
- 10. What are the operating plans and environmental protection protocols for tundra travel? How will these protocols differ for different snow and soil conditions and for travel on steep slopes, areas with sensitive soil/vegetation types, and near special areas (e.g. groundwater-fed springs, overflow ice, ice-hummocks, and waterbodies that may support fish)?
- 11. For each type of activity/equipment (e.g. camp moves, resupplies, snow machine access, refueling, transport of fuel and hazardous chemicals), describe what the environmental regulations/limits will be for the following:
 - a. What is the maximum slope that operations for each type of activity/equipment would occur on? This information will allow us analyze the potential for impacts of different activities (e.g. fuel storage, transport of hazardous materials, camp moves, seismic) would be occurring on steep slopes.

- b. What are the soil and vegetation type requirements for each type of operation/equipment? This information will allow for a more meaningful analysis of impacts to tundra.
 - c. What are the criteria for snow and soil characteristics that will be required for each type of activity/equipment? Will these criteria vary with slope and type of soil and vegetation?
12. What are the proposed routes for camp moves or other travel that may cause substantial damage to the tundra? Please provide a map and GIS file. Please provide the following information broken down in a table and linkable to GIS format:
- a. Proposed route distance
 - b. Timing
 - c. Type of activity (e.g. resupply, camp move)
 - d. Type of equipment (e.g. vehicle type, sled, skis)
 - e. Weight of vehicle/equipment empty
 - f. Weight of equipment/vehicle fully loaded
 - g. Pounds per square inch (PSI) pressure of vehicle, sled, or skis empty
 - h. Pounds per square inch (PSI) pressure of vehicle, sled, or skis fully loaded (note – this especially important for sleds or vehicles that haul large volumes of water or fuel, kitchen and bath units, etc.)
 - i. Total footprint of all vehicle or other equipment in contact with ground
 - j. Type of tire (tracked versus wheeled)
 - k. Track material (e.g. steel versus rubber)
 - l. Are tracks cleated or uncleated? Number of times a particular route would be exposed to a particular PSI from a particular vehicle, sled, or skis.
 - m. Maximum slope that this equipment would travel on and at what weights (minimum and maximum)
 - n. Snow depth requirements for this type of vehicle/equipment
 - o. Freezing depth requirements for this type of vehicle/equipment
 - p. Link to soil and vegetation type requirements for use of this vehicle/equipment and environmental protections protocol
 - q. Are hazardous material transported on this type of equipment?
 - r. Is more than 500 gallons of fuel be transported on this type of vehicle/equipment?
13. How and where will snow be gathered and moved for construction of snow trails and ramps?
14. What are the soil and snow characteristics that would elicit the need for creating snow trails?
15. How far can snow be transported for trail making?
16. What are the topographic and other criteria that elicit the need for creating snow ramps?
17. More detail about snow packed trails: can you preplan a route well enough to prepack trails for all of the camp moves and long-haul fuel moves? If not, can you prepack main routes through the work area and minimize movement of heavier vehicles off of those prepacked routes? For example, move camps and fuel on prepacked trails with only short spurs off of it to reach camp sites.
18. When would be prepacking be done? Will it be done before snow is deep enough for the tundra travel season to open? What vehicles would be used during this time?

19. What equipment will be used for moving and placing snow, what is the operating plan, and what is the environmental protection protocol?
20. How will the permittee ensure that significant volumes of snow/water (snow water equivalent) are not translocated (e.g. by snow-fence captures or removal and application of snow) to other drainages?
21. Snow compaction can impede natural surface flows during breakup. What are the locations of proposed snow trails? What operating procedures will be followed to reduce hydrologic impacts of snow trails?
22. How many resupply trips will be needed along routes?
23. How many vehicles and what type will be involved in resupply trips?
24. Will resupply vehicles use existing trails?
25. What is the typical size (area covered) of a 3D seismic grid that would be completed by 2 crews in one winter season? Or what size would a grid in the 1002 area in 2018-19 probably be? Would it probably be roughly a square? For the expected size and shape of the grid area, how many miles of camp move trails would there be within the work area (not including miles of access to reach the edge of the work area)?

10.0 Survey and Ice Check

1. This appears to be from a sea-ice based project proposal or from an area where there are many lakes. It should be reworked to account for activities in a mostly tundra environment where snow is known to blow around making snow drifts with intermittent bare ground or thin snow.
2. The applicant states that "In low snow years, snow surveys will be conducted to substantiate depths and will be recorded for equipment movement efforts" and sentence ends - (Page 8 under 10.0 Survey and Ice check: SAExploration 2018). This does not address the adequacy of snow nor preclusion of survey impacts. A description of activities is needed for "low" snow years, including a description of what they feel "adequate" snow cover would be. How might weather and changing climate affect seismic survey operations with an increasingly shortened winter period. Is the applicant prepared to deal with early melts? If so, how?
3. What provisions are there for the possibility that snow conditions deteriorate before the train returns?
4. Where would snow surveys be done in order to decide when exploration could begin?
5. What is the proposed survey design and statistically determined spatial and temporal inference for collecting data (e.g. weather, snow, slope and soil) necessary to assess whether or not activities can occur?
6. How will SAE gather data on frost and snow conditions and provide them to the authorized officer, so the he/she can make an informed decision?
7. There can be large expanses with no snow cover in the 1002 Area. What are the contingency plans in the event extensive areas with low snow cover and/or unfrozen ground are encountered? Do you plan to conduct aerial snow surveys at least a year ahead of time or conduct snow modeling efforts to get a general sense of where these large expanses are to help develop your contingency plans for these areas?

11.0 River Crossings (and lake)

1. Ice-road, ice ridge and ramp construction across deep ravines need to consider spring snowmelt or storm events to preclude damming that could cause impounded water as a heat sink, flooding, erosion and mass wasting, water turbidity, suspended solids, stream rechanneling, and/or bank stabilization.
2. SAE refers here, and throughout the document, to coordinating with the State of Alaska. Note that coordination with the BLM and FWS will also be necessary.
3. Need a clear understanding of how they plan to move across areas where the banks are deep and steep.
4. Constructing ice bridges in the absence of water or water-limited conditions is problematic – isolated, shallow lakes; minimal or absent winter flows in streams and rivers; minimum pool size and freezing-depth to protect overwinter fish habitat (in contrast with the NPRA where water is abundant and average snow depths much deeper). The PoOP provides no specific information on accessing water, water requirements, or ice bridge locations, given the overall limitation of water in the 1002 area,
5. What are the environmental protection protocols for building ice roads, traveling on river and lake ice, and preventing additional freeze-down of ice, impacts to spring fish migration, and altering spring flooding events?
6. Are there special provisions for avoiding spring-fed areas, aufeis, deep pools that do not freeze to the bottom, ice-hummocks, and potential fish-bearing lakes?
7. Cross-slope travel is indicated and implied in PoOP Appendix C (SAExploration 2018) not only from Deadhorse to the 1002 area, but within the 1002 area with steeply sloped topography and cut by deep ravines. Stream crossing points are not identified nor consolidated for seismic surveys or sled camps – this links back to the need for more specifically defining the project area and providing a detailed map.
8. What are the locations and dates of proposed lake and river crossings?
9. What are the proposed locations for ice bridges? Where will water for construction of ice bridges come from?
10. If travel near, springs, aufeis, or potential fish-bearing habitat is proposed, what baseline monitoring of ice depth, winter water volume, invertebrates, fish, and water chemistry will be conducted prior to, during and after the proposed activity? What will the statistical inference and change detection capabilities of these surveys be?
11. For areas that ice bridges are being proposed, what studies on channel morphometry and spring discharge/flooding extent will be conducted prior to, during and after ice breaches are created and breached? What will the statistical inference and change detection capabilities of these surveys be?

13.0 Recording Operations (and sound)

1. Noise or acoustic disturbance considerations, including ground penetrating vibrations, are not addressed from an environmental effects perspective.
2. Frequency, intensity, and duration of vibroseis?
3. Proximity to non-fish bearing and fish bearing waterbodies?

4. Potential impacts to fish considered?
5. 2nd paragraph, last sentence - Documents from the 2D seismic in 1002 in 1980s mentioned that the seismic receiver lines could be diverted a certain distance if needed to avoid areas of inadequate snow cover or sensitive vegetation. With the 3D seismic, is there a distance that a line could be altered if needed for some reason without compromising the data?

14.0 Camp Facilities

1. How many camp areas will be used?
2. How many days on average will a camp be on a site?
3. Please give a breakdown of the ground pressure and footprint of the entire camp, vehicles, and equipment that will be there.
4. What are the proposed locations and timing of use for camps?
5. How close will camps be to a waterbody or wetland?
6. How close does the campsite need to be to the area you are working in?
7. The sentence in section 13, 2nd paragraph, should be added to this section. Like vibrators, camps, fuel haulers and small personnel carriers will also travel only on snow covered tundra or grounded sea ice, I assume.
8. How much water will be required for camp each day?
9. More detailed description of grey water discharge is needed (also part of section 18).
10. What is the maximum gradient the tracked tractors can pull the camp sleds? This is needed to determine where they would need to use the D7 Cats for moving the camp and an analysis of under what circumstances the camps cause damage. Is it when they remain in a place too long or is it the dragging them over the tundra or both?
11. What provisions are there for the after-shift outdoors activities of camp employees?

15.0 Water Withdrawal (from lakes)

1. Any water withdrawal or additional freeze-down in a very water-limited environment is problematic – isolated, shallow lakes; minimal or absent winter flows in streams and rivers; minimum pool size and freezing-depth to protect overwinter fish habitat (in contrast with the NPRA where water is abundant and average snow depths much deeper). The PoOP provides no specific information on accessing water, fulfilling water requirements, or project locations, given the overall limitation of water in the 1002 area, and the effective working radius for travel from a water access point. Refer to 50 CFR § 37.31(c) Aquatic environment stipulations regarding water withdrawals, fisheries and fish habitat. The only exception to PoOP water discussion is sled camp usage (Page 10 under Water Withdrawal: SAExploration 2018) for potable water.
2. Is this proposal requesting withdrawal of lake water (or ice) that would be greater than 5,000 gallons? The Refuge has federal reserved water rights for all waterbodies and must ensure that adequate water quality and quantity meet Refuge purposes for diversity and maintenance of fish and wildlife populations.
2. What are the proposed locations of water withdraw from lakes? What is the recharge capability of these lakes based on drainage area and snow survey data? What baseline monitoring of invertebrates, water level, water chemistry, flow, and fish will be conducted prior to, during and

after any water withdraw greater than 5,000 gallons? What will the statistical inference and change detection capabilities of these surveys be?

16.0 Temporary Snow Air Strips

1. What are the proposed locations of air strips? Conditions may change, but scouting sites at least a year in advance should be done to ensure feasibility. Grounded ice is often buckled and may be difficult and possibly unsafe to land on. There are large expanses of land greater than 30 miles with no lakes. There are also large expanses of land that are completely blown free of snow.
2. Are you proposing to use water and or ice chips to prepare landing strips on lakes?
3. When lakes cannot be used as airstrips, what is the site prep for tundra air strips? If there is minimal snow cover and the area is tussocks, will this be possible? Will tussocks and other sensitive areas be avoided? What equipment is involved and what environmental protection protocols will be in place?
4. What is the operating plan for working in areas that fixed-wing aircraft cannot access? Is there a need for helicopter access?
5. How many crew swaps will be carried out? i.e. how many times will an airstrip be used per week?
6. The original proposal notes that an example of an airstrip is listed in appendix E. Please provide appendix E.
7. What type of aircraft will be used? Wheeled or skis?

17.0 Fuel Supply and Storage

1. How much fuel will be used per day?
2. What are the proposed locations for refueling and fuel storage and how much will be stored at each location and in what type of containers? What is the maximum amount of fuel that will be stored at a particular location? How many of these locations will there be at a given time and during the entire course of the project?
2. How far will fuel storage and fueling activity be from the active floodplain of any waterbody? How far away can fuel reasonably be stored from particular areas of concern?
3. Since there will be no refueling within a certain distance of any waterbody, what is the protocol for aerial fuel delivery, should it be needed. Will fuel be delivered in drums or will a tanker be used?
4. Please provide the Spill Prevention Countermeasure Control plan for fueling and fuel storage operations as appendix.
5. Please see questions in section 9.0 regarding what type of vehicle/equipment and environmental protection criteria will be required for transport of fuel. With regard to fuel transportation, we are particularly interested in the volume of fuel that will be transported in a particular vehicle under what environmental conditions (e.g., slope, snow and soil freezing depths, soil type).

18.0 Waste Management

1. What are the volumes and proposed locations of discharge of gray water? How many gray water discharge locations will there be?
2. It is unclear how graywater discharge on the tundra meets standards for SAExploration environmental management (Page 4ff) or industry standards to minimize attracting human-

subsidized predators and other camp following wildlife (Pages 9-10 under 14.0 Camp Facilities and Page 11 under Waste Management: SAExploration 2018). Soapy water and floating bits of pasta in commercial quantities will leave a signature on the tundra well into the growing season regardless of APDES permit conditions. More importantly, this appears to contravene SAExploration's statement that "Food and food waste will be kept inside vehicles while out in the field" (Page 12 under 19.0 Wildlife: SAExploration 2018).

3. What type of hazardous wastes and in what quantities will be generated, stored and/or transported? What type of containers will they be stored in? Please provide a table.
4. Please see questions in section 9.0 regarding what type of vehicle/equipment and environmental protection criteria will be required for transport of hazardous materials. With regard to transport of hazardous material, we are particularly interested in the type and volume of hazardous materials that will be transported in a particular type of vehicle/equipment type and under what environmental conditions (e.g., slope, snow and soil freezing depths, soil type).
5. How will sanitary waste be disposed of (e.g., incinerated and then backhauled)?

19.0 Wildlife

1. The suggested ingress/egress route from Deadhorse to the 1002 area across the coastal plain, and inferring a similar, continuing route across the 1002 area, traverses critical denning habitat for the polar bear.
2. What is the intensity and wavelength of sound of equipment?
3. What types of animals will be impacted by sound and/or compaction of snow and disturbance? We don't just mean charismatic megafauna.
4. The only PoOP wildlife considerations are framed in human-wildlife encounters, inferring conflict situations principally with polar bears. Denning polar bears are one of the main concerns in this area during the winter. This section needs to be greatly expanded to discuss this issue. There are no environmental protections or wildlife mitigation measures to avoid, minimize, rectify, reduce, or compensate direct, indirect or cumulative effects of exploration similar to activities in the NPRA or adjoining areas (BLM 2012, 2013); Alpine Satellite Development Plan (BLM 2014, 2015); Greater Mooses Tooth Unit EA (e.g., Pp. 38-49 Appendix B Stipulations and Best Management Practices: BLM 2016); and, offshore areas (SAExploration 2016a, 2016b; BOEM 2017).
4. What are the potential impacts to freshwater and marine species from sound generated by vibrators?
5. What measures will be taken to reduce impacts of vibroseis sound on fish?
6. See additional questions regarding Wildlife Interaction Plan
7. What are the potential impacts of snow compaction on subnivian species?
8. Note – that the proposed dates of operation extend into the caribou calving season
9. There is no acknowledgement of snow-free tundra that may be attractive forage sites for caribou remaining through the winter period; higher than average denning of polar bears in the northeast section of the 1002 area ranging up to 25 miles or more from the coastline in the deep river ravines; pre-survey reconnaissance to identify and avoid bear dens; seasonal demobilization phase (25 Apr-31 May) when caribou may be arriving on calving grounds and calving, nor arrival of migratory birds, including raptors that may be establishing territories and nest sites; nor any other wildlife avoidance mitigation offered as a BMP, in a manner similar to ...(BLM 2012, 2013), etc. (BLM 2014, 2015, 2016; SAExploration 2016a, 2016b; BOEM 2017).

20.0 Historic and Cultural Resources

1. Is SEA implying that buffers for historic and cultural resources be determined from a point on the map that indicates the general vicinity of these resources or will the buffer be drawn from the actual area that resources cover?
2. There is no compliance with NHPA, nor any communication SHPO. See 50 CFR § 37.31(d) Cultural resources.

Recommended Section: Wilderness

1. Could the objectives of the project be met with a buffer for designated Wilderness?

Recommended Section: Post-Survey Impact Evaluation

1. What are the proposed survey designs and statistical inference short and long-term follow-up monitoring efforts to assess impacts and recovery of soil, tundra, and water resources following seismic exploration and how will this information be reported?
2. What are SAE's plans for supporting Post-Survey Impact Evaluations? SAE should be responsible for evaluating impacts to the tundra following the first winter's activities, so that adjustments can be made if necessary. Also, if warranted, SAE should be accountable for monitoring recovery of tundra/vegetation, soils, and water in the post survey years to follow. The evaluation of impacts should be done by third-party persons with defined qualifications, who report directly to BLM/FWS, and are paid for by SAE. Of course SAE would have full access to monitoring reports, but would not be a filter between resource monitor and us. This is also consistent with SAE's assertion in its plan of operations that it is continually assessing the impacts of its operations and making improvements in equipment and methods.

Appendix B:

1. See questions related to section 9.0 for more information needs that should be added to equipment tables for each vehicle.
2. We would like more information on the equipment. Add some columns to table, to provide the following information for each line of table:
 - a. Vehicle weight
 - b. Pounds per square inch (psi)
 - c. Is unit tracked or wheeled?
 - d. If tracked, are tracks steel or rubber?
 - e. Are tracks cleated or cleatless?
3. Instead of putting 150-man sleigh camp in one line in table, itemize vehicles, sleds, and skis. For example, how many sled units are there, what is the footprint, and what is weight and the ground pressure (pounds per square inch) when empty and loaded to maximum? See additional questions related to section 9.0 for more information needs for vehicles and other equipment.

4. Itemize vehicles for transporting fuel. Are there just the 4 long haul fuelers or are there other smaller fuel vehicles? Do the fuel tanks on the list get hauled between camps full or empty? For each unit that is used to transport fuel over tundra, what is the footprint of the vehicle, and what is weight and the ground pressure (pounds per square inch) when empty and loaded to maximum??
5. CAT dozers and CAT loaders have high weight and psi. What are they used for? What precautions are taken to limit disturbance to tundra from them, travelling between camps as well as in camp? What is their weight empty and at maximum load, what is their footprint, what is their ground pressure empty and at maximum load?

Appendix D:

1. Add more photos, including camp sleighs, long haul fueler, Case/Steiger tractor, CAT dozer and CAT loader.

Appendix F: Wildlife Interaction Plan

1. This plan is not adequate. This proposal lays out a window of December 1 to May 31. Going this late impinges on the beginning of the calving and nesting season of wildlife using this area. As such, this proposal should have a significant section that lays out the Affected Environment and Environmental Consequences. Basically, all the details needed for the NEPA analysis should be included. They are not. These concerns include polar bears, particularly denning bears; caribou, particularly during calving; shorebird nesting which may be starting during this window; and water usage, especially considering that this is a relatively dry landscape compared to the NPRA and fish and other aquatic organisms are constrained to critical habitats that may already be near environmental thresholds.
2. In the SAE plan of operations, “heavy equipment” and “seismic activity” with regard to wildlife interactions needs to be further defined. For example, if there is a one mile avoidance area for a polar bear den, does that apply to laying of recording devices by hand or smaller vehicle, or just to the large vibroseis activity? For example, does a one mile avoidance area mean that no personnel, equipment, gear or anything else will come within one mile of a polar bear den? Does this apply to seal birthing dens and grizzly bear dens as well?
3. The Wildlife Interaction Plan and field operating procedure state that denning sites will be identified prior to operations, and then seems to leave setback and other stipulations as “to be determined” or “protocols of FWS will be followed.” There will be cases when decisions must be made while activities are in progress, but SAE should provide protocols and information that indicate their capabilities to make informed decisions ahead of time rather than during activities.
4. What is the survey design, operating procedure and resulting accuracy in identifying denning sites? Are these surveys done prior to any other activity or occupation of an area including caching equipment or fuel or conducting reconnaissance surveys to assess ice conditions, locations for camp moves, etc?
5. There is no compliance with ESA/MMPA, with focal emphasis on denning polar bears. Although not listed at the time of generating 50 CFR §§ 37, denning bears were considered [50 CFR §

37.31(b)(11); 50 CFR § 37.32(c)], now updated via MMPA incidental take regulations (ITR) (FWS 2013, FWS 2016b, FWS 2016c, FWS 2016d).

6. The data provided for polar bear numbers in the southern Beaufort Sea is out of date (Page 23 Polar Bears: SAExploration 2018).

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From: [Vosburgh, Timothy](#)
To: [Keeney, Joseph](#)
Cc: [Whitman, Matt](#); [Wixon, Donna](#); [Alfredo Soto](#); [Mitch Ellis](#); [Bud Cribley](#); [Christopher Latty](#); [Cindy Hamfler](#); [Debbie Greta Burkart](#); [Joanna Fox](#); [John Trawick](#); [Joshua Rose](#); [kdebenham](#); [Lonnie Bryant](#); [Lynnda Kahn](#); [Randy Goodwin](#); [Richard Kemnitz](#); [Robert Brumbaugh](#); [Roger Kaye](#); [Sarah Conn](#); [Sarah LaMarr](#); [Serena Sweet](#); [Shelly Jacobson](#); [Stacey](#); [Stephanie Brady](#); [Stephen Arthur](#); [Steve Berendzen](#); [Ted Murphy](#); [Ted Swem](#); [Terra Meares](#); [Wendy Loya](#)
Subject: Re: Information Request - DD Friday May 11
Date: Sunday, May 13, 2018 3:01:11 PM
Attachments: [Marsh Creek 3D.docx](#)

Donna,
My questions and comments are attached.

Tim

On Thu, May 10, 2018 at 1:34 PM, Keeney, Joseph <jkeeney@blm.gov> wrote:

Hi Donna,

I have only a few questions/comments in the attached document

On Thu, May 10, 2018 at 12:17 PM, Whitman, Matt <mwhitman@blm.gov> wrote:

Find my comments and questions in the attached document.

Thanks,
Matthew

On Mon, May 7, 2018 at 10:37 AM, Wixon, Donna <dwixon@blm.gov> wrote:

Hello All,

Thank-you for participating in the Seismic Application Meeting last Friday. Attached is a copy of the sign in sheet. There were a few people that missed the sign in sheet so I added some names. If you notice I missed anyone please let me know.

As we pointed out Friday, the application is missing information that is needed to evaluate the proposed action. Please send me any questions you have about the proposed action so that I may compile them and ask the company to supply answers.

I would like all of the questions by the end of the day Friday May 11.

Thank-you,
Donna

Donna L Wixon
Natural Resource Specialist
BLM Arctic District Office
222 University Ave
Fairbanks, Alaska 99709
907-474-2301 Office
907-474-2386 Fax
dwixon@blm.gov

--

Joe Keeney
Archaeologist
BLM Arctic District Office
222 University Avenue
Fairbanks, Alaska 99709
907-474-2312
jkeeney@blm.gov

From: [Hayes, Miriam \(Nicole\)](#)
To: [Wendy Loya](#)
Subject: Fwd: [EXTERNAL] RE: Request for short list of topics for scoping comments
Date: Monday, May 14, 2018 8:49:08 AM

The list to coordinate with staff.
Nicole

Nicole Hayes

Project Coordinator
Bureau of Land Management
222 W. 7th Avenue #13
Anchorage, Alaska 99513
Desk: (907) 271-4354

----- Forwarded message -----

From: **Chad Ricklefs** <chad.ricklefs@empsi.com>
Date: Sat, May 12, 2018 at 6:49 PM
Subject: [EXTERNAL] RE: Request for short list of topics for scoping comments
To: "Hayes, Miriam (Nicole)" <mnhayes@blm.gov>

- Issues
- Resource concerns
- Data for analysis
- Potential alternatives
- Potential mitigation, stipulations, BMPs
- New development technologies
- Potential impacts
- Past, present, or foreseeable future projects for cumulative impact analysis

Chad Ricklefs, AICP

EMPSi Environmental Management and Planning Solutions, Inc.
[3005 Center Green Drive, Suite 205](#)
Boulder, CO 80301
direct: 303-495-5129 main: 303-447-7160 fax: 866-625-0707

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From: Hayes, Miriam (Nicole) [mailto:mnhayes@blm.gov]
Sent: Thursday, May 10, 2018 12:36 PM
To: Chad Ricklefs <chad.ricklefs@empfi.com>; Amy Lewis <amy.lewis@empfi.com>
Subject: Fwd: Request for short list of topics for scoping comments

I didn't write down the list that Amy put on the board during our internal scoping - could you send to me to provide to Wendy?

Thanks,

Nicole

Nicole Hayes

Project Coordinator

Bureau of Land Management

[222 W. 7th Avenue #13](#)

[Anchorage, Alaska 99513](#)

Desk: (907) 271-4354

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From: Wendy Loya <Wendy_loya@fws.gov>
Date: Thu, May 10, 2018 at 10:00 AM
Subject: Request for short list of topics for scoping comments
To: Nicole Hayes <mnhayes@blm.gov>

Hi Nicole,

Can you please send me the short list, maybe it was 5-6 things like concerns, impacts, mitigation etc., that you requested participants at the scoping workshop address? I'll include that in our request for further comments that FWS will submit by June 19th.

0000012179

Thank you,

Wendy

Dr. Wendy M. Loya, Coordinator

Office of Science Applications -Arctic Program

US Fish and Wildlife Service

Anchorage, Alaska

907.786.3532 (office)

907.277.2942 (mobile)

From: [Wendy Loya](#)
To: [John Trawickj](#); [Drew Crane](#)
Subject: FW: Information Request - DD Friday May 11
Date: Monday, May 14, 2018 11:09:41 AM
Attachments: [FWS questions and comments re SAE seismic application.docx](#)

FYI....

Dr. Wendy M. Loya, Coordinator
Office of Science Applications -Arctic Program
US Fish and Wildlife Service
Anchorage, Alaska
907.786.3532 (office)
907.277.2942 (mobile)

From: Fox, Joanna <joanna_fox@fws.gov>
Sent: Friday, May 11, 2018 3:25 PM
To: Wixon, Donna <dwixon@blm.gov>
Cc: Steve Berendzen <steve_berendzen@fws.gov>; Wendy Loya <wendy_loya@fws.gov>; stephanie_brady <stephanie_brady@fws.gov>; Bud Cribley <bud_cribley@fws.gov>; Lynnda Kahn <lynnda_kahn@fws.gov>
Subject: Re: Information Request - DD Friday May 11

Hi Donna,

Attached please find a compilation of requests for more information from the seismic applicant. This document includes comments from Arctic Refuge staff, as well as specialists in our regional and headquarters offices. If you have questions or need clarification on anything in the document, please don't hesitate to contact me. There is a lot of overlap in topics, so likely quite a bit of duplication, though I attempted to eliminate that where obvious.

Thanks much,
Joanna

Joanna L. Fox
Deputy Refuge Manager
Arctic National Wildlife Refuge
101 12th Avenue, Room 236
Fairbanks, AK 99701
(907) 456-0549

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www.facebook.com/arcticonationalwildliferefuge

"Do what you can, with what you have, where you are." -- Theodore Roosevelt

On Mon, May 7, 2018 at 10:37 AM, Wixon, Donna <dwixon@blm.gov> wrote:

| Hello All,

0000012181

Thank-you for participating in the Seismic Application Meeting last Friday. Attached is a copy of the sign in sheet. There were a few people that missed the sign in sheet so I added some names. If you notice I missed anyone please let me know.

As we pointed out Friday, the application is missing information that is needed to evaluate the proposed action. Please send me any questions you have about the proposed action so that I may compile them and ask the company to supply answers.

I would like all of the questions by the end of the day Friday May 11.

Thank-you,
Donna

Donna L Wixon
Natural Resource Specialist
BLM Arctic District Office
222 University Ave
Fairbanks, Alaska 99709
907-474-2301 Office
907-474-2386 Fax
dwixon@blm.gov

From: [Wixon, Donna](#)
To: [Alfredo Soto](#); [Bud Cribley](#); [Christopher Latty](#); [Cindy Hamfler](#); [Debbie](#); [Greta Burkart](#); [Joanna Fox](#); [John Trawicki](#); [Joseph Keeney](#); [Joshua Rose](#); [kdebenham](#); [Lonnie Bryant](#); [Lynnda Kahn](#); [Matthew Whitman](#); [me](#); [Mitch Ellis](#); [Randy Brown](#); [Randy Goodwin](#); [Richard Kemnitz](#); [Robert Brumbaugh](#); [Roger Kaye](#); [Sarah Conn](#); [Sarah LaMarr](#); [Shelly Jacobson](#); [Stacey](#); [Stephanie Brady](#); [Stephen Arthur](#); [Steve Berendzen](#); [Ted Swem](#); [Terra Mearns](#); [Timothy Vosburgh](#); [Wendy Loya](#)
Subject: Fwd: [EXTERNAL] NSB 18-466 SAExploration, Inc. (SAE LLC) - Kuukpik Corporation
Date: Thursday, May 17, 2018 11:35:57 AM
Attachments: [NSB 18-466 SAExploration \(SAE LLC\) - Kuukpik Corporation.pdf](#)

FYI, SAE is applying to conduct seismic in the Point Thompson Unit this winter, see attached.

Donna

Donna L Wixon
Natural Resource Specialist
BLM Arctic District Office
222 University Ave
Fairbanks, Alaska 99709
907-474-2301 Office
907-474-2386 Fax
dwixon@blm.gov

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From: **Annamae J. Leavitt** <Annamae.Leavitt@north-slope.org>
Date: Thu, May 17, 2018 at 9:22 AM
Subject: [EXTERNAL] NSB 18-466 SAExploration, Inc. (SAE LLC) - Kuukpik Corporation
To: "ssimonds@saexploration.com" <ssimonds@saexploration.com>
Cc: Selene Tirre <Selene.Tirre@north-slope.org>, "jeanne.proulx@alaska.gov" <jeanne.proulx@alaska.gov>, "[j\[REDACTED\].mil](mailto:j[REDACTED].mil)" <[j\[REDACTED\].mil](mailto:j[REDACTED].mil)>, "dwixon@blm.gov" <dwixon@blm.gov>, "lee.mckinley@alaska.gov" <lee.mckinley@alaska.gov>, "audra.braser@alaska.gov" <audra.braser@alaska.gov>, "josephina.delgado-plikat@alaska.gov" <josephina.delgado-plikat@alaska.gov>, "tonya.bear@alaska.gov" <tonya.bear@alaska.gov>, "dog.permitting@alaska.gov" <dog.permitting@alaska.gov>, "reese.thieme@alaska.gov" <reese.thieme@alaska.gov>, "katie.farley@alaska.gov" <katie.farley@alaska.gov>, "rock@asrc.com" <rock@asrc.com>, Norajane Burns <Norajane.Burns@north-slope.org>, "[\[REDACTED\]](mailto:[REDACTED])" <[\[REDACTED\]](mailto:[REDACTED])>, Gordon Brower <Gordon.Brower@north-slope.org>, "Matt C. Dunn" <MattC.Dunn@north-slope.org>, Seeseei Pili <Seeseei.Pili@north-slope.org>, Josie Kaleak <Josie.Kaleak@north-slope.org>, Ralph Burke <Ralph.Burke@north-slope.org>, Waska Williams Jr <Waska.Williams@north-slope.org>, "Lilly H. Kilapsuk" <Lilly.Kilapsuk@north-slope.org>, Daryl Lynn Aveoganna <DarylLynn.Aveoganna@north-slope.org>, Tony Cabinboy <Tony.Cabinboy@north-slope.org>, "Brower A. Frantz" <Brower.Frantz@north-slope.org>, "Herbert H. Ipalook" <Herbert.Ipalook@north-slope.org>, "Leroy L. Oenga Jr." <Leroy.Oenga@north-slope.org>, James Ahmaogak <James.Ahmaogak@north-slope.org>, Jonathan Aiken Jr <Jonathan.AikenJr@north-slope.org>, Charmaine Hingada <Charmaine.Hingada@north-slope.org>, Wayne Cary <Wayne.Cary@north-slope.org>, Sione Tu'ifua <Sione.Tuifua@north-slope.org>

Good morning, attached is NSB 18-466, Draft Development Permit, STAINES 3D

0000012183

Annamae J. Leavitt, Senior Office Specialist

North Slope Borough | Planning & Community Services

PO Box 69 Barrow, Alaska 99723

P 907-852-0320 | F 907-852-0322

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From: [Hayes, Miriam \(Nicole\)](#)
To: [Wendy Loya](#)
Subject: Re: Schedule for Leasing EIS
Date: Monday, May 21, 2018 6:01:51 PM

Hi Wendy,

The Alternatives workshop will be July 9-12. I currently will plan for 3 FWS representatives to be present. These people should be individuals that can make decisions and recommendations on behalf of the agency, and understand the resource issues. Hope this helps for now - more to come.

Nicole

Nicole Hayes

Project Coordinator
Bureau of Land Management
222 W. 7th Avenue #13
Anchorage, Alaska 99513
Desk: (907) 271-4354

On Mon, May 21, 2018 at 10:37 AM, Wendy Loya <wendy_loya@fws.gov> wrote:

Hi Nicole,

I am getting nervous what we don't have at least a summer timeline for the Draft Coastal Plain Leasing EIS. Many of our resource specialists are headed out in the field and it will be harder to change their plans the longer we wait, given that most are in supervisory roles. Firming up the dates for the alternative workshop and an approximate timeline for Draft EIS review given that you have indicated that will be a very short window.

Thanks!
Wendy

Dr. Wendy M. Loya, Coordinator
Office of Science Applications -Arctic Program
US Fish and Wildlife Service
Anchorage, Alaska
907.786.3532 (office)
907.277.2942 (mobile)

From: [Wendy Loya](#)
To: [Karen Clark](#); [Greg Siekaniec](#); [Bud Cribley](#)
Subject: FW: SAE Plan of Operations Questions for Coastal Plain Seismic
Date: Tuesday, May 22, 2018 3:41:23 PM
Attachments: [SAE seismic questions 5.22.2018.pdf](#)

Karen, Greg and Bud,

FYI: attached letter from BLM to SAE for additional information needed to process the seismic application for the Arctic Refuge Coastal Plain under NEPA.

The cover letter states:

Once BLM receives the answers to the attached questions we will start the 90 day review clock as required by 43 CFR 3152.2 a. and notify you if the 90 days cannot be met and refine our estimation of time needed to process your application.

Thank you,
Wendy

Dr. Wendy M. Loya, Coordinator
Office of Science Applications -Arctic Program
US Fish and Wildlife Service
Anchorage, Alaska
907.786.3532 (office)
907.277.2942 (mobile)

From: Joanna Fox <joanna_fox@fws.gov>
Sent: Tuesday, May 22, 2018 1:16 PM
To: Wendy Loya <wendy_loya@fws.gov>
Cc: Steve Berendzen <steve_berendzen@fws.gov>
Subject: Fwd: SAE Plan of Operations Questions

Hi Wendy,

We just received this copy of the letter BLM sent to the seismic applicant requesting additional information. It answers some of the questions we discussed this morning (including when the 90-day clock starts). Please distribute as you see fit.

Thank you,
Joanna

Joanna L. Fox
Deputy Refuge Manager
Arctic National Wildlife Refuge
101 12th Avenue, Room 236
Fairbanks, AK 99701
(907) 456-0549

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"Do what you can, with what you have, where you are." -- Theodore Roosevelt

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From: Wixon, Donna <dwixon@blm.gov>

Date: Tue, May 22, 2018 at 1:00 PM

Subject: Fwd: SAE Plan of Operations Questions

To: Steve Berendzen <steve_berendzen@fws.gov>, Joanna Fox <joanna_fox@fws.gov>

Cc: Sarah LaMarr <slamarr@blm.gov>, Shelly Jacobson <njones@blm.gov>

Hi Steve and Joanna,

Attached is a copy of the questions we sent to SAExploration.

Thanks,
Donna

Donna L Wixon
Natural Resource Specialist
BLM Arctic District Office
222 University Ave
Fairbanks, Alaska 99709
907-474-2301 Office
907-474-2386 Fax
dwixon@blm.gov

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From: **Wixon, Donna** <dwixon@blm.gov>

Date: Tue, May 22, 2018 at 11:35 AM

Subject: SAE Plan of Operations Questions

To: Suzan Simonds <ssimonds@saexploration.com>

Cc: Shelly Jacobson <njones@blm.gov>

Good Morning Sue,

Attached please find a letter and questions about the seismic permit that SAExploration has requested from the BLM for the 1002 area.

Please let me know if you have any questions about our questions as you work through them.

Thanks,
Donna

Donna L Wixon
Natural Resource Specialist
BLM Arctic District Office

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222 University Ave
Fairbanks, Alaska 99709
907-474-2301 Office
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dwixon@blm.gov



BUREAU OF LAND MANAGEMENT
Arctic District Office
222 University Avenue
Fairbanks, Alaska 99709-3816
<http://www.blm.gov/ak>



May 22, 2018

In reply refer to:
FF097424
3152.00 (AKR000)

Ms. Suzan Simonds
Permit and Regulatory Manager
SAExploration Inc.
8240 Sandlewood Place, Suite 102
Anchorage, Alaska 99507

Subject: Oil and Gas Geophysical Exploration Application

Dear Ms. Simonds,

Title II of the Tax Cuts and Jobs Act of 2017 directed the Secretary of Interior to establish and administer a competitive oil and gas program within the Coastal Plain of Alaska. Because the Bureau of Land Management (BLM) manages the National Petroleum Reserve in Alaska (NPR-A) pursuant to the Naval Petroleum Reserves Production Act (1976), the BLM has been identified as the lead agency for permitting oil and gas related activities in the Arctic National Wildlife Refuge Coastal Plain area, including seismic exploration activities. Within the BLM the Arctic District Office has been tasked to process seismic applications for the area.

On April 19, 2018 the Alaska BLM State Office received an application from SAExploration to conduct seismic activity in the 1002 area of the Alaska National Wildlife Refuge. On May 3, 2018 the BLM Arctic District received a nonconfidential version of the plan of operations. BLM and USFWS met on May 4th to discuss the proposed action.

The regulations that cover the proposed action are 43 CFR 3152, Exploration in Alaska. Part 3152.1 provides information on what is required to be submitted as part of the application. SAExploration has provided information for items a thru f. Part f requires a plan for conducting the exploration activities. While SAExploration has submitted a plan of operations, the plan does not provide enough information for the BLM to adequately evaluate impacts of the proposed action on the environment as required by the National Environmental Policy Act (NEPA).

Please see attached list of questions entitled: "Marsh Creek 3D 2018 Winter Seismic Survey Plan of Operations (POO) BLM/USFWS Comments and Questions." We would ask that you respond to the questions and comments as soon as possible so that we may begin the NEPA process on the proposed action. Once BLM receives the answers to the attached questions we will start the 90 day review clock as required by 43 CFR 3152.2 a. and notify you if the 90 days cannot be met and refine our estimation of time needed to process your application

If you have any questions please contact Donna Wixon of my staff at 907-474-2301.

Sincerely,
Nichelle Jones, Manager



Arctic District Office

Enclosures (1):

Marsh Creek 3D 2018 Winter Seismic Survey Plan of Operations (POO) BLM/USFWS Comments and Questions

Marsh Creek 3D 2018 Winter Seismic Survey Plan of Operations (POO): BLM/USFWS Comments and Questions

General comments:

1. What kind of lighting will be needed - tall light posts for equipment and storage areas; aircraft operations, localized lighting for worker camps, seismic line work, etc?
2. What is the normal and peak operating decibel levels of the camp generator and hours of operation each day or 24/7?
3. What are the total miles of seismic trails planned?
4. Will SAExploration Inc. be submitting a more detailed map of the actual proposed area of survey? This would greatly help in addressing impacts.
5. Does SAExploration, Inc. plan to avoid native allotments entirely?

Section 4.0 Environmental Management

1. Please provide a write up of how you are doing things differently based on lessons learned from the past.
2. What are the steepest slopes that you would be conducting activity on and how do you propose to protect soil and vegetation?

Section 5.0 Cultural Interface

1. This section mentions coordination with Kaktovik, what about Arctic Village and Venetie?
2. Applicant needs to submit a Subsistence Plan that meets the requirements of the 2013 Record of Decision (ROD) Best Management Practice (BMP) H-1 and also include:
 - Precise meeting dates and locations.
 - The names of and contact information for subsistence representatives and the biologist hired by SAE to work with the panel.
 - Reporting on mitigation measures and conflict avoidance agreements, if any, developed through such consultation.
 - Documentation of notification to allotment owners and camps and cabins users.
 - Procedures necessary to facilitate access by subsistence users to conduct their activities.
3. Applicant needs to follow the requirements of BMP H-2.

Section 6.0 Oversight Panel ¹

1. When will the oversight Panel be formed?
2. How many people will be on the panel?
3. What types of people will be on the panel?
4. Will its members be residents of Kaktovik only?
5. Will the panel only report to Kaktovik?

¹ BLM would like to set up a meeting in June or July to discuss.

6. Does “cultural sites” refer to archaeological, historic, and/or traditional land use sites? If so, will this subsistence observer also be an archaeologist with access to the Alaska Heritage Resources Survey (AHRS) database (maintained by the Alaska State Historic Preservation Office) and the Traditional Land Use Inventory (TLUI) site within the study area (maintained by the North Slope Borough Department of Planning and Community Services)?

Section 7.2 Training Process

1. Please provide an Orientation Program Plan following NPR-A BMP I-1 for BLM’s approval.

Section 8.0 Permit Requirements

1. In table please include ESA Consultation under BLM
2. In table, under ADFG and Fish Habitat Permits, please add stream/river crossings.
3. In table under other approvals what lease holders are in the area?
4. What public outreach has taken place prior to application submittal, or as of today’s date?²

Section 9.0 Mobilization and Access

1. “The crews will mobilize to existing gravel pads which will allow access to the tundra and provide a resupply area for the crews” (Page 7: SAExploration 2018). These gravel pads are not identified in the POO – whether inside the 1002 area boundary or adjacent to it. Where are the gravel pads and travel corridors? Locations of ingress and egress? Please submit a map showing ingress and egress with land status layer.
2. SAE states "SAE will attempt to coordinate with companies to use any existing or planned trails." There are no existing trails in the permit area, what other companies are you referring to?
3. How close does the campsite need to be to the area you are working in?
4. What criteria will be used to determine if snow depth and coverage is adequate to minimize damage to the tundra vegetation?
5. Does SAE have a contingency plan should snow depth and cover not be adequate to minimize soil compaction and vegetation damage?
6. Please provide routes and what type of activity, storage, etc. that will occur at locations within the permit area.
7. Please provide a description of the current camp move practices and how they would help to protect the tundra.
8. Are there ice or snow roads between Dalton Highway and Point Thompson that you could travel on to reduce tundra damage? If not, could you travel some of the distance on sea ice?

² BLM would like to set up a meeting in June/July to discuss.

9. What are the operating plans and environmental protection protocols for tundra travel? How will these protocols differ for different snow and soil conditions and for travel on steep slopes, areas with sensitive soil/vegetation types, and near special areas (e.g. groundwater-fed springs, overflow ice, ice-hummocks, and waterbodies that may support fish)?
10. For each type of activity/equipment (e.g. camp moves, resupplies, snow machine access, refueling, transport of fuel and hazardous chemicals), describe what the environmental regulations/limits will be for the following:
 - a. What is the maximum slope that operations for each type of activity/equipment would occur on? This information will allow us analyze the potential for impacts of different activities (e.g. fuel storage, transport of hazardous materials, camp moves, seismic) would be occurring on steep slopes.
 - b. What are the criteria for snow and soil characteristics that will be required for each type of activity/equipment? Will these criteria vary with slope and type of soil and vegetation?
11. Please provide the following information broken down in a table and linkable to GIS format along with a map:
 - a. Proposed route distance
 - b. Timing
 - c. Type of activity (e.g. resupply, camp move)
 - d. Type of equipment (e.g. vehicle type, sled, skis)
 - e. Weight of vehicle/equipment empty
 - f. Weight of equipment/vehicle fully loaded.
 - g. Pounds per square inch (PSI) pressure of vehicle, sled, or skis empty
 - h. Pounds per square inch (PSI) pressure of vehicle, sled, or skis fully loaded (note – this especially important for sleds or vehicles that haul large volumes of water or fuel, kitchen and bath units, etc.)
 - i. Total footprint of all vehicle or other equipment in contact with ground
 - j. Type of tire (tracked versus wheeled)
 - k. Track material (e.g. steel versus rubber)
 - l. Are tracks cleated or uncleated? Number of times a particular route would be exposed to a particular PSI from a particular vehicle, sled, or skis.
 - m. Maximum slope that this equipment would travel on and at what weights (minimum and maximum)
 - n. Snow depth requirements for this type of vehicle/equipment
 - o. Freezing depth requirements for this type of vehicle/equipment
 - p. Are hazardous material transported on this type of equipment?
 - q. Is more than 500 gallons of fuel be transported on this type of vehicle/equipment?
12. How and where will snow be gathered and moved for construction of snow trails and ramps?
13. How far can snow be transported for trail making?
14. What are the topographic and other criteria that elicit the need for creating snow ramps?
15. Verify that you would be prepacking snow trails.

16. What vehicles would be used for prepacking?
17. What equipment would be used for moving and placing snow?
18. How many resupply trips will be needed along routes?
19. How many vehicles and what type will be involved in resupply trips?
20. Will resupply vehicles use existing trails?
21. For the expected size and shape of the grid area, how many miles of camp move trails would there be within the work area (not including miles of access to reach the edge of the project area)?

Section 10.0 Survey and Ice Check

1. What does low snow years mean exactly? If it means they will ensure that enough snow cover is present for equipment movements, then what are the minimum snow depths? Will tundra freeze-down be quantified prior to and/or during operations?
2. What provisions are there for the possibility that snow conditions deteriorate before the train returns?
3. Where would snow surveys be done in order to decide when exploration could begin?³
4. How will SAE gather data on frost and snow conditions?
5. There can be large expanses with no snow cover in the 1002 Area. What are the contingency plans in the event extensive areas with low snow cover and/or unfrozen ground are encountered?
6. What Lakes, rivers or sea ice would be traveled across?

Section 11.0 River Crossings (and lake)

1. This element of the operations cannot just be permitted with ADF&G. In addition to ADF&G FHPs, the BLM & FWS must evaluate this activity as part of the NEPA process. The BLM already has some Best Management Practices (in the 2012 NPR-A IAP) related to stream/river crossings that can be used for guidance, but site specific evaluations will be necessary to determine if these BMPs or a modified version of the BMPs are most appropriate for this landscape. (Comment not question).
2. Describe how deep/steep banks would be crossed.
3. The POO provides no specific information on accessing water, water requirements, or ice bridge locations. Please provide.
4. Please provide a map that shows stream and lake crossings with a table that identifies the latitude and longitude of the corresponding crossings.
5. What are the proposed locations for ice bridges? Where will water for construction of ice bridges come from?
6. Does SAE propose any baseline monitoring of ice depth, winter water volume, invertebrates, fish, and water chemistry
7. If a crossing needs to be reinforced/built up for supporting equipment, where will liquid water come from? The BLM currently does not allow liquid water to be removed from rivers during the winter. If liquid water may need to be removed from lakes to build any

³ BLM would like to set up a meeting in June/July to discuss

“ice bridges”, then the volumes would need to be accounted for in the lake water use request to the BLM/FWS for evaluation in the EA and in ADF&G FHPs and ADNR Temporary Water Use Permits.

8. Would the removal of snow for this purpose only occur on areas of grounded ice (from lakes and/or rivers)?
9. Would the removal of ice aggregate from grounded ice areas on a river be requested?

Section 12.0 Willow Protocol

1. What criteria will be used to identify location and size of sensitive willow areas?
2. Will other vegetation types sensitive to seismic activities be considered when designing and constructing snow roads and trails? (Sensitive vegetation types include moist tussock tundra and low shrub vegetation categories.)
3. Please provide a weed plan following requirements of the NPR-A BMP M-2 for BLM Approval.

Section 13.0 Recording Operations (and sound)

1. What is the frequency, intensity, and duration of vibroseis?
2. What is the proximity to non-fish bearing and fish bearing waterbodies?
3. Provide the location of waterbodies and table of information of the proximity to non-fish bearing and fish bearing waterbodies.
4. With the 3D seismic, is there a distance that a line could be altered if needed for some reason without compromising the data?
5. Please verify that vibrators would not be operating on lakes or rivers.
6. If vibroseis shots will be made over liquid water under ice, the permittee needs to review the following document and indicate how they would implement or otherwise address recommendations made to reduce potential impacts to fish.
Morris, W., and J. Winters. 2005. Fish Behavioral and Physical Responses to Vibroseis Noise, Prudhoe Bay, Alaska 2003. Technical Report No. 05-02. Alaska Department of Natural Resources, Office of Habitat and Permitting.
7. What is SOS Methodology?

Section 14.0 Camp Facilities

1. How many camp areas will be used?
2. How many days on average will a camp be on a site?
3. How much water will be required for camp each day?
4. What are the water requirements each year for this project?
5. Provide a more detailed description of grey water discharge
6. What is the maximum gradient the tracked tractors can pull the camp sleds?
7. Section 14 states: “If existing airstrips are within the project area those area may be utilized to allow personnel, food and fuel to be delivered to the work area”. Are there existing airstrips in the project area?
8. What is the predetermined route?

9. What is the Vsat communication system?

Section 15.0 Water Withdrawal (from lakes)

1. Would snow for drinking water only be removed from grounded ice areas?
2. Water volume (liquid water and ice aggregate) requests must be made for each specific lake that might be used, for evaluation in the EA.
3. What information does SAE plan to collect or compile for planned use lakes.⁴

Section 16.0 Temporary Snow Air Strips

1. Are you proposing to use water and or ice chips to prepare landing strips on lakes?
2. When lakes cannot be used as airstrips, what is the site prep for tundra air strips?
3. What equipment is involved in creating and maintaining airstrips?
4. We need to know which specific lakes might be used for an airstrip, the size of the airstrip, the procedure for building and maintaining an airstrip, and the intended placement and orientation.
5. If airstrips are built on lakes, additional data collection may be required to provide data regarding the extent of additional freeze-down under the airstrip, as compared to the remainder of the lake.
6. What is the operating plan for working in areas that fixed-wing aircraft cannot access? Is there a need for helicopter access?
7. How many crew swaps will be carried out? i.e. how many times will an airstrip be used per week?
8. What type of aircraft will be used? Wheeled or skis?
9. Section 16 states: "SAE will create a flat area on predetermined grounded, frozen lakes, or tundra to serve as landing strip to receive the aircraft for crew changes." This is in the Temporary Snow Airstrips section. Will tundra airstrips be built of snow or will ice be needed to make the airstrip?

Section 17.0 Fuel Supply and Storage

1. How much fuel will be used per day?
2. How much fuel will be used for each year of the project?
3. What are the proposed locations for refueling and fuel storage?
4. What is the maximum amount of fuel that will be stored at a particular location? How many of these locations will there be at a given time and during the entire course of the project?
5. The POO states that the refueling distance from waterbodies would be 100 feet. The BLM NPR-A BMP requires 500 ft distance and we will consider this requirement for this project. We allow a deviation from the 500 ft. in the NPR-A because of the high density/close proximity of so many lakes that makes it impractical in many areas.

⁴ BLM would like to set up a meeting in June/July to discuss.

6. Provide a copy of the SPCC plan(s) for this project with site-specific information included. Until it is complete provide:
The size, type, and number of fuel storage tanks or other containers.
What type of equipment/supplies will be available on site to respond to a spill?
Describe any training requirements for employees handling fuel.
7. Since there will be no refueling within a certain distance of any waterbody, what is the protocol for aerial fuel delivery, should it be needed. Will fuel be delivered in drums or will a tanker be used?

Section 18.0 Waste Management

1. What are the volumes and proposed locations of discharge of gray water? How many gray water discharge locations will there be?
2. Provide a copy of your APDES permit, and any requirements it may have for treatment before discharge.
3. Provide a hazardous waste plan following the requirements of the NPR-A BMP A-3.
4. Provide a Comprehensive Waste Management Plan following the requirements of the NPR-A BMP A-2.
5. What types of wastes are anticipated to be generated by seismic operations?

Section 19.0 Wildlife

1. What is the intensity and wavelength of sound of equipment?

20.0 Historic and Cultural Resources

1. Is SAE implying that buffers for historic and cultural resources be determined from a point on the map that indicates the general vicinity of these resources or will the buffer be drawn from the actual area that resources cover?
2. In response to the “if required,” in addition to background research of documented (“known”) cultural (historic, prehistoric, and TLUI) sites, SAE Exploration should conduct archaeological field surveys of all proposed travel routes and survey locations prior to the proposed seismic survey.⁵
3. The 500 foot minimum avoidance boundary around all cultural sites is adequate for seismic exploration. However, does SAExploration plan to consider the boundaries of all sites within the proposed seismic testing areas?
4. Most of the sites in both the AHRS and TLUI are referenced geospatially by a 1-dimensional point that is typically somewhere near the center of a 2-dimensional area. Sometimes cultural remains within a site can be distributed over hundreds of meters, thus extending beyond a roughly 150 meter (500 foot) buffer. SAExploration should not only survey for undocumented sites within the proposed seismic study areas, but also consider sites documented in the AHRS and TLUI databases and that are within the proposed seismic study areas. These sites should be included in the 2018 cultural field survey,

⁵ BLM would like to set up a meeting in June/July to discuss.

where archaeologists should at minimum map the boundaries (i.e. the extent of cultural remains within a site) of sites within the seismic study areas that are spatially referenced by a point. Site buffers should then extend 500 feet from the site boundary.

Appendix D:

1. Request more photos, including camp sleighs, long haul fueler, Case/Steiger tractor, CAT dozer and CAT loader.

Appendix F: Wildlife Interaction Plan

1. In the SAE plan of operations, “heavy equipment” and “seismic activity” with regard to wildlife interactions needs to be further defined. For example, if there is a one mile avoidance area for a polar bear den, does that apply to laying of recording devices by hand or smaller vehicle, or just to the large vibroseis activity? For example, does a one mile avoidance area mean that no personnel, equipment, gear or anything else will come within one mile of a polar bear den? Does this apply to seal birthing dens and grizzly bear dens as well?
2. “A polar bear den detection survey shall be conducted prior to activities occurring in polar bear denning habitat during the maternal denning period (November to mid-April).” How will this survey be conducted?
3. Will all suitable denning habitat within the entire 1002 area be surveyed?
4. What is the survey design, operating procedure and resulting accuracy in identifying denning sites? Are these surveys done prior to any other activity or occupation of an area including caching equipment or fuel or conducting reconnaissance surveys to assess ice conditions, locations for camp moves, etc?⁶
5. The data provided for polar bear numbers in the southern Beaufort Sea is out of date (Page 23 Polar Bears: SAExploration 2018).
 - a. Current estimate of polar bears in the Southern Beaufort Sea population is estimated to be 900 and declining (see Bromaghian 2010)
 - b. Global population is estimated to be 22,000 – 31,000 with an average of 26,000 (see FWS 5-year review 2017)
6. “Aircraft will avoid flying over ideal Polar Bear habitat including but not limited to sea ice and barrier islands.” Please define what is considered to be “ideal” polar bear habitat.
7. “Vessels and aircraft will avoid areas in which subsistence hunting is being conducted.” Are vessels being used for this project? If so please describe.
8. “The Project Manager and wilderness guides have overall responsibility.” What are “wilderness guides” (also called wildlife guide in some places in the document)? Please describe training and responsibilities. This is not a position that was described in the polar bear section of this plan.
9. If the bear takes refuge near or in a vehicle and does not appear likely to move, crew HSE will be notified depending on the location of operation. No action will be taken unless

⁶ BLM would like to set up a meeting in June/July to discuss.

authorized by the AKFG or their designated agents.” Assuming that AKFG is the Alaska Department of Fish and Game (ADFG), please correct in all locations in document.

10. Field Operating Procedure Polar Bear Protocol

- a. In numbers 1 and 7 of this protocol include the distance that must be maintained from known densities.

From: [Berendzen, Steve](#)
To: [Stephanie Brady](#); [Loya, Wendy](#)
Cc: [Joanna Fox](#)
Subject: Fwd: Project Initiation Letter for Coastal Plain Seismic EA
Date: Friday, May 25, 2018 5:30:15 PM
Attachments: [PIL_Seismic EA May 24 2018.docx](#)

Stephanie,

Did you review the Project Initiation Letter for the EA that I sent you? Joanna had them make a couple minor changes, as I understand. I think they're ready for me to sign and accept it, but I'm curious if you have any suggested changes?

Steve Berendzen
Refuge Manager, Arctic National Wildlife Refuge
907-456-0253

----- Forwarded message -----

From: **Joanna Fox** <joanna_fox@fws.gov>
Date: Fri, May 25, 2018 at 8:51 AM
Subject: Fwd: Project Initiation Letter for Coastal Plain Seismic EA
To: Steve Berendzen <steve_berendzen@fws.gov>

Not sure why Shelly didn't include you. Did you already sign this? Do we need the version with her signature before you can sign so we can send out to our staff?

Joanna L. Fox
Deputy Refuge Manager
Arctic National Wildlife Refuge
101 12th Avenue, Room 236
Fairbanks, AK 99701
(907) 456-0549

Follow us on Facebook!
www.facebook.com/arcticnationalwildliferefuge

"Do what you can, with what you have, where you are." -- Theodore Roosevelt

----- Forwarded message -----

From: Jones, Nichelle (Shelly) <njones@blm.gov>
Date: Thu, May 24, 2018 at 3:16 PM
Subject: Project Initiation Letter for Coastal Plain Seismic EA
To: Nolan Heath <nheath@blm.gov>, Hillis, Catherine <chillis@blm.gov>, Fox, Joanna <joanna_fox@fws.gov>

Hey All:

We incorporated a few last minute and minor edits. I am planning to sign the

0000012200

attached PIL before I scan it and send it out to my staff later today. Please either edit, sign and send or just forward this email, indicating your concurrence, to your assigned staff.

Thanks.

-Shelly

Shelly Jones
Acting Manager
Arctic District Office
222 University Avenue
Fairbanks, AK 99709

(907) 474-2310 (w)
(907) 460-0086 (c)



United States Department of the Interior

Bureau of Land Management – Arctic District Office
Fish and Wildlife Service – Arctic National Wildlife Refuge

Refer To: FF097424
1310 (LLAKR00000)

Date: May 24, 2018

Project Initiation Letter

To: Bureau of Land Management (BLM) and Fish and Wildlife Service (FWS)
Interdisciplinary Team Members

From: Nichelle Jones (BLM Arctic District Manager) and Steven Berendzen (FWS Arctic
National Wildlife Refuge Manager)

Subject: Project Initiation Letter for the Marsh Creek 3D Seismic Plan of Operations

Purpose and Need

Title II of the Tax Cuts and Jobs Act of 2017 directed the Secretary of Interior (Secretary) to establish and administer a competitive oil and gas program for the leasing, development, production and transportation of oil and gas in and from the Coastal Plain with two lease sales required over the next ten years. The Tax Cuts and Jobs Act also directed the Secretary to issue any right of ways across the Coastal Plain for exploration, development and/or production and directed the Coastal Plain to be managed in a manner similar to the administration of lease sales under the Naval Petroleum Reserves Production Act (1976). Because the BLM manages the National Petroleum Reserve-Alaska (NPR-A) pursuant to the Naval Petroleum Reserves Production Act (1976), the BLM has been identified as the lead agency for permitting oil and gas related activities in the Arctic National Wildlife Refuge Coastal Plain area, including seismic exploration activities.

Proposed Action

The BLM State Office received the Marsh Creek 3D Plan of Operations from SAExploration (SAE), Inc. for winter seismic surveys in the Coastal Plain on April 19, 2018. SAE is proposing to acquire seismic data across the Arctic National Wildlife Refuge Coastal Plain (2602 sq. miles) using rubber tracked/buggy vibrators and wireless, autonomous recording channels (nodes) during the winter of 2018/2019 and 2019/2020. There could be two crews each winter season with work starting approximately December 1 and ending on May 31, depending on tundra closures.

Roles and Responsibilities

Although the BLM is the lead agency for permitting oil and gas activities on the Coastal Plain, including seismic exploration, FWS staff will be integral in the planning and analysis of the proposed seismic exploration project. The purpose of this Project Initiation Letter is to identify interdisciplinary team (IDT) members and provide direction on how to proceed with the NEPA process for the Marsh Creek 3D Seismic Plan of Operations.

We have chosen to use an Environmental Assessment as the NEPA tool to analyze the impacts of this project. See Table 1 for a list of core interdisciplinary team (IDT) members and their responsibilities.

Table 1. Seismic Exploration Interdisciplinary Team										
Role	BLM	FWS	Issues & Alternatives	Chapter 1 and 2	Chapter 3 (Affected Environment)	Chapter 4 (Environmental Impacts & Cumulative Effects)	BMPs	Public Meetings	Gov Consult	Response to Comments
Oversight and Decisions	Shelly Jones	Steve Berendzen	Briefings			Briefings	Briefings	X	X	Briefings
IDT Leader	Donna Wixon		Facilitate	X	Compile/Edit	Compile/Edit	Briefings	X	X	X
		Joanna Fox	Facilitate	Review	Review/Edit	Review/Edit	Briefings	X	X	X
International Liaison		Charlie Hamilton (Polar Bears) Gilbert Castellanos (Caribou)	X		X	X	X			X
Geology/Petroleum Engineer	Rob Brumbaugh		X		X	X	X			X
		Patrick O'Dell	X		Review	Review	X			X
Soils and Permafrost	Eric Geisler		X			X	X			X
		Josh Rose	X		X	Review	X			X
Vegetation	Tim Vosburgh/ Scott Guyer		X			X	X			X
		Greta Burkhart	X		X	Review	X			X
Hydrology and Wetlands	Richard Kemnitz		X			X	X			X
		Greta Burkhart/Josh Rose	X		X	Review	X			X
Archaeology	Joe Keeney		X			X	X			X
		Ed Declava	X		X	Review	X			X
Acoustical Environment	TBD		X		X	X	X			X
		Roger Kaye	X		Review	Review	X			X
Fisheries	Matt Whitman		X			X	X			X
		Randy Brown	X		X	Review	X			X
Wildlife (Birds)	Debbie Nigro		X			X	X			X
		Chris Latty	X		X	Review	X			X

Role	BLM	FWS	Issues & Alternatives	Chapter 1 and 2	Chapter 3 (Affected Environment)	Chapter 4 (Environmental Impacts & Cumulative Effects)	BMPs	Public Meetings	Gov Consult	Response to Comments
Wildlife (Mammals)	Tim Vosburgh		X			X	X			X
		Steve Arthur	X		X	Review	X			X
T&E Species and Consultation	Debbie Nigro (BA – Birds)		X			X	X			X
		MMPA – Bear Ted Swem (ESA consultation)	X		X	Review	X			X
Socioeconomics and Environmental Justice	Stacey Fritz		X			X	X	X	X	X
		Hollis Twitchell/Erin Carver	X		X	Review	X	X	X	X
Subsistence & 810 Analysis	Stacey Fritz (responsible for 810 analysis)		X			X	X	X	X	X
		Hollis Twitchell	X		X	Review	X	X	X	X
Lands/Realty	Donna Wixon		X			X	X			X
		Susan LaKomski	X		X	Review	X			X
VRM/Transportation	Randy Goodwin	Jennifer Reed	X		X	X	X			X
Wilderness		Roger Kaye	X		X	X	X			X
Wild & Scenic Rivers	Randy Goodwin		X			X	X			X
		Jennifer Reed	X		X	Review	X			X
Other Special Land Designations	Randy Goodwin		X			X	X			X
		Jennifer Reed	X		X	Review	X			X
Hazardous Materials	Melody Debenham					X	X			X
		Angela Matz	X		X	Review	X			X
GIS/Mapping	Cindy Hamfler			X	X			X		
		Sheila Dufford		X	X			X		

IDT Team

All participants identified in this Project Initiation Letter will work together throughout the analysis and documentation process.

The IDT Lead is responsible for communicating with the managers on a regular basis, ensuring the process is meeting timeframes and providing assignments and instructions to IDT members. In addition, the IDT Lead is responsible for finalizing the proposed action, leading and facilitating IDT meetings, writing Chapters 1 and 2, compiling and editing Chapters 3 and 4, finalizing the NEPA document and assuring a complete project record.

All IDT members will be responsible for identifying environmental and/or social issues related to the proposed action, develop best management practices and propose alternatives based on issues.

Fish and Wildlife Service staff will be primarily responsible for writing Chapter 3 (Existing Condition) while BLM staff will be primarily responsible for writing Chapter 4 (Environmental Impacts) with review by FWS specialists (refer to Table 1). Communication is critical and the IDT Lead and managers should be notified as soon as possible of any potential issues or deadlines that can't be met. Any questions should be directed to the IDT Lead, Donna Wixon at dwixon@blm.gov or 474-2301.

After the Proposed Action is finalized (approximately early June), there will be weekly IDT update conference calls each Tuesday at 3pm (call in number will be provided). There will also be an in person IDT meeting to identify draft best management practices and alternatives.

The BLM District Manager and the FWS Arctic National Wildlife Refuge Manager will be given briefings at key milestones during the process such as after Issue Statement Development, Alternative Development, and determination of Environmental Impacts (including the 810 analysis and ESA impacts). Key IDT members may need to be available to attend briefings.

In addition, the IDT Lead will update managers weekly on the timeline, process, and any issues that need to be resolved.

NEPA

Under the new Department NEPA direction, complex Environmental Assessments will be required to be less than 50 pages in length (appendices are not included in the total page numbers). All IDT members will need to be cognizant of the page limitations and write their sections accordingly. Specialists should complete Specialist Reports for their resource that will be included as an appendix and provide a summary of their findings for the body of the EA. Even if a resource is found to have no issues associated with the proposed action, a Specialist Report should still be completed to explain why there are no issues associated with that resource.

Timeframes

Under the 43 CFR 3152 (Mineral Exploration in Alaska), the authorized officer is required to review and approve a seismic permit within 90 calendar days of receiving an application unless

compliance with statutory requirements, such as NEPA, would delay the action. Due to the high likelihood of public interest in this project, the need for public outreach and the amount of time necessary for the Endangered Species Act and Marine Mammal Protection Act consultations, it is not feasible to meet the 90 day timeframe. See the proposed project timeline below.

Projected Timeline

- May 11-** Due date for application questions from FWS and BLM to IDT Lead
- May 22** – IDT Lead compiles application questions and sends letter to applicant
- May 23** – Project Initiation Letter sent to IDT
- May 22-June 1** – Draft Affected Environment (FWS and Key BLM IDT members) (Refer to Table 1)
- May 31** – Deadline for applicant response to questions
- May 31-June 6** - Finalize Proposed Action and post to BLM ePlanning website (IDT Lead)
- June - November** –MMPA Incidental Take Regulations development (published in Federal Register in November and final rule in January)
- June 6** – IDT Lead sends Proposed Action to team to draft Issue Statements
- June 12** – Deadline for Issue Statements from IDT to IDT Lead
- June 12** – IDT Lead sends letter to applicant regarding schedule
- June 13-27** – All IDT members draft proposed Best Management Practices and draft Alternatives based on Issues
- June 28** – In person IDT meeting to identify draft Best Management Practices and Alternatives. Additional BMPs may be identified during the environmental impacts analysis.
- June 29** – IDT Lead sends Alternatives including draft Best Management Practices to Managers for review
- July 3** – IDT Lead sends list of projects to include in cumulative effects analysis to IDT for review
- July 5** – Manager Alternative Briefing and Identify Preferred Alternative (IDT Lead, Managers and key IDT members)
- July 6 - July 20** – Joint Biological Assessment for ESA and MMPA consultations on Preferred Alternative (FWS – polar bears, BLM - eiders) (BA for both seismic and the Incidental Take Regulations)
- July 6 - July 20** – IDT finalizes Best Management Practices and completes Environmental Impacts including Cumulative Effects analysis (BLM and Key FWS IDT members) (Refer to Table 1)
- July 20 – November 9** – Joint MMPA and ESA Formal Consultation for both seismic and Incidental Take Regulations
- July 25** – Manger Briefing on Environmental Impacts
- July 27** – Post draft EA for 30 day comment period.
- August 6-15**– Public Meetings and Government to Government
- August 27**– All Public Comments Received
- August 27-September 14** – IDT Responds to Comments
- November 9** – Joint MMPA and ESA Formal Consultation Completed
- November 12** – Sign FONSI and Decision (BLM District Manager)
- November 16** – Incidental Take Regulations published in Federal Register
- January 2019** – Final Incidental Take Regulations Rule

Nichelle Jones
(BLM Arctic District Manager)

Steve Berendzen
(FWS Arctic National Wildlife Refuge Manager)

From: [Berendzen, Steve](#)
To: [Joanna Fox](#)
Cc: [Loya, Wendy](#); [John Trawicki](#); [Stephanie Brady](#); [Stephen Arthur](#)
Subject: Fwd: [EXTERNAL] NSB 18-466 SAExploration, Inc. (SAE LLC) - Kuukpik Corporation
Date: Friday, May 25, 2018 6:25:22 PM
Attachments: [SnowSampling_2014-10-31.pdf](#)

Joanna,

Have you had the opportunity to run this by any staff to take a closer look at these requirements? I don't know if Wendy has anyone in the RO or elsewhere who might have familiarity to make an informed decision, but I think we should review and determine if there is some benefit in following this.

Steve Berendzen
Refuge Manager, Arctic National Wildlife Refuge
907-456-0253

----- Forwarded message -----

From: **Jones, Nichelle (Shelly)** <njones@blm.gov>
Date: Wed, May 23, 2018 at 10:12 AM
Subject: Fwd: [EXTERNAL] NSB 18-466 SAExploration, Inc. (SAE LLC) - Kuukpik Corporation
To: Donna Wixon <dwixon@blm.gov>, "LaMarr, Sarah" <slamarr@blm.gov>, Debora Nigro <dnigro@blm.gov>, Timothy Vosburgh <tvosburgh@blm.gov>, Matt Whitman <mwhitman@blm.gov>, Steve Berendzen <steve_berendzen@fws.gov>, "Fox, Joanna" <joanna_fox@fws.gov>, "Guyer, Scott" <sguyer@blm.gov>, Eric Geisler <egeisler@blm.gov>, Richard Kemnitz <rkemnitz@blm.gov>, "Longan, Sara" <slongan@blm.gov>

Hello All: I thought you might be interested in the attachment Melissa Head attached to this email. I would like to set up some time to discuss with you how much more of this type of monitoring we might want to do as part of the seismic permit we are working on.

It sounds like part (maybe most) of the 1002 area will fall in the coastal plain region and DNR tundra opening minimums would require 6" of snow. Other areas further south might use 9". As I understand it, the idea is that there should be enough snow to protect the vegetation. We should consider tweaking these minimum requirements based on our own analysis of the vegetation and types of tundra in this area.

The benefit of additional snow and soil temperature monitoring from the applicant's stand point is they might be able to show conditions meet the minimum standards earlier than the data coming in from the DNR monitoring. I am not sure how many monitoring stations inform the tundra opening decisions for DNR or where they are located. I know Melissa has that information and told me the increased monitoring by the applicants does often allow increased number of tundra travel opportunities. If we do not think the current amount of monitoring forms a good basis for representing the average conditions across this area, we may want to increase the monitoring for our

own risk management concerns as well.

The dynamic between freeze down, snow cover, ground pressure of the vehicles, type of tundra vegetation, the amount of moisture and the type of permafrost soils cuts across many of the critical NEPA elements. It would be helpful if these could be considered collectively by an arctic engineering specialist. I would like work more collaboratively with DNR to stay informed on the snow and freeze conditions throughout the season, so I can start to fine tune my understanding of the relationship between the environmental conditions we are tracking and the residual impacts we are documenting from our permits.

-Shelly

Shelly Jones
Acting Manager
Arctic District Office
222 University Avenue
Fairbanks, AK 99709

(907) 474-2310 (w)
(907) 460-0086 (c)

----- Forwarded message -----

From: **Head, Melissa M (DNR)** <melissa.head@alaska.gov>

Date: Mon, May 21, 2018 at 4:34 PM

Subject: RE: [EXTERNAL] NSB 18-466 SAExploration, Inc. (SAE LLC) - Kuukpik Corporation

To: "Jones, Nichelle (Shelly)" <njones@blm.gov>

Hi Shelly,

Here is our snow sampling protocol for your reference.

Contacts for you-

Henry Brooks (DNR/DMLW Water Section for Temporary Water Use Authorizations): henry.brooks@alaska.gov

Jack Winters (ADFG/Habitat Division for Fish Habitat Permits for water withdrawals): jack.winters@alaska.gov

Tiffany Carey (ConocoPhillips for advancements in seismic technology): tiffany.c.carey@conocophillips.com

0000012210

- She was the seismic manager for the 3D Bear program and GMT2 seismic. You may already have her contact info.
- Tiffany gave us a great presentation about how their new seismic technology reduces overall travel needs and how she is managing seismic operations. She is very enthusiastic about her job and is very good at explaining their process.
- I would expect all seismic companies to be following a similar process to reduce impacts.

It was good talking to you this afternoon. Please don't hesitate to get in touch. I'm happy to help in any way that I can.

Kind Regards,

Melissa

Melissa Head

Manager, Northern Oil & Gas Team

DNR/DMLW

907-451-2719

Kind Regards,

From: Jones, Nichelle (Shelly) [mailto:njones@blm.gov]

Sent: Monday, May 21, 2018 4:10 PM

To: Head, Melissa M (DNR) <melissa.head@alaska.gov>

Subject: Fwd: [EXTERNAL] NSB 18-466 SAExploration, Inc. (SAE LLC) - Kuukpik Corporation

Shelly Jones

0000012211

Acting Manager

Arctic District Office

222 University Avenue

Fairbanks, AK 99709

(907) 474-2310 (w)

(907) 460-0086 (c)

Annamae J. Leavitt, Senior Office Specialist

North Slope Borough | Planning & Community Services

PO Box 69 Barrow, Alaska 99723

P 907-852-0320 | F 907-852-0322

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From: [Brady, Stephanie](#)
To: [Berendzen, Steve](#)
Cc: [Loya, Wendy](#); [Joanna Fox](#)
Subject: Re: Project Initiation Letter for Coastal Plain Seismic EA
Date: Tuesday, May 29, 2018 9:24:50 AM
Attachments: [PIL Seismic EA May 24 2018 sbedits.docx](#)

Hi there Steve - I added some language regarding review by FWS of the EA - attached for you to take a look - in track changes. Let me know if you need anything else. Stephanie

stephanie_bradly@fws.gov | Branch Chief, Conservation Planning and Policy |
U.S. Fish and Wildlife Service | National Wildlife Refuge System | Alaska |
907.306.7448
<https://sites.google.com/a/fws.gov/alaska-region-office-of-conservation-planning-policy/home> (DOI employees)

On Fri, May 25, 2018 at 3:30 PM, Berendzen, Steve <steve_berendzen@fws.gov> wrote:
Stephanie,

Did you review the Project Initiation Letter for the EA that I sent you? Joanna had them make a couple minor changes, as I understand. I think they're ready for me to sign and accept it, but I'm curious if you have any suggested changes?

Steve Berendzen
Refuge Manager, Arctic National Wildlife Refuge
907-456-0253

----- Forwarded message -----

From: **Joanna Fox** <joanna_fox@fws.gov>
Date: Fri, May 25, 2018 at 8:51 AM
Subject: Fwd: Project Initiation Letter for Coastal Plain Seismic EA
To: Steve Berendzen <steve_berendzen@fws.gov>

Not sure why Shelly didn't include you. Did you already sign this? Do we need the version with her signature before you can sign so we can send out to our staff?

Joanna L. Fox
Deputy Refuge Manager
Arctic National Wildlife Refuge
101 12th Avenue, Room 236
Fairbanks, AK 99701
(907) 456-0549

Follow us on Facebook!
www.facebook.com/arcticnationalwildliferefuge

"Do what you can, with what you have, where you are." -- Theodore Roosevelt

----- Forwarded message -----
From: Jones, Nichelle (Shelly) <njones@blm.gov>

Date: Thu, May 24, 2018 at 3:16 PM

Subject: Project Initiation Letter for Coastal Plain Seismic EA

To: Nolan Heath <nheath@blm.gov>, Hillis, Catherine <chillis@blm.gov>, Fox, Joanna <joanna_fox@fws.gov>

Hey All:

We incorporated a few last minute and minor edits. I am planning to sign the attached PIL before I scan it and send it out to my staff later today. Please either edit, sign and send or just forward this email, indicating your concurrence, to your assigned staff.

Thanks.

-Shelly

Shelly Jones
Acting Manager
Arctic District Office
222 University Avenue
Fairbanks, AK 99709

(907) 474-2310 (w)

(907) 460-0086 (c)



United States Department of the Interior

Bureau of Land Management – Arctic District Office
Fish and Wildlife Service – Arctic National Wildlife Refuge

Refer To: FF097424
1310 (LLAKR00000)

Date: May 24, 2018

Project Initiation Letter

To: Bureau of Land Management (BLM) and Fish and Wildlife Service (FWS)
Interdisciplinary Team Members

From: Nichelle Jones (BLM Arctic District Manager) and Steven Berendzen (FWS Arctic
National Wildlife Refuge Manager)

Subject: Project Initiation Letter for the Marsh Creek 3D Seismic Plan of Operations

Purpose and Need

Title II of the Tax Cuts and Jobs Act of 2017 directed the Secretary of Interior (Secretary) to establish and administer a competitive oil and gas program for the leasing, development, production and transportation of oil and gas in and from the Coastal Plain with two lease sales required over the next ten years. The Tax Cuts and Jobs Act also directed the Secretary to issue any right of ways across the Coastal Plain for exploration, development and/or production and directed the Coastal Plain to be managed in a manner similar to the administration of lease sales under the Naval Petroleum Reserves Production Act (1976). Because the BLM manages the National Petroleum Reserve-Alaska (NPR-A) pursuant to the Naval Petroleum Reserves Production Act (1976), the BLM has been identified as the lead agency for permitting oil and gas related activities in the Arctic National Wildlife Refuge Coastal Plain area, including seismic exploration activities.

Proposed Action

The BLM State Office received the Marsh Creek 3D Plan of Operations from SAExploration (SAE), Inc. for winter seismic surveys in the Coastal Plain on April 19, 2018. SAE is proposing to acquire seismic data across the Arctic National Wildlife Refuge Coastal Plain (2602 sq. miles) using rubber tracked/buggy vibrators and wireless, autonomous recording channels (nodes) during the winter of 2018/2019 and 2019/2020. There could be two crews each winter season with work starting approximately December 1 and ending on May 31, depending on tundra closures.

Roles and Responsibilities

Although the BLM is the lead agency for permitting oil and gas activities on the Coastal Plain, including seismic exploration, FWS staff will be integral in the planning and analysis of the proposed seismic exploration project. The purpose of this Project Initiation Letter is to identify interdisciplinary team (IDT) members and provide direction on how to proceed with the NEPA process for the Marsh Creek 3D Seismic Plan of Operations.

We have chosen to use an Environmental Assessment as the NEPA tool to analyze the impacts of this project. See Table 1 for a list of core interdisciplinary team (IDT) members and their responsibilities.

Table 1. Seismic Exploration Interdisciplinary Team										
Role	BLM	FWS	Issues & Alternatives	Chapter 1 and 2	Chapter 3 (Affected Environment)	Chapter 4 (Environmental Impacts & Cumulative Effects)	BMPs	Public Meetings	Gov Consult	Response to Comments
Oversight and Decisions	Shelly Jones	Steve Berendzen	Briefings			Briefings	Briefings	X	X	Briefings
IDT Leader	Donna Wixon		Facilitate	X	Compile/Edit	Compile/Edit	Briefings	X	X	X
		Joanna Fox	Facilitate	Review	Review/Edit	Review/Edit	Briefings	X	X	X
International Liaison		Charlie Hamilton (Polar Bears) Gilbert Castellanos (Caribou)	X		X	X	X			X
Geology/Petroleum Engineer	Rob Brumbaugh		X		X	X	X			X
		Patrick O'Dell	X		Review	Review	X			X
Soils and Permafrost	Eric Geisler		X			X	X			X
		Josh Rose	X		X	Review	X			X
Vegetation	Tim Vosburgh/ Scott Guyer		X			X	X			X
		Greta Burkhart	X		X	Review	X			X
Hydrology and Wetlands	Richard Kemnitz		X			X	X			X
		Greta Burkhart/Josh Rose	X		X	Review	X			X
Archaeology	Joe Keeney		X			X	X			X
		Ed Declava	X		X	Review	X			X
Acoustical Environment	TBD		X		X	X	X			X
		Roger Kaye	X		Review	Review	X			X
Fisheries	Matt Whitman		X			X	X			X
		Randy Brown	X		X	Review	X			X
Wildlife (Birds)	Debbie Nigro		X			X	X			X
		Chris Latty	X		X	Review	X			X

Role	BLM	FWS	Issues & Alternatives	Chapter 1 and 2	Chapter 3 (Affected Environment)	Chapter 4 (Environmental Impacts & Cumulative Effects)	BMPs	Public Meetings	Gov Consult	Response to Comments
Wildlife (Mammals)	Tim Vosburgh		X			X	X			X
		Steve Arthur	X		X	Review	X			X
T&E Species and Consultation	Debbie Nigro (BA – Birds)		X			X	X			X
		MMPA – Bear Ted Swem (ESA consultation)	X		X	Review	X			X
Socioeconomics and Environmental Justice	Stacey Fritz		X			X	X	X	X	X
		Hollis Twitchell/Erin Carver	X		X	Review	X	X	X	X
Subsistence & 810 Analysis	Stacey Fritz (responsible for 810 analysis)		X			X	X	X	X	X
		Hollis Twitchell	X		X	Review	X	X	X	X
Lands/Realty	Donna Wixon		X			X	X			X
		Susan LaKomski	X		X	Review	X			X
VRM/Transportation	Randy Goodwin	Jennifer Reed	X		X	X	X			X
Wilderness		Roger Kaye	X		X	X	X			X
Wild & Scenic Rivers	Randy Goodwin		X			X	X			X
		Jennifer Reed	X		X	Review	X			X
Other Special Land Designations	Randy Goodwin		X			X	X			X
		Jennifer Reed	X		X	Review	X			X
Hazardous Materials	Melody Debenham					X	X			X
		Angela Matz	X		X	Review	X			X
GIS/Mapping	Cindy Hamfler			X	X			X		
		Sheila Dufford		X	X			X		

IDT Team

All participants identified in this Project Initiation Letter will work together throughout the analysis and documentation process.

The IDT Lead is responsible for communicating with the managers on a regular basis, ensuring the process is meeting timeframes and providing assignments and instructions to IDT members. In addition, the IDT Lead is responsible for finalizing the proposed action, leading and facilitating IDT meetings, writing Chapters 1 and 2, compiling and editing Chapters 3 and 4, finalizing the NEPA document and assuring a complete project record.

All IDT members will be responsible for identifying environmental and/or social issues related to the proposed action, develop best management practices and propose alternatives based on issues.

Fish and Wildlife Service staff will be primarily responsible for writing Chapter 3 (Existing Condition) while BLM staff will be primarily responsible for writing Chapter 4 (Environmental Impacts) with review by FWS specialists (refer to Table 1). Communication is critical and the IDT Lead and managers should be notified as soon as possible of any potential issues or deadlines that can't be met. The BLM will share draft copies of the sections of the EA for FWS review. The BLM will engage the FWS when a decision is required regarding substantive work or material to be included in the EA that is within the scope of its jurisdiction by law or special expertise. BLM will provide written responses to FWS comments and rationale for recommendations not incorporated into the EA. Any questions should be directed to the IDT Lead, Donna Wixon at dwixon@blm.gov or 474-2301.

After the Proposed Action is finalized (approximately early June), there will be weekly IDT update conference calls each Tuesday at 3pm (call in number will be provided). There will also be an in person IDT meeting to identify draft best management practices and alternatives.

The BLM District Manager and the FWS Arctic National Wildlife Refuge Manager will be given briefings at key milestones during the process such as after Issue Statement Development, Alternative Development, and determination of Environmental Impacts (including the 810 analysis and ESA impacts). Key IDT members may need to be available to attend briefings.

In addition, the IDT Lead will update managers weekly on the timeline, process, and any issues that need to be resolved.

NEPA

Under the new Department NEPA direction, complex Environmental Assessments will be required to be less than 50 pages in length (appendices are not included in the total page numbers). All IDT members will need to be cognizant of the page limitations and write their sections accordingly. Specialists should complete Specialist Reports for their resource that will be included as an appendix and provide a summary of their findings for the body of the EA. Even if a resource is found to have no issues associated with the proposed action, a Specialist Report should still be completed to explain why there are no issues associated with that resource.

Timeframes

Under the 43 CFR 3152 (Mineral Exploration in Alaska), the authorized officer is required to review and approve a seismic permit within 90 calendar days of receiving an application unless

compliance with statutory requirements, such as NEPA, would delay the action. Due to the high likelihood of public interest in this project, the need for public outreach and the amount of time necessary for the Endangered Species Act and Marine Mammal Protection Act consultations, it is not feasible to meet the 90 day timeframe. See the proposed project timeline below.

Projected Timeline

May 11- Due date for application questions from FWS and BLM to IDT Lead

May 22 – IDT Lead compiles application questions and sends letter to applicant

May 23 – Project Initiation Letter sent to IDT

May 22-June 1 – Draft Affected Environment (FWS and Key BLM IDT members) (Refer to Table 1)

May 31 – Deadline for applicant response to questions

May 31-June 6 - Finalize Proposed Action and post to BLM ePlanning website (IDT Lead)

June - November –MMPA Incidental Take Regulations development (published in Federal Register in November and final rule in January)

June 6 – IDT Lead sends Proposed Action to team to draft Issue Statements

June 12 – Deadline for Issue Statements from IDT to IDT Lead

June 12 – IDT Lead sends letter to applicant regarding schedule

June 13-27 – All IDT members draft proposed Best Management Practices and draft Alternatives based on Issues

June 28 – In person IDT meeting to identify draft Best Management Practices and Alternatives. Additional BMPs may be identified during the environmental impacts analysis.

June 29 – IDT Lead sends Alternatives including draft Best Management Practices to Managers for review

July 3 – IDT Lead sends list of projects to include in cumulative effects analysis to IDT for review

July 5 – Manager Alternative Briefing and Identify Preferred Alternative (IDT Lead, Managers and key IDT members)

July 6 - July 20 – Joint Biological Assessment for ESA and MMPA consultations on Preferred Alternative (FWS – polar bears, BLM - eiders) (BA for both seismic and the Incidental Take Regulations)

July 6 - July 20 – IDT finalizes Best Management Practices and completes Environmental Impacts including Cumulative Effects analysis (BLM and Key FWS IDT members) (Refer to Table 1)

July 20 – November 9 – Joint MMPA and ESA Formal Consultation for both seismic and Incidental Take Regulations

July 25 – Manger Briefing on Environmental Impacts

July 27 – Post draft EA for 30 day comment period.

August 6-15– Public Meetings and Government to Government

August 27– All Public Comments Received

August 27-September 14 – IDT Responds to Comments

November 9 – Joint MMPA and ESA Formal Consultation Completed

November 12 – Sign FONSI and Decision (BLM District Manager)

November 16 – Incidental Take Regulations published in Federal Register

January 2019 – Final Incidental Take Regulations Rule

Nichelle Jones

(BLM Arctic District Manager)

Steve Berendzen

(FWS Arctic National Wildlife Refuge Manager)

From: [Berendzen, Steve](#)
To: [Loya, Wendy](#); [Hollis Twitchell](#)
Cc: [Joanna Fox](#); [Doug Damberg](#); [Steven Strader](#)
Subject: Fwd: For Fairbanks, Anchorage and Utqiagvik meetings
Date: Tuesday, May 29, 2018 11:08:49 AM
Attachments: [Week 2 May 29-June1 ANC FAI BAR FINAL.docx v.2.docx](#)
[Meeting Flow.docx](#)

FYI - updated agenda and logistics for EIS Scoping meetings this week.

Steve Berendzen
Refuge Manager, Arctic National Wildlife Refuge
907-456-0253

----- Forwarded message -----

From: **Mouritsen, Karen** <kmourits@blm.gov>
Date: Fri, May 25, 2018 at 6:03 PM
Subject: For Fairbanks, Anchorage and Utqiagvik meetings
To: Joseph Balash <joseph_balash@ios.doi.gov>, "MacGregor, Katharine" <katharine_macgregor@ios.doi.gov>, Stephen Wackowski <stephen_wackowski@ios.doi.gov>, Greg Siekaniec <greg_siekaniec@fws.gov>, Karen Clark <karen_clark@fws.gov>, Miriam Hayes <mnhayes@blm.gov>, Ted Murphy <t75murph@blm.gov>, Steve Berendzen <steve_berendzen@fws.gov>
Cc: Joseph Seidlitz <gseidlitz@blm.gov>, "Moran, Jill" <jcmoran@blm.gov>, Lesia Monson <lesia_monson@ios.doi.gov>, "Rosenberger, Leslie" <rosenberger@blm.gov>, "Frost, Eileen" <efrost@blm.gov>, Lesli Ellis-Wouters <lellis@blm.gov>, Serena Sweet <ssweet@blm.gov>, Michael Nedd <mnedd@blm.gov>, Nichelle Jones <njones@blm.gov>, chad.ricklefs@empsi.com, Hilary Zarin <hzarin@blm.gov>, Jeff Krauss <jkrauss@blm.gov>, Tracie Lassiter <tracie_lassiter@ios.doi.gov>, Brian Steed <bsteed@blm.gov>

Hello Joe, Kate, Steve

Attached here is a document with the times and logistics for the meetings in Fairbanks, Anchorage and Utqiagvik. The second document is the detailed description of how we will manage the speakers. Please note that in Fairbanks, we will have a safety briefing for BLM and DOI attendees, at 1:30 pm -- so please arrive at 1:15. The outer doors will open at 2 and the open house will begin at 3 pm. (in Anchorage, the safety briefing will be at 2:30).

BLM employees will be glad to pick you up at the airport or a hotel before these meetings, just let one of us know.

For Fairbanks and Anchorage, we have arranged for you all to enter through a side door, so do call the person noted on the agenda for that day.

Lesli Ellis Wouters (BLM-AK Communications Chief), Nicole Hayes and Ted Murphy will arrive in Fairbanks on Tuesday at mid-morning. They will have these documents in folders for you. Ted Murphy will be taking my place at next week's meetings.

Joe, on Tuesday, Lesli will need to talk to you about the designated speakers.

Kate, I'll send a separate email to you, as we have a communications site trip for you on Monday at

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10:30, then we will make sure you get lunch and get you to the Fairbanks venue for the safety briefing.

Steve, I will be calling you tomorrow about the Chicken trip (I have some options put together by Geoff Beyersdork and Matt Varner) and we need to talk to you before finalizing some of those plans.

Please call if any questions or concerns. Have a good weekend.

Ted - cell --

b6

Nicole cell -- 907-290-0179 or

b6

Chad Ricklefs - EMPSi contractor lead -- cell:

b6

Lesli Ellis-Wouters - cell -- 907-331-8763

Karen cell 202-329-2030

From: [Berendzen, Steve](#)
To: [Brady, Stephanie](#)
Cc: [Loya, Wendy](#); [Joanna Fox](#)
Subject: Re: Project Initiation Letter for Coastal Plain Seismic EA
Date: Tuesday, May 29, 2018 1:56:36 PM

Thanks, Stephanie - I like your suggested additions. We'll run them by Shelly with the expectation that it gets incorporated.

Steve Berendzen
Refuge Manager, Arctic National Wildlife Refuge
907-456-0253

On Tue, May 29, 2018 at 7:24 AM, Brady, Stephanie <stephanie_brady@fws.gov> wrote:
Hi there Steve - I added some language regarding review by FWS of the EA - attached for you to take a look - in track changes. Let me know if you need anything else. Stephanie

stephanie_brady@fws.gov | Branch Chief, Conservation Planning and Policy |
U.S. Fish and Wildlife Service | National Wildlife Refuge System | Alaska |
907.306.7448
<https://sites.google.com/a/fws.gov/alaska-region-office-of-conservation-planning-policy/home> (DOI employees)

On Fri, May 25, 2018 at 3:30 PM, Berendzen, Steve <steve_berendzen@fws.gov> wrote:
Stephanie,

Did you review the Project Initiation Letter for the EA that I sent you? Joanna had them make a couple minor changes, as I understand. I think they're ready for me to sign and accept it, but I'm curious if you have any suggested changes?

Steve Berendzen
Refuge Manager, Arctic National Wildlife Refuge
907-456-0253

----- Forwarded message -----

From: **Joanna Fox** <joanna_fox@fws.gov>
Date: Fri, May 25, 2018 at 8:51 AM
Subject: Fwd: Project Initiation Letter for Coastal Plain Seismic EA
To: Steve Berendzen <steve_berendzen@fws.gov>

Not sure why Shelly didn't include you. Did you already sign this? Do we need the version with her signature before you can sign so we can send out to our staff?

Joanna L. Fox
Deputy Refuge Manager
Arctic National Wildlife Refuge
101 12th Avenue, Room 236
Fairbanks, AK 99701
(907) 456-0549

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www.facebook.com/arcticonationalwildliferefuge

"Do what you can, with what you have, where you are." -- Theodore Roosevelt

----- Forwarded message -----

From: Jones, Nichelle (Shelly) <njones@blm.gov>

Date: Thu, May 24, 2018 at 3:16 PM

Subject: Project Initiation Letter for Coastal Plain Seismic EA

To: Nolan Heath <nheath@blm.gov>, Hillis, Catherine <chillis@blm.gov>, Fox, Joanna <joanna_fox@fws.gov>

Hey All:

We incorporated a few last minute and minor edits. I am planning to sign the attached PIL before I scan it and send it out to my staff later today. Please either edit, sign and send or just forward this email, indicating your concurrence, to your assigned staff.

Thanks.

-Shelly

Shelly Jones
Acting Manager
Arctic District Office
222 University Avenue
Fairbanks, AK 99709

(907) 474-2310 (w)
(907) 460-0086 (c)

0000012225

From: [Joanna Fox](#)
To: [stephanie_bradly](#)
Cc: [Steve Berendzen](#); [Wendy Loya](#); [John Trawicki](#); [Stephen Arthur](#)
Subject: Re: [EXTERNAL] NSB 18-466 SAExploration, Inc. (SAE LLC) - Kuukpik Corporation
Date: Tuesday, May 29, 2018 5:56:04 PM

Thanks Stephanie. If we could get comments back by noon on June 5, that would be great (that way we can discuss at our 3pm meeting with BLM that afternoon). We're going to ask Josh Rose to take a look at it too.

Joanna L. Fox
Deputy Refuge Manager
Arctic National Wildlife Refuge
101 12th Avenue, Room 236
Fairbanks, AK 99701
(907) 456-0549

Follow us on Facebook!
www.facebook.com/arcticnationalwildliferefuge

"Do what you can, with what you have, where you are." -- Theodore Roosevelt

On Tue, May 29, 2018 at 8:11 AM Brady, Stephanie <stephanie_bradly@fws.gov> wrote:

I can have John Martin review these requirements - when do you need the comments to you and Joanna?

stephanie_bradly@fws.gov | Branch Chief, Conservation Planning and Policy |
U.S. Fish and Wildlife Service | National Wildlife Refuge System | Alaska |
907.306.7448
<https://sites.google.com/a/fws.gov/alaska-region-office-of-conservation-planning-policy/home> (DOI employees)

On Fri, May 25, 2018 at 4:25 PM, Berendzen, Steve <steve_berendzen@fws.gov> wrote:

Joanna,

Have you had the opportunity to run this by any staff to take a closer look at these requirements? I don't know if Wendy has anyone in the RO or elsewhere who might have familiarity to make an informed decision, but I think we should review and determine if there is some benefit in following this.

Steve Berendzen
Refuge Manager, Arctic National Wildlife Refuge
907-456-0253

----- Forwarded message -----

From: Jones, Nichelle (Shelly) <njones@blm.gov>

Date: Wed, May 23, 2018 at 10:12 AM

Subject: Fwd: [EXTERNAL] NSB 18-466 SAExploration, Inc. (SAE LLC) - Kuukpik Corporation

To: Donna Wixon <dwixon@blm.gov>, "LaMarr, Sarah" <slamarr@blm.gov>, Debora Nigro <dnigro@blm.gov>, Timothy Vosburgh <tvosburgh@blm.gov>, Matt Whitman

<mwhitman@blm.gov>, Steve Berendzen <steve_berendzen@fws.gov>, "Fox, Joanna" <joanna_fox@fws.gov>, "Guyer, Scott" <sguyer@blm.gov>, Eric Geisler <egeisler@blm.gov>, Richard Kemnitz <rkemnitz@blm.gov>, "Longan, Sara" <slongan@blm.gov>

Hello All: I thought you might be interested in the attachment Melissa Head attached to this email. I would like to set up some time to discuss with you how much more of this type of monitoring we might want to do as part of the seismic permit we are working on.

It sounds like part (maybe most) of the 1002 area will fall in the coastal plain region and DNR tundra opening minimums would require 6" of snow. Other areas further south might use 9". As I understand it, the idea is that there should be enough snow to protect the vegetation. We should consider tweaking these minimum requirements based on our own analysis of the vegetation and types of tundra in this area.

The benefit of additional snow and soil temperature monitoring from the applicant's stand point is they might be able to show conditions meet the minimum standards earlier than the data coming in from the DNR monitoring. I am not sure how many monitoring stations inform the tundra opening decisions for DNR or where they are located. I know Melissa has that information and told me the increased monitoring by the applicants does often allow increased number of tundra travel opportunities. If we do not think the current amount of monitoring forms a good basis for representing the average conditions across this area, we may want to increase the monitoring for our own risk management concerns as well.

The dynamic between freeze down, snow cover, ground pressure of the vehicles, type of tundra vegetation, the amount of moisture and the type of permafrost soils cuts across many of the critical NEPA elements. It would be helpful if these could be considered collectively by an arctic engineering specialist. I would like work more collaboratively with DNR to stay informed on the snow and freeze conditions throughout the season, so I can start to fine tune my understanding of the relationship between the environmental conditions we are tracking and the residual impacts we are documenting from our permits.

-Shelly

Shelly Jones
Acting Manager
Arctic District Office
222 University Avenue
Fairbanks, AK 99709

(907) 474-2310 (w)

(907) 460-0086 (c)

----- Forwarded message -----

From: **Head, Melissa M (DNR)** <melissa.head@alaska.gov>

Date: Mon, May 21, 2018 at 4:34 PM

Subject: RE: [EXTERNAL] NSB 18-466 SAExploration, Inc. (SAE LLC) - Kuukpik Corporation

To: "Jones, Nichelle (Shelly)" <njones@blm.gov>

Hi Shelly,

Here is our snow sampling protocol for your reference.

Contacts for you-

Henry Brooks (DNR/DMLW Water Section for Temporary Water Use Authorizations):
henry.brooks@alaska.gov

Jack Winters (ADFG/Habitat Division for Fish Habitat Permits for water withdrawals):
jack.winters@alaska.gov

Tiffany Carey (ConocoPhillips for advancements in seismic technology): tiffany.c.carey@conocophillips.com

- She was the seismic manager for the 3D Bear program and GMT2 seismic. You may already have her contact info.
- Tiffany gave us a great presentation about how their new seismic technology reduces overall travel needs and how she is managing seismic operations. She is very enthusiastic about her job and is very good at explaining their process.
- I would expect all seismic companies to be following a similar process to reduce impacts.

It was good talking to you this afternoon. Please don't hesitate to get in touch. I'm happy to help in any way that I can.

Kind Regards,

0000012228

Melissa

Melissa Head

Manager, Northern Oil & Gas Team

DNR/DMLW

907-451-2719

Kind Regards,

From: Jones, Nichelle (Shelly) [mailto:njones@blm.gov]

Sent: Monday, May 21, 2018 4:10 PM

To: Head, Melissa M (DNR) <melissa.head@alaska.gov>

Subject: Fwd: [EXTERNAL] NSB 18-466 SAExploration, Inc. (SAE LLC) - Kuukpik Corporation

Shelly Jones

Acting Manager

Arctic District Office

222 University Avenue

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(907) 474-2310 (w)

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Annamae J. Leavitt, Senior Office Specialist

North Slope Borough | Planning & Community Services

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P 907-852-0320 | F 907-852-0322

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From: [Joanna Fox](#)
To: [Roger Kaye](#); [Christopher Latty](#); [Jennifer Reed](#); [Stephen Arthur](#); [Burkart, Greta](#); [Hollis Twitchell](#); [Joshua Rose](#); [Brown, Randy](#); [Patrick O'Dell](#); [Edward Decleva](#); [Erin Carver](#); [Swem, Ted](#); [Susan LaKowski](#)
Cc: [Wendy Loya](#); [Drew Crane](#); [John Trawicki](#); [stephanie brady](#); [Steve Berendzen](#)
Subject: Re: New Meeting?
Date: Wednesday, May 30, 2018 2:06:36 PM

Thanks to those of you who got right back to me on your availability June 5. It turns out June 5 does not work well for the majority of the BLM interdisciplinary team staff, so they're now proposing June 4 at 10am. If you're available then please let me know as soon as possible.

Thanks!

Joanna L. Fox
Deputy Refuge Manager
Arctic National Wildlife Refuge
101 12th Avenue, Room 236
Fairbanks, AK 99701
(907) 456-0549

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"Do what you can, with what you have, where you are." -- Theodore Roosevelt

On Tue, May 29, 2018 at 3:48 PM Joanna Fox <joanna_fox@fws.gov> wrote:

In response to some of the questions we asked, the seismic applicant would like to give a couple of presentations about how they conduct seismic work in the Arctic. They're proposing the first as an on-line webinar-type presentation, to be offered June 5 at 10 am. If this date and/or time will not fit into your schedule, will you please let me know asap? I'd like to give Donna an indication of how well this might work for us.

(Arctic Refuge staff - if need be we will change our standing bi-weekly staff meeting to accommodate this presentation).

Thanks!
Joanna

Joanna L. Fox
Deputy Refuge Manager
Arctic National Wildlife Refuge
101 12th Avenue, Room 236
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(907) 456-0549

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----- Forwarded message -----

From: Wixon, Donna <dwixon@blm.gov>

Date: Tue, May 29, 2018 at 3:26 PM

Subject: New Meeting?

To: Jones, Nichelle (Shelly) <njones@blm.gov>

Cc: Steve Berendzen <steve_berendzen@fws.gov>, Fox, Joanna <joanna_fox@fws.gov>, LaMarr, Sarah <slamarr@blm.gov>, Robert Brumbaugh <rbrumbau@blm.gov>

Good Afternoon,

I just spoke with Sue Simonds with SAE, she had some questions on our questions about the project. SAE has offered to give a couple of presentations about seismic to all of the people working on the EA. The first presentation would be an on-line skype presentation going over the basics of how SAE conducts seismic in the Arctic. They would like to do this June 5th. Does that seem like an okay day? Would 10am work?

On July 10, they would like to come to Fairbanks and give a presentation and/or answer questions. Would 11am work for this?

Once we decide on a date and time I will send out a meeting invite.

Thanks,

Donna

Donna L Wixon
Natural Resource Specialist
BLM Arctic District Office
222 University Ave
Fairbanks, Alaska 99709
907-474-2301 Office
907-474-2386 Fax
dwixon@blm.gov

On Tue, May 29, 2018 at 12:20 PM, Jones, Nichelle (Shelly) <njones@blm.gov> wrote:

Hello All: We have a couple of us out this afternoon. In lieu of a meeting, I have the following update:

Donna sent the request for additional information last week. We also issued the PIL to the IDT members. I have a meeting with our state office on Thursday to get someone to cover the acoustic section. IDT members should be working on the affected environment and consequences sections.

The next milestones from the schedule are as follows:

May 22-June 1 – Draft Affected Environment (FWS and Key BLM IDT members)

May 31 – Deadline for applicant response to questions

May 31-June 6 - Finalize Proposed Action and post to BLM ePlanning website (IDT Lead)

June - November –MMPA Incidental Take Regulations development (published in Federal Register in November and final rule in January)

June 6 – IDT Lead sends Proposed Action to team to draft Issue Statements.

See some of you at the scoping meeting for the CPLEIS this evening.

-Shelly

Shelly Jones
Acting Manager
Arctic District Office
[222 University Avenue](#)
[Fairbanks, AK 99709](#)

(907) 474-2310 (w)
(907) 460-0086 (c)

From: [Edward Decleva](#)
To: [Wendy Loya](#)
Cc: [Fox, Joanna](#); [John Trawicki](#)
Subject: Re: Marsh Creek 3D Environmental Assessment (1002 Area) Sec 106 consultation
Date: Friday, June 1, 2018 12:20:53 PM

Wendy,

Your response is helpful. I will let Joe know that I can meet with him, and I will let you know when that occurs and what the outcome is.

Thank you, Ed

Edward J. DeCleva
Regional Historic Preservation Officer
U.S. Fish and Wildlife Service, Alaska Region
1011 E Tudor Rd, MS-235
Anchorage, AK 99503

edward_decleva@fws.gov
907-786-3399

On Fri, Jun 1, 2018 at 10:16 AM Wendy Loya <Wendy_loya@fws.gov> wrote:

Ed,

I read through Joe's email more carefully in order to craft a response. It sounds like Joe Keeney with BLM is handling the process for Sec 106, so let him continue to work in coordinating that through BLM since that is their role. FYI, formal NEPA Government to Government consultation is being led by the BLM, has already occurred in some places. It is up to BLM to determine how to coordinate consultation with regards to Sec. 106.

Your role within FWS as a Cooperating Agency is to share your knowledge within your area of expertise on resources within the Arctic Refuge. You are free to talk with BLM as a subject matter expert at any time. If you are invited to join in consultation meetings with communities regarding Sec 106, please keep me in the loop so I can track our engagement in formal outreach.

Thank you, let me know if I have not answered your questions.

Wendy

Dr. Wendy M. Loya, Coordinator

Office of Science Applications -Arctic Program

US Fish and Wildlife Service

Anchorage, Alaska

907.786.3532 (office)

907.277.2942 (mobile)

From: Joanna Fox <joanna_fox@fws.gov>

Sent: Friday, June 1, 2018 8:53 AM

To: Wendy Loya <Wendy_loya@fws.gov>

Cc: Edward Decleva <edward_decleva@fws.gov>

Subject: Re: Marsh Creek 3D Environmental Assessment (1002 Area) Sec 106 consultation

I don't know the answers to Ed's questions - and don't even understand who has the lead on these consultations (which I assume are separate from the others affiliated with the EIS and EA)? If Joe, though, is being asked to draft and send consultation letters, it sounds like BLM may have the lead? It seems this may be something we should discuss at our coordination meetings next week.

Joanna L. Fox

Deputy Refuge Manager

Arctic National Wildlife Refuge

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0000012235

On Fri, Jun 1, 2018 at 8:48 AM Wendy Loya <Wendy_loya@fws.gov> wrote:

Hi Joanna,

Are you able to answer Ed's questions? My inclination would be to run it up through Stephanie Brady and her team. Please let me know how we can help ensure a timely to BLM.

Thank you,

Wendy

Dr. Wendy M. Loya, Coordinator

Office of Science Applications -Arctic Program

US Fish and Wildlife Service

Anchorage, Alaska

907.786.3532 (office)

907.277.2942 (mobile)

From: Edward Decleva <edward_decleva@fws.gov>

Sent: Friday, June 1, 2018 7:13 AM

To: Wendy Loya <wendy_loya@fws.gov>; Fox, Joanna <joanna_fox@fws.gov>

Cc: Joseph Keeney <jkeeney@blm.gov>

Subject: Fwd: Marsh Creek 3D Environmental Assessment (1002 Area)

Since we have two different leads for the EA and the EIS,
I'm contacting the both of you.

Joe Keeney is BLM's archaeologist working on the Coastal

Plain Oil and Gas NEPA documents. He brings up the topic of government-to-government (aka, G2G) consultation.

Although not asked, my take on G2G is that it shouldn't be conducted separately and uniquely for National Historic Preservation Act consultation purposes - G2G should be conducted under the auspices of NEPA to fulfill all resources and planning requirements.

Joe is also right in that we really need to have a meeting to discuss Section 106 of the National Historic Preservation Act, and I would add paleontological resources. A meeting specific to these resources would be my preference, as these alone may take an hour or two to talk through. I recommend that attendance should be limited to our agency's lead POCs (Wendy or Joanna?), BLM's Nicole Hayes, BLM's Joe Keeney, and myself.

But please note that I am out of the office June 3-29.

Edward J. DeCleva

Regional Historic Preservation Officer

U.S. Fish and Wildlife Service, Alaska Region

1011 E Tudor Rd, MS-235

Anchorage, AK 99503

edward_decleva@fws.gov

907-786-3399

----- Forwarded message -----

From: Keeney, Joseph <jkeeney@blm.gov>

Date: Thu, May 31, 2018 at 2:44 PM

Subject: Marsh Creek 3D Environmental Assessment (1002 Area)

To: Edward Decleva <edward_decleva@fws.gov>

Hi Ed,

Sometime soon we should chat about the forthcoming EA and the EIS. Are there times that work better than others?

As an update, for the EA I am drafting a letter to initiate SHPO consultation, followed by those for Tribal, local govt, public to consult on Section 106. I am waiting for our anthropologist to return for the latter to try to coordinate Section 106 with 810 consultations.

Regarding the EIS, I can't even send out the consultation letters yet. Despite repeated requests for information, I am in the dark regarding who the appropriate line officer is to sign the consultation letters and direct requests for G2G consultation to. I have been in touch with Nicole Hayes (project coordinator) and she is not sure. I spoke with Sarah Meitl and have been in touch with our BLM liaison at the ACHP, but for now there is no official consultation initiated for Section 106.

Best,

Joe

--

Joe Keeney

Archaeologist

BLM Arctic District Office

222 University Avenue

Fairbanks, Alaska 99709

0000012238

907-474-2312

jkeeney@blm.gov

From: [Keeney, Joseph](#)
To: [Edward Decleva](#)
Cc: [Wendy Loya](#); [Fox, Joanna](#); [Miriam \(Nicole\) Hayes](#); [Donna Wixon](#); [LaMarr, Sarah](#)
Subject: Re: Marsh Creek 3D Environmental Assessment (1002 Area)
Date: Friday, June 1, 2018 4:58:52 PM

Hi Ed,

Do you need permission to speak with me? By chat, I was referring to a more informal phone call and had not recommended a face to face in case this is what you thought I meant. Although BLM is the lead Federal Agency, I wanted to keep in contact with you to coordinate and keep you abreast of matters relating to Section 106 for these undertakings.

You say that your take on G2G is that it shouldn't be conducted separately, which is good as it shows we are on the same page in that regard. Per 36 CFR 800.2(a)(4), Section 106 consultation should be coordinated with other requirements of other statutes, such as NEPA. You were not asked about this as it is the process per the federal regs, which I had assumed you were aware of and did not perceive of any need to inquire about it with you.

Indeed consultation should be and will be tied into the existing frameworks as much as possible. However, SHPO consultation needs to be initiated and not all potentially interested Tribal and other relevant parties have been invited to consult on Section 106 for both the EIS or EA. This is what I am working on currently and had intended to update you on in said phone call.

Indeed, it would be useful to discuss paleontological resources too. While there is no process law like Section 106 equating to paleontological resources, I agree this is an important resource to consider in both the EIS and EA.

If you wish to involve more people in a larger meeting, that is fine by me although it could get to be unwieldy the more people we have in the mix over 1-2 hours. If we are having program leads involved in this meeting, I will also recommend Donna Wixon, our lead for the Seismic EA. I also cc'ed my supervisor as she might want to be involved.

Heading to the field? My scheduled field work this summer is June 6-13, June 27-July 11, and July 25-August 8. Hopefully we can squeeze in some correspondence after you and I return. I've had many things to attend to today, but I will try to give a call if I can. It sounds like you are pretty busy today anyways, especially if you are heading out for four weeks.

Best,
Joe

On Fri, Jun 1, 2018 at 10:23 AM, Edward Decleva <edward_decleva@fws.gov> wrote:

Hi Joe,

I've been given permission to meet with you.

Unfortunately, I'm tied up most of today and I'm out June 4-29.

Give me a call today if you want to try to talk. Otherwise, please try to schedule something with me for July.

Thank you, Ed

Edward J. DeCleva
Regional Historic Preservation Officer
U.S. Fish and Wildlife Service, Alaska Region
[1011 E Tudor Rd, MS-235](#)
Anchorage, AK 99503

edward_decleva@fws.gov
907-786-3399

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Best,
Joe

--

Joe Keeney
Archaeologist
BLM Arctic District Office
222 University Avenue
Fairbanks, Alaska 99709
907-474-2312
jkeeney@blm.gov

--

Joe Keeney
Archaeologist
BLM Arctic District Office
222 University Avenue
Fairbanks, Alaska 99709
907-474-2312
jkeeney@blm.gov

From: [Hayes, Miriam \(Nicole\)](#)
To: [Wendy Loya](#)
Subject: TIME SENSITIVE: Coastal Plain EIS - Draft Scoping Report Review
Date: Friday, June 29, 2018 10:08:57 AM
Attachments: [140L6318F0003_Coastal-DRFT-ScopRpt_coopagencycmnts.docx](#)
[F-0270_Coastal_ScopingRpt_Draft_USFWS.pdf](#)

Hi Wendy,

Attached is the Draft Scoping Report for FWS review and comment.

Comments are due back to me NO LATER THAN close of business, July 9th.

Please note the following during your review:

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- You will see areas of yellow highlight throughout the document. These note locations where information will be updated once all comments are coded; they also identify areas of attention for reviewers.

Thank you so much and as always, please let me know if you have any questions!

Nicole

Nicole Hayes
Project Coordinator
Bureau of Land Management
222 W. 7th Avenue #13
Anchorage, Alaska 99513
Desk: (907) 271-4354

From: [Wendy Loya](#)
To: [Mary Colligan](#)
Subject: FW: TIME SENSITIVE: Coastal Plain EIS - Draft Scoping Report Review
Date: Friday, June 29, 2018 4:08:00 PM
Attachments: [140L6318F0003_Coastal-DRFT-ScopRpt_coopagencycmnts.docx](#)
[F-0270_Coastal_ScopingRpt_Draft_USFWS.pdf](#)
[2018_0618_FWS_Leasing_EIS_Scoping_Comments_\(sn\)_RD_.pdf](#)

Hi Mary,

This is the email and attachments we received today with the DRAFT Leasing EIS public scoping report for review. I spoke with Nicole at BLM, and she confirmed what you said about our role:
]1) to make sure our agency comments are reflected (attached);
2) to use this to inform our conversation at the alternatives meeting.

Let me know if you want someone else to tackle #1.

Dr. Wendy M. Loya,
Arctic Program Coordinator
Office of Science Applications, US Fish and Wildlife Service
Anchorage, Alaska
907.786.3532 (office)
907.277.2942 (mobile)

From: Hayes, Miriam (Nicole) <mnhayes@blm.gov>
Sent: Friday, June 29, 2018 8:08 AM
To: Wendy Loya <wendy_loya@fws.gov>
Subject: TIME SENSITIVE: Coastal Plain EIS - Draft Scoping Report Review

Hi Wendy,

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Thank you so much and as always, please let me know if you have any questions!

Nicole

0000012243

Nicole Hayes

Project Coordinator

Bureau of Land Management

222 W. 7th Avenue #13

Anchorage, Alaska 99513

Desk: (907) 271-4354

From: [Wendy Loya](#)
To: [Steve Berendzen](#)
Subject: FW: TIME SENSITIVE: Coastal Plain EIS - Draft Scoping Report Review
Date: Friday, June 29, 2018 4:12:00 PM
Attachments: [140L6318F0003_Coastal-DRFT-ScopRpt_coopagencycmnts.docx](#)
[F-0270_Coastal_ScopingRpt_Draft_USFWS.pdf](#)

Steve,

Mary I believe is going to handle the review of these to ensure our comments were reflected, but the secondary purpose is to ensure we are aware of the issues raised throughout scoping. Because this is a DRAFT, I think it is for your consideration only although of course the information can be communicated to inform staff through discussions. It should not be shared broadly until the final is released publically including the broader feedback Nicole describes below as missing in this draft (by July 19th).

Wendy

Dr. Wendy M. Loya,
Arctic Program Coordinator
Office of Science Applications, US Fish and Wildlife Service
Anchorage, Alaska
907.786.3532 (office)
907.277.2942 (mobile)

From: Hayes, Miriam (Nicole) <mnhayes@blm.gov>
Sent: Friday, June 29, 2018 8:08 AM
To: Wendy Loya <wendy_loya@fws.gov>
Subject: TIME SENSITIVE: Coastal Plain EIS - Draft Scoping Report Review

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Thank you so much and as always, please let me know if you have any questions!

Nicole

Nicole Hayes

Project Coordinator

Bureau of Land Management

222 W. 7th Avenue #13

Anchorage, Alaska 99513

Desk: (907) 271-4354

From: [Colligan, Mary](#)
To: [Wendy Loya](#)
Subject: Re: FW: TIME SENSITIVE: Coastal Plain EIS - Draft Scoping Report Review
Date: Monday, July 2, 2018 7:23:01 PM
Attachments: [140L6318F0003_Coastal-DRFT-ScopRpt_coopagencycmnts_Colligan.docx](#)

Wendy - I went through the scoping document and have included in the attached comment form places where I felt additional detail from our scoping comments should be reflected. I tried to find a balance between wanting to reflect all of the good information in our comments and recognizing that this scoping summary is intended to summarize the > 1 million comments they received. I probably erred too much on the inclusion side, but see what you think. I assume at least Steve should look at this but who else?

I am going to do another read of the document and try to pull out other key information that may be useful for the alternatives workshop.

Thanks

On Fri, Jun 29, 2018 at 2:08 PM, Wendy Loya <wendy_loya@fws.gov> wrote:

Hi Mary,

This is the email and attachments we received today with the DRAFT Leasing EIS public scoping report for review. I spoke with Nicole at BLM, and she confirmed what you said about our role:

- 1) to make sure our agency comments are reflected (attached);
- 2) to use this to inform our conversation at the alternatives meeting.

Let me know if you want someone else to tackle #1.

Dr. Wendy M. Loya,
Arctic Program Coordinator
Office of Science Applications, US Fish and Wildlife Service
Anchorage, Alaska
907.786.3532 (office)
907.277.2942 (mobile)

From: Hayes, Miriam (Nicole) <mnhayes@blm.gov>
Sent: Friday, June 29, 2018 8:08 AM
To: Wendy Loya <wendy_loya@fws.gov>

Subject: TIME SENSITIVE: Coastal Plain EIS - Draft Scoping Report Review

Hi Wendy,

Attached is the Draft Scoping Report for FWS review and comment.

Comments are due back to me NO LATER THAN close of business, July 9th.

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Nicole

Nicole Hayes

Project Coordinator

Bureau of Land Management

222 W. 7th Avenue #13

Anchorage, Alaska 99513

Desk: (907) 271-4354

|

--

Mary Colligan
Assistant Regional Director
Fisheries and Ecological Services
U.S. Fish and Wildlife Service, Alaska Region
1011 E. Tudor Road, MS-361
Anchorage, AK 99503
907-786-3505
cell: 907-223-5945

From: [Wendy Loya](#)
To: [Mitch Ellis](#)
Subject: FW: FW: TIME SENSITIVE: Coastal Plain EIS - Draft Scoping Report Review
Date: Friday, July 6, 2018 1:37:00 PM
Attachments: [140L6318F0003_Coastal-DRFT-ScopRpt_coopagencycmts_Colligan.docx](#)
[2018_0618_FWS_Leasing_EIS_Scoping_Comments_\(sn\)_RD_.pdf](#)
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All attachments ☺

Dr. Wendy M. Loya,
Arctic Program Coordinator
Office of Science Applications, US Fish and Wildlife Service
Anchorage, Alaska
907.786.3532 (office)
907.277.2942 (mobile)

From: Wendy Loya <wendy_loya@fws.gov>
Sent: Friday, July 6, 2018 10:41 AM
To: Mitch Ellis <mitch_ellis@fws.gov>
Subject: FW: FW: TIME SENSITIVE: Coastal Plain EIS - Draft Scoping Report Review

Hi Mitch,

Attached is Mary's review of the very Drafty BLM Public Scoping Comments report, which was developed by reviewing the comments we submitted (also attached). In BLM's email at the bottom, you will see that the report was prepared without analysis of all the comments received. If you have any major concerns with the report above and beyond what was not in our letter, please add to the table. I will forward this COB today to Greg and Karen for submission on Monday July 9th.

FYI, it was also shared with Steve B as informational, but Mary offered to do the review.

Thank you,
Wendy

Dr. Wendy M. Loya,
Arctic Program Coordinator
Office of Science Applications, US Fish and Wildlife Service
Anchorage, Alaska
907.786.3532 (office)
907.277.2942 (mobile)

From: Colligan, Mary <mary_colligan@fws.gov>
Sent: Monday, July 2, 2018 5:23 PM
To: Wendy Loya <wendy_loya@fws.gov>
Subject: Re: FW: TIME SENSITIVE: Coastal Plain EIS - Draft Scoping Report Review

Wendy - I went through the scoping document and have included in the attached comment

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Thank you so much and as always, please let me know if you have any questions!

Nicole

Nicole Hayes

Project Coordinator
Bureau of Land Management
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--

Mary Colligan
Assistant Regional Director
Fisheries and Ecological Services
U.S. Fish and Wildlife Service, Alaska Region
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cell: 907-223-5945

From: [Ellis, Mitch](#)
To: [Wendy Loya](#)
Subject: Re: FW: FW: TIME SENSITIVE: Coastal Plain EIS - Draft Scoping Report Review
Date: Friday, July 6, 2018 3:04:18 PM
Attachments: [140L6318F0003_Coastal-DRFT-ScopRpt_coopagencymts_Colligan and Ellis.docx](#)

Wendy - I wish there was more time but there obviously isn't. I added three comments related to view-shed, acoustics, and night sky that seemed too significant to not mention. It did appear our FWS comments haven't been looked at yet? Mary did a great job catching things and I applaud her for that! In fact, she captures most of my three comments in the general recreation section, but I felt the specific sections in the document needed it as well. Hope this helps. Thanks again for your diligence!

Mitch Ellis
Chief of Refuges - Alaska
National Wildlife Refuge System
US Fish and Wildlife Service
(907)786-3667 wk
(907)947-4416 mob

On Fri, Jul 6, 2018 at 11:37 AM, Wendy Loya <wendy_loya@fws.gov> wrote:

All attachments 😊

Dr. Wendy M. Loya,
Arctic Program Coordinator
Office of Science Applications, US Fish and Wildlife Service
Anchorage, Alaska
907.786.3532 (office)
907.277.2942 (mobile)

From: Wendy Loya <wendy_loya@fws.gov>
Sent: Friday, July 6, 2018 10:41 AM
To: Mitch Ellis <mitch_ellis@fws.gov>
Subject: FW: FW: TIME SENSITIVE: Coastal Plain EIS - Draft Scoping Report Review

Hi Mitch,

Attached is Mary's review of the very Drafty BLM Public Scoping Comments report, which was developed by reviewing the comments we submitted (also attached). In BLM's email at the bottom, you will see that the report was prepared without analysis of all the comments received. If you have any major concerns with the report above and beyond what was not in our letter, please add to the table. I will forward this COB today to Greg and Karen for submission on Monday July 9th.

FYI, it was also shared with Steve B as informational, but Mary offered to do the review.

Thank you,

Wendy

Dr. Wendy M. Loya,

Arctic Program Coordinator

Office of Science Applications, US Fish and Wildlife Service

Anchorage, Alaska

907.786.3532 (office)

907.277.2942 (mobile)

From: Colligan, Mary <mary_colligan@fws.gov>

Sent: Monday, July 2, 2018 5:23 PM

To: Wendy Loya <wendy_loya@fws.gov>

Subject: Re: FW: TIME SENSITIVE: Coastal Plain EIS - Draft Scoping Report Review

Wendy - I went through the scoping document and have included in the attached comment form places where I felt additional detail from our scoping comments should be reflected. I tried to find a balance between wanting to reflect all of the good information in our comments and recognizing that this scoping summary is intended to summarize the > 1 million comments they received. I probably erred too much on the inclusion side, but see what you think.

I am going to do another read of the document and try to pull out other key information that may be useful for the alternatives workshop.

Thanks

On Fri, Jun 29, 2018 at 2:08 PM, Wendy Loya <wendy_loya@fws.gov> wrote:

Hi Mary,

This is the email and attachments we received today with the DRAFT Leasing EIS public scoping report for review. I spoke with Nicole at BLM, and she confirmed what you said about our role:

1) to make sure our agency comments are reflected (attached);

2) to use this to inform our conversation at the alternatives meeting.

Let me know if you want someone else to tackle #1.

Dr. Wendy M. Loya,

Arctic Program Coordinator

Office of Science Applications, US Fish and Wildlife Service

Anchorage, Alaska

907.786.3532 (office)

907.277.2942 (mobile)

From: Hayes, Miriam (Nicole) <mnhayes@blm.gov>

Sent: Friday, June 29, 2018 8:08 AM

To: Wendy Loya <wendy_loya@fws.gov>

Subject: TIME SENSITIVE: Coastal Plain EIS - Draft Scoping Report Review

Hi Wendy,

Attached is the Draft Scoping Report for FWS review and comment.

0000012255

Comments are due back to me NO LATER THAN close of business, July 9th.

Please note the following during your review:

- This report is not reflective of all submissions received or comments coded. The EMPSi team is still working through the incredibly high volume. It is possible that some reviewers may not see their comments reflected in an issue statement contained in this draft report. That does not mean their comment will not be considered; it means we have not been able to code it yet. The final report will include information from all submissions received, issue statements and summaries will be refined, and statistical data for tables will be included.
- You will see areas of yellow highlight throughout the document. These note locations where information will be updated once all comments are coded; they also identify areas of attention for reviewers.

Thank you so much and as always, please let me know if you have any questions!

Nicole

Nicole Hayes

Project Coordinator

Bureau of Land Management

222 W. 7th Avenue #13

Anchorage, Alaska 99513

Desk: (907) 271-4354

--

0000012256

Mary Colligan

Assistant Regional Director

Fisheries and Ecological Services

U.S. Fish and Wildlife Service, Alaska Region

1011 E. Tudor Road, MS-361

Anchorage, AK 99503

907-786-3505

cell: 907-223-5945

From: [Sarah LaMarr](#)
To: [Wendy Loya](#)
Cc: [Joanna Fox](#); [Nichelle Jones](#); [Wixon, Donna](#); [Rose, Joshua](#)
Subject: Re: Coastal Plain Seismic IDT List and Draft Timeline
Date: Friday, July 6, 2018 7:28:45 PM
Attachments: [Seismic Schedule July 6 2018.docx](#)

Thanks Wendy -

The internal review period can happen at the same as the 30-day public comment period from August 17- September 17. I'll add a note about this to the revised schedule. Thanks!

Attached is the revised schedule.

Sarah La Marr
Bureau of Land Management
Arctic District Office
Fairbanks, Alaska
907-474-2334 (desk)
907-888-3407 (cell)
slamarr@blm.gov

On Thu, Jul 5, 2018 at 10:48 AM Wendy Loya <wendy_loya@fws.gov> wrote:

Hi Sarah, Shelly and Donna,

In the Draft Timeline sent out on June 26th, there is no period for internal review (both BLM and FWS staff looking at complete document and BLM State office?) of the complete document identified, which should be at least a few days. Do we need to modify the timeline? Working to arrange our review processes here for both EA and EIS.

Thanks,
Wendy

Dr. Wendy M. Loya,
Arctic Program Coordinator
Office of Science Applications, US Fish and Wildlife Service
Anchorage, Alaska
907.786.3532 (office)
907.277.2942 (mobile)

-----Original Message-----

From: Wendy Loya <wendy_loya@fws.gov>
Sent: Tuesday, June 26, 2018 1:45 PM
To: Sarah LaMarr <slamarr@blm.gov>; Joanna Fox <joanna_fox@fws.gov>; John Trawicki <john_trawicki@fws.gov>; Nichelle (Shelly) Jones <njones@blm.gov>; Donna Wixon <dwixon@blm.gov>; Joshua Rose <joshua_rose@fws.gov>; Sarah Conn <sarah_conn@fws.gov>
Subject: Coastal Plain Seismic IDT List and Draft Timeline

Hi all,

Attached are our current versions of the IDT Team and Timeline for the Seismic EA. They are the same as I sent Shelly on 6/12/18, but extracted from the PIL (obsolete given DOI agency guidance on MOUs) as separate documents. I expect the timeline may warrant further adjustment based on the date of application completion?

Wanted to send these so they are handy if needed for our meeting today.

Cheers,
Wendy

Dr. Wendy M. Loya,
Arctic Program Coordinator
Office of Science Applications, US Fish and Wildlife Service Anchorage,
Alaska
907.786.3532 (office)
907.277.2942 (mobile)

-----Original Appointment-----

From: wendy_loya@fws.gov <wendy_loya@fws.gov>

Sent: Tuesday, June 26, 2018 9:33 AM

To: wendy_loya@fws.gov; Sarah LaMarr; Joanna Fox; Trawicki, John; Nichelle (Shelly) Jones; Donna Wixon (dwixon@blm.gov); Rose, Joshua; Sarah Conn
Subject: Coastal Plain Seismic

When: Tuesday, June 26, 2018 3:00 PM-4:00 PM (UTC-09:00) Alaska.

Where: Fairbanks (Refuges Conference Room (2nd floor) or b5 - CIP)

b5 - CIP

Check in following last Thursday's meeting with SAE/ASRC, who provided information requested towards advancing Seismic permit application/NEPA.

BLM will come to FWS on 6/26, and we can join with Anchorage folks by phone. Forward as needed to be inclusive J

Dr. Wendy M. Loya,

Arctic Program Coordinator

Office of Science Applications, US Fish and Wildlife Service

Anchorage, Alaska

From: [Wendy Loya](#)
To: [Miriam \(Nicole\) Hayes](#)
Subject: Sociocultural contacts
Date: Monday, July 9, 2018 8:43:00 AM

Let's check with Steve B today, but I would expect Hollis as well as Josh Ream and Carl Johnson, who are in our Office of Subsistence Management.

Dr. Wendy M. Loya,
Arctic Program Coordinator
Office of Science Applications, US Fish and Wildlife Service
Anchorage, Alaska
907.786.3532 (office)
907.277.2942 (mobile)

From: Hayes, Miriam (Nicole) <mnhayes@blm.gov>
Sent: Monday, July 9, 2018 6:40 AM
To: Wendy Loya <wendy_loya@fws.gov>
Subject: Re: FW: Recreation Visitation for Arctic Refuge

Thank you, Wendy.

Also - who on your team is an anthropologist and has the best/most expertise on Environmental Justice and Sociocultural issues in the Arctic and can they be available this week?

Nicole

Nicole Hayes
Project Coordinator
Bureau of Land Management
222 W. 7th Avenue #13
Anchorage, Alaska 99513
Desk: (907) 271-4354

On Mon, Jul 9, 2018 at 6:30 AM, Wendy Loya <wendy_loya@fws.gov> wrote:

Hi Nicole,

Below is Jen Reed's email regarding what she is planning to provide. I have not had time to read it carefully, but looks like there is a plan. We can discuss at a break today if needed.

Wendy

Dr. Wendy M. Loya,
Arctic Program Coordinator
Office of Science Applications, US Fish and Wildlife Service
Anchorage, Alaska

907.786.3532 (office)
907.277.2942 (mobile)

----- Forwarded message -----

From: Reed, Jennifer <jennifer_reed@fws.gov>
Date: Thu, Jul 5, 2018 at 1:56 PM
Subject: Re: Recreation Visitation for Arctic Refuge
To: Randy Goodwin <rgoodwin@blm.gov>, Nathan Beauchamp <nathan_beauchamp@fws.gov>
Cc: "Spomer, Katherine" <katherine_spomer@fws.gov>

Hi Randy,

Ketti notified you last week that refuge staff is working to compile the most complete visitation data we can provide about the minimum number of visitors to the Coastal Plain within Arctic Refuge, derived from client use reports provided by Refuge-authorized commercial operators. On July 2, I asked you to provide a time frame for your request, so we can be sure to offer the most accurate information available promptly, based on your need. We can provide data very soon for 2013-2017. Please let us know if you have updates about your need and its time frame.

The information provided by Nathan is derived from Arctic Refuge's Annual Performance Report submissions, which offer *estimated total annual* visitation numbers across Arctic Refuge. This estimated visitation includes refuge staff's best professional assessment of visits by activity type to off-Refuge visitor centers, visits by private pilots landing on the refuge, visits by motorists who drive up the Dalton Highway then walk or boat onto the Refuge, or other visits made by people who take regularly-scheduled commercial airlines to non-Refuge lands at various access points then enter onto the Refuge by their own means. Because national wildlife refuges tally client use days for separate activities in Refuge Annual Performance Reporting, there are cases where people performing multiple activities (i.e.: both hunting and fishing) would be counted more than once.

I hope this information helps provide the context for visitation data provided to you by the FWS.

Jennifer J. Reed

[Arctic National Wildlife Refuge Public Use Manager](#)

[101 12th Ave. Rm 236](#)

[Fairbanks, AK 99701](#)

Telephone: (907) 455-1835

Fax: (907) 456-0428

[Interagency Visitor Use Management Council-USFWS Representative](#)

[Interagency Wild & Scenic River Coordinating Council-USFWS Representative](#)

[Make Your Splash!](#)

NOTE: This email correspondence and any attachments to and from this sender is subject to the Freedom of Information Act (FOIA) and may be disclosed to third parties.

On Thu, Jul 5, 2018 at 10:56 AM, Beauchamp, Nathan <nathan_beauchamp@fws.gov>

wrote:

Hello Randy,

Please find attached the annual visitation numbers (2007 - 2017) for Arctic NWR. The 2012 and 2013 annual numbers are quite different than the rest, those were the reported visitation numbers and not typos.

Please let me know if you have any questions or need any other information.

Thanks

Nathan

Nathan Beauchamp

Transportation Program Analyst - Branch of Transportation

U.S. Fish and Wildlife Service Headquarters

[5275 Leesburg Pike](#), MS-NWRS

Falls Church, VA 22041

703-358-2226 (Office)

571-384-0960 (Cell)

On Thu, Jun 28, 2018 at 7:16 PM, Goodwin, Randy <rgoodwin@blm.gov> wrote:

Katherine,

I'm writing to you to request the annual visitation numbers for the Arctic Refuge. I'm tasked with providing input into the NEPA for the Energy Leasing and 3D Seismic Mapping projects in the 1002/Coastal Plain area and would like to show what the recreational visitation is in the analysis.

I'd like to get the last 5-10 years of recreation visitation to show visitation trends. If you have that information it would help show what the impacts can be to the recreational users.

I'm available if you have questions.

Thank you, Randy

From: [Wendy Loya](#)
To: [Diane Ray \(diane_ray@fws.gov\)](mailto:Diane_Ray_(diane_ray@fws.gov))
Subject: FW: Due Monday July 9th: FWS comments on BLM Draft Public Scoping Report for 1002
Date: Monday, July 9, 2018 6:33:00 PM
Attachments: [2018 0706Coastal Plain Leasing draft public scoping report transmittal.docx](#)
[2018 0706_FINAL_Coastal-ScopRpt_coopagencycmnts.docx](#)
[Note to Reviewer_draft_public_scoping_report_review_070918.docx](#)
Importance: High

Diane,

Can you make a purple folder for Greg and Karen Clark for Tuesday morning with these attachments? It was due today but they didn't do it electronically, so need it in the morning if possible.

When it is signed, can you email me and then I will finalize transmission to BLM via email.

Thank you!
Wendy

Dr. Wendy M. Loya,
Arctic Program Coordinator
Office of Science Applications, US Fish and Wildlife Service
Anchorage, Alaska
907.786.3532 (office)
907.277.2942 (mobile)

From: Wendy Loya <wendy_loya@fws.gov>
Sent: Friday, July 6, 2018 2:43 PM
To: Greg Siekaniec <greg_siekaniec@fws.gov>; Karen Clark <karen_clark@fws.gov>
Subject: Due Monday July 9th: FWS comments on BLM Draft Public Scoping Report for 1002
Importance: High

Hi Greg and Karen,

Attached are our comments (2018 0706 FINAL Coastal-ScopRpt_coopagencycmnts.docx) on the very preliminary draft of the Coastal Plain Leasing EIS Public Comments Scoping Report (also attached).

Mary and Mitch have reviewed it to make sure that the key points we conveyed in our letter (also attached) were captured. Given the lack of details in the report, we kept our input focused and review limited to Mary and Mitch.

In BLM's words:

- This report is not reflective of all submissions received or comments coded. The EMPSi team is still working through the incredibly high volume. It is possible that some reviewers may not see their comments reflected in an issue statement contained in this draft report. That does not mean their comment will not be considered; it means we have not been able to code it yet. The final

report will include information from all submissions received, issue statements and summaries will be refined, and statistical data for tables will be included.

- You will see areas of yellow highlight throughout the document. These note locations where information will be updated once all comments are coded; they also identify areas of attention for reviewers.

Mary, Steve B and I have reviewed the document to take into consideration concerns/ideas expressed here as we go into the Alternatives Workshop next week.

I can transmit this at COB on Monday after incorporating any concerns or suggestions you may have.

Thank you,
Wendy

Dr. Wendy M. Loya,
Arctic Program Coordinator
Office of Science Applications, US Fish and Wildlife Service
Anchorage, Alaska
907.786.3532 (office)
907.277.2942 (mobile)

From: [Greg Siekaniec](#)
To: [Wendy Loya](#)
Cc: [Karen Clark](#)
Subject: Re: Due Monday July 9th: FWS comments on BLM Draft Public Scoping Report for 1002
Date: Wednesday, July 11, 2018 10:27:14 AM

Wendy,

I missed closing the loop with you on these. Well done comments and I'm good with these being provided to BLM.

I trust your discussions are going well. I did speak with Steve about the idea of alternatives that give consideration to non lease areas particularly around caribou and subsistence. I did not ask him to step in at this time but wanted him to know that we feel that this is an opportunity to address concerns of the rural communities that were voiced during scoping.

greg

On Fri, Jul 6, 2018 at 2:43 PM Wendy Loya <wendy_loya@fws.gov> wrote:

Hi Greg and Karen,

Attached are our comments (2018 0706 FINAL Coastal-ScopRpt_coopagencymts.docx) on the very preliminary draft of the Coastal Plain Leasing EIS Public Comments Scoping Report (also attached). Mary and Mitch have reviewed it to make sure that the key points we conveyed in our letter (also attached) were captured. Given the lack of details in the report, we kept our input focused and review limited to Mary and Mitch.

In BLM's words:

- This report is not reflective of all submissions received or comments coded. The EMPSi team is still working through the incredibly high volume. It is possible that some reviewers may not see their comments reflected in an issue statement contained in this draft report. That does not mean their comment will not be considered; it means we have not been able to code it yet. The final report will include information from all submissions received, issue statements and summaries will be refined, and statistical data for tables will be included.
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Mary, Steve B and I have reviewed the document to take into consideration concerns/ideas expressed here as we go into the Alternatives Workshop next week.

I can transmit this at COB on Monday after incorporating any concerns or suggestions you may have.

Thank you,

Wendy

Dr. Wendy M. Loya,

Arctic Program Coordinator

Office of Science Applications, US Fish and Wildlife Service

Anchorage, Alaska

907.786.3532 (office)

907.277.2942 (mobile)

From: [Wendy Loya](#)
To: [Robert Brumbaugh](#)
Subject: springs
Date: Thursday, July 12, 2018 11:41:00 AM

They can utilize the already collected seismic data and borehole data from test wells as they do exploratory drilling. If additional information is needed they can contract the collection of EM data or additional surveys that will further inform mapping. These datasets will provide a general picture of possible connections between subsurface layers and can be utilized when developing drilling and reinjection plans.

Dr. Wendy M. Loya,
Arctic Program Coordinator
Office of Science Applications, US Fish and Wildlife Service
Anchorage, Alaska
907.786.3532 (office)
907.277.2942 (mobile)

From: [Wendy Loya](#)
To: [Donna Wixon \(dwixon@blm.gov\)](#); [Nichelle \(Shelly\) Jones](#); [Sarah LaMarr](#)
Cc: [Joshua Rose](#)
Bcc: [Paul Leonard](#); [John Trawicki](#)
Subject: Information request from SAE
Date: Friday, July 13, 2018 5:17:00 PM

Dear Donna,

I have uploaded documents in response to SAE's request for hydrologic, snow and climate monitoring/thermistor data for the 1002 area to help inform their operations planning into a folder on Google Drive they can access here: https://drive.google.com/open?id=1JKR6plmltt4z0plXo0e9_KglW84KLiUN

For the hydrology, I believe they were looking for information on lake depths that I had described, and we have included a zip drive with those GIS data (waterbody_depths.zip). That information is also described in an uploaded technical report. We are also sending a technical report on winter water within rivers to help them avoid doing seismic in these areas (if they have not changed), an overall hydrology study summary from 1984, and a list of studies that have been done that might provide other useful information.

With regards to the request for thermistor data, the USGS report with this information is available here for download (too large for email): <https://doi.org/10.3133/ds1021>.
Urban, F.E., and Clow, G.D., 2017, DOI/GTN-P Climate and active-layer data acquired in the National Petroleum Reserve—Alaska and the Arctic National Wildlife Refuge, 1998–2015: U.S. Geological Survey Data Series 1021, 546 p.,

This report presents data for air temperature, incident/reflected solar flux, wind speed/direction snow depth, atmospheric pressure, ground temperatures, soil moisture, and rainfall for 17 climate stations across the coastal plain. Four of the stations are located on the Refuge of which three are in the current area of interest. Data collection at those sites began between 2000 and 2003. Data were collected by automated stations with infrequent servicing at individual locations. Users should thoroughly read the methodology and be aware these stations by not reflect overall conditions within the project area.

Finally, there is a memo from Dr. Matthew Sturm at the Geophysical Institute at UAF that describes *preliminary* information from the aerial and ground surveys they did in the Marsh Creek to Camden Bay area in mid-April 2018. This is available for sharing with SAE to help inform their planning for seismic operations in the 1002 area. We believe that the method used by Dr. Sturm and associates, flying aerial Structure for Motion surveys, is a useful tool in evaluating landscape patterns of snow distribution and preliminary depth estimates. These estimates need to be validated by ground based measurements of *both* snow depth and density to achieve sufficient coverage to protect diverse vegetation types, coupled with soil freeze depth before actual operations.

We look forward to working with BLM and SAE on a collaborative approach to avoiding impacts from seismic in this important, area wide seismic survey. Please do not hesitate to contact me for further information and to find a time to meet to discuss the snow, river, terrain and vegetation of the 1002

area so we can help facilitate successful operations.

Thank you,

Wendy

Dr. Wendy M. Loya,
Arctic Program Coordinator
Office of Science Applications, US Fish and Wildlife Service
Anchorage, Alaska
907.786.3532 (office)
907.277.2942 (mobile)

From: [Sarah LaMarr](#)
To: [Wixon, Donna](#)
Cc: [Wendy Loya](#)
Subject: Re: Shareable: Arctic Refuge 1002 Reports for SAE
Date: Monday, July 16, 2018 2:39:14 PM

If you haven't already, go ahead and forward the email with the link to the reports to SAE folks, Donna. Thanks, s.

Sarah La Marr
Bureau of Land Management
Arctic District Office
Fairbanks, Alaska
907-474-2334 (desk)
907-888-3407 (cell)
slamarr@blm.gov

On Mon, Jul 16, 2018 at 9:11 AM Wixon, Donna <dwixon@blm.gov> wrote:

Great, thank-you. I was wondering if it was okay to just forward the e-mail.

Thanks,
Donna

Donna L Wixon
Natural Resource Specialist
BLM Arctic District Office
222 University Ave
Fairbanks, Alaska 99709
907-474-2301 Office
907-474-2386 Fax
dwixon@blm.gov

On Mon, Jul 16, 2018 at 9:01 AM, Wendy Loya <wendy_loya@fws.gov> wrote:

Hi Sarah and Donna,

Just an FYI, the Google drive I used to share the reports for SAE is accessible for non-DOI partners, so you can share the email and link directly with SAE/ASRC. I did update the sharing yesterday, it seems like I always set it correctly but then forget to hit save.

Thank you,
Wendy

Dr. Wendy M. Loya,

Arctic Program Coordinator

Office of Science Applications, US Fish and Wildlife Service

Anchorage, Alaska

907.786.3532 (office)

907.277.2942 (mobile)

From: [Tom Lohman](#)
To: mnhayes@blm.gov; wendy_loya@fws.gov; (b) (6); (b) (6);
(b) (6); (b) (6); faith.martineau@alaska.gov;
vaughan.molly@epa.gov; Kevin.Fisher@north-slope.org
Subject: [EXTERNAL] Re: Cumulative Impact Information Request
Date: Tuesday, July 17, 2018 6:18:24 PM

Hi Nicole,

Having some difficulty mustering our resources to respond to your request with many researchers in the field and most of the Borough's Utqiagvik-based officials and staff fully occupied with the Inuit Circumpolar Council General Assembly in full swing there this week.

That being said, we hope to see the following addressed in the cumulative effects analysis:

The interface and feedback mechanisms that would foreseeably occur between ANWR development and increased seismic activity, leasing, exploration, and development in adjacent State waters. Alaskan officials have long argued that the failure to open the Coastal Plain to leasing has denied the State the right to benefit from those largely inaccessible state resources. As an example, in the State's February 6, 1987 comments to USFWS Regional Director Robert Gilmore on the Draft ANWR 1002(h) Report, Division of Governmental Coordination Director Robert Grogan wrote, in part:

It is important that the final 1002(h) report and management alternatives address the siting in ANWR of oil and gas facilities needed to support offshore oil and gas development occurring adjacent to ANWR on state-owned submerged lands and on the federal Outer Continental Shelf.

Thanks,

Tom Lohman
North Slope Borough
Department of Wildlife Management
4011 Winchester Loop
Anchorage, AK 99507
(907) 349-2606
(907) 349-2602 FAX
tomlohman2@aol.com

-----Original Message-----

From: Hayes, Miriam (Nicole) (Nicole) <mnhayes@blm.gov>
To: Wendy Loya <wendy_loya@fws.gov>; (b) (6); Tonya Garnett
(b) (6); Tiffany Yatlin (b) (6); patrick hanson
(b) (6); Faith C Martineau (DNR) <faith.martineau@alaska.gov>; Vaughan, Molly
<vaughan.molly@epa.gov>; Kevin S. Fisher <Kevin.Fisher@north-slope.org>; Tom Lohman
<tomlohman2@aol.com>
Sent: Fri, Jul 13, 2018 8:55 am
Subject: Cumulative Impact Information Request

Cooperating Agencies:

We would like your input on any reasonably foreseeable future actions that you would like to see included as part of the cumulative analysis.

A reasonably foreseeable future action is defined as a project for which there is an existing proposal, a project currently in the NEPA process, or a project to which a commitment of resources (such as

funding) has been made.

Please send your input to me by COB on Tuesday, July 17.

Thank you-
Nicole

Nicole Hayes
Project Coordinator
Bureau of Land Management
222 W. 7th Avenue #13
Anchorage, Alaska 99513
Desk: (907) 271-4354

From: [Wendy Loya](#)
To: [Miriam \(Nicole\) Hayes](#)
Cc: [Stephen Arthur](#)
Subject: RE: Summer Caribou Timing Limitation
Date: Wednesday, July 18, 2018 6:11:00 PM

Nicole,

The stipulation I believe you are inquiring about is the following, specific to item C, so correct me if I am wrong:

K-5a Lease Stipulation/Best Management Practice –Caribou Summer Habitat

Note: All lands within the Arctic Refuge Coastal Plain are recognized as habitat of the Porcupine and Central Arctic caribou herds and shall be managed to ensure unhindered movement of caribou through the area.

Objective: Minimize disturbance and hindrance of caribou, or alteration of caribou movements through portions the Coastal Plain that are essential for summer use by caribou, including calving and rearing, insect-relief, and migration.

Requirement/Standard: The following standards will be applied to permitted activities:

c. Heavy equipment (e.g., sand/gravel extraction and transport, pipeline and pad construction, but not drilling from existing production pads) shall be suspended from no later than May 20 through no earlier than July 20, unless approved by the authorized officer in consultation with the appropriate federal, State, and North Slope Borough regulatory and resource agencies. The intent of this requirement is to restrict activities that will disturb caribou during calving and insect-relief periods. If caribou arrive on the calving grounds prior to May 20 or if they remain in the area in significant numbers (greater than approximately 10% of the estimated calving cow population or 1,000 during insect-relief periods) past July 20, major construction activities will be suspended. The lessee shall submit with the development proposal a “stop work” plan that considers this and any other mitigation related to caribou early arrival and/or late departure. The intent of this latter requirement is to provide flexibility to adapt to changing climate conditions that may occur during the life of fields in the region.

This was drawn from language from NPRA, with a shortened time period (July 20 not August) to reflect different caribou use of the 1002 area. What is different than NPRA, is that the entire Coastal Plain of the Arctic Refuge is high use caribou habitat, for two herds. Our support for this stipulation is based on the assumption that most development activity involving heavy equipment happens in winter, which is when I believe road and pad construction activity occurs in NPRA. Our intent with keeping this stipulation was primarily to require authorization, not to stop construction. It also does not apply to drilling, although that may also be a winter activity. With healthy caribou populations this would be mostly unrestricted, however under low populations when disturbance could further impact populations, the 10% would be more restrictive.

Examples where permission would be easily given:

- If one Lessee is completing a road and a wellpad in areas outside of caribou calving (area id’ed in K-5b under FWS recommended alternative) and post-calving habitat (area in K5C), and caribou aren’t using that area in significant numbers (10% or more of current population

estimates), then approval would be given as there would be no reason to stop heavy equipment.

- If more than one construction project is occurring and spacing between well pads/roads with heavy equipment is sufficient for caribou to be displaced (up to 5 km per Carmeron et al. 1992), approval could be granted
- Meets one or the other examples but if 10% of caribou were calving, construction could resume once caribou move out of area.

If BLM can agree that the language is sufficient to allow for approval, we would like to leave it as it is to be similar to NPRA. The following might be slightly more clear:

c. Heavy equipment (e.g., sand/gravel extraction and transport, pipeline and pad construction, but not drilling from existing production pads) shall be suspended from no later than May 20 through no earlier than July 20, unless approved by the authorized officer in consultation with the US Fish and Wildlife Service, **when it can be shown that activities will not have an impact on significant numbers** (greater than approximately 10% of the estimated calving cow population or 1,000 during insect-relief periods of caribou during calving and insect relief periods). If caribou arrive on the calving grounds prior to May 20 or if they remain in the area in significant numbers past July 20, major construction activities will be suspended until caribou have moved out of the area. The lessee shall submit with the development proposal a “stop work” plan that considers this and any other mitigation related to caribou early arrival and/or late departure. The intent of this latter requirement is to provide flexibility to adapt to changing conditions that may occur during the life of fields in the region.

Example justification for why we need to protect calving 1002 area, from Cameron et al. 1992:

With construction of an oil field access road through a calving concentration area, mean caribou density (no./km²) decreased from 1.41 to 0.31 ($P = 0.05$) within 1 km and increased from 1.41 to 4.53 ($P = 0.04$) 5- 6 km from the road. Concurrently, relative caribou use of the adjacent area declined ($P < 0.02$), apparently in response to increasing surface development. We suggest that perturbed distribution associated with roads reduced the capacity of the nearby area to sustain parturient females and that insufficient spacing of roads may have depressed overall calving activity. Use of traditional calving grounds and of certain areas therein appears to favor calf survival, principally through lower predation risk and improved foraging conditions. Given the possible loss of those habitats through displacement and the crucial importance of the reproductive process, a cautious approach to petroleum development on the Arctic Slope is warranted

Example justification for why we need to protect insect-relief, from the 1987 EIS (Clough et al.):

The postcalving season is the low point of the annual physiological cycle when energy reserves of parturient cows are especially low. The stresses of winter, pregnancy, migration, birth, lactation, hair molt, antler growth, and insect harassment draw heavily upon this

segment of the population (Dauphine, 1976; White and others, 1975). Access to insect-relief habitat and forage during this period may be critical to herd productivity. In early July the herd usually moves east and south, vacating the 1002 area by mid-July.

I welcome your further feedback and insights in to how to make this work. Thank you!
Wendy

Dr. Wendy M. Loya,
Arctic Program Coordinator
Office of Science Applications, US Fish and Wildlife Service
Anchorage, Alaska
907.786.3532 (office)
907.277.2942 (mobile)

From: Hayes, Miriam (Nicole) <mnhayes@blm.gov>
Sent: Wednesday, July 18, 2018 3:28 PM
To: Wendy Loya <wendy_loya@fws.gov>
Subject: Re: Summer Caribou Timing Limitation

Yes, please. It would be good to take a hard look at all the stips with this lens. We have been doing it with each one and want to make sure we're not presenting an alternative on either end of the spectrum that wouldn't meet the purposes.

Thank you,
Nicole

Nicole Hayes
Project Coordinator
Bureau of Land Management
222 W. 7th Avenue #13
Anchorage, Alaska 99513
Desk: (907) 271-4354

On Wed, Jul 18, 2018 at 3:14 PM, Wendy Loya <wendy_loya@fws.gov> wrote:

Hi Nicole,

Thanks for the email. This is a stipulation we have continued to work on, as we adopted the footprint and timing from NPRA but it may be that we aren't even asking for lower density as written. Let me get with Steve Arthur and the other caribou experts that drafted this tomorrow morning and hope to get a response to you by COB Thursday?

Thank you,

Wendy

Dr. Wendy M. Loya,
Arctic Program Coordinator
Office of Science Applications, US Fish and Wildlife Service
Anchorage, Alaska
907.786.3532 (office)
907.277.2942 (mobile)

From: Hayes, Miriam (Nicole) <mnhayes@blm.gov>

Sent: Wednesday, July 18, 2018 2:52 PM

To: Wendy Loya <wendy_loya@fws.gov>

Subject: Summer Caribou Timing Limitation

Hi Wendy,

For Alternative D (previous B), the summer caribou habitat timing limitation - there is concern that this does not meet the 5 requirements of the purposes of the refuge, to include supporting an O&G program. It is going to be a hard sell to most operators to say they cannot operate heavy equipment between May 20-Aug 20, which posted the the question is that actually a reasonable alternative?

Alternative language or rationale would be appreciated that could still support the intent of this stipulation.

Nicole Hayes

Project Coordinator
Bureau of Land Management
[222 W. 7th Avenue #13](#)
[Anchorage, Alaska 99513](#)
Desk: (907) 271-4354

From: [Whitman, Matt](#)
To: [Randy Brown](#); [Joshua Rose](#)
Cc: [Sarah LaMarr](#); [Nichelle \(Shelly\) Jones](#); [Wendy Loya](#); [Richard Kemnitz](#)
Subject: seismic EA: draft issues & BMPs fish/water
Date: Thursday, July 19, 2018 4:14:58 PM
Attachments: [ANWR seismic_fish&water_issues&BMPs_draft.docx](#)

FWS folks -

Find attached a draft of Issue Statements and Best Management Practices for fish and water resources combined for the seismic EA. It sounds like we may need to prepare separate "specialist reports" for fish and water at some point, but for this first step entailing the development of draft Issue Statements and BMPs it is hard to entirely separate the two resources without a lot of duplication. As such, and in the spirit of streamlining, Richard Kemnitz and I coordinated to create a document that covers both.

We see no reason to wait until our deadline of July 25 to share this with you. I'm not sure what the approved process is for getting feedback from you, but hopefully you can review this so we can coordinate a framework to move forward.

Matthew

From: [Wendy Loya](#)
To: [Nicole Hayes](#)
Cc: ["Chad Ricklefs"](#); ["Amy Lewis"](#); [Randy Brown](#); [John Trawicki](#)
Subject: Springs/aufeis Stipulation with further clarification
Date: Thursday, July 19, 2018 5:09:00 PM
Attachments: [K1C Springs revised_rb_071918.docx](#)

Hi Nicole,

Attached are revisions to the Springs stipulation after further consultation with our team.

1. We further generalized the study language and removed watershed, as the groundwater "watershed" may be different than the surface watershed that is typically defined with that term. Impacts are most likely to occur if numerous wells are drilled upstream of a spring, not below.
2. We do not have any information on how broad the groundwater flow is leading to a spring. Thus, it is hard to know how we might protect these important sources of water, that sustain fish populations in some rivers. The conservative approach would be to either restrict drilling above springs entirely or require full groundwater mapping. Both of these are problematic. Thus, a more reasonable approach would be to work towards better science on both 1) spring hydrology and 2) development models of how industry might align wells in a way that would likely have the least impact under different spring groundwater flowpath scenarios, as examples. There appear to be non-drilling methods for groundwater flow determinations.
3. It is likely that industry doesn't want to mess up spring flow either as it could have consequences for surface infrastructure if flow paths are changed and water comes out under pressure somewhere else.
4. Service staff have put forth the no-leasing at or above springs for 3 miles as a current best professional judgement on how issues *might* be avoided in the planning stages. This is no guarantee that changes would not occur, which is why the studies would be required. For most springs, this should not be an obstacle. The spring in the Tamayariak is the one that is out in the middle of possible high potential oil area, but at this time it does not support fish habitat directly.
5. Because the springs are associated with riverbeds and buffers are used on every river in NPRA, this should be similar. Asking for no-leasing at or above the springs for 3 miles seems like a minimal request.
6. Removing this stipulation for variation among alternatives is not recommended, given the significant impacts that could occur to natural resources and possibly infrastructure, if groundwater flow to surface springs is disrupted.

Lastly, this language was in the Clough et al. 1987 EIS for 1002:

The Sadlerochit Spring Special Area, as designated by regulations for exploration in the 1002 area, encompasses an approximately 4,000-acre area within 1/2 mile of the spring outlet and extends 1/4 mile on each side of the river downstream 5 miles to the aufeis field [50 CFR 37.32(g)]. The spring and its surrounding area have been identified as a special area primarily for the unusual plant

communities and associated diverse wildlife (pi. 1A).
Because of the spring's special values, exploration activities
have been prohibited. The Sadlerochit Spring area is used
for traditional subsistence harvest, particularly in winter,
when people from Kaktovik camp at the spring and hunt
and fish (Jacobson and Wentworth, 1982).

Thank you, happy to discuss further!
Wendy

Dr. Wendy M. Loya,
Arctic Program Coordinator
Office of Science Applications, US Fish and Wildlife Service
Anchorage, Alaska
907.786.3532 (office)
907.277.2942 (mobile)

From: [Wendy Loya](#)
To: [Miriam \(Nicole\) Hayes](#)
Subject: RE: Springs/aufeis Stipulation with further clarification
Date: Thursday, July 19, 2018 5:55:00 PM

Yes, it should have been in the package we shared with Marcia.

Looks like below, only we are modifying to reduce the circles to half circles elevational at or above the surface expression of the spring.
Total: 4 source springs w/aufeis and the Canning buffer to protect spring/aufeis flow that originates above 1002



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From: Hayes, Miriam (Nicole) <mnhayes@blm.gov>
Sent: Thursday, July 19, 2018 3:38 PM
To: Wendy Loya <wendy_loya@fws.gov>
Subject: Re: Springs/aufeis Stipulation with further clarification

So all the springs in areas potentially available for leasing? Do you have a map layer of all those springs and the boundaries that should be studied?

Nicole Hayes
Project Coordinator
Bureau of Land Management
222 W. 7th Avenue #13
Anchorage, Alaska 99513
Desk: (907) 271-4354

On Thu, Jul 19, 2018 at 3:32 PM, Wendy Loya <wendy_loya@fws.gov> wrote:

No, the area above 3 mi could be affected. Studies are a very very very good idea. Think of them as a groundwater blowout protector ☺

Dr. Wendy M. Loya,
Arctic Program Coordinator
Office of Science Applications, US Fish and Wildlife Service
Anchorage, Alaska
907.786.3532 (office)
907.277.2942 (mobile)

From: Hayes, Miriam (Nicole) <mnhayes@blm.gov>
Sent: Thursday, July 19, 2018 3:24 PM
To: Wendy Loya <wendy_loya@fws.gov>
Subject: Re: Springs/aufeis Stipulation with further clarification

Hi Wendy,
I'm assuming if the recommendation is to have no leases offered in those areas the study should not be required?
Nicole

Nicole Hayes
Project Coordinator
Bureau of Land Management
[222 W. 7th Avenue #13](#)
[Anchorage, Alaska 99513](#)
Desk: (907) 271-4354

On Thu, Jul 19, 2018 at 3:09 PM, Wendy Loya <wendy_loya@fws.gov> wrote:

Hi Nicole,

Attached are revisions to the Springs stipulation after further consultation with our team.

1. We further generalized the study language and removed watershed, as the groundwater "watershed" may be different than the surface watershed that is typically defined with that term. Impacts are most likely to occur if numerous wells are drilled upstream of a spring, not below.
2. We do not have any information on how broad the groundwater flow is leading to a spring. Thus, it is hard to know how we might protect these important sources of water, that sustain fish populations in some rivers. The conservative approach would be to either restrict drilling above springs entirely or require full groundwater mapping. Both of these are problematic. Thus, a more reasonable approach would be to work towards better science on both 1) spring hydrology and 2) development models of how industry might align wells in a way that would likely have the least impact under different spring groundwater flowpath scenarios, as examples. There appear to be non-drilling methods for groundwater flow determinations.
3. It is likely that industry doesn't want to mess up spring flow either as it could have consequences for surface infrastructure if flow paths are changed and water comes out under pressure somewhere else.
4. Service staff have put forth the no-leasing at or above springs for 3 miles as a current best professional judgement on how issues *might* be avoided in the planning stages. This is no guarantee that changes would not occur, which is why the studies would be required. For most springs, this should not be an obstacle. The spring in the Tamayariak is the one that is out in the middle of possible high potential oil area, but at this time it does not support fish habitat directly.
5. Because the springs are associated with riverbeds and buffers are used on every river in NPRA, this should be similar. Asking for no-leasing at or above the springs for 3 miles seems like a minimal request.
6. Removing this stipulation for variation among alternatives is not recommended, given the significant impacts that could occur to natural resources and possibly infrastructure, if groundwater flow to surface springs is disrupted.

Lastly, this language was in the Clough et al. 1987 EIS for 1002:

The Sadlerochit Spring Special Area, as designated by regulations for exploration in the 1002 area, encompasses an approximately 4,000-acre area within 1/2 mile of the spring outlet and extends 1/4 mile on each side of the river downstream 5 miles to the aufeis field [50 CFR 37.32(g)]. The spring and its surrounding area have been

identified as a special area primarily for the unusual plant communities and associated diverse wildlife (pi. 1A). Because of the spring's special values, exploration activities have been prohibited. The Sadlerochit Spring area is used for traditional subsistence harvest, particularly in winter, when people from Kaktovik camp at the spring and hunt and fish (Jacobson and Wentworth, 1982).

Thank you, happy to discuss further!
Wendy

Dr. Wendy M. Loya,
Arctic Program Coordinator
Office of Science Applications, US Fish and Wildlife Service
Anchorage, Alaska
907.786.3532 (office)
907.277.2942 (mobile)

From: [Trawicki, John](#)
To: [Hayes, Miriam \(Nicole\)](#); [Steve Berendzen](#); [Joanna Fox](#); [Wendy Loya](#)
Subject: Re:
Date: Thursday, July 26, 2018 10:00:23 AM

Hi Nicole- Hopefully updates below are clear. You are correct that the intent is to **not** create deep water habitats within the active channel or flood plain of the 4 identified drainages or to transplant fish to other drainages.

E-8 Best Management Practice

Objective: Minimize the impact of mineral materials mining activities on air, land, water, fish, and wildlife resources.

Requirement/Standard: Gravel mine site design, construction, and reclamation will be in accordance with a plan approved by the authorized officer. The plan shall be developed in consultation with the US Fish and Wildlife Service and other appropriate federal, State, and North Slope Borough regulatory and resource agencies and consider:

- a. Construction of gravel mine sites or water reservoirs may not be considered within the active floodplains of the four rivers that support populations of freshwater, anadromous, or endemic fish (Canning, Sadlerochit, Hulahula, and Aichilik rivers).
- b. Design and construction of gravel mine sites may be considered at locations outside the active floodplain.
- c. Design and construction of gravel mine sites that may also serve as water reservoirs may be considered within active floodplains with the exception of waters identified in (a).
- d. Potential storage and reuse of sod/overburden for the mine site or at other disturbed sites on the North Slope.
- e. All constructed water storage reservoirs shall be a sufficient distance from drill sites, fueling stations, or other temporary or permanent site that generates or maintains more than 220 gallons of fuel, drilling fluids, or other hazardous materials to avoid contamination via surface or groundwater of the storage reservoir. The lessee shall implement a water quality and contaminants monitoring program for any constructed water storage facility.

On Wed, Jul 25, 2018 at 1:45 PM, Trawicki, John <john_trawicki@fws.gov> wrote:

Hi Nicole-

Working on rewording it and will get back to you in a few. A little confusion between gravel mining and creating reservoirs.

john t

On Wed, Jul 25, 2018 at 11:56 AM, Hayes, Miriam (Nicole) <mnhayes@blm.gov> wrote:

Hi Steve and John,

On one of the BMPs (or Required Operating procedures now) - we have some specific questions from the IDT. Can you please help?

- ROP 26: for Alt D, a, b, and c seem to conflict. It's unclear where gravel mines would be allowed or not allowed, and if allowed, could they be allowed to function as deep water habitat? Does "a" infer that water reservoirs would be for human use only (i.e. water couldn't be reserved for fish under this ROP)?
- "b" says mines should be outside the floodplain, and "c" says they should be

inside the floodplain.

Regarding “a”, because this is an oil and gas plan, all stips and ROPs are in the framework of oil and gas. So water reservoirs wouldn’t be developed for fish habitat – correct?

FWS recommended this for the more conservative alternative:

Objective: Minimize the impact of mineral materials mining activities on air, land, water, fish, and wildlife resources.

Requirement/Standard: Gravel mine site design and reclamation will be in accordance with a plan approved by the authorized officer. The plan shall consider:

- a. Design and construction of gravel mine sites to serve as water reservoirs for future use may not be considered within active floodplains of the four rivers that support populations of freshwater, anadromous, or endemic fish (i.e., Canning, Sadlerochit, Hulahula, and Aichilik Rivers).
- b. Locations outside the active floodplain for all other rivers.
- c. Design and construction of gravel mine sites within active floodplains to serve as water reservoirs for future use.
- d. Potential use of the site for enhancing fish and wildlife habitat while preventing entrapment of native fishes.
- e. Potential storage and reuse of sod/overburden for the mine site or at other disturbed sites on the North Slope.
- f. All constructed water storage reservoirs shall be a sufficient distance from drill sites, fueling stations, or other temporary or permanent site that generates or maintains more than 220 gallons of fuel, drilling fluids, or other hazardous materials to avoid contamination via surface or groundwater of the storage reservoir. The lessee/operator/contractor shall implement a water quality and contaminants monitoring program for any constructed water storage facility.

The similar ROP for the other alternatives states:

Objective: Minimize the impact of mineral materials mining activities on air, land, water, fish, and wildlife resources.

Requirement/Standard: Gravel mine site design and reclamation will be in accordance with a plan approved by the authorized officer. The plan shall be developed in coordination with the appropriate entity and consider:

- a. Locations outside the active floodplain.
- b. Design and construction of gravel mine sites within active floodplains to serve as water reservoirs for future use.
- c. Potential use of the site for enhancing fish and wildlife habitat.
- d. Potential storage and reuse of sod/overburden for the mine site or at other disturbed sites on the North Slope.

Nicole Hayes

Project Coordinator
Bureau of Land Management
[222 W. 7th Avenue #13](#)
[Anchorage, Alaska 99513](#)

Desk: (907) 271-4354
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John Trawicki
Water Resources Branch Chief
National Wildlife Refuge System, Alaska
U.S. Fish and Wildlife Service
1011 E. Tudor Road
Anchorage, AK 99503
Work: (907) 786-3474
Mobile: (907) 360-1656

"The single biggest problem with communication is the illusion that it has taken place"
George Bernard Shaw

--

John Trawicki
Water Resources Branch Chief
National Wildlife Refuge System, Alaska
U.S. Fish and Wildlife Service
1011 E. Tudor Road
Anchorage, AK 99503
Work: (907) 786-3474
Mobile: (907) 360-1656

"The single biggest problem with communication is the illusion that it has taken place"
George Bernard Shaw

From: [Wixon, Donna](#)
To: [Joshua Rose](#); [Wendy Loya](#)
Cc: [Shelly Jacobson](#); [Sarah LaMarr](#)
Subject: Fwd: [EXTERNAL] POSSIBLE Water Withdrawal Locations
Date: Tuesday, July 31, 2018 10:58:39 AM
Attachments: [MC WaterWLocations-2018.kmz](#)

Good Morning,

Please see attached map of lakes that SAE may want to withdraw water. Do you have any information on these lakes?

Thanks,
Donna

Donna L Wixon
Natural Resource Specialist
BLM Arctic District Office
222 University Ave
Fairbanks, Alaska 99709
907-474-2301 Office
907-474-2386 Fax
dwixon@blm.gov

----- Forwarded message -----

From: **Suzan Simonds** <ssimonds@contractor.saexploration.com>
Date: Mon, Jul 23, 2018 at 3:33 PM
Subject: [EXTERNAL] POSSIBLE Water Withdrawal Locations
To: Sarah LaMarr <slamarr@blm.gov>, Donna Wixon <dwixon@blm.gov>
Cc: Marsh Creek Permitting <MarshCreekPermitting@saexploration.com>

Hi Sara

Compared to most other winter north slope activities, seismic water withdrawal is considered minimalistic by the state. SAE follows the following guide lines for water withdrawal. These guidelines are an explanation for when a company would need to file for a Temporary water use permit (TWUP) if the amounts are exceeded. In normal operations we/SAE does not exceed this amount described below:

- the consumptive use of more than 5,000 gallons of water from a single source in a single day;
- the regular daily or recurring consumptive use of more than 500 gpd from a single source for more than 10 days per calendar year
- the non-consumptive use of more than 30,000 gpd (0.05 cubic feet per second) from a single source; or

- any water use that may adversely affect the water rights of other appropriators or the public interest.

I have put together a KMZ file for possible lakes that may work for water withdrawal. These lakes would be looked as we move into winter planning.

Please let me know if you need anything else.

Suzan Simonds

Permit and Regulatory Manager

SAExploration, Inc.

Safety – Acquisition - Experience

8240 Sandlewood Pl., Suite 102

Anchorage, AK 99507

907-331-8140 Cell

907-522-4499 Main

907-522-4498 Fax

From: [Steve Berendzen](mailto:Steve.Berendzen)
To: john_trawicki@fws.gov; paul_leonard@fws.gov
Cc: [Joanna Fox](mailto:Joanna.Fox); [Joshua Rose](mailto:Joshua.Rose); wendy_loya@fws.gov; [Doug Damberg](mailto:Doug.Damberg); [Mitch Ellis](mailto:Mitch.Ellis)
Subject: Fwd: Seismic EA Call Today
Date: Thursday, August 2, 2018 1:06:38 PM

Good summary from Shelly on our concerns with snow & frost depths. Glad to see they share our concerns. Hopefully we can implement some protective protocol for the 1002 Area

Sent from my iPhone

Begin forwarded message:

From: "Jones, Nichelle (Shelly)" <njones@blm.gov>
Date: August 2, 2018 at 10:40:29 AM AKDT
To: "Geisler, Eric" <egeisler@blm.gov>, Timothy Vosburgh <tvosburgh@blm.gov>, "LaMarr, Sarah" <slamarr@blm.gov>, "Guyer, Scott" <sguyer@blm.gov>, Matt Whitman <mwhitman@blm.gov>, Donna Wixon <dwixon@blm.gov>, Steve Berendzen <steve_berendzen@fws.gov>
Subject: Re: Seismic EA Call Today

My understanding of what we are interested in discussing with the snow experts related to tundra travel is:

Background: We have an objective, for our use authorizations in the arctic, to protect several major resources (including permafrost soils and tundra tussock shrub vegetation) from damage and compaction due to the cross country travel by industrial equipment and camp buildings to support winter field operations.

In general we use a performance based approach to our standard that allows ground ops as long they protect the tundra from damage. Our stipulation used to be more prescriptive and on adjacent state lands they use standard regional minimums for frost depth at a sufficient depth and snow cover at a sufficient depth to announce the tundra as open to certain approved low ground pressure vehicles.

The standard, in general, is that on the coastal plain where the soils are silty and ice rich the freeze down needs to be at a depth of at least 12" and the snow cover needs to be at a depth of 6" to cover the relatively short vegetation that grows there. In the foothill region, the soils are somewhat rockier and more natural structure and strength. Also less permafrost, so freeze down is only needed at a depth of 6" but because of the taller vegetation, the snow needs to be 12". There are also a 9"/6" and a 9"/12" transitional area that exists between the two main categories.

Right now the information that informs the state's tundra opening across the entire north slope comes to DNR from a series of about 20 relatively tightly located measuring stations near Deadhorse. The stations measure frost depth with thermistors and somehow also take automated snow depth reading I believe. I am not sure if the automated stations are actually able to turn the snow depth data into a snow water equivalent or if that can only be done by people.

1. How many stations and at what spacing would be desirable to accurately characterize the snow and frost conditions across broad regions of the north slope/foothills and coastal plain physiographic areas. Ideally we are trying to build in a buffer to allow for localized variation from drifting.
2. How do the localized variables of soil moisture, soil type, variations in permafrost and vegetation cover, etc. interact with each other and these snow and frost measurements to lead to different impacts? Can the physics and applied engineering knowledge of snow be experimented with theoretically or actually to see how the depth, density and specific gravity differences of snow can be used to predict impacts/level of protection to the resources we care about. Ideally we could create more locally specific stipulations that make sense for the same vehicles traveling across different localized areas and no how to relate that to the variables we can measure. Right now the conditions typically only manifest for about 100 days per year. Being able to open the tundra earlier or keep it open later in certain areas would be desirable for development activities. The economics of this make an extremely relevant management question.

Shelly Jones
Acting Manager
Arctic District Office
222 University Avenue
Fairbanks, AK 99709

(907) 474-2310 (w)
(907) 460-0086 (c)

On Tue, Jul 31, 2018 at 4:31 PM, Geisler, Eric <egeisler@blm.gov> wrote:

Shelly

Can you phrase the question we want answered about snow depth and impacts for me?. I will forward it to the conference organizers to get it onto a forum for the International Snow Science Workshop.

Eric Geisler, CF
Program Lead for Forestry, Invasive Species, Range, Botany, ES&R

BLM Alaska State Office
[222 W 7th Ave #13](#)
[Anchorage, AK 99513](#)
W 907-271-1985
C 509-220-4712

On Tue, Jul 31, 2018 at 2:43 PM, Jones, Nichelle (Shelly) <njones@blm.gov> wrote:

We have a lot of topics to cover today. FWS would like us to consider a different approach to the tundra opening minimums. Paul Leonard from FWS is coming over to discuss it with us today. It is a followup to the email I sent certain of you a couple of weeks ago asking for your input on the suggested snow stipulations Wendy Loya sent the IDT for review.

This issue is really the crux of the whole EA in terms of impacts and it is one that could easily slip through the cracks as snow and frost are not specifically assigned as a "critical element" to anyone. However, they are the aspects that will result in the most protection or degradation to the vegetation and soils,

If you are able to call in at 3 to participate in this discussion, please do.

b5 - CIP Passcode **b5 - CIP**

Shelly Jones
Acting Manager
Arctic District Office
[222 University Avenue](#)
[Fairbanks, AK 99709](#)

[\(907\) 474-2310](tel:(907)474-2310) (w)
[\(907\) 460-0086](tel:(907)460-0086) (c)

From: [Trawicki, John](#)
To: [Hayes, Miriam \(Nicole\)](#)
Cc: [Wendy Loya](#)
Subject: Fwd: GIS Data
Date: Friday, August 3, 2018 12:13:12 PM

Nicole-

Please see Paul's note and his concern that the maps and supporting information is not exhaustive. He is willing to work with Cindy on the maps. Please let me know how you would like to proceed.

john t

----- Forwarded message -----

From: Leonard, Paul <paul_leonard@fws.gov>
Date: Fri, Aug 3, 2018 at 10:00 AM
Subject: Re: GIS Data
To: "Trawicki, John" <john_trawicki@fws.gov>
Cc: Steve Berendzen <steve_berendzen@fws.gov>, Wendy Loya <wendy_loya@fws.gov>, Drew Crane <drew_crane@fws.gov>

Hi John,

You are correct in that - the spatial data I compiled and passed along to BLM supported the geopdfs (for use in discussion of the leasing EIS) that were presented to them by Wendy, Steve B, and Mary C. at the alternatives workshop.

My only hesitation in using these data for another purpose would be if they are expected to be exhaustive. For example, I only digitized aufeis for areas that were named in the draft leasing alternatives - not all areas that exist or could be impacted. So in that regard, perhaps I should work with BLM directly on interpretation? I'm happy to contact Cindy directly and also open to other ideas here.

As far as the example she provides about waterbody depths - this layer relates to your work on the large lakes in the late 80s early 90s.

Cheers,
Paul

On Fri, Aug 3, 2018 at 9:29 AM, Trawicki, John <john_trawicki@fws.gov> wrote:

Hi Paul-

see email string-

I have not seen the maps (in their entirety) or had the opportunity to review the maps that you produced and Wendy provided to BLM for the alternatives workshop and therefore can not answer Nicole's question on using the maps the Service

provided in the EA and EIS. I will need to defer to you. You may have questions such as which layers and in what context are they being used. How will the layers be documented and referenced..? Please let me know your thoughts on this.

john t

----- Forwarded message -----

From: **Cindy Hamfler** <chamfler@blm.gov>

Date: Fri, Aug 3, 2018 at 8:44 AM

Subject: Re: GIS Data

To: john_trawicki@fws.gov

Cc: "Miriam (Nicole) Hayes" <mnhayes@blm.gov>, "Loya, Wendy"

<wendy_loya@fws.gov>, steve_berendzen@fws.gov, Donna Wixon <dwixon@blm.gov>, John Brewer <John_Brewer@fws.gov>, Douglas Campbell <Douglas_Campbell@fws.gov>

Apologies, I should have been more clear. It's not data from the FWS Realty group that I was referring to, in fact I don't think we are using anything from them. It's the data from resource groups and Paul/Wendy (for Leasing EIS alternatives). For example, when Matthew comes talking to me about fish and water for the Seismic EA and I know about the areas Paul/Wendy had identified as Aufeis or Perennial Springs (because of ability to see the Leasing EIS data stack)- can we use that data in the Seismic EA? Unfortunately, there is a disconnect on our side because the two IDT teams for the Seismic EA and the Leasing EIS are not exactly the same. Being asked to make the maps for the Seismic and having access and involvement in the Leasing EIS I feel like I am straddling the line and can see how data for one project should really be used in both.

We also have one instance of a dataset- waterbody depths- that got passed to Donna (we need to figure out from whom/what source) that would be useful in the Leasing EIS.

I'm not sure how we could review the data.

That's a little more detail on where I am coming from with having asked the question,

Cindy

BLM AK - GIS Specialist

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[\(907\) 474-2213](tel:(907)474-2213)

On Thu, Aug 2, 2018 at 9:41 AM Trawicki, John <john_trawicki@fws.gov> wrote:

Hi Nicole-

Not sure which gis data/maps you are referring to. Would like to see/review them prior to use. Layers from our realty shop may not be the same as those from resource assessment teams. Not sure the best way to review them.

john t

On Thu, Aug 2, 2018 at 9:28 AM, Hayes, Miriam (Nicole) <mnhayes@blm.gov> wrote:
Hi John,

I think you may be acting today so wanted to let you know that we are intending to use GIS data provided by FWS for Leasing EIS maps, for the Seismic EA maps as well. Please let me know if there are concerns with this for any reason.

Thanks!
Nicole

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"The single biggest problem with communication is the illusion that it has taken place"
George Bernard Shaw

--

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--

Paul Leonard, PhD

Science Coordinator

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George Bernard Shaw

From: [Berendzen, Steve](#)
To: [Joanna Fox](#); [John Trawicki](#); [Joshua Rose](#); [Loya, Wendy](#); [Paul Leonard](#); [Doug Damberg](#)
Subject: Fwd: Seismic EA Call Today
Date: Tuesday, August 7, 2018 10:49:46 AM

Shelly makes some good points here and I think this fully reinforces my thoughts on needing to have some documentation of soil frost and snow depth when seismic is being conducted. The only way I think we can reliably do this is to have our own monitors on site with the crew. This would allow us to determine what conditions are resulting in damage to the tundra when it occurs, as well as the activities that are causing the damage.

If we're only able to go in the next spring and look for damage over a 1.6 million acre area, it will be like looking for a needle in a haystack. How can we learn anything about operational conditions if we aren't involved in the operation?

Steve Berendzen
Refuge Manager, Arctic National Wildlife Refuge
907-456-0253

----- Forwarded message -----

From: **Jones, Nichelle (Shelly)** <njones@blm.gov>
Date: Thu, Aug 2, 2018 at 10:40 AM
Subject: Re: Seismic EA Call Today
To: "Geisler, Eric" <egeisler@blm.gov>, Timothy Vosburgh <tvosburgh@blm.gov>, "LaMarr, Sarah" <slamarr@blm.gov>, "Guyer, Scott" <sguyer@blm.gov>, Matt Whitman <mwhitman@blm.gov>, Donna Wixon <dwixon@blm.gov>, Steve Berendzen <steve_berendzen@fws.gov>

My understanding of what we are interested in discussing with the snow experts related to tundra travel is:

Background: We have an objective, for our use authorizations in the arctic, to protect several major resources (including permafrost soils and tundra tussock shrub vegetation) from damage and compaction due to the cross country travel by industrial equipment and camp buildings to support winter field operations.

In general we use a performance based approach to our standard that allows ground ops as long they protect the tundra from damage. Our stipulation used to be more prescriptive and on adjacent state lands they use standard regional minimums for frost depth at a sufficient depth and snow cover at a sufficient depth to announce the tundra as open to certain approved low ground pressure vehicles.

The standard, in general, is that on the coastal plain where the soils are silty and ice rich the freeze down needs to be at a depth of at least 12" and the snow cover needs to be at a depth of 6" to cover the relatively short vegetation that grows there. In the foothill region, the soils are somewhat rockier and more natural structure and strength. Also less permafrost, so freeze down is only needed at a depth of 6" but because of the taller vegetation, the snow needs to be 12". There are also a 9"/6"

and a 9"/12" transitional area that exists between the two main categories.

Right now the information that informs the state's tundra opening across the entire north slope comes to DNR from a series of about 20 relatively tightly located measuring stations near Deadhorse. The stations measure frost depth with thermisters and somehow also take automated snow depth reading I believe. I am not sure if the automated stations are actually able to turn the snow depth data into a snow water equivalent or if that can only be done by people.

1. How many stations and at what spacing would be desirable to accurately characterize the snow and frost conditions across broad regions of the north slope/foothills and coastal plain physiographic areas. Ideally we are trying to build in a buffer to allow for localized variation from drifting.
2. How do the localized variables of soil moisture, soil type, variations in permafrost and vegetation cover, etc. interact with each other and these snow and frost measurements to lead to different impacts? Can the physics and applied engineering knowledge of snow be experimented with theoretically or actually to see how the depth, density and specific gravity differences of snow can be used to predict impacts/level of protection to the resources we care about. Ideally we could create more locally specific stipulations that make sense for the same vehicles traveling across different localized areas and no how to relate that to the variables we can measure. Right now the conditions typically only manifest for about 100 days per year. Being able to open the tundra earlier or keep it open later in certain areas would be desirable for development activities. The economics of this make an extremely relevant management question.

Shelly Jones
Acting Manager
Arctic District Office
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[Fairbanks, AK 99709](#)

[\(907\) 474-2310](#) (w)
[\(907\) 460-0086](#) (c)

On Tue, Jul 31, 2018 at 4:31 PM, Geisler, Eric <egeisler@blm.gov> wrote:

Shelly

Can you phrase the question we want answered about snow depth and impacts for me?. I will forward it to the conference organizers to get it onto a forum for the International Snow Science Workshop.

Eric Geisler, CF
Program Lead for Forestry, Invasive Species, Range, Botany, ES&R
BLM Alaska State Office
[222 W 7th Ave #13](#)
[Anchorage, AK 99513](#)

W 907-271-1985

C 509-220-4712

On Tue, Jul 31, 2018 at 2:43 PM, Jones, Nichelle (Shelly) <njones@blm.gov> wrote:

We have a lot of topics to cover today. FWS would like us to consider a different approach to the tundra opening minimums. Paul Leonard from FWS is coming over to discuss it with us today. It is a followup to the email I sent certain of you a couple of weeks ago asking for your input on the suggested snow stipulations Wendy Loya sent the IDT for review.

This issue is really the crux of the whole EA in terms of impacts and it is one that could easily slip through the cracks as snow and frost are not specifically assigned as a "critical element" to anyone. However, they are the aspects that will result in the most protection or degradation to the vegetation and soils,

If you are able to call in at 3 to participate in this discussion, please do.

65 - CIP [REDACTED] Passcode 65 - CIP [REDACTED]

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[\(907\)](#) 460-0086 (c)

From: [Sara Longan](#)
To: wendy_loya@fws.gov; greg_siekaniec@fws.gov
Subject: NSSI end of year funds to support FWS land cover project
Date: Wednesday, August 8, 2018 12:56:00 PM

Hello Wendy and Greg,

NSSI has end of year funds to use, largely due to staff vacancies. I understand you might benefit from additional funding to expand or continue your NS land cover efforts?

If that's the case, we'd be happy to contribute. Do you have a cost estimate? As you know, we would have to work quickly to process the funds, prior to losing end-of-year options.

Let me know your thoughts

Thanks

Sara

From: [Hayes, Miriam \(Nicole\)](#)
To: [Wendy Loya](#); [Drew Crane](#); [John Trawicki](#); [Steve Berendzen](#)
Subject: Coastal Plain - Preliminary Draft EIS: Message 1 of 2
Date: Thursday, August 9, 2018 9:12:19 AM
Attachments: [Coastal Plain EIS Vol 1 FWS.pdf](#)
[140L6318F0003 AdminDrftEIS BLM-agency-cmmts 20180808.docx](#)

Dear Cooperating Agencies:

Attached is Volume 1 of the Preliminary Draft EIS for the Coastal Plain Oil and Gas Leasing Program for your review and comment. Volume 1 contains the Executive Summary, Chapters 1-3, References, and Glossary. Volume 2 will follow in a separate message and includes the Appendices.

Also attached is a comment matrix form in Microsoft Word which should be used to capture all of you comments. Instructions for commenting and completing the form are at the beginning of the comment matrix.

Please note there are areas that are still being refined and updated for consistency based on recent corrections such as: acreage calculations across all chapters; inclusion of some caribou and cultural resource data; and formatting, however, the information presented in this Draft EIS provides the foundation for subsequent versions and should not change the overall analysis. Please keep that in mind while reviewing and that constructive comments should focus on the following:

- Adequacy of addressing the purpose and need.
- Missing information, such as tribal, local and state planning documents or other readily-available data.
- Inconsistencies between stipulations and required operating procedures in the alternatives.
- Adequate illustrations of the alternatives in the maps.
- Adequacy and appropriate level of direct, indirect, and cumulative impact analysis. Provide specific changes to improve analysis and note any gaps in logic.
- Consistency of impact analysis between resource topic areas.

Comments are due to me by close of business Friday, August 17, 2018.

Please remember this is for INTERNAL USE ONLY. As always, let me know if you have any questions.

Thank you!
Nicole

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From: [Hayes, Miriam \(Nicole\)](#)
To: [Wendy Loya](#); [Drew Crane](#); [John Trawicki](#); [Steve Berendzen](#)
Subject: Coastal Plain - Preliminary Draft EIS: Message 2 of 2
Date: Thursday, August 9, 2018 9:26:44 AM
Attachments: [Coastal Plain EIS Vol II FWS.pdf](#)

Attached is Volume 2

Nicole Hayes

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From: [Leonard, Paul](#)
To: [Wendy Loya](#)
Subject: Re: [EXTERNAL] ROP comments
Date: Friday, August 10, 2018 10:10:48 AM
Attachments: [nrfjhfbbjeocbjkh.png](#)
[gdoebgmbehdpckh.png](#)
[ehjhohblonjpecal.png](#)
[ndkmgghilcpnmkqc.png](#)

BLM did ask me to calculate a 2.5" water column (SWE) already so as soon as I get contracts out the door this AM - I'll dig into the doc.

Cheers,
Paul

On Thu, Aug 9, 2018 at 11:04 PM, Matthew Sturm <msturm1@alaska.edu> wrote:
Hi Wendy and Paul:

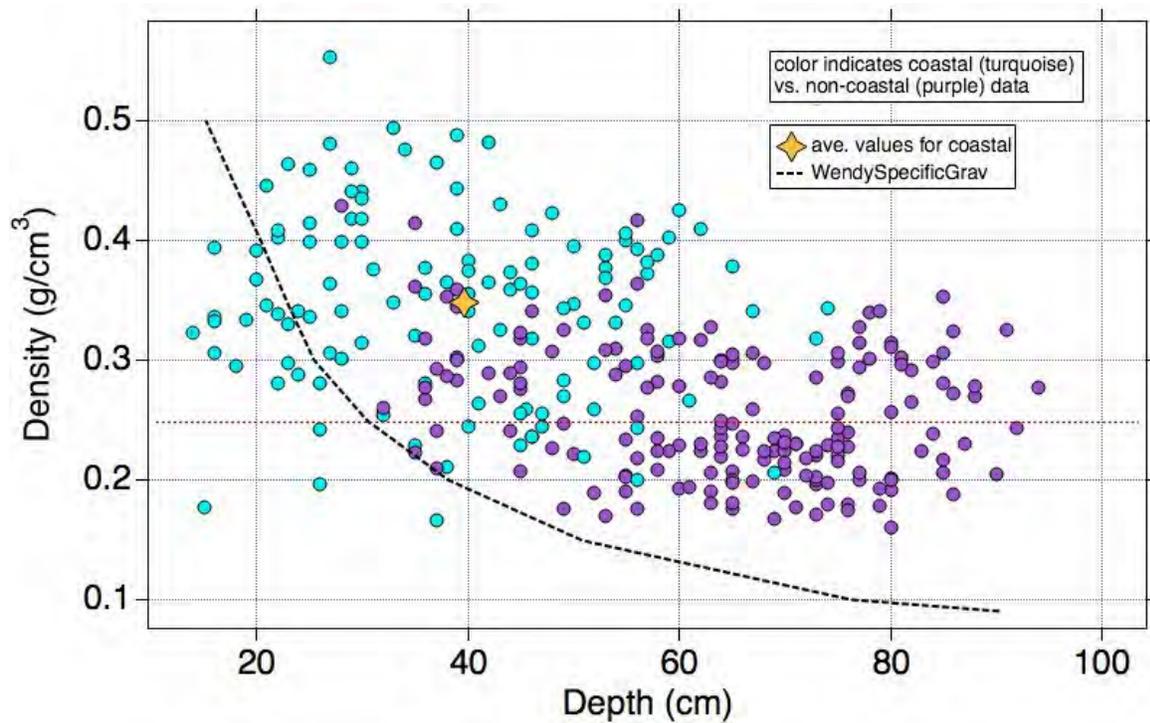
The workshop budget will be ready sometime tomorrow morning.

With respect to the stipulations, first let me say that I am not conversant with how these things are written, but assuming there is a (B +C) and (D) option for snow, here are my comments:

1. Melissa Head stressed to me that much damage is done by poor equipment operation. An example: if a rig is stuck, the operator tries to get it unstuck to avoid being "in trouble" or "embarrassed, but in fact, that is one situation in which the State has observed a lot of damage is done. The correct thing is to wait for another rig to help get the 1st one unstuck. That is probably covered in "...operated..." but perhaps this thing needs to get spelled out.
2. Ice roads and snow roads are quite different, but the stipulations seem to be focused on ice roads. My understanding is that ice roads can be either pure ice, or snow then wetted with fresh water to make ice. Snow roads are compacted snow, which can be either snow in place compacted, or snow mined and dumped on the right-of-way, then compacted. Given that in the 1002, the prospects for ice roads is much lower than snow roads, the stipulations need to be quite clear about what is what. Further, say the idea is to build a snow road to avoid tundra damage, it is hard to see how a steel-tread backhoe or front-end loader does that without creating damage that you are trying to avoid. So in [B], subnote (b), the Note, it seems like a catch 22: To build the protective snow road it is OK to use the equipment that does the damage.
3. "hardened snow trails" Are these supposed to be manufactured, or just the by-product of multiple passes of the rollagons? It is unclear.
4. **CRITICAL:** [Alternative D]. I started reflecting and worrying about the 3" water equivalent over the *highest* tussock. This comes in part from my email of July 7th (attached below), though I was thinking at the time of the *mean tussock tops*, not the *highest* tussock. Could this standard be impossible to achieve across parts of the 1002? If too stringent it could mean the stipulation gets ignored entirely. So I went back to the data (what little we have), which I would have done in July but there was no time then. To understand what this standard might actually mean, refer to the graph below. This is depth-density data from our 2014-2015 work. Here "coastal" (turquoise) is sort of the same as the 1002 area as it included Marsh Creek station. A few things to note. The gold star is the centroid for the coastal data, and falls at 40 cm depth (16") and 0.35 specific gravity. For all the data 0.30 is the average specific gravity. The black dashed line is the line that corresponds to the depth specific gravity chart Wendy put in Stipulation D. Most data plot as deeper, denser or combination of deeper and denser than this line.....which means they would surpass the stipulation. That is good.

But be aware that in December the entire data cloud would effectively move down and left....and I am pretty sure mostly would fall below the black dashed line....i.e., not in stipulation. This would particularly true for a "highest tussock standard". I suggest the standard be relaxed to "above tussock tops"....and since this will be an interpreted standard anyway, that should suffice. Moreover, be aware that a slow build up winter could well find the data cloud moving up rather slowly and not looking like this chart until March, leaving a very short season for seismic.

If that is a major worry, perhaps backing off to 2.5" SWE stipulation might be better and still OK. The sad thing is we DO NOT KNOW what SWE value we need, nor is the NPRA practise any guide because we have not longitudinal studies that have gone back and examined what has happened under these stipulations (or even other looser ones).



I am sorry I did not have the time when asked in July to work this out.....and it is exactly the reason the mad rush on the EIS is such detrimental thing. This sort of work takes time, thought, and care.

5. I would change the wording to "...*will be monitored* agency representatives" and would in fact suggest that the mandate of the USFWS requires that by law.

And Since industry is pushing back on accommodating inspectors in their camps....take that out and just indicate "inspectors will be in the field at the time of activities and will be allow access to operations but will not impede the work". Given that the USFWS is the legal steward for this land....how could there be any objection to that either? So put that in [B] and [C]....in fact insist on having it in all stipulation options. Any effort to keep that out smacks of efforts to evade the stipulations. I will certainly be adding that in my public review comments and citing the enacting laws of the USFWS to buttress that such clauses are required.

Good luck.

Matthew

+++++ July 7th email +++++

Here are several comments on the draft:

1. The stipulations are being based on those being used in the NPRA, but two questions make this a somewhat shaky foundation:

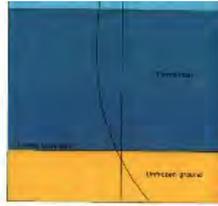
- Are there case studies that document that the standards as applied in NPRA have been successful to date? I am unaware of any longitudinal studies tracking conditions since activities in NPRA have increased. What level of damage has been observed under what snow conditions?
- There are distinct physiographic differences between the 1002 and the northern NPRA, chiefly that the former experiences higher winter winters than the latter, while the latter domain is about 50% thaw lake in comparison <10% for the 1002 area (these percentages are rough estimates but could be done quantitatively).
- To my knowledge, the 6" 12" rule was put forward by Max Brewer of NARL prior to the first work on the NPRA (this fact may be in Reed's 1958 USGS Professional Paper on NPRA), and it is mentioned in Gryc's USGS Professional Paper 1240-C on the area. The basis for it was mostly common sense: 12" t prevent ground deformation; 6" to buffer the vegetation. But of course, the stipulations date from an era when there was a higher acceptance of damage (see image from Gryc's paper).

caused ice roads can be built for the use of surface vehicles. Large or permanent structures are placed

but, as demonstrated by this program, the problems can be solved.



Track made by a tracked vehicle in the winter during the PIV-4 program.



Cross-sectional graph of ground surface has been shown. As the snow, actual temperature structure may be different in depth of 100-200 feet. The upper boundary for permafrost, ground is about 1-200 feet in diameter and 200 feet in thickness. (modified from Madsen and Aronov, 1972).

2. While it sounds like the protocol is to measure 20 depths across 100-m transects and average, the stipulation merely says 6" for snow. But the frost (12") is specified as being measured in the intertussock area. To be parallel, one might think the snow standard would be 6" above tussock tops to ensure an adequate minimum cover. I would also like the 20 measurements to be evenly spaced, but the transect location to be somewhat random so it is not deep-snow biased.

3. Coastal vs. Foothills snow: While the Camden Bay to Marsh Creek line shows less snow a Marsh Creek, this is due to strong katabatic scour drainage winds off of the Sadelrochit Mountains. It is unclear (as we don't have comparative data along North-South line across the 1002) whether this is a general or local gradient. See #2: if the 6" is specified as the minimum above most tussock tops, then is a Foothills vs. Coastal value difference necessary?

4. The 6" rule has always been flawed because it specifies "volume" rather than "mass". Consider that a balloon has a large volume, and almost no protection value when run over by a vehicle. So first a lesson in snow density:

Snow falls from the sky and once on the ground begins to settle. Initial (just after deposition) densities range from 0.05 grams/cm³ (3.12 lbs/ft³) for fluffy powder and no wind, to about 0.3 grams/cm³ for wet Cascade cement. Densification on the ground increases the density; it takes place slowly in cold conditions and thin snow packs, and rapidly in deep wet snow packs. Wind is the other way snow can get dense....the wind picks up grains, pulverizes them and then deposits them, packing them tighter and sintering them (bonding them) into a cohesive mass.

Most seasonal snow covers (including the 1002) are made up of 5 to 15 layers of snow, each with an initial density and each undergoing some densification. The bulk density of the whole snow pack is the weighted average of all these layers. Typically, we just core the whole thing and weigh the core to get the bulk density....but do remember that we might have a dense snow pack 40 cm deep, get a big fluffy snowfall that adds an additional 20 cm of fluff....and now the pack that had an average density that met a standard, no longer does...the bulk value has been greatly reduced.

Worldwide, the average bulk density of seasonal snow packs is 0.3 gram/cm³ (18.7 lbs/cubic ft.). Drifts in the NPRA and 1002 would have bulk densities of 0.4 to 0.5 grams/cm³ (25 to 31 lbs/ft³). Without melting or heavy comminution, physical compaction of snow can only bring the density 0.6 gram/cm³.

So Specifying depth is not a good approach, but then neither is specifying density alone. 6" of fluff is a No Go, while 6" of 0.6 grams/cm³ drift snow is a lot of protection: 1 cm of bulk density 0.4 grams/cm³ snow is not enough protection, while 10 cm of 0.2 grams is plenty.

5. If we assume the 6" rule has worked OK (not sure it has, but let's assume so), and that it usually has been applied to a snow pack that has undergone wind action and settlement, then we could assume the snow was at a bulk density on the order of 0.4 grams/cm³. Switching to centimeters, 6" = 15 cm; 15 cm X 0.4 g/cm³ = 6.1 g/cm², which is column of water 6.1 cm high, and now we have a stipulation that is in a mass unit. In English units it is column of water about 2.5" of water that needs to be between the vehicle and tundra.

To me this is not even an absolute minimum, and I question whether it is enough. So frankly, I would want to see at least **3" column of water equivalent** above the tussock tops, since average tussock relief is often >15 cm.

For normal snow densities we often encounter, that would be a rule that looks like this: 10" of snow, density of 0.3 grams/cm³ (since we are working in English units, then it would be 10" of snow at a specific gravity of 0.3. If the snow was only a specific gravity of 0.2, then we would need 15" of snow; if it was 0.1, then 30" of snow; if it was 0.5, then we can get away with 6"

The 3" water column rule

Snow Specific Gravity	Needed Snow Depth (inches)
0.05	60
0.1	30
0.15	20
0.2	15
0.25	12
0.3	10
0.35	9
0.4	8
0.45	7
0.5	6

6. One of the pressing problems is that the seismic is supposed to start in December....but both depth and density tend to increase with time across the winter. My experience is that meeting the 3" water column rule, or even the 2.5" could be difficult that time of year.

7. In fact, while 2018 appears to be all-time record snow for much of the North Slope, Frank (USGS) and Eric (BLM) hit a lot of areas where there was only marginal snow for snowmobiling this April. More typical may be (see attached pictures) conditions we encountered in April 2017....which would fail to pass virtually any opening criteria....thereby precipitating some sort of political crisis I suspect. This is why I would strongly urge the approach to be one that uses airborne photogrammetric snow depth mapping to guide the exploration. In a "bad" year, this approach might actually allow for work, while a dumber, strict rule approach could well shut things down (until the politicians overrule).

8. As discussed by phone, also consider whether there needs to be a "percentage snow cover" criteria for when an area needs to be vacated. I include a slide show of the melt near Ivotuk....you can see that large areas of snow might meet a depth (or even water column) criteria yet overall the area is has patched out due to the melt too much. It is pretty easy to assess the percent snow cover that would drive such a stipulation.

Matthew

On 7/6/18 11:31 AM, Wendy Loya wrote:

Matthew..

PLEASE DO NOT DISTRIBUTE FURTHER- Draft for soliciting your expertise only. Final document may be significantly different based off input from all cooperating agencies, including the State of Alaska and BLM.

This is a marked up version of the NPRA best management practice for winter tundra travel. There is no snow depth, much less SWE, defined. However, based off our conversation, perhaps this is adequate for leaving space for us to work out the appropriate SWE as we go. Very draft ideas in red, other edits we might make in yellow.

Winter tundra travel and seismic work

C-2 Best Management Practice

Objective: Protect stream banks, minimize compaction of soils, and minimize the breakage, abrasion, compaction, or displacement of vegetation.

Requirement/Standard:

a. Ground operations shall be allowed only when frost and snow cover are at sufficient depths to protect the tundra. Soils should be frozen at least 12 inches below the lowest surface height (e.g. intertussock space). Snow depth should be no less than 6 inches on the coastal plain (below elev XX) and 9 inches in the foothills (above elev XX) at a Snow Density of at least 0.4 g/XX. Ground operations shall cease when the spring snowmelt begins when snow depth and density no longer meet criteria established at the time of permitting. The exact dates will be determined by the **authorized officer in consultation with the US Fish and Wildlife Service.** (approximately May 5 in the foothills area where elevations reach or exceed 500 feet and approximately May 15 in the northern coastal areas).

b. Low-ground-pressure vehicles shall be used for on-the-ground activities off ice roads or pads. Low- ground-

pressure vehicles shall be selected and operated in a manner that eliminates direct impacts to the tundra by shearing, scraping, or excessively compacting the tundra mat. **Note:** This provision does not include the use of heavy equipment such as front-end loaders and similar equipment required during ice road construction.

c. Bulldozing of tundra mat and vegetation to create trails or seismic lines is prohibited. Clearing of drifted snow is allowed on existing snow trails, snow pads for camps, ice roads, or ice pads to the extent that the tundra mat is not disturbed.

d. To reduce the possibility of ruts, vehicles shall avoid using the same trails for multiple trips unless necessitated by serious safety or superseding environmental concern. This provision does not apply to hardened snow trails for use by low-ground-pressure vehicles such as Rolligons.

e. The location of ice roads shall be designed and located to minimize compaction of soils and the breakage, abrasion, compaction, or displacement of vegetation. Offsets may be required to avoid using the same route or track in the subsequent year.

~~f. Motorized ground vehicle use within the Colville River Special Area associated with overland moves, seismic work, and any similar use of heavy equipment shall be minimized within an area that extends 1 mile west or northwest of the bluffs of the Colville River, and 2 miles on either side of the Kogosukruk and Kikiakrorak rivers and tributaries of the Kogosukruk River from April 15 through August 5, with the exception that use will be minimized in the vicinity of gyrfalcon nests beginning March 15. Such use will remain 0.5 mile away from known raptor nesting sites, unless authorized by the authorized officer.~~

Dr. Wendy M. Loya,

Arctic Program Coordinator

Office of Science Applications, US Fish and Wildlife Service

Anchorage, Alaska

907.786.3532 (office)

907.277.2942 (mobile)

--
Dr. Matthew Sturm
Geophysical Institute
University of Alaska-Fairbanks
907-474-5257
msturml@alaska.edu

HulaHulaApril2017 - 1 (1).jpg



HulaHulaApril2017 - 1.jpg



Hi Matthew,

Thank you for your continued advice on how we might work with BLM and industry to ensure seismic operations

can get out when there is sufficient snow to protect the tundra. Attached are the draft ROPs in the internal draft of the DraftEIS (getting it ready for public review) that we are reviewing for how snow depth/tundra opening will be established. I hope that Melissa Head will also be reviewing these for the State as another cooperating agency. The column on the left (Alt B and C) reflects the language for NPRA. The column on the right, Alt D, reflects what I attempted to create from our previous emails and conversations. I have until next Tuesday COB to refine them in our comments back to BLM.

I welcome your comments and feedback.

Thank you!

Wendy

Dr. Wendy M. Loya,

Arctic Program Coordinator

Office of Science Applications, US Fish and Wildlife Service

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Science Coordinator
[Arctic LCC](#)
101 12th Ave. Room 216
Fairbanks, AK 99701
(907) 456-0445

From: [Wendy Loya](#)
To: [John Trawicki](#); [Joshua Rose](#)
Subject: FW: [EXTERNAL] POSSIBLE Water Withdrawal Locations
Date: Friday, August 10, 2018 3:23:00 PM
Attachments: [Waterbody_study_lakes.kmz](#)

Hi John,

Will you give me a call when you have a chance to discuss this? Not sure if we have more info than we have shared, but possibly the opportunity to indicate acceptance of SAE's proposed water withdrawal plan without further concerns...

The other hydrology info we sent is in here: https://drive.google.com/open?id=1JKR6plmltt4z0plXo0e9_KglW84KLiuN

Thanks,
Wendy

Dr. Wendy M. Loya,
Arctic Program Coordinator
Office of Science Applications, US Fish and Wildlife Service
Anchorage, Alaska
907.786.3532 (office)
907.277.2942 (mobile)

From: Rose, Joshua <joshua_rose@fws.gov>
Sent: Friday, August 10, 2018 12:57 PM
To: Wixon, Donna <dwixon@blm.gov>
Cc: Wendy Loya <Wendy_loya@fws.gov>; Shelly Jacobson <njones@blm.gov>; Sarah LaMarr <slamarr@blm.gov>
Subject: Re: [EXTERNAL] POSSIBLE Water Withdrawal Locations

Donna,

I don't have anything beyond what Wendy sent in her July 13th email titled "Information request from SAE". Within the folder is a zipped shapefile titled "Waterbody_Depths.zip" and a .pdf file "Arctic NWR 1002 Lakes". It looks like about half of the lakes they are interested in have had some data collected on them. If you don't have access or can't find the email please let us know.

I am also attaching a .kmz file of the Waterbody_Depths to make cross referencing your lakes easier.

Thanks,
Josh

On Tue, Jul 31, 2018 at 8:58 AM, Wixon, Donna <dwixon@blm.gov> wrote:

| Good Morning,

Please see attached map of lakes that SAE may want to withdraw water. Do you have any information on these lakes?

Thanks,
Donna

Donna L Wixon
Natural Resource Specialist
BLM Arctic District Office
222 University Ave
Fairbanks, Alaska 99709
907-474-2301 Office
907-474-2386 Fax
dwixon@blm.gov

----- Forwarded message -----

From: **Suzan Simonds** <ssimonds@contractor.saexploration.com>
Date: Mon, Jul 23, 2018 at 3:33 PM
Subject: [EXTERNAL] POSSIBLE Water Withdrawal Locations
To: Sarah LaMarr <slamarr@blm.gov>, Donna Wixon <dwixon@blm.gov>
Cc: Marsh Creek Permitting <MarshCreekPermitting@saexploration.com>

Hi Sara

Compared to most other winter north slope activities, seismic water withdrawal is considered minimalistic by the state. SAE follows the following guide lines for water withdrawal. These guidelines are an explanation for when a company would need to file for a Temporary water use permit (TWUP) if the amounts are exceeded. In normal operations we/SAE does not exceed this amount described below:

- the consumptive use of more than 5,000 gallons of water from a single source in a single day;
- the regular daily or recurring consumptive use of more than 500 gpd from a single source for more than 10 days per calendar year
- the non-consumptive use of more than 30,000 gpd (0.05 cubic feet per second) from a single source; or
- any water use that may adversely affect the water rights of other appropriators or the public interest.

I have put together a KMZ file for possible lakes that may work for water withdrawal. These lakes would be looked as we move into winter planning.

Please let me know if you need anything else.

Suzan Simonds

Permit and Regulatory Manager

SAExploration, Inc.

Safety – Acquisition - Experience

8240 Sandlewood Pl., Suite 102

Anchorage, AK 99507

907-331-8140 Cell

907-522-4499 Main

907-522-4498 Fax

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Joshua Rose

Acting Oil and Gas Coordinator

Arctic National Wildlife Refuge

101 12th Ave., Rm 236

Fairbanks, AK 99701

phone: (907) 456-0409

From: [Wixon, Donna](#)
To: [Joshua Rose](#)
Cc: [Wendy Loya](#); [Sarah LaMarr](#)
Subject: Coastal Plain EA cumulative area
Date: Friday, August 10, 2018 3:38:53 PM
Attachments: [CoastalPlain_CumulativeEffects.pdf](#)

Hello Joshua,

Attached is a map of the proposed cumulative area for the seismic EA. Would you please provide information that USFWS has on activities taking place within the area identified; now, in the last 5 years and any projected in the next 5 years?

Sorry for the quick turn around request, but if you could get this information to me Monday that would be very helpful.

Thanks,
Donna

Donna L Wixon
Natural Resource Specialist
BLM Arctic District Office
222 University Ave
Fairbanks, Alaska 99709
907-474-2301 Office
907-474-2386 Fax
dwixon@blm.gov

From: [Edward Decleva](#)
To: [Joseph Keeney](#)
Cc: [Sarah LaMarr](#); [Nichelle \(Shelly\) Jones](#); [Wendy Loya](#)
Subject: Re: Questions about affected environment section for ACP seismic EA
Date: Monday, August 13, 2018 8:59:30 AM
Attachments: [Arctic NWR Coastal Plain Archaeological Sites.pdf](#)

Hi Joe,

I'm conducting a review of the draft EIS today and tomorrow for USFWS cooperating agency review. Wednesday I'm going to the field and will be out until August 30. But here is a brief summary of what I know about the sites within the 1002.

Our cartographer (aka GIS specialist) created a shapefile of the 1002 which was provided to Jeff Weinberger at AHRS. Jeff then provided to me AHRS spatial attributes, and a table inclusive of all recorded sites within and adjacent to the external 1002 boundary. I then had our cartographer generate a map with sites only within the external 1002 boundary (this map is attached for you). I then cross-referenced that map with USFWS Lands Tracker (an internal GIS tool) and the AHRS online map and database. I excluded sites within conveyed and selected ANCSA sites and native allotments. That's how I got to 70. Recognizing that this is a lot of data, I then ran through the process again from the source data. Again I came up with 70. But that doesn't mean that my count isn't flawed.

Regarding eligibility, I went only by the eligibility attribute within the AHRS table that Jeff provided me. I did not research the sites to ascertain whether or not they had ever been evaluated, but the attribute table showed only two sites as eligible, XDP-00045 and XMM-00114 (both DEW line).

Also reviewed the previous investigation reports that I could access associated with the majority of the sites. The coastal sites were inspected as part of a site condition assessment conducted by the USACE. The inland sites were recorded primarily by a contractor working for the USFWS. I did not come across any report that provided eligibility evaluations.

I can share what I have with you or Braund if you would like. But it is a massive amount of data so it would be best if whoever wants would visit my office with a flash drive (but again, note that I am only in today and tomorrow).

To ensure accuracy and buy-in on the count and status of sites, I recommend examining the data with SHPO. However, I don't really believe that an accurate count is necessary as I'm sure several sites, especially those along the coast, no longer exist (USACE reported many as actively eroding or threatened by eroding). I provided the numbers only to get a sense of the distribution of site types within the 1002. For this exercise, also, eligibility didn't matter much to me as previously determined eligible sites can become ineligible and previously determined ineligible site can become eligible, and I would expect any applicant to evaluate or reevaluate any site that they would potentially impact.

Regarding your closing statement, likewise Wendy Loya is cc'ed here as she is our POC.

Hope this was helpful.

Best regards
Ed

Edward J. DeCleva
Regional Historic Preservation Officer
U.S. Fish and Wildlife Service, Alaska Region
1011 E Tudor Rd, MS-235
Anchorage, AK 99503

0000012317

edward_decleva@fws.gov
907-786-3399

On Fri, Aug 10, 2018 at 2:59 PM Keeney, Joseph <jkeeney@blm.gov> wrote:

Hi Ed,

I'm working on the env. impacts section for the seismic EA. Looking at your affected environment section, you note 70 AHRS sites within the APE, but I am wondering how you found this number. I am finding 89 AHRS sites listed as being both within the 1002 Area and outside the excluded area around Kaktovik. Did you exclude some types of sites to arrive at 70?

I am also wondering about NRHP eligibility. I know SHPO will bring this up when they comment on it. Since these are part of the affected env. section and you did the site counting, would you be able to get me numbers of sites that are:

- On the NRHP
- Determined eligible for the NRHP
- Determined not eligible for the NRHP
- No determination has been attempted

I think that total counts for each of these categories should be adequate.

So you know, we've been directed to include our manager and supervisor on correspondence on the EA, which is why they are cc'ed here.

Best,
Joe

--

Joe Keeney
Archaeologist
BLM Arctic District Office
222 University Avenue
Fairbanks, Alaska 99709
907-474-2312
jkeeney@blm.gov

From: [Rose, Joshua](#)
To: [Wixon, Donna](#)
Cc: [Wendy Loya](#); [Sarah LaMarr](#)
Subject: Re: Coastal Plain EA cumulative area
Date: Monday, August 13, 2018 5:45:35 PM
Attachments: [USFWS and USGS activities.docx](#)
[CPLOTS-27-SHAPEFILE.dbf](#)
[CPLOTS-27-SHAPEFILE.prj](#)
[CPLOTS-27-SHAPEFILE.sbn](#)
[CPLOTS-27-SHAPEFILE.sbx](#)
[CPLOTS-27-SHAPEFILE.shp](#)
[CPLOTS-27-SHAPEFILE.shx](#)

Donna,

Attached is list of projects/activities that will have people in the field, have infrastructure installed, or are long-term study sites that the seismic company should be aware of. In addition to the list I have attached a shapefile with the locations of the long-term vegetation plots.

Please let me know if you need anything else.

Thanks,
Josh

On Fri, Aug 10, 2018 at 2:20 PM, Wixon, Donna <dwixon@blm.gov> wrote:

Joshua,

We would want to include the inhouse activities such as river gages and research plots. If they are inside the Coastal Plain Area are they something that the seismic company should be made aware?

Thanks,
Donna

Donna L Wixon
Natural Resource Specialist
BLM Arctic District Office
[222 University Ave](#)
[Fairbanks, Alaska 99709](#)
907-474-2301 Office
907-474-2386 Fax
dwixon@blm.gov

On Fri, Aug 10, 2018 at 2:08 PM, Rose, Joshua <joshua_rose@fws.gov> wrote:

Donna,

Will do. I assume this is for the cumulative effects analysis so you are looking for information similar to what we provided for the DEIS and not Refuge activities such as river gaging and research plots. Is that correct?

Thanks,
Josh

On Fri, Aug 10, 2018 at 1:38 PM, Wixon, Donna <dwixon@blm.gov> wrote:

Hello Joshua,

Attached is a map of the proposed cumulative area for the seismic EA. Would you please provide information that USFWS has on activities taking place within the area identified; now, in the last 5 years and any projected in the next 5 years?

Sorry for the quick turn around request, but if you could get this information to me Monday that would be very helpful.

Thanks,
Donna

Donna L Wixon
Natural Resource Specialist
BLM Arctic District Office
[222 University Ave](#)
[Fairbanks, Alaska 99709](#)
907-474-2301 Office
907-474-2386 Fax
dwixon@blm.gov

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Joshua Rose
Acting Oil and Gas Coordinator
Arctic National Wildlife Refuge
[101 12th Ave., Rm 236](#)
[Fairbanks, AK 99701](#)
phone: (907) 456-0409

--

Joshua Rose
Acting Oil and Gas Coordinator
Arctic National Wildlife Refuge
101 12th Ave., Rm 236
Fairbanks, AK 99701
phone: (907) 456-0409

From: [Edward Decleva](#)
To: [Joseph Keeney](#)
Cc: [Sarah LaMarr](#); [Nichelle \(Shelly\) Jones](#); [Wendy Loya](#); [Donna Wixon](#); [Debbie Steen](#)
Subject: Re: Questions about affected environment section for ACP seismic EA
Date: Tuesday, August 14, 2018 8:54:00 AM

Joe,

I laid out the method I used to examine the data as a professional courtesy. It was a method that I felt was sufficient given the constraints when I was tasked by my agency to prepare it. You obviously prefer a different method and I respect that. But it is not your place to school me.

Unless I'm mistaken, BLM is the lead. Therefore the method is yours to decide. You are perfectly capable of answering your own questions.

Regards,
Ed

Edward J. DeCleva
Regional Historic Preservation Officer
U.S. Fish and Wildlife Service, Alaska Region
1011 E Tudor Rd, MS-235
Anchorage, AK 99503

edward_decleva@fws.gov
907-786-3399

On Mon, Aug 13, 2018 at 6:34 PM Keeney, Joseph <jkeeney@blm.gov> wrote:

All lands within the APE, regardless of land status, need to be considered within the EA. This includes sites located on allotments and ASRC lands within the APE. A simple select by polygon should get you this without need of the additional steps you mentioned.

An accurate count is necessary for describing the affected environment. This is relevant for the discussion of what has been documented in the APE. Yes, site conditions change, but we must rely on the most currently available information, which is within the AHRS. If we have information available, such as eroded sites reported in the Grover & Laughlin report, this should be in the AHRS and would be great to include in the affected environment section (although perhaps a bit late to add at this juncture). Destroyed and disturbed site counts would likely be more relevant than the location type as is currently discussed.

AHRS site cards contain the eligibility information (whether they have been evaluated or not and the determination). A report would likely not have this information, or at least it wouldn't have all sites in the APE. I disagree with your logic about the relevance of eligibility in this matter but, if you prefer, we can disregard this for now and see if OHA comments on NRHP eligibility later.

On Mon, Aug 13, 2018 at 6:59 AM, Edward Decleva <edward_decleva@fws.gov> wrote:

Hi Joe,

I'm conducting a review of the draft EIS today and tomorrow for USFWS cooperating agency review. Wednesday I'm going to the field and will be out until August 30. But here is a brief summary of what

I know about the sites within the 1002.

Our cartographer (aka GIS specialist) created a shapefile of the 1002 which was provided to Jeff Weinberger at AHRS. Jeff then provided to me AHRS spatial attributes, and a table inclusive of all recorded sites within and adjacent to the external 1002 boundary. I then had our cartographer generate a map with sites only within the external 1002 boundary (this map is attached for you). I then cross-referenced that map with USFWS Lands Tracker (an internal GIS tool) and the AHRS online map and database. I excluded sites within conveyed and selected ANCSA sites and native allotments. That's how I got to 70. Recognizing that this is a lot of data, I then ran through the process again from the source data. Again I came up with 70. But that doesn't mean that my count isn't flawed.

Regarding eligibility, I went only by the eligibility attribute within the AHRS table that Jeff provided me. I did not research the sites to ascertain whether or not they had ever been evaluated, but the attribute table showed only two sites as eligible, XDP-00045 and XMM-00114 (both DEW line).

Also reviewed the previous investigation reports that I could access associated with the majority of the sites. The coastal sites were inspected as part of a site condition assessment conducted by the USACE. The inland sites were recorded primarily by a contractor working for the USFWS. I did not come across any report that provided eligibility evaluations.

I can share what I have with you or Braund if you would like. But it is a massive amount of data so it would be best if whoever wants would visit my office with a flash drive (but again, note that I am only in today and tomorrow).

To ensure accuracy and buy-in on the count and status of sites, I recommend examining the data with SHPO. However, I don't really believe that an accurate count is necessary as I'm sure several sites, especially those along the coast, no longer exist (USACE reported many as actively eroding or threatened by eroding). I provided the numbers only to get a sense of the distribution of site types within the 1002. For this exercise, also, eligibility didn't matter much to me as previously determined eligible sites can become ineligible and previously determined ineligible site can become eligible, and I would expect any applicant to evaluate or reevaluate any site that they would potentially impact.

Regarding your closing statement, likewise Wendy Loya is cc'ed here as she is our POC.

Hope this was helpful.

Best regards
Ed

Edward J. DeCleva
Regional Historic Preservation Officer
U.S. Fish and Wildlife Service, Alaska Region
1011 E Tudor Rd, MS-235
Anchorage, AK 99503

edward_decleva@fws.gov
907-786-3399

On Fri, Aug 10, 2018 at 2:59 PM Keeney, Joseph <jkeeney@blm.gov> wrote:

Hi Ed,

I'm working on the env. impacts section for the seismic EA. Looking at your affected environment section, you note 70 AHRS sites within the APE, but I am wondering how you found this number. I am finding 89 AHRS sites listed as being both within the 1002

Area and outside the excluded area around Kaktovik. Did you exclude some types of sites to arrive at 70?

I am also wondering about NRHP eligibility. I know SHPO will bring this up when they comment on it. Since these are part of the affected env. section and you did the site counting, would you be able to get me numbers of sites that are:

- On the NRHP
- Determined eligible for the NRHP
- Determined not eligible for the NRHP
- No determination has been attempted

I think that total counts for each of these categories should be adequate.

So you know, we've been directed to include our manager and supervisor on correspondence on the EA, which is why they are cc'ed here.

Best,
Joe

--

Joe Keeney
Archaeologist
BLM Arctic District Office
222 University Avenue
Fairbanks, Alaska 99709
907-474-2312
jkeeney@blm.gov

--

Joe Keeney
Archaeologist
BLM Arctic District Office
222 University Avenue
Fairbanks, Alaska 99709
907-474-2312
jkeeney@blm.gov

From: [Stephanie Brady](mailto:Stephanie.Brady@fws.gov)
To: [Wendy Loya](mailto:Wendy.Loya@fws.gov)
Subject: Fwd: [EXTERNAL] Seismic Exploration Scoping Comments - Arctic National Wildlife Refuge (Delivery Receipt Requested)
Date: Friday, August 17, 2018 10:57:44 AM
Attachments: [Seismic Exploration Coastal Plain Submitted Scoping Comments_08172018.pdf](#)

Wendy - I am forwarding this email to you as an FYI - I do not know who this person is nor do I know why I am cc:d - but wanted you to see this. Stephanie

stephanie_brady@fws.gov | Branch Chief, Conservation Planning and Policy |
U.S. Fish and Wildlife Service | National Wildlife Refuge System | Alaska |
907.306.7448

----- Forwarded message -----

From: Greg Warren <[\(b\) \(6\)@blm.gov](mailto:(b) (6)@blm.gov)>
Date: Fri, Aug 17, 2018 at 7:15 AM
Subject: [EXTERNAL] Seismic Exploration Scoping Comments - Arctic National Wildlife Refuge (Delivery Receipt Requested)
To: <kmourits@blm.gov>, <blm_ak_coastalplain_EIS@blm.gov>
Cc: <[\(b\) \(6\)@blm.gov](mailto:(b) (6)@blm.gov)>, <stephanie_brady@fws.gov>

FYI – The following is a copy of comments submitted on the seismic exploration proposal for the Coastal Plain in the Arctic National Wildlife Refuge. Please encourage the BLM Arctic District Office to improve their public involvement plan for this project, including providing for adequate scoping opportunities. In addition, an automated system should be implemented to demonstrate receipt of comments received. Thank you.

From: Greg Warren [mailto:[\(b\) \(6\)@blm.gov](mailto:(b) (6)@blm.gov)]
Sent: Friday, August 17, 2018 8:50 AM
To: blm_ak_coastal_plain_seismic_ea@blm.gov
Cc: [\(b\) \(6\)@blm.gov](mailto:(b) (6)@blm.gov)
Subject: Seismic Exploration Scoping Comments (Delivery Receipt Requested)

Please find the attached comments regarding seismic exploration on the Coastal Plain in the Arctic National Wildlife Refuge – DOI-BLM-AK-R000-2018-0040-EA. Thank you

From: [Sarah LaMarr](#)
To: [Ted Murphy](#); [Heath Nolan](#); [Steve Berendzen](#); [Wendy Loya](#); [Joanna Fox](#); [Rose Joshua](#); [Michael Gieryc](#)
Cc: [Nichelle Jones](#); [Wixon, Donna](#); [BLM AK Coastal Plain Seismic EA](#)
Subject: Review of Arctic District Preliminary Seismic EA
Date: Monday, August 20, 2018 3:36:26 PM
Attachments: [Draft Coastal Plain Seismic EA 8.20.2018 for Review.docx](#)
[Appendix B Maps.pdf](#)
[Appendix E Specialist Reports.docx](#)
[AdminDraftEA_agency_cmnt.docx](#)

Hello - Attached is the preliminary Seismic EA for your review. Also attached are Appendix B (maps), Appendix F (specialist reports) and the comment response table. Since we will have a number of folks reviewing the document, we would like you to use the attached comment response table (instruction provided) for any edits or comments to the EA.

We are continuing to work on other appendices but if there is one referenced in the EA that you would like to review, let us know and we'll send you a draft.

Please forward the EA to any manager or specialist who should be reviewing the document.

Please send us your comments by COB on Friday, August 24, and send your comments to dwixon@blm.gov and slamarr@blm.gov.

Thanks! sarah

Sarah La Marr
Bureau of Land Management
Arctic District Office
Fairbanks, Alaska
907-474-2334 (desk)
907-888-3407 (cell)
slamarr@blm.gov

From: [Sarah LaMarr](#)
To: [Ted Murphy](#); [Heath Nolan](#); [Steve Berendzen](#); [Wendy Loya](#); [Joanna Fox](#); [Rose Joshua](#); [Michael Gieryc](#)
Cc: [Nichelle Jones](#); [Wixon, Donna](#); [BLM AK Coastal Plain Seismic EA](#)
Subject: Re: Review of Arctic District Preliminary Seismic EA
Date: Tuesday, August 21, 2018 1:22:45 PM
Attachments: [Draft Coastal Plain Seismic EA 8.20.2018 for Review with Line Numbers.docx](#)

Thanks to Wendy for creating a version of the Seismic EA with line numbers. This will be a tremendous help with identifying where edits/comments are looked in the document. Please pass on to those reviewing EA. THANKS Wendy!

Sarah La Marr
Bureau of Land Management
Arctic District Office
Fairbanks, Alaska
907-474-2334 (desk)
907-888-3407 (cell)
slamarr@blm.gov

On Mon, Aug 20, 2018 at 1:36 PM Sarah LaMarr <slamarr@blm.gov> wrote:

Hello - Attached is the preliminary Seismic EA for your review. Also attached are Appendix B (maps), Appendix F (specialist reports) and the comment response table. Since we will have a number of folks reviewing the document, we would like you to use the attached comment response table (instruction provided) for any edits or comments to the EA.

We are continuing to work on other appendices but if there is one referenced in the EA that you would like to review, let us know and we'll send you a draft.

Please forward the EA to any manager or specialist who should be reviewing the document.

Please send us your comments by COB on Friday, August 24, and send your comments to dwixon@blm.gov and slamarr@blm.gov.

Thanks! sarah

Sarah La Marr
Bureau of Land Management
Arctic District Office
Fairbanks, Alaska
907-474-2334 (desk)
907-888-3407 (cell)
slamarr@blm.gov

From: [Jones, Nichelle \(Shelly\)](#)
To: [Wendy Loya](#)
Cc: [Sarah LaMarr](#); [Donna Wixon](#); [Steve Berendzen](#); [Joanna Fox](#); [Joshua Rose](#); [Paul Leonard](#); [Eric Geisler](#); [Guyer, Scott](#); [Nolan Heath](#); [Robert Brumbaugh](#); [Murphy, Ted](#); [Timothy Vosburgh](#)
Subject: Re: Report from Sturm et al. North Slope Snow 2018
Date: Wednesday, August 22, 2018 4:26:02 PM

Thanks Wendy. I will ask Donna to forward this to the applicant tomorrow, just so she stays in the loop with what is being discussed and passed along to them. We met with SAE today to talk over the NMFs consultation and stipulations for ringed seals, that went fairly well I thought. Tomorrow we are meeting with them to talk over the cultural stipulations.

I have asked Scott Guyer Tim Vosburg (vegetation) and Eric Geisler (Soils/Permafrost) to take a look at their sections and try to speak to the adequacy of the advanced survey snow monitoring that SAE proposes. I think we also need to make sure the importance of the water equivalency being recommended is an improvement over just the snow depth-I agree with the logic but we need to have the differences in the expected impact or protection identified to support that stip. Those sections also need to speak to the adequacy/inadequacy of the existing baseline stations that inform the tundra opening for DNR and perhaps recommend some additional monitoring of that ilk (both the number and the spacing).

A lot of the comments are speaking to the fact that the snow conditions are variable across the area: It makes sense to me that we would have areas marked as potential avoidance areas based on known snow patterns with some additional survey protocols before entering those areas.

I just heard Scott and Eric are planning to meet with Paul Leonard tomorrow to talk these things over and perhaps recommend some additional BMPs? I would like to have that recommendation as soon as possible because I would also like Melissa Head at DNR to review it based on her expertise and the monitoring they would typically recommend for this type of project on state lands (or may already be considering in conjunction with their seismic permit for next year)

Thanks for all the work everyone is putting to this. I think it is coming out pretty well overall

-Shelly.

Shelly Jones
Acting Manager
Arctic District Office
222 University Avenue
Fairbanks, AK 99709

(907) 474-2310 (w)

(907) 460-0086 (c)

On Wed, Aug 22, 2018 at 12:35 PM, Wendy Loya <wendy_loya@fws.gov> wrote:
Dear Shelly, Sarah and Donna,

Attached is a summary of snow research for the North Slope from Dr. Matthew Sturm and others, that includes the Arctic Refuge Coastal Plain, central Arctic including foothills, and the coast of NPRA that I have received Monday and am looking at as we read the draft Draft EA. b5 - DP

[Redacted]

b5 - DP
[Redacted]

. Let me know your thoughts b5 - DP

As I have mentioned, FWS is working with Dr. Sturm to organize a snow workshop this October, where we hope to bring together federal, state, industry and university/research personnel involved with snow monitoring/seismic for a conversation about what information we have, what works well for each entity, and how to ensure we create reasonable and effective operating procedures for snow depth/density and coverage for seismic exploration and other activities. b5 - DP

[Redacted]

Thanks!
Wendy

Dr. Wendy M. Loya,
Arctic Program Coordinator
Office of Science Applications, US Fish and Wildlife Service
Anchorage, Alaska
907.786.3532 (office)
907.227.2942 (mobile)

From: [Geisler, Eric](#)
To: [Wendy Loya](#)
Subject: Fwd: Soils Revisions
Date: Wednesday, August 22, 2018 5:53:23 PM
Attachments: [Geisler Arctic Soils NEPA - Coastal Plain Seismic.docx](#)

Eric Geisler, CF
Program Lead for Forestry, Invasive Species, Range, Botany, ES&R
BLM Alaska State Office
222 W 7th Ave #13
Anchorage, AK 99513
W 907-271-1985
C 509-220-4712

----- Forwarded message -----

From: **Geisler, Eric** <egeisler@blm.gov>
Date: Wed, Aug 22, 2018 at 3:41 PM
Subject: Soils Revisions
To: Scott Guyer <sguyer@blm.gov>, "Rose, Joshua" <joshua_rose@fws.gov>, Paul Leonard <paul_leonard@fws.gov>, "Vosburgh, Timothy" <tvosburgh@blm.gov>
Cc: Sarah LaMarr <slamarr@blm.gov>, Shelly Jacobson <njones@blm.gov>, Donna Wixon <dwxion@blm.gov>, BLM_AK Coastal_Plain_Seismic_EA <blm_ak_coastal_plain_seismic_ea@blm.gov>, Nolan Heath <nheath@blm.gov>

Here are my suggestions for the soils section. The note from Wendy Loya yesterday had some critical snow information which is now added.

Scott asked a good question today - What level of disturbance is acceptable?
This will play into how much information we need them to gather and where.

I think we can use the FWS depth and density table and add the structural component. Depth hoar tends to be larger crystals 2 to 6 mm with high density (weight per volume) and low strength while fine grained snow <1mm makes dense solid snow for travel. The structure of the desired layers is likely to be wind fragmented crystals or small sintered rounds with a resistance of pencil or harder although some one finger resistance may be sufficient for lighter loads and traffic.

Eric Geisler, CF
Program Lead for Forestry, Invasive Species, Range, Botany, ES&R
BLM Alaska State Office
222 W 7th Ave #13
Anchorage, AK 99513
W 907-271-1985
C 509-220-4712

From: [Heath, Nolan](#)
To: [Jones, Nichelle \(Shelly\)](#)
Cc: [Guyer, Scott](#); [Timothy Vosburgh](#); [Wendy Loya](#); [Paul Leonard](#); [Sarah LaMarr](#); [Geisler, Eric](#); [Wixon, Donna](#); [BLM AK Coastal Plain Seismic EA](#)
Subject: Re: [EXTERNAL] North Slope Snow 2018
Date: Thursday, August 23, 2018 9:30:25 AM

In yesterday's meeting with them they expressly stated that they would not even be leaving Deadhorse until the area was opened by the state to tundra travel.

On Wed, Aug 22, 2018 at 2:35 PM, Jones, Nichelle (Shelly) <njones@blm.gov> wrote:

I agree that zero impact is not realistic. I think 18 square feet of damage per every 300 miles of travel may be a figure I've heard from last years seismic that I would say sounds pretty good but I am not sure if it is typical. It sounds like most snow roads do experience a small amount of break through but nobody has summarized the amount per mile or documented the reasons behind the break through as far as I know.

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Shelly Jones
Acting Manager
Arctic District Office

[222 University Avenue](#)
[Fairbanks, AK 99709](#)

(907) 474-2310 (w)
(907) 460-0086 (c)

On Wed, Aug 22, 2018 at 2:14 PM, Guyer, Scott <sguyer@blm.gov> wrote:

Before developing BMPs I would like to know what is the acceptable impact from the seismic operation? BMPs based on zero impact (not realistic) would be different than BMPs based on an acceptable level of impact. The long term impact research on winter seismic exploration in 1002 (Jorgenson 1996) showed that after eight years only 3% of seismic line trails were still disturbed and 10% of camp move trails were still disturbed. This was using the tundra travel standard of 6 inches of snow and 12 inches of frost. Is this level of impact acceptable?

Features such as: lighter rubber track vehicles, use of GPS to navigate reducing numbers of passes, packing trails for camp move facilities, and avoidance of low snow areas are already incorporated in SAE's proposed action plan should reduce impacts found in the 1996 study. Are more BMPs needed?

Scott

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When I spoke with Eric this morning, he said that he would work with Scott and the FWS (likely Paul?) to develop a new BMP (they may also have to modify the snow BMP submitted by the FWS??) as well as update the analysis in Chapter 4 for vegetation and soils.

Sarah La Marr
Bureau of Land Management
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Fairbanks, Alaska
907-474-2334 (desk)
907-888-3407 (cell)
slamarr@blm.gov

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so who is drafting the BMP(s) suggested here?

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This research is the key I was looking for. The presence of 35 to 66% depth hoar in the snow pack may give a high density but provides little strength to support loads. We need to add a BMP to examine snow structure as well as the density and depth. They also report that the wind scoured areas were common and were very low on snow cover even in a near record snowfall year. These are the concerns I have with regards to protection of vegetation and soils.

Sent from my iPad

Begin forwarded message:

From: Wendy Loya <wendy_loya@fws.gov>
Date: August 21, 2018 at 3:07:48 PM AKDT
To: Scott Guyer <sguyer@blm.gov>, Eric Geisler <egeisler@blm.gov>
Cc: Paul Leonard <paul_leonard@fws.gov>
Subject: FW: [EXTERNAL] North Slope Snow 2018

Hi Scott and Eric,

I believe you both were involved in drafting sections of the coastal plain leasing EA that dealt with the importance of adequate snow cover for protecting veg and soils. I am sharing a white-paper from Sturm et al. regarding their recent (204-present) observations of north slope snow.

b5 -
DP

. Happy to discuss this further once we all have had a chance to read it carefully.

Thank you,
Wendy

Dr. Wendy M. Loya,
Arctic Program Coordinator
Office of Science Applications, US Fish and Wildlife Service
Anchorage, Alaska
907.786.3532 (office)
907.227.2942 (mobile)

-----Original Message-----

From: Matthew Sturm <msturm1@alaska.edu>
Sent: Monday, August 20, 2018 7:48 PM
To: Fisher, Daniel - NRCS, Anchorage, AK
<daniel.fisher@ak.usda.gov>;
Sousanes, Pamela <pam_sousanes@nps.gov>; Head, Melissa M (DNR)
<melissa.head@alaska.gov>; Greta Burkart <greta_burkart@fws.gov>;
Steve
Berendzen <steve_berendzen@fws.gov>; Wendy Loya
<wendy_loya@fws.gov>; Paul
Leonard <paul_leonard@fws.gov>; Craig George
<Craig.George@north-slope.org>;
Kyle Joly <kyle_joly@nps.gov>; Matt Macander
<mmacander@abrinc.com>; Sveta

Stuefer <sveta.stuefer@alaska.edu>; Scott.Goetz@nau.edu;
Larsen_Chris
<chris.larsen@gi.alaska.edu>; Skip Walker <dawalker@alaska.edu>;
Tako
Raynolds ^{b6} [REDACTED] >; Christopher A. Hiemstra
<^{b6} [REDACTED].mil>; Entin
<jared.k.entin@nasa.gov>;
^{b6} [REDACTED]; Griffith, Peter C. (GSFC-618.0)[SIGMA
SPACE
CORPORATION] <peter.c.griffith@nasa.gov>
Subject: [EXTERNAL] North Slope Snow 2018

Dear Friends and Colleagues:

Several snow-focused groups were active this winter on the N. Slope and northern Brooks Range. It seemed worthwhile to pull the snow data together across the group and put it in one place, and it may prove of interest to you. It seems particularly relevant with impending opening of the Arctic Refuge.

Feel free to share this.

Matthew

--
Dr. Matthew Sturm
Geophysical Institute
University of Alaska-Fairbanks
907-474-5257
msturm1@alaska.edu

--
Scott Guyer
Landscape Initiatives Coordinator
Alaska State Office
907-223-6759 (wk cell)

*"Not the victory but the action, Not the goal but the game,
In the deed the Glory!"*

From: [Jones, Nichelle \(Shelly\)](#)
To: [Donna Wixon](#); [LaMarr, Sarah](#); [Steve Berendzen](#); [Fox, Joanna](#); [Robert Brumbaugh](#); [Guyer, Scott](#); [Eric Geisler](#); [Nolan Heath](#); [Murphy, Ted](#); [Wendy Loya](#)
Subject: Fwd: [EXTERNAL] NSB 18-466 SAExploration, Inc. (SAE LLC) - Kuukpik Corporation
Date: Thursday, August 23, 2018 4:21:27 PM
Attachments: [SnowSampling_2014-10-31.pdf](#)

We should reflect on this snow sampling protocol and see how it jives with what the applicant is proposing and what we may be proposing. Also, I would like to see the presentation and talk to the person at Conoco that Melissa mentions.

Shelly Jones
Acting Manager
Arctic District Office
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Fairbanks, AK 99709

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(907) 460-0086 (c)

----- Forwarded message -----

From: **Head, Melissa M (DNR)** <melissa.head@alaska.gov>
Date: Mon, May 21, 2018 at 4:34 PM
Subject: RE: [EXTERNAL] NSB 18-466 SAExploration, Inc. (SAE LLC) - Kuukpik Corporation
To: "Jones, Nichelle (Shelly)" <njones@blm.gov>

Hi Shelly,

Here is our snow sampling protocol for your reference.

Contacts for you-

Henry Brooks (DNR/DMLW Water Section for Temporary Water Use Authorizations): henry.brooks@alaska.gov

Jack Winters (ADFG/Habitat Division for Fish Habitat Permits for water withdrawals): jack.winters@alaska.gov

Tiffany Carey (ConocoPhillips for advancements in seismic technology): tiffany.c.carey@conocophillips.com

- She was the seismic manager for the 3D Bear program and GMT2 seismic. You may already have her contact info.

0000012334

- Tiffany gave us a great presentation about how their new seismic technology reduces overall travel needs and how she is managing seismic operations. She is very enthusiastic about her job and is very good at explaining their process.
- I would expect all seismic companies to be following a similar process to reduce impacts.

It was good talking to you this afternoon. Please don't hesitate to get in touch. I'm happy to help in any way that I can.

Kind Regards,

Melissa

Melissa Head

Manager, Northern Oil & Gas Team

DNR/DMLW

907-451-2719

Kind Regards,

From: Jones, Nichelle (Shelly) [mailto:njones@blm.gov]

Sent: Monday, May 21, 2018 4:10 PM

To: Head, Melissa M (DNR) <melissa.head@alaska.gov>

Subject: Fwd: [EXTERNAL] NSB 18-466 SAExploration, Inc. (SAE LLC) - Kuukpik Corporation

Shelly Jones

Acting Manager

Arctic District Office
222 University Avenue
Fairbanks, AK 99709

(907) 474-2310 (w)

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Annamae J. Leavitt, Senior Office Specialist

North Slope Borough | Planning & Community Services

PO Box 69 Barrow, Alaska 99723

P 907-852-0320 | F 907-852-0322

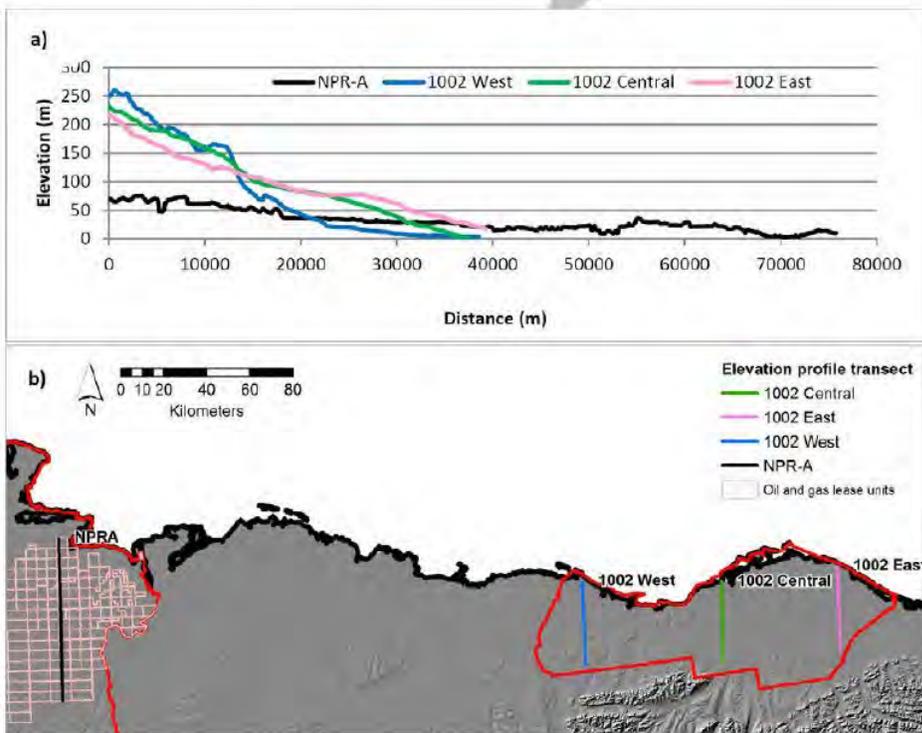
Note: The information contained in this message may be privileged and confidential and protected from disclosure. If the reader of this message is not the intended recipient, or an employee or agent responsible for delivering this message to the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by replying to the message and deleting it from your computer.

From: [Wendy Loya](#)
To: [Nichelle \(Shelly\) Jones](#); [Scott Guyer](#); [Timothy Vosburgh](#); [Paul Leonard](#)
Cc: [Sarah LaMar](#); [Nolan Heath](#); [Eric Geisler](#); [Donna Wilson](#); [BLM AK Coastal Plain Seismic EA](#)
Subject: RE: [EXTERNAL] North Slope Snow 2018
Date: Wednesday, August 22, 2018 5:13:00 PM
Attachments: [image004.png](#)
[image005.png](#)
[20171101_ANWRHearingInfoRequest_DMLW.PDF](#)
[ATN_GWSTR0905.pdf](#)

Hi BLM,

I want to make the important distinction that the terrain is significantly different in the Arctic Refuge coastal plain than on the NPRA coastal plain around GMT/and Bears Tooth, and we can expect impacts even when there is sufficient snow cover based off the 19080's program which had 10" of snow supposedly. With FWS monitors included in seismic teams.

Notice, the only places similar with lowlands/flat sedge tundra with lakes are the Canning River Delta and the area south/southeast of Kaktovik. Otherwise you have greater slopes, with more tussock tundra, sedge-willow tundra and sedge-dryas tundra; industry has to go through those more sensitive vegetation types to access the area. The estimates of damage should be derived from the Refuge seismic monitoring series, and that is what the draft EA typically relies on at the moment (through Jorgenson et al. 2010).



We won't get to the bottom of whether the state standards or an integrated depth/density standard is sufficient for the Refuge in the next week or two, as there is insufficient data for ecosystems reflective of the conditions in the Arctic Refuge Coastal Plain. We do have data from Matthew Sturm et al. on variation in density, which is important because we know that fluffy snow is less protective than wind crusted snow ("fluffy" snow shows up with low buld density; wind crust as higher bulk density). Eric mentions structure also ☺. Data show variation, which is why we are asking for a standard of 3" above the vegetation. From our table in Alt B, you will see that our requirements are typically not different than the state requirements at the average bulk density found. But in situations where snow might be less dense, it makes sense to increase the depth. I agree it needs to be do-able but remember, our decisions can affect the surface characteristics of the Refuge for decades to come.

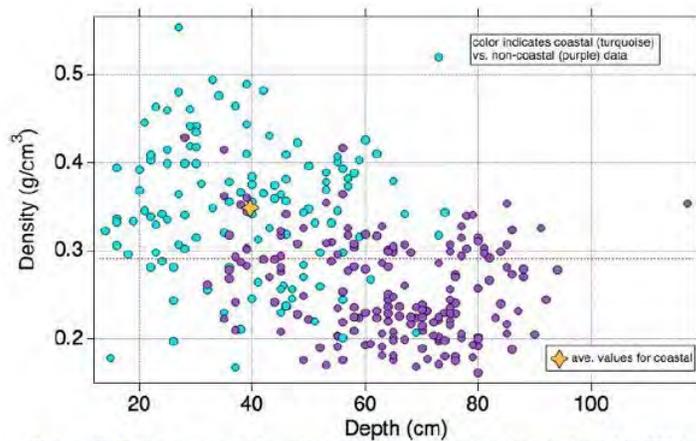


Figure 9: Bulk snow pack densities from Federal coring data collected in 2014 and 2015 in the Arctic National Wildlife Refuge by the lead author, showing the difference in bulk densities nearer the coast than in the foothills and the Brooks Range. The red dotted line is the mean for all data.

One of the other considerations is that we don't want to create new ROPs that are inconsistent with the EIS.

Lastly, it would not be sufficient to use only measurements on state land to open the Arctic Refuge Coastal Plain, there must be measurements made on the Refuge. That is not clear under Alt A. It did not seem necessary to spell that out the specific protocol in the DEIS as we adopted NPRA language and didn't have time to think about it critically, but it is appropriate to spell that out in the EA since these are the ROPs/BMPs for the action. I agree that we need to include DNR/Melissa in the conversation. I am attaching what we have from DNR to help inform the conversation for now. We also need approved methods for traversing low snow areas to get to areas of sufficient snow, so that the seismic survey can be as extensive as planned. What are the options? Permitting snow movement from wildlife free drifts, snow fences, other? We need to think about that before industry gets out and calls for guidance.

Thank you,
Wendy

Dr. Wendy M. Loya,
Arctic Program Coordinator
Office of Science Applications, US Fish and Wildlife Service
Anchorage, Alaska
907.786.3532 (office)
907.227.2942 (mobile)

From: Jones, Nichelle (Shelly) <njones@blm.gov>
Sent: Wednesday, August 22, 2018 2:36 PM
To: Guyer, Scott <sguyer@blm.gov>; Timothy Vosburgh <tvosburgh@blm.gov>; Wendy Loya <wendy_loya@fws.gov>; Paul Leonard <paul_leonard@fws.gov>
Cc: Sarah LaMarr <slamarr@blm.gov>; Heath, Nolan <nheath@blm.gov>; Geisler, Eric <egeisler@blm.gov>; Wixon, Donna <dwixon@blm.gov>; BLM_AK Coastal_Plain_Seismic_EA <blm_ak_coastal_plain_seismic_ea@blm.gov>
Subject: Re: [EXTERNAL] North Slope Snow 2018

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b5 - DP
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Dr. Wendy M. Loya,
Arctic Program Coordinator
Office of Science Applications, US Fish and Wildlife Service
Anchorage, Alaska
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907.227.2942 (mobile)

-----Original Message-----

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Sent: Monday, August 20, 2018 7:48 PM
To: Fisher, Daniel - NRCS, Anchorage, AK <daniel.fisher@ak.usda.gov>;
Sousanes, Pamela <pam_sousanes@nps.gov>; Head, Melissa M (DNR) <melissa.head@alaska.gov>; Greta Burkart <greta_burkart@fws.gov>; Steve Berendzen <steve_berendzen@fws.gov>; Wendy Loya <wendy_loya@fws.gov>; Paul Leonard <paul_leonard@fws.gov>; Craig George <Craig.George@north-slope.org>;
Kyle Joly <kyle_joly@nps.gov>; Matt Macander <mmacander@abrinc.com>; Sveta Stuefer <sveta.stuefer@alaska.edu>; Scott Goetz <nau.edu>; Larsen, Chris <chris.larsen@gl.alaska.edu>; Skip Walker <dawalker@alaska.edu>; Tako Reynolds <**b6**>; Christopher A. Hiemstra <**b6**>; Entin <jared.k.entin@nasa.gov>;
b6; Griffith, Peter C. (GSFC-618.0) [SIGMA SPACE

0000012339

CORPORATION] <peter.c.griffith@nasa.gov>
Subject: [EXTERNAL] North Slope Snow 2018

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Matthew

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Dr. Matthew Sturm
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msturm1@alaska.edu

--
Scott Guyer
Landscape Initiatives Coordinator
Alaska State Office
907-223-6759 (wk cell)

*"Not the victory but the action, Not the goal but the game,
In the deed the Glory!"*

From: [Jones, Nichelle \(Shelly\)](#)
To: [Gieryic, Michael](#)
Cc: [Sarah LaMarr](#); [Ted Murphy](#); [Heath, Nolan](#); [Steve Berendzen](#); [Wendy Loya](#); [Joanna Fox](#); [Rose, Joshua](#); [Wixon, Donna](#); [BLM AK Coastal Plain Seismic EA](#)
Subject: Re: Review of Arctic District Preliminary Seismic EA - CONTAINS SOLICITOR COMMENTS - DO NOT RELEASE
Date: Saturday, August 25, 2018 2:30:57 PM

Thanks Mike. I just got Ch. 3 of the Marine Mammals section from Casey, but will wait until we get Ch. 4 to send them both. Hopefully that will be on Monday. We also got the comments back from FWS yesterday and sincerely appreciate the time you all took to dive into this document. I really think it is heading in a good direction. There are still several mitigation measures to be ironed out and some that counteract each other so I'm sure I will be reaching out to all of you next week to help think about those.

In addition to considering these comments, the IDT members are also working on responding to the external comments we have gotten to date. We will be trying to address or consider all actionable/substantive comments by the end of next week.

Shelly Jones
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(907) 474-2310 (w)
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On Fri, Aug 24, 2018 at 4:15 PM, Gieryic, Michael <mike.gieryic@sol.doi.gov> wrote:

Sarah,

Here are my comments and suggested edits on the preliminary EA, as well as a few from the Regional Solicitor, Josh Kindred.

Please forgive me, but in order to meet your timeline I used track changes in the Word document. Otherwise I would have needed another couple of days using the very inefficient comment response table given the amount of comments and suggested edits that I provided and the fact that I reviewed the entire document. I also wanted my legal comments to be handled separately, since they are attorney-client privileged and should be withheld from any FOIA request.

Let me know if you have any questions. Also, please send me the missing marine mammals sections and any other T&E resource sections that may still be added, once they are complete.

Have a great weekend.

Mike Gieryic
Attorney-Adviser
Office of the Regional Solicitor

U.S. Department of the Interior
4230 University Drive, Suite 300
Anchorage, AK 99508
Phone: (907) 271-1420; Fax: (907) 271-4143
mike.gieryic@sol.doi.gov

On Mon, Aug 20, 2018 at 1:36 PM, Sarah LaMarr <slamarr@blm.gov> wrote:

Hello - Attached is the preliminary Seismic EA for your review. Also attached are Appendix B (maps), Appendix F (specialist reports) and the comment response table. Since we will have a number of folks reviewing the document, we would like you to use the attached comment response table (instruction provided) for any edits or comments to the EA.

We are continuing to work on other appendices but if there is one referenced in the EA that you would like to review, let us know and we'll send you a draft.

Please forward the EA to any manager or specialist who should be reviewing the document.

Please send us your comments by COB on Friday, August 24, and send your comments to dwixon@blm.gov and slamarr@blm.gov.

Thanks! sarah

Sarah La Marr
Bureau of Land Management
Arctic District Office
Fairbanks, Alaska
907-474-2334 (desk)
907-888-3407 (cell)
slamarr@blm.gov

From: [Jones, Nichelle \(Shelly\)](#)
To: [Leonard, Paul](#)
Cc: [Steve Berendzen](#); [Wendy Loya](#); [Donna Wixon](#); [LaMarr, Sarah](#); [Guyer, Scott](#); [Eric Geisler](#); [Timothy Vosburgh](#); [Robert Brumbaugh](#); [Nolan Heath](#)
Subject: Re: Beaded Streams Follow up
Date: Monday, August 27, 2018 10:58:13 AM

Thanks for this Paul.

I wrote down 2 other companies that sell equipment like this. I thought beaded streams said DNR had been using the snow ranger (acoustic depth meter) and had mentioned the pizometer but I wasnt sure if that was for snow moisture or structure.

Would you have time to contact either RST (a Canadian company-not sure what it stands for) and/or Campbell Scientific to see if they sell something that would measure the snow depth and/or the snow moisture or structure.

Shelly Jones
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On Mon, Aug 27, 2018 at 8:44 AM, Leonard, Paul <paul_leonard@fws.gov> wrote:

Hi Shelly,

I spoke with Melissa Head from DNR on Friday and her feedback about these systems (temperature monitoring) was extremely positive. She mentioned that DNR has been using these products for years and they have worked out extremely well and proven durable.

I did ask specifically about the snow depth acoustic monitoring and she said that DNR is not asking that they be installed at this point because they do not provide information about snow quality.

To that point, I think it will be very important to chase down options for collecting additional information to couple with snow depth.

Cheers,
Paul

On Thu, Aug 23, 2018 at 3:00 PM, Jones, Nichelle (Shelly) <njones@blm.gov> wrote:

Hey Steve/Wendy et al:

Their web site here in Anchorage:

<https://www.beadedstream.com/>

They said they had been thinking of us and this seismic project in particular. They have plans to approach SAE to market to them directly and were discussing that earlier this week. Their sales rep gave me the following information on the kits they make for DNR:

Tundra Station-

2 ice road/tundra cables \$1050 each. some people just get one but they recommend 2. It has a 12" probe that goes in the ground and takes 3 readings at 3, 6 and 12 "depths

Data Logger-Purchase for \$3100 each and \$80/month for the data service or \$2500 to lease it and the data is free (typically only 6 months during the ice road season but probably could log data year round-not sure if they would charge more)

Snow Ranger-Also hooks into the data logger. this is an acoustic snow depth measuring device that DNR and others evidently like. \$550

Solar recharge-Not sure how much this is I forgot to ask.

So in the ball park of \$5K each

I asked about a gadget to measure snow crystals or water equivalency. We need to follow up for cost and options. He mentioned a pizometer and I don't know what that is for sure but it sounded possible to measure perhaps the snow moisture with this.

There are other vendors he gave me if I have to get 3 quotes I can otherwise I will try to go with sole source. Ted is not available right now so I will keep staking him out for approval. Meanwhile I am going to check with procurement to see if this freaks them out. I would like to ask to get 8 of them and scale back if necessary. More later.

-Shelly

Shelly Jones
Acting Manager
Arctic District Office
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[Fairbanks, AK 99709](#)

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--

Paul Leonard, PhD

Science Coordinator

[Arctic LCC](#)

[101 12th Ave. Room 216](#)

[Fairbanks, AK 99701](#)

(907) 456-0445

From: [Geisler, Eric](#)
To: [Donna Wixon](#); [Edmonds, Joseph](#); [BLM AK Coastal Plain Seismic EA](#); [Sarah LaMarr](#); [Vosburgh, Timothy](#); [Scott Guyer](#); [Wendy Loya](#); [Paul Leonard](#); [Rose, Joshua](#)
Subject: Revised Soils effects with BMP Revision
Date: Monday, August 27, 2018 2:45:04 PM
Attachments: [Geisler Arctic Soils NEPA - Coastal Plain Seismic.docx](#)

The BMP Revision is at the bottom of the effects document.

Yellow highlights need to be verified with other sections of the document or the EIS for proper reference

Eric Geisler, CF
Program Lead for Forestry, Invasive Species, Range, Botany, ES&R
BLM Alaska State Office
222 W 7th Ave #13
Anchorage, AK 99513
W 907-271-1985
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From: [Geisler, Eric](#)
To: [Donna Wixon](#); [Edmonds, Joseph](#); [BLM AK Coastal Plain Seismic EA](#); [Sarah LaMarr](#); [Vosburgh, Timothy](#); [Scott Guyer](#); [Wendy Loya](#); [Paul Leonard](#); [Rose, Joshua](#)
Subject: Comments
Date: Monday, August 27, 2018 3:12:21 PM
Attachments: [Comment Response Matrix Final.docx](#)

Here are my additions to the comments sheet.

BMPs should address the bulk of the issues

We could see 574 to 1721 acres of long term impacts

Eric Geisler, CF
Program Lead for Forestry, Invasive Species, Range, Botany, ES&R
BLM Alaska State Office
222 W 7th Ave #13
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W 907-271-1985
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From: [Jones, Nichelle \(Shelly\)](#)
To: [Steve Berendzen](#); [Fox, Joanna](#); [Joshua Rose](#); [Wendy Loya](#); [Robert Brumbaugh](#)
Subject: Cancelling CP Seismic Check In Today
Date: Tuesday, August 28, 2018 10:13:27 AM

Donna and Sarah are out. We are working on getting the comments assigned to IDT staff to address. There have been adjustments to the schedule but none that give us any slack on the 9/5 goal for getting the draft uploaded to eNEPA.

There are still several outstanding issues and mitigation that works at cross purposes, so I will be trying to get a compiled list of the measures all in one place so I can reflect on it. We made good progress last week on the seal consultation with NMFS and made a certain amount of progress discussing our cultural stipulations we plan to recommend to the SHPO.

This morning some of us are meeting with Melissa Head to discuss snow monitoring again. I plan to call the solicitor to discuss WSR compliance and I got approval to reach out to the Native Village of Kaktovik, so I will be trying to get a meeting set up as soon as possible if they are interested. I will talk to you all before then and maybe we can develop a suggested agenda and have a couple people from each agency there to discuss and hear about issues.

Safe travels and take lots of pictures at the seismic demo in Deadhorse this week. I honestly wish I was going to be there.

Shelly Jones
Acting Manager
Arctic District Office
222 University Avenue
Fairbanks, AK 99709

(907) 474-2310 (w)
(907) 460-0086 (c)

From: [Ellefson, Robert](#)
To: [Berendzen, Steve](#)
Cc: rtrupp@saexploration.com; [Joanna Fox](#); [Loya, Wendy](#)
Subject: Re: Trip Planning: Seismic equipment and operations review in Deadhorse (Prudhoe Bay); Thursday Aug 30
Date: Tuesday, August 28, 2018 10:32:24 AM

Thanks Steve. Let me know if anyone will need a pickup in Deadhorse, Short notice, but its coming together. Let me know if you need anything else. I'll reconfirm everything by the end of the day.

Rob Ellefson

Special Assistant, Alaska State Office
Bureau of Land Management
Office: 907-271-4194
Cell: 907-301-8362
rellefso@blm.gov

On Mon, Aug 27, 2018 at 4:56 PM, Berendzen, Steve <steve_berendzen@fws.gov> wrote:
Rob, thanks for the invite and info on logistics. I'll be attending as well as Joanna Fox, my deputy. At least a couple others from FWS will attend, but I'm not sure how many.

Steve Berendzen
Refuge Manager, Arctic National Wildlife Refuge
907-456-0253

On Mon, Aug 27, 2018 at 11:43 AM, Ellefson, Robert <rellefso@blm.gov> wrote:
Shelly/Steve - SAE is planning to provide the Agencies an overview of their seismic exploration equipment in Deadhorse on Thursday August 30. SAE will provide roundtrip transportation from the airport to their facilities as well as their equipment yard in Deadhorse. BLM will have a videographer on the tour to document equipment information and operations. I'll work the logistics and coordination. **Whoever attends must plan on arriving in Deadhorse prior to 10am on Thursday. Make your travel arrangements today.**

I need the following information from the Agencies (BLM Arctic District; USFWS Refuge; USFWS Regional):

- A headcount and names of Staff attending. Let me know if any staff *will not* be flying in on the Thursday, 9:15am arrival AlaskaAir flight. We'll have to make sure that any early arrivals connect with the larger group. We've estimated a group of 10 total Agency staff, but can accommodate more if needed.
- A list of any equipment demonstrations you would like.

SAE has provided the following Tentative Agenda for the visit:

10a-11:30a -- Presentation on seismic and the typical operations strategy at Deadhorse aviation center
11:45a-12:45p -- Lunch at Aurora
1:00-2:30p -- SAE Equipment Yard; visit pad site to view equipment and demonstrate a vibrator, transports, and other operations equipment.
3:00p -- Return to SAE shop for Q&A
5:25p - Departure

8/30/2018 Alaska Air Round Trip Flights

- Flight AS 55 Departs Anchorage 7:35am (arrives Deadhorse 9:15am)
- Flight AS 50 Departs Deadhorse 5:25pm (arriving Anchorage 8:57pm)
 - **or** Flight AS 182 Departs Deadhorse 2:20pm (arriving Anchorage 4:18pm)

Rob Ellefson

Special Assistant, Alaska State Office
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Office: 907-271-4194
Cell: 907-301-8362
rellefo@blm.gov

From: [Wendy Loya](#)
To: [Miriam \(Nicole\) Hayes](#)
Subject: RE: Lease stipulations 7 and 8
Date: Tuesday, August 28, 2018 3:48:00 PM

Hi Nicole,

I have looked through our recommended stips where our experts developed them for each resource and where I collated those to submit. I am unable to find reference to human activity in our recommendations.

When I search the draft DEIS, I do find that term for Alt B and C for Stips 7 and 8, and under Alt D-1 for Stip 8. We did not write any of those stipulations, as I think our recommended language is reflected in Alt D-2. I believe it is up to BLM to define this since it was added post-Alt workshop. My recommendation would be to define it as all the elements of human activity described in Stip 6 (copied below), but I don't think that is your intent to have such protections in Alt B and C:

Stipulation: (TL) Heavy equipment, such as for sand and gravel extraction and transport, pipeline and pad construction, but not drilling from existing production pads, would be suspended from no later than May 20 through no earlier than July 20, unless approved by the BLM Authorized Officer, in consultation with the appropriate federal, state, and NSB regulatory and resource agencies. The intent of this requirement and allowance for deviation is to restrict activities that would disturb caribou during calving and insect-relief periods but allow for activity if caribou are unlikely to be disturbed in significant numbers. If caribou arrive on the calving grounds before May 20, or if they remain in the area past July 20 in significant numbers (greater than approximately 10% of the estimated calving cow population or 1,000 during insect-relief periods), major construction would be suspended. The lessee would submit with the development proposal a stop work plan that considers this and any other mitigation related to caribou early arrival or late departure. The intent of this requirement is to provide flexibility to adapt to changing climate conditions that may occur during the life of oilfields in the region.

The following ground and air traffic restrictions would apply in the areas and during the periods indicated.

Ground traffic restrictions apply to permanent oil and gas-related roads:

a. From May 20 through July 20, traffic speed would not exceed 15 miles per hour when caribou are within 0.5 miles of the road. Additional strategies may include limiting trips, using convoys, and using different vehicle types to the extent practicable. The lessee would submit with the development proposal a vehicle use plan that considers these and any other mitigation. The vehicle use plan would also include a vehicle-use monitoring plan. The BLM Authorized Officer would require adjustments if she or he determines the resulting disturbance to be unacceptable.

b. The lessee/operator/contractor would observe caribou movement from May 20 through July 20, or earlier than May 20 if caribou are present. Based on these observations, traffic would be stopped in the following manner:

i. Temporarily to allow a crossing by 10 or more caribou. Sections of road would be evacuated whenever an attempted crossing by a large number of caribou (approximately 100 or more) appears to be imminent. The lessee/operator/contractor would submit with the development proposal a vehicle use plan that considers these and any other mitigations.

ii. By direction of the BLM Authorized Officer throughout a defined area for up to 4 weeks, to prevent displacement of calving caribou. The vehicle use plan would also include a vehicle-use monitoring plan. The BLM Authorized Officer would require adjustments if he or she determines that the resulting disturbance is unacceptable.

c. Major equipment, materials, and supplies to be used at oil and gas work sites would be stockpiled before or after the period of May 20 through July 20 to minimize road traffic.

d. Aircraft use would be restricted in areas where caribou are present from May 20 through July 20, unless

doing so would endanger human life or violate safe flying practices. The lessee/operator/contractor would submit with the development proposal an aircraft use plan that considers these and other mitigations. The aircraft use plan would also include an aircraft monitoring plan. The BLM Authorized Officer would require adjustments, including perhaps suspending all aircraft use, if she or he determines the resulting disturbance to be unacceptable. This lease stipulation is not intended to restrict wildlife survey flights for information necessary to meet the stated objective of the stipulations; however, flights necessary to gain this information would be restricted to the minimum necessary to collect such data.

Aircraft pilots would maintain a minimum height of 1,000 feet above ground level (AGL), except for takeoffs and landings, from May 20 through July 20, unless doing so would endanger human life or violate safe flying practices.

FYI, when I search NPRA Table 2.3 I see human activity restrictions for Goose molting, but not caribou.

Feel free to call if you want to discuss,
Wendy

Dr. Wendy M. Loya,
Arctic Program Coordinator
Office of Science Applications, US Fish and Wildlife Service
Anchorage, Alaska
907.786.3532 (office)
907.227.2942 (mobile)

From: Hayes, Miriam (Nicole) <mnhayes@blm.gov>
Sent: Tuesday, August 28, 2018 12:54 PM
To: Wendy Loya <wendy_loya@fws.gov>
Subject: Lease stipulations 7 and 8

Did FWS have a way they were defining human activity for these stipulations? I can't find anything comparable in the IAP ROD.

Nicole Hayes

Project Coordinator
Bureau of Land Management
222 W. 7th Avenue #13
Anchorage, Alaska 99513
Desk: (907) 271-4354
Cell: (907) 290-0179

From: [Wendy Loya](#)
To: [Miriam \(Nicole\) Hayes](#)
Subject: RE: Another question ROP 26
Date: Wednesday, August 29, 2018 12:32:00 PM

Nicole,

It looks like John Trawicki provided some clarification on our recommendations by email on 7-26-18. Below is the language he provided for BMP E-8/ROP 26 for Alt D, which is what we recommend for DEIS. We apparently did not catch this discrepancy in our review.

The intent is to not create deep water habitats within the active channel or flood plain of the 4 identified drainages, which could cause entrapment in poor quality habitat, or to transplant fish to other drainages.

Recommended language for Alt D ROP 26:

Objective: Minimize the impact of mineral materials mining activities on air, land, water, fish, and wildlife resources.

Requirement/Standard: Gravel mine site design, construction, and reclamation will be in accordance with a plan approved by the authorized officer. The plan shall be developed in consultation with the US Fish and Wildlife Service and other appropriate federal, State, and North Slope Borough regulatory and resource agencies and consider:

- a. Construction of gravel mine sites or water reservoirs may not be considered within the active floodplains of the four rivers that support populations of freshwater, anadromous, or endemic fish (Canning, Sadlerochit, Hulahula, and Aichilik rivers).
- b. Design and construction of gravel mine sites may be considered at locations outside the active floodplain.
- c. Design and construction of gravel mine sites that may also serve as water reservoirs may be considered within active floodplains with the exception of waters identified in (a).
- d. Potential storage and reuse of sod/overburden for the mine site or at other disturbed sites on the North Slope.
- e. All constructed water storage reservoirs shall be a sufficient distance from drill sites, fueling stations, or other temporary or permanent site that generates or maintains more than 220 gallons of fuel, drilling fluids, or other hazardous materials to avoid contamination via surface or groundwater of the storage reservoir. The lessee shall implement a water quality and contaminants monitoring program for any constructed water storage facility.

Dr. Wendy M. Loya,
Arctic Program Coordinator
Office of Science Applications, US Fish and Wildlife Service
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From: Hayes, Miriam (Nicole) <mnhayes@blm.gov>
Sent: Tuesday, August 28, 2018 5:26 PM
To: Wendy Loya <wendy_loya@fws.gov>
Subject: Another question

Hi Wendy,

For ROP 26 Alt D Requirement a and b- can you explain purpose? Are you saying gravel mines are not allowed within in those rivers or that they cannot be designed a certain way.
Thanks,
Nicole

Nicole Hayes

Project Coordinator
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From: [Leonard, Paul](#)
To: [Jones, Nichelle \(Shelly\)](#)
Cc: [Scott Guyer](#); [Geisler, Eric](#); [Wendy Loya](#)
Subject: Re: Coastal Plain Seismic Area
Date: Wednesday, August 29, 2018 7:00:12 PM

Thanks Eric for these remarks and guidance!

We too feel that the EA should cover how (where and when) the applicant will monitor frost depth, snow depth, and snow condition in both alternatives.

However, I'm not sure that a gridded sample design is the best option. My concerns are below:

1. Some of Matthew Sturm's (and others) work also shows that landscape features, along with predictable wind patterns help shape the landscape-scale patterns of snow in the area. We should investigate these patterns to site the highest density monitoring locations (In other words, we may need a stratified design - or a more dense network across some areas/landforms)
2. Matthew S. work also indicates that within a 15 mile grid there will be a large variation in snow depth and the 'nearby' stations clause may not capture this either - support for #1
3. The logistics involved with the timing of advanced survey crews and/or agency staff to monitor/deploy across the grid will be a challenge.
4. The snow monitoring workshop in October (being co-hosted by BLM, USFWS, UAF, DNR) will bring together data and experts that will help develop these ideas and can lead to more efficient sample design.

There is one big advantage of a gridded design; we would get a better handle on the coarse-scale spatial variability of snow across the refuge. However, there may be other ways to achieve something similar (an image classification analysis from NSIDC products).

Ultimately, if #4 above does not fit into the proposed timeline, we need a refuge-specific monitoring plan/network that will be efficient and give us a good indication of when conditions are suitable enough for advanced crews to do more site/route specific monitoring. I think Eric did a good job capturing this but I'd like to see the conversation broadened a bit so we can harness all the available data we have on snow in the area.

Cheers,
Paul

On Mon, Aug 27, 2018 at 3:31 PM, Geisler, Eric <egeisler@blm.gov> wrote:

Shelly

I do not see any specifics in their proposal on how or where they would measure snow. They refer to the State methods which I have researched further.

Here what is written in their plan

Access to the project area would entail crossing state land once the Alaska Department of

Natural Resources determines there is adequate snow cover and frozen ground and opens the area for tundra travel. Criteria, set by the Alaska Department of Natural Resources, for tundra opening in the Coastal Plain are 6" of snow and 23° Fahrenheit soil temperature at approximately 1' depth and criteria for the Foothills Areas are 9" of snow and 23° Fahrenheit soil temperature at approximately 1' depth. SAE would obtain a permit from the state for overland travel. No ice roads would be constructed for this project.

The advance survey crew would verify, identify, stake, and map avoidance areas including..... low snow areas

If low snow conditions are encountered, the advanced crew would use a procedure based on State of Alaska guidance to continuously sample snow depths along the routes. Low snow areas would be avoided and low snow locations would be loaded into all vehicle navigational systems.

From the DNR web site it looks like DNR does all the monitoring.. None of the permits I reviewed from 2013 to 2015 had any mention of contractor monitoring.

The **DMLW Northern Regional Office actively monitors snow depth and soil temperatures throughout the winter season** to determine when to open the tundra to general off-road travel. Monitoring stations are located within four tundra opening areas: the Western Coastal, the Eastern Coastal, and the Upper Foothills and the Lower Foothills of the Brooks Range. The tundra is opened to off-road travel in the Coastal areas when the soil temperature at a depth of twelve inches reaches -5°C and when there is six (6) inches of snow on the ground. In the Foothills areas, tundra opening occurs when the soil temperature reaches -5°C and when there is nine (9) inches of snow on the ground. The date of tundra opening has ranged from as early as November 4 to as late as January 27. Once the tundra has been opened in the winter, there are no restrictions on the type of vehicles that may operate on the tundra under a permit. In years of limited snowfall, the tundra may be opened conditionally with specific operating restrictions.

We need a plan included in the EA for them to monitor under both alternatives.

ALT A

Contractor will monitor the depth of frost and the snow depths across the permit area throughout the operations area in the following manner..

Stations will be established across the area on a roughly fifteen mile grid on both exposed sites and sites with high snow accumulations to continuously monitor

1. Ground temperatures at depths of 6 and 12 inches
2. Snow depths at shallowest and deepest nearby locations

ALT B

Contractor will monitor the depth of frost and the snow depths across the permit area throughout the operations area in the following manner..

Stations with known Latitude, longitude will be established across the area on a roughly fifteen mile grid on both exposed sites and sites with high snow accumulations to continuously monitor

1. Ground temperatures at depths of 6 and 12 inches
2. Snow depths at shallowest and deepest nearby locations

In addition contractor will monitor snow depth, structure and density in accordance with the Snow, Weather and Avalanche Guidelines (SWAG) at locations with limited snow depth (scoured sites). The date, observer, latitude and longitude of each site will be reported on all records. Measurements will be made at 0.5 mile intervals in the most wind scoured locations between 24 and 72 hours before operations are planned to proceed across the area. Within the sampling area measurements will be taken from the shallowest depth within a 10 foot radius of the sample point.

Snow structure must reflect fine grained rounded or sintered crystals of 1 mm or less diameter in a depth and density that matches the USFWS snow table. The depth and density of grains over 2 mm will not be considered as capable of supporting loads..

Eric Geisler, CF
Program Lead for Forestry, Invasive Species, Range, Botany, ES&R
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[222 W 7th Ave #13](#)
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W 907-271-1985
C 509-220-4712

On Mon, Aug 27, 2018 at 12:41 PM, Jones, Nichelle (Shelly) <njones@blm.gov> wrote:

Thanks Eric! I needed this. Do you have an excerpt you could send from the proposed action that describes the snow monitoring the applicant proposes? I may meet with Melissa on my own tomorrow and send you my notes.

Shelly Jones
Acting Manager
Arctic District Office
[222 University Avenue](#)
[Fairbanks, AK 99709](#)

[\(907\) 474-2310](#) (w)
[\(907\) 460-0086](#) (c)

On Mon, Aug 27, 2018 at 12:34 PM, Geisler, Eric <egeisler@blm.gov> wrote:

Here are my assumptions for the area of impact

2600 square miles
12 miles trails per mile
31200 miles of trails
360 mile camp move
31560 TOTAL miles @ 5280 ft per mile

25 ft camp trail width
10 ft side trail width
15 ft Vibrosies width
15 ft AVERAGE width

2,499,552,000 Square feet project area

43560 Sq ft per acre

57382 Acres project area operations

1,664,000 Acres total

3.4% of area for operations

Long term impacts on 1 to 3% of operations

or 574 to 1721 acres long term affects

Eric Geisler, CF

Program Lead for Forestry, Invasive Species, Range, Botany, ES&R

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--

Paul Leonard, PhD

Science Coordinator

[Arctic LCC](#)

101 12th Ave. Room 216

Fairbanks, AK 99701

(907) 456-0445

From: [Geisler, Eric](#)
To: [Jones, Nichelle \(Shelly\)](#); [BLM AK Coastal Plain Seismic EA](#); [Donna Wixon](#); [Sarah LaMarr](#); [Scott Guyer](#); [Vosburgh, Timothy](#); [Rose, Joshua](#); [Nolan Heath](#); [Wendy Loya](#)
Subject: Re: Coastal Plain Seismic Edits
Date: Wednesday, August 29, 2018 7:28:53 PM
Attachments: [Draft Coastal Plain Seismic EA 8.29.2018-EG.docx](#)
[Geisler Arctic Soils NEPA - Coastal Plain Seismic.docx](#)
[AdminDraft Seismic EA agency-cmmts 20180824 FWS assigned-EG.docx](#)
[Comment Response Final-EG.docx](#)

Here are my most recent comments.

When we are ready to revise the BMPs and develop a monitoring plan I am glad to help

Eric Geisler, CF
Program Lead for Forestry, Invasive Species, Range, Botany, ES&R
BLM Alaska State Office
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Anchorage, AK 99513
W 907-271-1985
C 509-220-4712

On Wed, Aug 29, 2018 at 12:36 PM, Jones, Nichelle (Shelly) <njones@blm.gov> wrote:

Hello CP IDT Authors,

We are nearing the finish line, but still have one large task to accomplish by EOD Thursday, August 30, , which is addressing outstanding comments by the USFWS, and editing your sections based on comments by FWS, Ted and the Solicitor.

Attached to this email are three documents: 1) the latest Draft version of the EA dated 8.29.2018; 2) the USFWS comment table with IDT author identified in the last column; and 3) the previous draft EA with line numbers that FWS used for their review.

Directions:

1. Go through the USFWS comment table and look for your name in the last column. For those comments assigned to you, please use the A/R/M column to indicate your response.

- For all of the A's, please edit your section of the 8.29.2018 Draft EA using track changes to reflect the recommended change.
- For all R's please replace your name in the last column with the reason why you rejected the change/comment.
- for all M's, please make your modified edit to the 8.29.2018 document using track changes, and replace your name with the modified edit.

Please note that the current EA has already been revised to reflect the edits of the BLM IDT reviewers, and well as SOL/ALT edits that did not require specialist input. Therefore, the page and line numbers referenced by USFWS are not accurate anymore. If you need assistance in figuring out the text being referred to, use the previous draft 8.20.2018 EA with lines numbered (attached). And--it may very well be that you do not need to make the changes requested by FWS. Many of FWS comments may be a result of their unfamiliarity of seismic exploration. Use your best professional judgement based on your knowledge and experience of the activity, resources, and impacts.

2. Please review your sections in the draft EA 8.29.2018. There are marginal comments of suggested edits by the Solicitor and Ted Murphy that may also need to be addressed. Please make those edits/changes to the document using track changes, or provide a response comment within the bubble.

3. Once you are finished making your edits and responses to the draft EA and to the USFWS comment table,

please save each document by adding your initials to the end. Send your document to Donna Wixon by EOD Thursday, August 30. If you cannot make this deadline, please send me an email explaining why, and when you anticipate being able to complete this task.

I am sorry that this is short turn-around time, everyone is doing an amazing job, we are close!

Thank you,
Shelly

Shelly Jones
Acting Manager
Arctic District Office
222 University Avenue
Fairbanks, AK 99709

(907) 474-2310 (w)
(907) 460-0086 (c)

From: [Heath, Nolan](#)
To: [Geisler, Eric](#)
Cc: [Jones, Nichelle \(Shelly\)](#); [BLM AK Coastal Plain Seismic EA](#); [Donna Wixon](#); [Sarah LaMarr](#); [Scott Guyer](#); [Vosburgh, Timothy](#); [Rose, Joshua](#); [Wendy Loya](#)
Subject: Re: Coastal Plain Seismic Edits
Date: Thursday, August 30, 2018 9:14:23 AM
Attachments: [Geisler Arctic Soils NEPA - Coastal Plain Seismic with NH additional edits.docx](#)

I looked over Eric's comments and added a few additional edits. Hope this helps.

On Wed, Aug 29, 2018 at 5:28 PM, Geisler, Eric <egeisler@blm.gov> wrote:

Here are my most recent comments.

When we are ready to revise the BMPs and develop a monitoring plan I am glad to help

Eric Geisler, CF
Program Lead for Forestry, Invasive Species, Range, Botany, ES&R
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2. Please review your sections in the draft EA 8.29.2018. There are marginal comments of suggested edits by the Solicitor and Ted Murphy that may also need to be addressed. Please make those edits/changes to the document using track changes, or provide a response comment within the bubble.

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I am sorry that this is short turn-around time, everyone is doing an amazing job, we are close!

Thank you,
Shelly

Shelly Jones
Acting Manager
Arctic District Office
222 University Avenue
Fairbanks, AK 99709

(907) 474-2310 (w)
(907) 460-0086 (c)

From: [Jones, Nichelle \(Shelly\)](#)
To: [Wendy Loya](#); [Paul Leonard](#)
Subject: Re: Coastal Plain Seismic Edits
Date: Thursday, August 30, 2018 5:35:24 PM

Thanks Wendy. I am trying to really get my head around this and maybe am making it harder than need be. I appreciate you bearing with me.

I agree we need a more detailed sampling protocol from SAE and it sounds like that protocol is at least partially being suggested in BMP #8? I wonder if the collaborative part could be to tweak that BMP and suggest that the operator would do the snow depth measurements at intervals and transects as described and the agency monitors would do the density and structure measurements? Also the agency will install and monitor 4 thermisters and request the operator to also install 4 thermisters across the project area before the first season. This may be adjusted.

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(907) 474-2310 (w)
(907) 460-0086 (c)

On Thu, Aug 30, 2018 at 2:07 PM, Wendy Loya <wendy_loya@fws.gov> wrote:

Hi Shelly and everyone,

I appreciate the discussion around the appropriate protocol for snow monitoring. I would like to weigh in here on behalf of the FWS with recommendations that I believe are consistent with our comments on the preliminary EA:

- 1) For Alternative A, SAE's proposed action, there is an incomplete snow monitoring protocol.
 - a. We would expect SAE to follow DNR winter tundra travel opening and closing determinations for their route across State lands. Note of interest, Exxon has sometimes put out supplemental thermistors that are similar to DNR's to see if conditions going to Pt. Thomson are ready and I believe they share that data with DNR towards opening date determination.
 - b. Monitoring only on State land is not likely to be sufficient to describe conditions on the Coastal Plain, which experiences less snow. The shorter distance from the coast to the mountains results in different precipitation and wind conditions compared to lands west of the Canning River /Saddlerochit Mountains,

which can produce katabatic winds which sweep snow off the coastal plain. SAE does describe a snow monitoring protocol with transects in the document containing answers to the questions BLM asked following their initial Plan of Operations, but it is not clear when and where they would implement the measurements, other than by the advance team. **I would recommend that Alt A require SAE to submit a complete snow depth and soil freeze depth monitoring protocol as part of their requirements under Alt A, including describing the vehicles they use when evaluating snow depth and how they deal with crossing low-snow areas as they find a pathway forward to the next area with adequate snow.**

2) For Alt B, the FWS recommends that BLM, in partnership with FWS, and/or SAE implement a combination of remote monitoring with thermistors and an advance crew that does measurements including depth, density and structure to determine open/close dates. As was stated yesterday (via email from Paul Leonard Wed 8/29 at 5pm), landscape features and predictable wind patterns help shape the landscape-scale patterns of snow in the area. Thus, the deployment and site specific measurements should consider these patterns in determining where they should be placed.

We stand by our recommended BMPs/ROPs:

7. Ground operations would be allowed only when frost depth is at sufficient depths and snow cover is at sufficient depth, density and structure to protect the tundra (See Table 2 and BMP 8), as determined by the authorized officer, in consultation with the USFWS. The applicant is required to develop a snow monitoring protocol for approval by the authorized officer. The snow monitoring proposal shall be for the entire project area and project period, and will be used to help inform the authorized officer when required snow depth and soil temperature are met (e.g. opening of winter tundra travel), continue to be met and no longer met (e.g. overwinter changes, winter tundra travel closing).

8. The criteria for winter tundra travel are: soils should be frozen to at least -23°F at least 12" below the lowest surface height (e.g. trough or intertussock space). Snow depth and snow density should amount to no less than a Snow Water Equivalent of 3" over the highest vegetated surface (e.g. top of tussock; See Table 2). Simultaneously, snow structure should predominantly be crystals <1mm to create a firm snowpack. Larger hoar frost crystals (2-6mm) can easily be compacted and thus would not provide sufficient depth to protect vegetation and soils.

The Operator will be responsible for monitoring snow depth, structure and

density and recording coordinates of sampling sites prior to proceeding with seismic and camp vehicles. Depth, structure and density will be measured along the proposed route ~~every 0.5 mile or~~ where an obvious change in snow conditions, terrain, vegetation type or other physical features suggest snow conditions may be different than the previous measurement.

At each sampling site, measurements will be made along a 100 meter (328 ft.) transect, away from any structures. At no less than 20 points in each transect, measurements of depth, density and structure will be taken at the shallowest depth within a 10-foot area at each sample site (i.e. on top of the tussocks, not in the troughs), and a GPS coordinate and a description of the terrain shall be recorded. The snow structure will be used to help determine the load bearing ability of the snow.

The applicant shall notify the authorize officer if snow conditions do not meet criteria and shall not proceed through areas of low snow.

9. Keep Table as is; at this time we are assuming that 3" SWE is sufficient to protect both coastal and foothills vegetation, eliminating the need to identify when the terrain transitions from coast to foothills. We support adding Eric's description of structure: The desired snow structure should be recorded as crystal sizes less than 2mm in size for the desired depth and density shown in the above table. Crystal sizes above 2mm will require a hardness of pencil or stronger according to the Snow, Weather, Avalanche Guidelines (SWAG 2016). FWS and BLM can work together to evaluate the efficacy of these requirements because we will have the snow data on hand when we follow up to evaluate impacts in the summer and if necessary, in subsequent years,.

10. When snow depth and density no longer meet criteria in the spring, the authorized officer will order ground operations to cease.

11. The use of snow machines to initially pack trails a few days ahead of operations will aid in the initial densification of the snow pack. Although tilling of the snow can destroy the depth hoar crystals and create a dense snow pack it is likely to damage vegetation and would not be the preferred method. Snow crystal sizes of less than 1 mm will provide the more desirable structure for vehicle travel- firm cohesive snow. It is the depth of this firm snow that is most supportive of winter tundra travel vehicles.

12. Seismic operations and winter overland travel will be monitored by agency representative(s) and operators will be required to accommodate the representative(s) during operations.

Barring any further information from the BLM and FWS staff that had the opportunity to tour SAE's operations and equipment, I agree that we should be ready to make a decision (and ensure that thermistors get deployed promptly!)

Thank you all!

Wendy

Dr. Wendy M. Loya,

Arctic Program Coordinator

Office of Science Applications, US Fish and Wildlife Service

Anchorage, Alaska

907.786.3532 (office)

907.227.2942 (mobile)

From: Vosburgh, Timothy <tvosburgh@blm.gov>

Sent: Thursday, August 30, 2018 12:23 PM

To: Heath, Nolan <nheath@blm.gov>

Cc: Jones, Nichelle (Shelly) <njones@blm.gov>; Guyer, Scott <sguyer@blm.gov>; Geisler, Eric <egeisler@blm.gov>; Donna Wixon <dwixon@blm.gov>; Sarah LaMarr <slamarr@blm.gov>; Rose, Joshua <joshua_rose@fws.gov>; Wendy Loya <wendy_loya@fws.gov>

Subject: Re: Coastal Plain Seismic Edits

Although a big commitment from the agencies there is good justification for the BLM & FWS to oversee the snow monitoring. That's not to say the company can not do monitoring too.

Tim

On Thu, Aug 30, 2018 at 12:13 PM, Heath, Nolan <nheath@blm.gov> wrote:

I talked with Eric and he said that alternative A is more the traditional way we measure but to be more protective he was using the F&W way with the monitoring. He did say it was your decision regarding how much monitoring you felt was needed. If you only thought 2 sites per section as apposed to 4 he was fine with that. He said that would still provide 5200 monitoring points for the project.

On Thu, Aug 30, 2018 at 11:17 AM, Jones, Nichelle (Shelly) <njones@blm.gov> wrote:

As we get closer to figuring out exactly what we need to know and be able to justify we need to more quickly figure out whether what we are proposing makes sense and get on the same page, I am trying to boil down a lot of facts into something that is understandable. I could use your help resolving these issues because I have about run out of time.

Do you mean we should use the DNR methods (tundra stations-for temperature and field confirmation of snow depth) and employ them on the coastal plain? Or do you mean that the current DNR monitoring on state lands would be adequate to inform the conditions on the coastal plain?

The information is that there are somewhat different soils and topography of the 1002 area and that particularly to inform the opening date and the closing date, it would be important to have more locally proximate readings.

Eric was recommending 15 square mile spacing-12 frost monitoring on these tundra stations. They cost \$5K each so the cost is an important thing we will need to justify.

The snow monitoring (measuring and weighing) seems like it also needs some additional discussion before this is ready for prime time. What is being proposed is not completely clear, but leads me to believe they plan to do snow depth measurements only, up to 72 hours prior to entering an area at .5 mile increments. It is not clear if these are point samples adjacent or line transects perpendicular to the trail. Using the DNR protocol, if I understood Melissa correctly, they would not be expected to weigh the snow. DNR would themselves normally take 20 measurements along a 100M transect and weigh the samples in the lab at night.

Each transect usually takes about an hour to conduct.

I am coming to the conclusion that BLM and FWS will need to function in a similar way to DNR on this if we do not want to apply their readings all the way across the coastal plain, we need to take on some of the monitoring ourselves. It is just going to be too hard to justify and does not seem practical to implement I'm afraid. It is just too cold and takes too long to be doing the weighing of a lot

of samples in the field.

I know FWS and BLM would like to install some tundra stations ourselves to help inform the the freeze down to see if it is happening at the same time as it is along the Haul Road where DNR currently monitors it. We could also confirm ourselves the water equivalency on a smaller number of the transects to correlate to SAE's snow measurements to help inform the authorized officer's decision to allow travel on a particular route.

What do you think about that?

Shelly Jones

Acting Manager

Arctic District Office

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[Fairbanks, AK 99709](#)

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[\(907\) 460-0086](#) (c)

On Thu, Aug 30, 2018 at 9:12 AM, Heath, Nolan <nheath@blm.gov> wrote:

That is consistent with Mike G. comments as well and I would also agree.

On Thu, Aug 30, 2018 at 8:50 AM, Guyer, Scott <sguyer@blm.gov> wrote:

I have discussed a few times with Eric the fact that the snow depth/density table while being good science has not been validated by actually testing and research with seismic/track vehicles. I do not see how we can use this as a BMP without the research to back it up. Also to incorporate the Snow Avalanche Guidelines into the BMPs for the same reason, good science but not verified through research on the North Slope. On a call this week with the state discussing their tundra opening snow and frost protocols it became clear to me that using their established methods should be the standards we should use in the EA.

Scott

On Thu, Aug 30, 2018 at 7:14 AM, Heath, Nolan <nheath@blm.gov> wrote:

I looked over Eric's comments and added a few additional edits. Hope this helps.

On Wed, Aug 29, 2018 at 5:28 PM, Geisler, Eric <egeisler@blm.gov> wrote:

Here are my most recent comments.

When we are ready to revise the BMPs and develop a monitoring plan I am glad to help

Eric Geisler, CF

Program Lead for Forestry, Invasive Species, Range, Botany, ES&R

BLM Alaska State Office

[222 W 7th Ave #13](#)

[Anchorage, AK 99513](#)

W 907-271-1985

C 509-220-4712

On Wed, Aug 29, 2018 at 12:36 PM, Jones, Nichelle (Shelly)
<njones@blm.gov> wrote:

Hello CP IDT Authors,

We are nearing the finish line, but still have one large task to accomplish by EOD Thursday, August 30, , which is addressing outstanding comments by the USFWS, and editing your sections based on comments by FWS, Ted and the Solicitor.

Attached to this email are three documents: 1) the latest Draft version of the EA dated 8.29.2018; 2) the USFWS comment table with IDT author identified in the last column; and 3) the previous draft EA with lines numbers that FWS used for their review.

Directions:

1. Go through the USFWS comment table and look for your name in the last column. For those comments assigned to you, please use the A/R/M column to indicate your response.

- For all of the A's, please edit your section of the 8.29.2018 Draft EA using track changes to reflect the recommended change.
- For all R's please replace your name in the last column with the reason why you rejected the change/comment.
- for all M's, please make your modified edit to the 8.29.2018 document using track changes, and replace your name with the modified edit.

Please note that the current EA has already been revised to reflect the edits of the BLM IDT reviewers, and well as SOL/ALT edits that did not require specialist input. Therefore, the page and line numbers referenced by USFWS are not accurate anymore. If you need assistance in figuring out the text being referred to, use the previous draft 8.20.2018 EA with lines numbered (attached). And--it may very well be that you do not need to make the changes requested by FWS. Many of FWS comments may be a result of their unfamiliarity of seismic exploration. Use your best professional judgement based on your knowledge and experience of the activity, resources, and impacts.

2. Please review your sections in the draft EA 8.29.2018. There are marginal comments of suggested edits by the Solicitor and Ted Murphy that may also need to be addressed. Please make those edits/changes to the document using track changes, or provide a response comment within the bubble.

3. Once you are finished making your edits and responses to the draft EA and to the USFWS comment table, please save each document by adding your initials to the end. Send your document to Donna Wixon by EOD Thursday, August 30. If you cannot make this deadline, please send me an email explaining why, and when you anticipate being able to complete this task.

I am sorry that this is short turn-around time, everyone is doing an amazing job, we are close!

Thank you,

Shelly

Shelly Jones

Acting Manager

Arctic District Office

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--

Scott Guyer

Landscape Initiatives Coordinator

Alaska State Office

907-223-6759 (wk cell)

"Not the victory but the action, Not the goal but the game,

In the deed the Glory!"

From: [Wendy Loya](#)
To: [Nichelle \(Shelly\) Jones](#)
Subject: RE: FW: [EXTERNAL] Re: NPRA snow depth requirement (best management Practice)
Date: Tuesday, September 4, 2018 10:58:00 AM
Attachments: [image002.png](#)

Shelly,

It is likely Structure for Motion imagery, like Matthew flew last April. When done correctly, it should be possible to at least identify low snow areas. FWS has the instruments to do this, I believe. It also may be possible that the applicant can work with the company that will fly the polar bear FLIR surveys to collect other types of imagery?

Dr. Wendy M. Loya,
Arctic Program Coordinator
Office of Science Applications, US Fish and Wildlife Service
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907.786.3532 (office)
907.227.2942 (mobile)

From: Jones, Nichelle (Shelly) <njones@blm.gov>
Sent: Tuesday, September 4, 2018 8:53 AM
To: Wendy Loya <wendy_loya@fws.gov>
Subject: Re: FW: [EXTERNAL] Re: NPRA snow depth requirement (best management Practice)

Thanks Wendy. Do you know what Matt is referring to when he says "airborne photogrammetric snow depth mapping to guide the exploration"? I wonder if this is something BLM/FWS/DOI could offer to partner to try to come up with a more sensible snow monitoring plan. I will try to follow up with Matt later this week to find out more about what would be involved in that approach.

Shelly Jones
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On Tue, Sep 4, 2018 at 8:25 AM, Wendy Loya <wendy_loya@fws.gov> wrote:

Good morning Shelly,

Here is some further background info to support the FWS recommended stipulations, as advice from Dr. Matthew Sturm. I have highlighted the sections that discuss the state standards and our recommended standards.

At this time, I think we are comfortable to have just one depth standard across the coastal plain, resulting in 3" of SWE. The attached images show low snow conditions even in a

high-snow winter like 2018. I think it is important to really talk through this with them to ensure they are successful this winter.

Call if you have further questions,
Thank you,
Wendy

Dr. Wendy M. Loya,
Arctic Program Coordinator
Office of Science Applications, US Fish and Wildlife Service
Anchorage, Alaska
907.786.3532 (office)
907.227.2942 (mobile)

From: Matthew Sturm <msturm1@alaska.edu>
Sent: Saturday, July 7, 2018 3:18 PM
To: Wendy Loya <wendy_loya@fws.gov>
Cc: Paul Leonard <paul_leonard@fws.gov>
Subject: [EXTERNAL] Re: NPRA snow depth requirement (best management Practice)

Here are several comments on the draft:

1. The stipulations are being based on those being used in the NPRA, but two questions make this a somewhat shaky foundation:

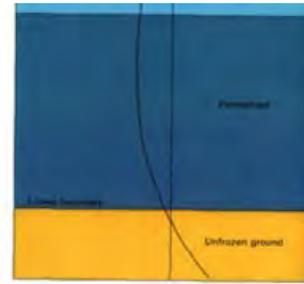
- Are there case studies that document that the standards as applied in NPRA have been successful to date? I am unaware of any longitudinal studies tracking conditions since activities in NPRA have increased. What level of damage has been observed under what snow conditions?
- There are distinct physiographic differences between the 1002 and the northern NPRA, chiefly that the former experiences higher winter winters than the latter, while the latter domain is about 50% thaw lake in comparison <10% for the 1002 area (these percentages are rough estimates but could be done quantitatively).
- To my knowledge, the 6" 12" rule was put forward by Max Brewer of NARL prior to the first work on the NPRA (this fact may be in Reed's 1958 USGS Professional Paper on NPRA), and it is mentioned in Gryc's USGS Professional Paper 1240-C on the area. The basis for it was mostly common sense: 12" t prevent ground deformation; 6" to buffer the vegetation. But of course, the stipulations date from an era when there was a higher acceptance of damage (see image from Gryc's paper).

caused. Ice roads can be built for the use of surface vehicles. Large or permanent structures are placed

but, as demonstrated by this program, the problems can be solved.



Tracks made by a tracked vehicle in the tundra during the Pet-4 program.



Generalized graph of ground temperature versus depth. In the Arctic, annual temperature variations may be detected to a depth of 70 to 100 feet. The lower boundary for permanently frozen ground is about 1,000 feet at Barrow and 2,000 feet at Peard Bay (modified from Haugen and Brown, 1971).

2. While it sounds like the protocol is to measure 20 depths across 100-m transects and average, the stipulation merely says 6" for snow. But the frost (12") is specified as being measured in the intertussock area. To be parallel, one might think the snow standard would be 6" above tussock tops to ensure an adequate minimum cover. I would also like the 20 measurements to be evenly spaced, but the transect location to be somewhat random so it is not deep-snow biased.

3. Coastal vs. Foothills snow: While the Camden Bay to Marsh Creek line shows less snow a Marsh Creek, this is due to strong katabatic scour drainage winds off of the Sadlerochit Mountains. It is unclear (as we don't have comparative data along North-South line across the 1002) whether this is a general or local gradient. See #2: if the 6" is specified as the minimum above most tussock tops, then is a Foothills vs. Coastal value difference necessary?

4. The 6" rule has always been flawed because it specifies "volume" rather than "mass". Consider that a balloon has a large volume, and almost not protection value when run over by a vehicle. So first a lesson in snow density:

Snow falls from the sky and once on the ground begins to settle. Initial (just after deposition) densities range from 0.05 grams/cm³ (3.12 lbs/ft³) for fluffy powder and no wind, to about 0.3 grams/cm³ for wet Cascade cement. Densification on the ground increases the density; it takes place slowly in cold conditions and thin snow packs, and rapidly in deep wet snow packs. Wind is the other way snow can get dense....the wind picks up grains, pulverizes them and then deposits them, packing them tighter and sintering them (bonding them) into a cohesive mass.

Most seasonal snow covers (including the 1002) are made up of 5 to 15 layers of snow, each with an initial density and each undergoing some densification. The bulk density of the whole snow pack is the weighted average of all these layers. Typically, we just core the

whole thing and weigh the core to get the bulk density.....but do remember that we might have a dense snow pack 40 cm deep, get a big fluffy snowfall that adds an additional 20 cm of fluff....and now the pack that had an average density that met a standard, no longer does...the bulk value has been greatly reduced.

Worldwide, the average bulk density of seasonal snow packs is 0.3 gram/cm³ (18.7 lbs/cubic ft.). Drifts in the NPRA and 1002 would have bulk densities of 0.4 to 0.5 grams/cm³ (25 to 31 lbs/ft³). Without melting or heavy comminution, physical compaction of snow can only bring the density 0.6 gram/cm³.

So Specifying depth is not a good approach, but then neither is specifying density alone. 6" of fluff is a No Go, while 6" of 0.6 grams/cm³ drift snow is a lot of protection: 1 cm of bulk density 0.4 grams/cm³ snow is not enough protection, while 10 cm of 0.2 grams is plenty.

5. If we assume the 6" rule has worked OK (not sure it has, but let's assume so), and that it usually has been applied to a snow pack that has undergone wind action and settlement, then we could assume the snow was at a bulk density on the order of 0.4 grams/cm³. Switching to centimeters, 6" = 15 cm; 15 cm X 0.4 g/cm³ = 6.1 g/cm², which is column of water 6.1 cm high, and now we have a stipulation that is in a mass unit. In English units it is column of water about 2.5" of water that needs to be between the vehicle and tundra.

To me this is not even an absolute minimum, and I question whether it is enough. So frankly, I would want to see at least **3" column of water equivalent** above the tussock tops, since average tussock relief is often >15 cm.

For normal snow densities we often encounter, that would be a rule that looks like this: 10" of snow, density of 0.3 grams/cm³ (since we are working in English units, then it would be 10" of snow at a specific gravity of 0.3. If the snow was only a specific gravity of 0.2, then we would need 15" of snow; if it was 0.1, then 30" of snow; if it was 0.5, then we can get away with 6"

The 3" water column rule	
Snow Specific Gravity	Needed Snow Depth (inches)
0.05	60
0.1	30
0.15	20
0.2	15
0.25	12
0.3	10
0.35	9
0.4	8
0.45	7
0.5	6

6. One of the pressing problems is that the seismic is supposed to start in December....but both depth and density tend to increase with time across the winter. My experience is that

meeting the 3" water column rule, or even the 2.5" could be difficult that time of year.

7. In fact, while 2018 appears to be all-time record snow for much of the North Slope, Frank (USGS) and Eric (BLM) hit a lot of areas where there was only marginal snow for snowmobiling this April. More typical may be (see attached pictures) conditions we encountered in April 2017....which would fail to pass virtually any opening criteria....thereby precipitating some sort of political crisis I suspect. This is why I would strongly urge the approach to be one that uses airborne photogrammetric snow depth mapping to guide the exploration. In a "bad" year, this approach might actually allow for work, while a dumber, strict rule approach could well shut things down (until the politicians overrule).

8. As discussed by phone, also consider whether there needs to be a "percentage snow cover" criteria for when an area needs to be vacated. I include a slide show of the melt near Ivotuk....you can see that large areas of snow might meet a depth (or even water column) criteria yet overall the area is has patched out due to the melt too much. It is pretty easy to assess the percent snow cover that would drive such a stipulation.

Matthew

On 7/6/18 11:31 AM, Wendy Loya wrote:

Matthew..

PLEASE DO NOT DISTRIBUTE FURTHER- Draft for soliciting your expertise only. Final document may be significantly different based off input from all cooperating agencies, including the State of Alaska and BLM.

This is a marked up version of the NPRA best management practice for winter tundra travel. There is no snow depth, much less SWE, defined. However, based off our conversation, perhaps this is adequate for leaving space for us to work out the appropriate SWE as we go. Very draft ideas in red, other edits we might make in yellow.

***Winter tundra travel and seismic work
C-2 Best Management Practice***

Objective: Protect stream banks, minimize compaction of soils, and minimize the breakage, abrasion, compaction, or displacement of vegetation.

Requirement/Standard:

a. Ground operations shall be allowed only when frost and snow cover are at sufficient depths to protect the tundra. Soils should be frozen at least 12 inches below the lowest surface height (e.g. intertussock space). Snow depth should be no less than 6 inches on the coastal plain (below elev XX) and 9 inches in the foothills (above elev XX) at a Snow Density of at least 0.4 g/XX. Ground operations shall cease when the spring snowmelt begins when snow depth and density no longer meet criteria established at the time of permitting. The exact dates will be determined by the **authorized officer in consultation with the US Fish and Wildlife Service.** (approximately May 5 in the foothills area where

elevations reach or exceed 500 feet and approximately May 15 in the northern coastal areas)-

b. Low-ground-pressure vehicles shall be used for on-the-ground activities off ice roads or pads. Low- ground-pressure vehicles shall be selected and operated in a manner that eliminates direct impacts to the tundra by shearing, scraping, or excessively compacting the tundra mat. **Note:** This provision does not include the use of heavy equipment such as front-end loaders and similar equipment required during ice road construction.

c. Bulldozing of tundra mat and vegetation to create trails or seismic lines is prohibited. Clearing of drifted snow is allowed on existing snow trails, snow pads for camps, ice roads, or ice pads to the extent that the tundra mat is not disturbed.

d. To reduce the possibility of ruts, vehicles shall avoid using the same trails for multiple trips unless necessitated by serious safety or superseding environmental concern. This provision does not apply to hardened snow trails for use by low-ground-pressure vehicles such as Rolligons.

e. The location of ice roads shall be designed and located to minimize compaction of soils and the breakage, abrasion, compaction, or displacement of vegetation. Offsets may be required to avoid using the same route or track in the subsequent year.

~~f. Motorized ground-vehicle use within the Colville River Special Area associated with overland moves, seismic work, and any similar use of heavy equipment shall be minimized within an area that extends 1 mile west or northwest of the bluffs of the Colville River, and 2 miles on either side of the Kogosukruk and Kikiakrorak rivers and tributaries of the Kogosukruk River from April 15 through August 5, with the exception that use will be minimized in the vicinity of gyrfalcon nests beginning March 15. Such use will remain 0.5 mile away from known raptor nesting sites, unless authorized by the authorized officer.~~

Dr. Wendy M. Loya,
Arctic Program Coordinator
Office of Science Applications, US Fish and Wildlife Service
Anchorage, Alaska
907.786.3532 (office)
907.277.2942 (mobile)

--
Dr. Matthew Sturm
Geophysical Institute
University of Alaska-Fairbanks
907-474-5257
msturml@alaska.edu

From: [Jones, Nichelle \(Shelly\)](#)
To: [Steve Berendzen](#); [Fox, Joanna](#); [Wendy Loya](#); [Robert Brumbaugh](#); [Sarah Conn](#)
Subject: Seismic EA Check-In Cancelled
Date: Tuesday, September 4, 2018 3:09:01 PM

We will be sending out our revised ROPS for your review tomorrow and hoping to post the EA to our eNEPA on Friday.

We are still working to get the applicants proposed snow/frost monitoring plan clarified.

We need the extra time this afternoon to make some of the revisions for staff that are out sick.

Shelly Jones
Acting Manager
Arctic District Office
222 University Avenue
Fairbanks, AK 99709

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(907) 460-0086 (c)

From: [Heath Nolan](#)
To: [Wendy Loya](#)
Subject: Re: Coastal Plain Seismic Edits
Date: Thursday, September 6, 2018 9:11:16 AM

Hi I will try to call you this morning around 8 am as I would like to discuss the science related to tundra travel and the 3" SWE (snow water equivalency) or if you get a chance to call me I can be reached at 907 271-4413

On Thu, Aug 30, 2018 at 2:07 PM, Wendy Loya <wendy_loya@fws.gov> wrote:

Hi Shelly and everyone,

I appreciate the discussion around the appropriate protocol for snow monitoring. I would like to weigh in here on behalf of the FWS with recommendations that I believe are consistent with our comments on the preliminary EA:

- 1) For Alternative A, SAE's proposed action, there is an incomplete snow monitoring protocol.
 - a. We would expect SAE to follow DNR winter tundra travel opening and closing determinations for their route across State lands. Note of interest, Exxon has sometimes put out supplemental thermistors that are similar to DNR's to see if conditions going to Pt. Thomson are ready and I believe they share that data with DNR towards opening date determination.
 - b. Monitoring only on State land is not likely to be sufficient to describe conditions on the Coastal Plain, which experiences less snow. The shorter distance from the coast to the mountains results in different precipitation and wind conditions compared to lands west of the Canning River /Saddlerochit Mountains, which can produce katabatic winds which sweep snow off the coastal plain. SAE does describe a snow monitoring protocol with transects in the document containing answers to the questions BLM asked following their initial Plan of Operations, but it is not clear when and where they would implement the measurements, other than by the advance team. **I would recommend that Alt A require SAE to submit a complete snow depth and soil freeze depth monitoring protocol as part of their requirements under Alt A, including describing the vehicles they use when evaluating snow depth and how they deal with crossing**

low-snow areas as they find a pathway forward to the next area with adequate snow.

2) For Alt B, the FWS recommends that BLM, in partnership with FWS, and/or SAE implement a combination of remote monitoring with thermistors and an advance crew that does measurements including depth, density and structure to determine open/close dates. As was stated yesterday (via email from Paul Leonard Wed 8/29 at 5pm), landscape features and predictable wind patterns help shape the landscape-scale patterns of snow in the area. Thus, the deployment and site specific measurements should consider these patterns in determining where they should be placed.

We stand by our recommended BMPs/ROPs:

7. Ground operations would be allowed only when frost depth is at sufficient depths and snow cover is at sufficient depth, density and structure to protect the tundra (See Table 2 and BMP 8), as determined by the authorized officer, in consultation with the USFWS. The applicant is required to develop a snow monitoring protocol for approval by the authorized officer. The snow monitoring proposal shall be for the entire project area and project period, and will be used to help inform the authorized officer when required snow depth and soil temperature are met (e.g. opening of winter tundra travel), continue to be met and no longer met (e.g. overwinter changes, winter tundra travel closing).

8. The criteria for winter tundra travel are: soils should be frozen to at least -23°F at least 12" below the lowest surface height (e.g. trough or intertussock space). Snow depth and snow density should amount to no less than a Snow Water Equivalent of 3" over the highest vegetated surface (e.g. top of tussock; See Table 2). Simultaneously, snow structure should predominantly be crystals <1mm to create a firm snowpack. Larger hoar frost crystals (2-6mm) can easily be compacted and thus would not provide sufficient depth to protect vegetation and soils.

The Operator will be responsible for monitoring snow depth, structure and density and recording coordinates of sampling sites prior to proceeding with seismic and camp vehicles. Depth, structure and density will be measured along the proposed route ~~every 0.5 mile or~~ where an obvious change in snow conditions, terrain, vegetation type or other physical features suggest snow conditions may be different than the previous measurement.

At each sampling site, measurements will be made along a 100 meter (328

ft.) transect, away from any structures. At no less than 20 points in each transect, measurements of depth, density and structure will be taken at the shallowest depth within a 10-foot area at each sample site (i.e. on top of the tussocks, not in the troughs), and a GPS coordinate and a description of the terrain shall be recorded. The snow structure will be used to help determine the load bearing ability of the snow.

The applicant shall notify the authorize officer if snow conditions do not meet criteria and shall not proceed through areas of low snow.

9. Keep Table as is; at this time we are assuming that 3” SWE is sufficient to protect both coastal and foothills vegetation, eliminating the need to identify when the terrain transitions from coast to foothills. We support adding Eric’s description of structure: The desired snow structure should be recorded as crystal sizes less than 2mm in size for the desired depth and density shown in the above table. Crystal sizes above 2mm will require a hardness of pencil or stronger according to the Snow, Weather, Avalanche Guidelines (SWAG 2016). FWS and BLM can work together to evaluate the efficacy of these requirements because we will have the snow data on hand when we follow up to evaluate impacts in the summer and if necessary, in subsequent years,.

10. When snow depth and density no longer meet criteria in the spring, the authorized officer will order ground operations to cease.

11. The use of snow machines to initially pack trails a few days ahead of operations will aid in the initial densification of the snow pack. Although tilling of the snow can destroy the depth hoar crystals and create a dense snow pack it is likely to damage vegetation and would not be the preferred method. Snow crystal sizes of less than 1 mm will provide the more desirable structure for vehicle travel- firm cohesive snow. It is the depth of this firm snow that is most supportive of winter tundra travel vehicles.

12. Seismic operations and winter overland travel will be monitored by agency representative(s) and operators will be required to accommodate the representative(s) during operations.

Barring any further information from the BLM and FWS staff that had the opportunity to tour SAE's operations and equipment, I agree that we should be ready to make a decision (and ensure that thermistors get deployed promptly!)

Thank you all!

Wendy

Dr. Wendy M. Loya,

Arctic Program Coordinator

Office of Science Applications, US Fish and Wildlife Service

Anchorage, Alaska

907.786.3532 (office)

907.227.2942 (mobile)

From: Vosburgh, Timothy <tvosburgh@blm.gov>

Sent: Thursday, August 30, 2018 12:23 PM

To: Heath, Nolan <nheath@blm.gov>

Cc: Jones, Nichelle (Shelly) <njones@blm.gov>; Guyer, Scott <sguyer@blm.gov>; Geisler, Eric <egeisler@blm.gov>; Donna Wixon <dwixon@blm.gov>; Sarah LaMarr <slamarr@blm.gov>; Rose, Joshua <joshua_rose@fws.gov>; Wendy Loya <wendy_loya@fws.gov>

Subject: Re: Coastal Plain Seismic Edits

Although a big commitment from the agencies there is good justification for the BLM & FWS to oversee the snow monitoring. That's not to say the company can not do monitoring too.

Tim

On Thu, Aug 30, 2018 at 12:13 PM, Heath, Nolan <nheath@blm.gov> wrote:

I talked with Eric and he said

that alternative A is more the traditional way we measure but to be more protective he was using the F&W way with the monitoring. He did say it was your decision regarding how much monitoring you felt was needed. If you only thought 2 sites per section as apposed to 4 he was fine with that. He said that would still provide 5200 monitoring points for the project.

On Thu, Aug 30, 2018 at 11:17 AM, Jones, Nichelle (Shelly) <njones@blm.gov> wrote:

As we get closer to figuring out exactly what we need to know and be able to justify we need to more quickly figure out whether what we are proposing makes sense and get on the same page, I am trying to boil down a lot of facts into something that is understandable. I could use your help resolving these issues because I have about run out of time.

Do you mean we should use the DNR methods (tundra stations-for temperature and field confirmation of snow depth) and employ them on the coastal plain? Or do you mean that the current DNR monitoring on state lands would be adequate to inform the conditions on the coastal plain?

The information is that there are somewhat different soils and topography of the 1002 area and that particularly to inform the opening date and the closing date, it would be important to have more locally proximate readings.

Eric was recommending 15 square mile spacing-12 frost monitoring on these tundra stations. They cost \$5K each so the cost is an important thing we will need to justify.

The snow monitoring (measuring and weighing) seems like it also needs some additional discussion before this is ready for prime time. What is being proposed is not completely clear, but leads me to believe they plan to do snow depth measurements only, up to 72 hours prior to entering an area at .5 mile increments. It is not clear if these are point samples adjacent or line transects perpendicular to the trail. Using the DNR protocol, if I understood Melissa correctly, they would not be expected to weigh the snow. DNR would themselves normally take 20 measurements along a 100M transect and weigh the samples in the lab at night.

Each transect usually takes about an hour to conduct.

I am coming to the conclusion that BLM and FWS will need to function in a similar way to DNR on this if we do not want to apply their readings all the way across the coastal plain, we need to take on some of the monitoring ourselves. It is just going to be too hard to justify and does not seem practical to implement I'm afraid. It is just too cold and takes too long to be doing the weighing of a lot of samples in the field.

I know FWS and BLM would like to install some tundra stations ourselves to help inform the the freeze down to see if it is happening at the same time as it is along the Haul Road where DNR currently monitors it. We could also confirm ourselves the water equivalency on a smaller number of the transects to

correlate to SAE's snow measurements to help inform the authorized officer's decision to allow travel on a particular route.

What do you think about that?

Shelly Jones

Acting Manager

Arctic District Office

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[Fairbanks, AK 99709](#)

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[\(907\) 460-0086](#) (c)

On Thu, Aug 30, 2018 at 9:12 AM, Heath, Nolan <nheath@blm.gov> wrote:

That is consistent with Mike G. comments as well and I would also agree.

On Thu, Aug 30, 2018 at 8:50 AM, Guyer, Scott <sguyer@blm.gov> wrote:

I have discussed a few times with Eric the fact that the snow depth/density table while being good science has not been validated by actually testing and research with seismic/track vehicles. I do not see how we can use this as a BMP without the research to back it up. Also to incorporate the Snow Avalanche Guidelines into the BMPs for the same reason, good science but not verified through research on the North Slope. On a call this week with the state discussing their tundra opening snow and frost protocols it became clear to me that using their established methods

should be the standards we should use in the EA.

Scott

On Thu, Aug 30, 2018 at 7:14 AM, Heath, Nolan <nheath@blm.gov> wrote:

I looked over Eric's comments and added a few additional edits. Hope this helps.

On Wed, Aug 29, 2018 at 5:28 PM, Geisler, Eric <egeisler@blm.gov> wrote:

Here are my most recent comments.

When we are ready to revise the BMPs and develop a monitoring plan I am glad to help

Eric Geisler, CF

Program Lead for Forestry, Invasive Species, Range, Botany, ES&R

BLM Alaska State Office

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[Anchorage, AK 99513](#)

W 907-271-1985

C 509-220-4712

On Wed, Aug 29, 2018 at 12:36 PM, Jones, Nichelle (Shelly)
<njones@blm.gov> wrote:

Hello CP IDT Authors,

We are nearing the finish line, but still have one large task to accomplish by EOD Thursday, August 30, , which is addressing outstanding comments by the USFWS, and editing your sections based on comments by FWS, Ted and the Solicitor.

Attached to this email are three documents: 1) the latest Draft version of the EA dated 8.29.2018; 2) the USFWS comment table with IDT author identified in the last column; and 3) the previous draft EA with lines numbers that FWS used for their review.

Directions:

1. Go through the USFWS comment table and look for your name in the last column. For those comments assigned to you, please use the A/R/M column to indicate your response.

- For all of the A's, please edit your section of the 8.29.2018 Draft EA using track changes to reflect the recommended change.
- For all R's please replace your name in the last column with the reason why you rejected the change/comment.
- for all M's, please make your modified edit to the 8.29.2018 document using track changes, and replace your name with the modified edit.

Please note that the current EA has already been revised to reflect the edits of the BLM IDT reviewers, and well as SOL/ALT edits that did not require specialist input. Therefore, the page and line numbers referenced by USFWS are not accurate anymore. If you need assistance in figuring out the text being referred to, use the previous draft 8.20.2018 EA with lines numbered (attached). And--it may very well be that you do not need to make the changes requested by FWS. Many of FWS comments may be a result of their unfamiliarity of seismic exploration. Use your best professional judgement based on your knowledge and experience of the activity, resources, and impacts.

2. Please review your sections in the draft EA 8.29.2018. There are marginal comments of suggested edits by the Solicitor and Ted Murphy that may also need to be addressed. Please make those edits/changes to the document using track changes, or provide a response comment within the bubble.

3. Once you are finished making your edits and responses to the draft EA and to the USFWS comment table, please save each document by adding your initials to the end. Send your document to Donna Wixon by EOD Thursday, August 30. If you cannot make this deadline, please send me an email explaining why, and when you anticipate being able to complete this task.

I am sorry that this is short turn-around time, everyone is doing an amazing job, we are close!

Thank you,

Shelly

Shelly Jones

Acting Manager

Arctic District Office

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--

Scott Guyer

Landscape Initiatives Coordinator

Alaska State Office

907-223-6759 (wk cell)

*"Not the victory but the action, Not the goal but the game,
In the deed the Glory!"*

From: [Wendy Loya](#)
To: [Nolan Heath](#)
Subject: FW: [EXTERNAL] Re: NPRA snow depth requirement (best management Practice)
Date: Thursday, September 6, 2018 10:24:00 AM
Attachments: [HulaHulaApril2017 - 1 \(1\).jpg](#)
[HulaHulaApril2017 - 1.jpg](#)
[IvoMelt2000.dat](#)
[image002.png](#)

Hi Nolan,

Below is an email I sent to Shelly Jones on Tuesday, and below that the email we got when we were developing written BMPs for the Leasing EIS. A little context: The language in our draft BMPs that Dr. Matthew Sturm reviewed by email and that FWS is recommending was derived from previous discussions about snow in general and snow in the Arctic Refuge, as well as discussions with DNR and Exxon, who implement monitoring to work with DNR on tundra travel opening to get to Pt. Thomson.

I am forwarding Dr. Sturm's white paper in a separate email.

FWS is working with Dr. Sturm and his lab at the UAF Geophysical Institute to organize a snow workshop on Oct 9-10th. We have asked DNR to be a co-host, given their experience. Through that workshop we hope to be able to have good conversation to collate diverse information, experience, and sources of science and science needs. It is a next step to both refining snow monitoring for travel as well as impacts monitoring. We do hope good recommendations will come out of that which can us work collaboratively and successfully with SAE and future operators to get the work done while avoiding impacts.

Thanks!
Wendy

Dr. Wendy M. Loya,
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From: Wendy Loya <wendy_loya@fws.gov>
Sent: Tuesday, September 4, 2018 8:26 AM
To: Nichelle (Shelly) Jones <njones@blm.gov>
Subject: FW: [EXTERNAL] Re: NPRA snow depth requirement (best management Practice)

Good morning Shelly,

Here is some further background info to support the FWS recommended stipulations, as advice from Dr. Matthew Sturm. I have highlighted the sections that discuss the state standards and our

recommended standards.

At this time, I think we are comfortable to have just one depth standard across the coastal plain, resulting in 3" of SWE. The attached images show low snow conditions even in a high-snow winter like 2018. I think it is important to really talk through this with them to ensure they are successful this winter.

Call if you have further questions,
Thank you,
Wendy

Dr. Wendy M. Loya,
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From: Matthew Sturm <msturm1@alaska.edu>
Sent: Saturday, July 7, 2018 3:18 PM
To: Wendy Loya <wendy_loya@fws.gov>
Cc: Paul Leonard <paul_leonard@fws.gov>
Subject: [EXTERNAL] Re: NPRA snow depth requirement (best management Practice)

Here are several comments on the draft:

1. The stipulations are being based on those being used in the NPRA, but two questions make this a somewhat shaky foundation:

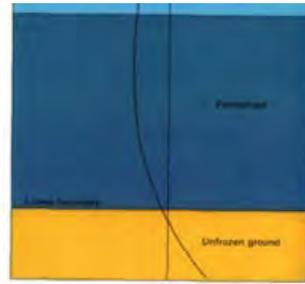
- Are there case studies that document that the standards as applied in NPRA have been successful to date? I am unaware of any longitudinal studies tracking conditions since activities in NPRA have increased. What level of damage has been observed under what snow conditions?
- There are distinct physiographic differences between the 1002 and the northern NPRA, chiefly that the former experiences higher winter winters than the latter, while the latter domain is about 50% thaw lake in comparison <10% for the 1002 area (these percentages are rough estimates but could be done quantitatively).
- To my knowledge, the 6" 12" rule was put forward by Max Brewer of NARL prior to the first work on the NPRA (this fact may be in Reed's 1958 USGS Professional Paper on NPRA), and it is mentioned in Gryc's USGS Professional Paper 1240-C on the area. The basis for it was mostly common sense: 12" to prevent ground deformation; 6" to buffer the vegetation. But of course, the stipulations date from an era when there was a higher acceptance of damage (see image from Gryc's paper).

caused. Ice roads can be built for the use of surface vehicles. Large or permanent structures are placed

but, as demonstrated by this program, the problems can be solved.



Tracks made by a tracked vehicle in the tundra during the Peat-t program.



Generalized graph of ground temperature versus depth. In the Arctic, annual temperature variations may be detected to a depth of 70 to 100 feet. The lower boundary for permanently frozen ground is about 1,000 feet at Barrow and 2,000 feet at Peulisek Bay (modified from Hansen and Brown, 1971).

2. While it sounds like the protocol is to measure 20 depths across 100-m transects and average, the stipulation merely says 6" for snow. But the frost (12") is specified as being measured in the intertussock area. To be parallel, one might think the snow standard would be 6" above tussock tops to ensure an adequate minimum cover. I would also like the 20 measurements to be evenly spaced, but the transect location to be somewhat random so it is not deep-snow biased.

3. Coastal vs. Foothills snow: While the Camden Bay to Marsh Creek line shows less snow a Marsh Creek, this is due to strong katabatic scour drainage winds off of the Sadelrochit Mountains. It is unclear (as we don't have comparative data along North-South line across the 1002) whether this is a general or local gradient. See #2: if the 6" is specified as the minimum above most tussock tops, then is a Foothills vs. Coastal value difference necessary?

4. The 6" rule has always been flawed because it specifies "volume" rather than "mass". Consider that a balloon has a large volume, and almost not protection value when run over by a vehicle. So first a lesson in snow density:

Snow falls from the sky and once on the ground begins to settle. Initial (just after deposition) densities range from 0.05 grams/cm³ (3.12 lbs/ft³) for fluffy powder and no wind, to about 0.3 grams/cm³ for wet Cascade cement. Densification on the ground increases the density; it takes place slowly in cold conditions and thin snow packs, and rapidly in deep wet snow packs. Wind is the other way snow can get dense....the wind picks up grains, pulverizes them and then deposits them, packing them tighter and sintering them (bonding them) into a cohesive mass.

Most seasonal snow covers (including the 1002) are made up of 5 to 15 layers of snow, each with an initial density and each undergoing some densification. The bulk density of the whole snow pack is the weighted average of all these layers. Typically, we just core the whole thing and weigh the core

to get the bulk density.....but do remember that we might have a dense snow pack 40 cm deep, get a big fluffy snowfall that adds an additional 20 cm of fluff....and now the pack that had an average density that met a standard, no longer does...the bulk value has been greatly reduced.

Worldwide, the average bulk density of seasonal snow packs is 0.3 gram/cm³ (18.7 lbs/cubic ft.). Drifts in the NPRA and 1002 would have bulk densities of 0.4 to 0.5 grams/cm³ (25 to 31 lbs/ft³). Without melting or heavy comminution, physical compaction of snow can only bring the density 0.6 gram/cm³.

So Specifying depth is not a good approach, but then neither is specifying density alone. 6" of fluff is a No Go, while 6" of 0.6 grams/cm³ drift snow is a lot of protection: 1 cm of bulk density 0.4 grams/cm³ snow is not enough protection, while 10 cm of 0.2 grams is plenty.

5. If we assume the 6" rule has worked OK (not sure it has, but let's assume so), and that it usually has been applied to a snow pack that has undergone wind action and settlement, then we could assume the snow was at a bulk density on the order of 0.4 grams/cm³. Switching to centimeters, 6" = 15 cm; 15 cm X 0.4 g/cm³ = 6.1 g/cm², which is column of water 6.1 cm high, and now we have a stipulation that is in a mass unit. In English units it is column of water about 2.5" of water that needs to be between the vehicle and tundra.

To me this is not even an absolute minimum, and I question whether it is enough. So frankly, I would want to see at least **3" column of water equivalent** above the tussock tops, since average tussock relief is often >15 cm.

For normal snow densities we often encounter, that would be a rule that looks like this: 10" of snow, density of 0.3 grams/cm³ (since we are working in English units, then it would be 10" of snow at a specific gravity of 0.3. If the snow was only a specific gravity of 0.2, then we would need 15" of snow; if it was 0.1, then 30" of snow; if it was 0.5, then we can get away with 6"

The 3" water column rule	
Snow Specific Gravity	Needed Snow Depth (inches)
0.05	60
0.1	30
0.15	20
0.2	15
0.25	12
0.3	10
0.35	9
0.4	8
0.45	7
0.5	6

6. One of the pressing problems is that the seismic is supposed to start in December....but both

depth and density tend to increase with time across the winter. My experience is that meeting the 3" water column rule, or even the 2.5" could be difficult that time of year.

7. In fact, while 2018 appears to be all-time record snow for much of the North Slope, Frank (USGS) and Eric (BLM) hit a lot of areas where there was only marginal snow for snowmobiling this April. More typical may be (see attached pictures) conditions we encountered in April 2017....which would fail to pass virtually any opening criteria....thereby precipitating some sort of political crisis I suspect. This is why I would strongly urge the approach to be one that uses airborne photogrammetric snow depth mapping to guide the exploration. In a "bad" year, this approach might actually allow for work, while a dumber, strict rule approach could well shut things down (until the politicians overrule).

8. As discussed by phone, also consider whether there needs to be a "percentage snow cover" criteria for when an area needs to be vacated. I include a slide show of the melt near Ivotuk....you can see that large areas of snow might meet a depth (or even water column) criteria yet overall the area is has patched out due to the melt too much. It is pretty easy to assess the percent snow cover that would drive such a stipulation.

Matthew

On 7/6/18 11:31 AM, Wendy Loya wrote:

Matthew..

PLEASE DO NOT DISTRIBUTE FURTHER- Draft for soliciting your expertise only. Final document may be significantly different based off input from all cooperating agencies, including the State of Alaska and BLM.

This is a marked up version of the NPRA best management practice for winter tundra travel. There is no snow depth, much less SWE, defined. However, based off our conversation, perhaps this is adequate for leaving space for us to work out the appropriate SWE as we go. Very draft ideas in red, other edits we might make in yellow.

***Winter tundra travel and seismic work
C-2 Best Management Practice***

Objective: Protect stream banks, minimize compaction of soils, and minimize the breakage, abrasion, compaction, or displacement of vegetation.

Requirement/Standard:

a. Ground operations shall be allowed only when frost and snow cover are at sufficient depths to protect the tundra. Soils should be frozen at least 12 inches below the lowest surface height (e.g. intertussock space). Snow depth should be no less than 6 inches on the coastal plain (below elev XX) and 9 inches in the foothills (above elev XX) at a Snow Density of at least 0.4 g/XX. Ground operations shall cease when the spring

snowmelt begins when snow depth and density no longer meet criteria established at the time of permitting. The exact dates will be determined by the **authorized officer in consultation with the US Fish and Wildlife Service.** ~~(approximately May 5 in the foothills area where elevations reach or exceed 500 feet and approximately May 15 in the northern coastal areas).~~

b. Low-ground-pressure vehicles shall be used for on-the-ground activities off ice roads or pads. Low- ground-pressure vehicles shall be selected and operated in a manner that eliminates direct impacts to the tundra by shearing, scraping, or excessively compacting the tundra mat. **Note:** This provision does not include the use of heavy equipment such as front-end loaders and similar equipment required during ice road construction.

c. Bulldozing of tundra mat and vegetation **to create** trails or seismic lines is prohibited. **Clearing of drifted snow is allowed on existing snow trails, snow pads for camps, ice roads, or ice pads to the extent that the tundra mat is not disturbed.**

d. To reduce the possibility of ruts, vehicles shall avoid using the same trails for multiple trips unless necessitated by serious safety or superseding environmental concern. This provision does not apply to hardened snow trails for use by low-ground-pressure vehicles such as Rolligons.

e. The location of ice roads shall be designed and located to minimize compaction of soils and the breakage, abrasion, compaction, or displacement of vegetation. Offsets may be required to avoid using the same route or track in the subsequent year.

~~f. Motorized ground-vehicle use within the Colville River Special Area associated with overland moves, seismic work, and any similar use of heavy equipment shall be minimized within an area that extends 1 mile west or northwest of the bluffs of the Colville River, and 2 miles on either side of the Kogosukruk and Kikiakrorak rivers and tributaries of the Kogosukruk River from April 15 through August 5, with the exception that use will be minimized in the vicinity of gyrfalcon nests beginning March 15. Such use will remain 0.5 mile away from known raptor nesting sites, unless authorized by the authorized officer.~~

Dr. Wendy M. Loya,
Arctic Program Coordinator
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--
Dr. Matthew Sturm
Geophysical Institute
University of Alaska-Fairbanks
907-474-5257
msturml@alaska.edu

From: [Wendy Loya](#)
To: [Miriam \(Nicole\) Hayes](#)
Subject: RE: Last on my list
Date: Thursday, September 6, 2018 1:55:00 PM

Hi Nicole,

I apologize for not getting back to you on the remaining items.

The comment in the table with my name is a compilation of comments from multiple FWS employees; nevertheless I am not sure what further clarification I can provide? It is asking that the RFDS be considered that aircraft may be arriving from other airstrips, thus the distribution of noise impacts would potentially be broader than described. It also asks that noise disturbance be analyzed spatially by alternative, so for example under Alt B disturbance noise disturbance is likely to be greater in the calving area identified in Alt D than it would be in Alt D, where there is no leasing. Also noise disturbance in river corridors for wildlife and recreation users/hunters. BLM Arctic Field District Office, perhaps Deb Nigro in particular, has information on aviation activity for permitted activities in NPRA that has been summarized and presented at subsistence meetings. That type of information could be used to project aviation activity associated with development and thus noise disturbance based off information presented in the DEIS and referenced in NPRA docs (GMT2 DEIS, which we suggested be incorporated into Coastal Plain Leasing DEIS because it is difficult to know where and what was being referred to). We already expect significant increases in temporary, localized noise across the refuge from winter seismic and associated summer cleanup activities, as well as research activities associated with implementing an oil and gas program.

I think you have the 2nd one answered, and the third might be covered in the National Research Council Cumulative Effects, available here: <https://www.nap.edu/catalog/10639/cumulative-environmental-effects-of-oil-and-gas-activities-on-alaskas-north-slope>

Give me a ring if you want to ask more specifics or this is unclear ☺ I am on leave but definitely available to help.

Wendy

Dr. Wendy M. Loya,
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From: Hayes, Miriam (Nicole) <mnhayes@blm.gov>
Sent: Thursday, September 6, 2018 10:54 AM
To: Wendy Loya <wendy_loya@fws.gov>
Subject: Re: Last on my list

Hi Wendy,
 Any additional information on the first item on the table?
 Thanks,
 Nicole

Nicole Hayes
 Project Coordinator
 Bureau of Land Management
 222 W. 7th Avenue #13
 Anchorage, Alaska 99513
 Desk: (907) 271-4354
 Cell: (907) 290-0179

On Thu, Aug 30, 2018 at 2:41 PM, Hayes, Miriam (Nicole) <mnhayes@blm.gov> wrote:

3-17; 3-18 (Acoustic Env)	30-40; 1-21	Loya/FWS	Noise disturbance from construction and aircraft to humans and wildlife are of great concern to communities across the Arctic. The DEIS does not adequately analyze or attempt to quantify the level of activity and how it will vary across alternatives. An estimate should be provided of annual activity and the acres or proportion of the area that would be affected by noise. Further, the DEIS largely considers Kaktovik Airport to be the hub of aircraft disturbance and does not adequately consider air traffic coming from Prudhoe Bay or other sites on the Dalton highway with airstrips. Further, the DEIS does not account for the impacts associated with support activities, such as surveys, stick-picking and research, much of which is done by helicopters which have been used only rarely under current management. The DEIS should reference the aviation data collected by BLM for landings in NPRA as an example/analog for activity (e.g. ~10,000 landings in 2018) and describe where it is likely to occur under each alternative.	A	Check with Wendy on available data
3-162 (Subsis)	11	Carl/FWS	Recommend that the analysis include communities in Canada	A	Revise as appropriate to be consistent with FSB

			<p>that rely on the PCH for customary and traditional uses. We recommend that the analysis include those communities in order to “ensure opportunities for customary and traditional uses of the Porcupine Caribou Herd by ... in Yukon and Northwest Territories, Native users as defined ...” Agreement Between the Government of Canada and the Government of the United States of America on the Conservation of the Porcupine Caribou Herd, Section 2(b)(2). See also id. at Section 3(b) (“The Parties will ensure that the Porcupine Caribou Herd, its habitat and the interests of users of Porcupine Caribou are given effective consideration in evaluating proposed activities within the range of the Herd.”) and Section 3(g) (“When evaluating the environmental consequences of a proposed activity, the Parties will consider and analyze potential impacts, including cumulative impacts, to the Porcupine Caribou Herd, its habitat and affected users of Porcupine Caribou.”). Additionally, the Federal Subsistence Board has recognized the customary and traditional use of caribou in Unit 26C by the residents of Point Hope, see 50 C.F.R. §100.24(a)(1), who are omitted from this analysis.</p>	<p>regulations –</p> <p>Check to see if there is known use in PtH and AKP of PCH in 26C</p>
3-189 (E)	10-11	Carl/FWS	<p>The history of oil and gas operations reflects that there are potential contamination sources for subsistence foods beyond just oil spills. This should be thoroughly acknowledged and detailed.</p>	<p>FWS – recommended language and reference?</p>

Nicole Hayes
Project Coordinator
Bureau of Land Management
222 W. 7th Avenue #13
Anchorage, Alaska 99513

Desk: (907) 271-4354
Cell: (907) 290-0179

From: [Hayes, Miriam \(Nicole\)](#)
To: [Wendy Loya](#)
Subject: Update
Date: Wednesday, September 12, 2018 10:47:35 AM

Sorry I didn't get a message out yesterday OR cancel the meeting. I'm not quite on this week...

As far as updates go:

1. We are still working on the Draft EIS with the target date to release still in late October. If that happens, we would hold public meetings in November. All of this is dependent on development of the DEIS based on all the feedback we received from cooperators on the PDEIS.
2. We are working through all the comments on the PDEIS and will send out the comment matrix with responses to comments.
3. We have contracted out development of a Programmatic Agreement (PA) for Section 106 for the EIS. I think it makes sense for FWS to be a signatory to the PA, however, I have not gone back to review the direction from the guidance Department yet to see if there is something we should do formalize this. More to come.
4. I intend to schedule a CA meeting late next week to provide a status update and answer any questions about next steps.
5. We are trying to reschedule G2G for Kaktovik for 9/26 and NVVTG, VVC, and AVC for 10/2. Who from FWS would participate?
6. I am working on a charter for when we do have public meetings on the DEIS. Who from FWS should I include on the manifest?

I think that's it for now.

Thanks for your patience.
Nicole

Nicole Hayes
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Cell: (907) 290-0179

From: [Jones, Nichelle \(Shelly\)](#)
To: [Steve Berendzen](#); [Fox, Joanna](#); [Joshua Rose](#); [Wendy Loya](#); [LaMarr, Sarah](#); [Donna Wixon](#); [Robert Brumbaugh](#)
Subject: I need to Cancel the Seismic EA Update Meeting Today
Date: Tuesday, September 25, 2018 2:02:00 PM

We met with SAE and ASRC yesterday and discussed the proposed snow monitoring stipulations as well as BMPs for operations in the vicinity of ringed seals. We will be keeping the concept of measuring density/SWE (3" SWE minimum) as well as depth (6" minimum), but will take out the table from the proposed ROP #7.

SAE also shared some recent sat. imagery with the staff in our state office, of an area near the NPRA they shot last year that had previously been publicized as damaged by seismic activities now showing little evidence of disturbance less than a year later. They also told us they were planning to offer some additional mitigation measures for polar bears in a meeting with FWS today. I am still not sure if the meeting in Utqiagvik is going to be rescheduled.

I will follow-up with Paul and Josh later this week regarding aviation planning for thermister installation.

I have the land status information now from Donna regarding the land status referred to in the state seismic application for SAE. It seems in SAE's application they stated partial lands within these townships. I will call the contact at DNR to and suggest clarifying that while part of these sections are state lands, part is also in the refuge. Steve you are correct that in T5N23E, all of section 36 is refuge and there are no state lands I will make sure I highlight that. However, Section 4 of T6N23E is not in the refuge, so perhaps you should double check that to make sure we are not overlooking something there. It appears to be entirely state. I will followup and cc you with an email with similar wording later this week.

-Shelly

Shelly Jones
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(907) 460-0086 (c)

From: [Jones, Nichelle \(Shelly\)](#)
To: msturm1@alaska.edu; [Fox, Joanna](#); [Paul Leonard](#)
Cc: [Head, Melissa M \(DNR\)](#); [Wendy Loya](#); [Charles Parr](#)
Subject: Re: [EXTERNAL] Snow Workshop 9-10 October
Date: Thursday, October 4, 2018 7:33:42 PM

Mathew: I agree it is unfortunate, but there should have been more coordination with me or others at BLM if you needed additional presenters for the workshop. I am not going to be able to take this on. I know Matt Whitman has prepared a presentation at your request that Chris Arpp will give on NPRA/ANWR hydrology. Matt and I will both be at another meeting on Wednesday.

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On Thu, Oct 4, 2018 at 4:33 PM Matthew Sturm <msturm1@alaska.edu> wrote:

Dear Shelly:

It seems unfortunate to not have this area covered, as (at least in my understanding) the enacting law opening the 1002 to development specifies that the management of the 1002 be "like" that of NPRA, hence knowing what has been done for snow in NPRA is important. I have been doing some research on what the practice has been and it has evolved over time, but the exact practice seems a bit fuzzy to me still.

Surely there is someone left in town from BLM who could cover this? I had a very productive conversation with Dave Yokel, and he knows it well, but he is now retired and it seems like more appropriate to have someone active.

Anyway, see if there is anything you can do.

Thanks.

Matthew

On 10/4/18 2:29 PM, Jones, Nichelle (Shelly) wrote:

Hello Matt: Unfortunately, I will not be able to speak to anything on the second day because I have a prior commitment and won't be able to attend the second day. At this time I can not even offer to find an alternate, because most of my staff will also be missing the second day of the workshop, with me, to attend a permitting meeting we had previously committed to.

I am also not prepared to come up with a 20 minute presentation to present on the first day either, but might be able to offer some additional information regarding what BLM uses for winter cross country travel stipulations and my understanding of how they have evolved over the years. I still won't use a lot of time or power point because I just don't have the time to pull anything together.

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On Thu, Oct 4, 2018 at 1:32 PM Matthew Sturm <msturm1@alaska.edu> wrote:

Dear Wendy and Melissa (plus Shelly):

We are going through the final arrangements for the *Arctic Refuge Snow Workshop* next week (October 9 and 10) at Pike's Waterfront Lodge in Fairbanks to ensure an interesting and productive meeting.

We have on the agenda that you will be speaking on Day 2 in the morning, each for about 20 minutes, about the existing regulatory environment for winter operations on State and Federal lands on the North Slope, or management considerations (in the case of USFWS) in ANWR. *Shelly: we currently lack a speaker who can address the same topic for the NPRA and would welcome a suggested speaker.* The goal of this section is to understand from a recent historical context how these northern lands have been managed with respect to snow and off-road travel. Of particular interest to workshop participants would be the ways in which State and Federal management intersect due to transiting. It would also be useful to discuss what we know and what we ought to know about how those prior management considerations have impacted the landscape and northern ecosystem.

We will have a computer and projector at the meeting and would plan to load your slides from a memory stick at 8:00 AM before the sessions start. There will be breakfast available at that time.

Please confirm by email that you understand and are comfortable with your charge. Let me know if you have any questions about either your part of the meeting or the meeting in general. Looking forward to seeing you there.

Thanks.

Matthew Sturm (msturm1@alaska.edu)(on behalf of the organizers)

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Dr. Matthew Sturm
Geophysical Institute
University of Alaska-Fairbanks
907-474-5257
msturm1@alaska.edu

--

Dr. Matthew Sturm
Geophysical Institute
University of Alaska-Fairbanks
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msturm1@alaska.edu

From: [Hamfler, Cindy](#)
To: [Loya, Wendy](#); [Paul Leonard](#); [Joshua Rose](#)
Subject: GIS Data - Coastal Plain Seismic EA FOIA
Date: Friday, October 5, 2018 4:28:12 PM

Dear Josh, Wendy and Paul,

BLM has had a FOIA request (actually multiple requests, but they will be responded to as one) to release information concerning the Coastal Plain Seismic EA. The GIS data used on maps in the EA should be released as part of the FOIA. I am planning on having all the data bundled up to respond to this FOIA by October 12th, although there has been no assigned due date for the FOIA response.

Below is a list of the datasets BLM received from FWS and used on the Coastal Plain Seismic EA. You will notice that little of it came with metadata. Would FWS want to write/add/review metadata for any of these datasets before they are released? Or should I add what I can and then release them as-is?

- 2 From FWS - **Perennial Springs** (No metadata, submitted to CP EIS on 20180712)
- 3 From FWS & USGS- **Refuge Projects, Activity Sites** (Created by CH from FWS spreadsheet, no metadata but CH could add some)
- 4 From FWS - **Aufeis Areas** (No metadata, submitted to CP EIS on 20180712)
- 5 From FWS - **Waterbody Depths** (Have citation, No metadata)
- 6 From FWS - **Known Fish Overwintering Areas** (Have Citation, No metadata)
- 7 From FWS- **Rivers found to be eligible & suitable for Wild & Scenic River System inclusion**(from CCP, Has metadata)

Thanks,
Cindy

BLM AK - GIS Specialist
222 University Ave. Fairbanks AK 99709
(907) 474-2213

From: [Jones, Nichelle \(Shelly\)](#)
To: [Donna Wixon](#); [LaMarr, Sarah](#); [Robert Brumbaugh](#); [Hayes, Miriam \(Nicole\)](#); [Fox, Joanna](#); [Joseph Keeney](#); [Wendy Loya](#)
Subject: Cancelling Seismic EA Meeting Again Today
Date: Tuesday, October 16, 2018 1:20:51 PM

Still waiting to hear back on ITR process for FWS. We expect to post the EA on eNEPA very shortly after we hear back on that. Still anticipating 30 day public comment period and public meeting in Utquiagvik a couple of weeks after we post it. I will check in with you next Tuesday and/or send an update if something changes between now and then.

Happy Tuesday!

-Shelly

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From: [Wendy Loya](#)
To: [Miriam \(Nicole\) Hayes](#); [Edward Decleva](#)
Subject: RE: Arctic Plain EIS/PA
Date: Tuesday, October 16, 2018 3:45:00 PM

Thank you, Nicole. It was great to have the chance to hear from all the relevant organizations today and we trust that BLM and the subcontractor will come up with a pathway forward.

We could use the 2-3pm time slot we normally use for our joint meeting? We can host here or come downtown.

Wendy

Dr. Wendy M. Loya
Arctic Program Coordinator
US Fish and Wildlife Service, Office of Science Applications
Anchorage, Alaska
907.786.3532 (office)
907.227.2942 (mobile)

From: Hayes, Miriam (Nicole) <mnhayes@blm.gov>
Sent: Tuesday, October 16, 2018 1:17 PM
To: Edward Decleva <edward_decleva@fws.gov>
Cc: Wendy Loya <wendy_loya@fws.gov>
Subject: Re: Arctic Plain EIS/PA

Hi Ed,

I appreciate your participation and agree that we need to be clear on what the PA will be accomplishing vs measures that will need to be accomplished pre-development. I am happy to meet with FWS prior to October 25 - early next week sometime?

Thanks,

Nicole

Nicole Hayes

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On Tue, Oct 16, 2018 at 11:49 AM Decleva, Edward <edward_decleva@fws.gov> wrote:

Hi Nicole,

I recommend BLM and USFWS talk separately prior to the Oct 25 parties meeting about our two agency's roles/responsibilities in the PA.

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I'd also like to discuss with you my take on SHPO and ACHP perspectives from this morning's meeting. I'll say this much for now: We won't have a signed PA for at least another year if we develop the contingencies recommended and preferred by SHPO. If USFWS were lead, I would advise caution and encourage leadership to stay on a sensible, reasonable path. But BLM is lead, I'll keep my mouth shut if you'd prefer.

Edward J. DeCleva
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U.S. Fish and Wildlife Service, Alaska Region
1011 E Tudor Rd, MS-235
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edward_decleva@fws.gov
907-786-3399

From: [Jones, Nichelle \(Shelly\)](#)
To: [Steve Berendzen](#); [Fox, Joanna](#); [Wendy Loya](#); [Joshua Rose](#); [LaMarr, Sarah](#); [Robert Brumbaugh](#); [Donna Wixon](#)
Subject: Cancel Seismic EA Meeting today at 3-
Date: Tuesday, October 23, 2018 11:56:49 AM

I have been spying on the R44 and hope that means you were successful at installing the thermistors?! I am anxious to hear how it went.

I have a meeting conflict today and need to cancel our 3 pm meeting. I have not heard much as far as updating on the status of the EA. We had a brief meeting with the applicant last week and they told us about the additional mitigation they were planning to do for polar bears. They were to have met with FWS the next day but we have not heard anything yet.

Ted told me we would not be having a public meeting in Utqiagvik as previously discussed. Not sure if that means no public meetings at all or just what. I still expect a 30 day public comment period if we upload it to ePlanning.

We are working on scheduling 106 consultation "listening sessions" (for lack of a better term) for the EA and EIS in Arctic Village, Venetie and Kaktovik. Some will hopefully be scheduled over the next month and both Joe Keeney and Steven R. Braun will be attending.

Lastly, I am starting to really worry about the logistics and time/cost for monitoring the seismic project and would like to discuss developing a statement of work to potentially contract or hire seasonal labor. There is more going on with that structure for motion discussion than I realized. It sound like Steve W. has been talking with Chris Noyles about using it in real time with a drone to help plan routes. Kind of what I had been asking myself, but had no idea discussions were going on regarding that. I will try to find out more and pass along what I find.

I would like to revisit the topic of cost recovery for monitoring and will need to have a good cost estimate and justification so getting that tightened up well in advance will be important to get the funding and staffing in time to do the work.

Thanks for reading this far and, again, sorry I won't be able to meet today. Lots going on!

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From: [Hayes, Miriam \(Nicole\)](#)
To: sarah.meitl@alaska.gov
Cc: [Tom McCulloch](#); judy.bittner@alaska.gov; [Faith C Martineau \(DNR\)](#); [Wendy Loya](#); [Edward Decleva](#); [Joseph Keeney](#); [Robert \(Bob\) King](#); Jake.Anders@srbak.com; [Stephen Braund](#); [Paul Lawrence](#)
Subject: Re: [EXTERNAL] RE: Draft Oct. 25 Meeting Agenda, PA Objectives and Scope, and Consultation Plan
Date: Wednesday, October 24, 2018 10:11:54 AM

Thank you for the feedback, Sarah. I'll make adjustments to the timeline accordingly.

Nicole

Nicole Hayes

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On Tue, Oct 23, 2018 at 11:51 AM Meitl, Sarah J (DNR) <sarah.meitl@alaska.gov> wrote:

Good morning,

It is sobering to see the timeline and how much needs to be accomplished between now and late April. The timeline is tight and to give us all some space at the end I recommend moving the first draft of the PA up several weeks to early January/late December and shifting the schedule accordingly with the understanding that placeholders could be used for sections that are still in development/consultation.

Also, the plan states that BLM will distribute revised or final drafts of the PA the same day as the third, fourth, and fifth consulting parties meetings. Will the purpose of these meetings be BLM sharing how they have responded to comments? It may be better to pair submission of comments with the consulting parties meetings or a week after receipt of comments so that BLM can process them.

Best,

Sarah Meitl

Review and Compliance Coordinator

Alaska State Historic Preservation Office / Office of History and Archaeology

0000012414

550 West 7th Avenue, Suite 1310

Anchorage, AK 99501-3510

sarah.meitl@alaska.gov

907-269-8720

From: Hayes, Miriam (Nicole) <mnhayes@blm.gov>

Sent: Tuesday, October 23, 2018 7:32 AM

To: Tom McCulloch <tmcculloch@achp.gov>; Bittner, Judith E (DNR) <judy.bittner@alaska.gov>; Meitl, Sarah J (DNR) <sarah.meitl@alaska.gov>; Martineau, Faith C (DNR) <faith.martineau@alaska.gov>; Wendy Loya <wendy_loya@fws.gov>; Edward Decleva <edward_decleva@fws.gov>; Joseph Keeney <jkeeney@blm.gov>; Robert (Bob) King <r2king@blm.gov>

Cc: Jake.Anders@srbak.com; Stephen Braund <stephen.braund@srbak.com>; Paul Lawrence <paul.lawrence@srbak.com>

Subject: Draft Oct. 25 Meeting Agenda, PA Objectives and Scope, and Consultation Plan

Good morning,

Attached is a draft agenda for the meeting on Thursday and a draft PA objective and scope, as well as timeline. Please provide any comments you may have by NOON TOMORROW (October 24th) so that I may get the attachments out to the consulting parties before the meeting on Thursday.

Thank you,

Nicole

From: [Hayes, Miriam \(Nicole\)](#)
To: [Matthew Rexford](#); [City of Kaktovik - City Clerk](#); [Imm. Teresa](#); [Tonya Garnett](#); [Tiffany Yatin](#); [patrick hanson](#); [norajane.burns@north-slope.org](#); [Tom Lohman](#); [Kevin S. Fisher](#); [Fannie Sopl](#); [Janowski, Tyler](#); [Kathy Ahgeak](#); [Tommy Nageak](#); [fenton.rexford@north-slope.org](#)
Cc: [Joseph Keeney](#); [Sarah LaMarr](#); [Nichelle \(Shelly\) Jones](#); [Edward Decleva](#); [Faith C Martineau \(DNR\)](#); [Eugene Marino](#); [jake.anders@srbak.com](#); [Paul Lawrence](#); [judy.bittner@alaska.gov](#); [Wendy Loya](#); [Chad Ricklefs](#); [sarah.meitl@alaska.gov](#); [Robert \(Bob\) King](#); [Tom McCulloch](#); [Stephen Braund](#)
Subject: Notes from 10.25.18 Coastal Plain PA meeting
Date: Friday, October 26, 2018 6:24:34 PM
Attachments: [10_25_18_Consulting_Parties_Meeting_notes.pdf](#)

Hi,

Thank you all for your participation in the meeting yesterday. I am attaching the draft notes but please let me know if there are any errors or additions. I may have missed a few names.

Also, I apologize to those who may have had trouble calling in due to the bridge line reaching capacity. I will work to ensure this doesn't happen again.

I will be reaching out to you all individually in the very near future.

Respectfully,
Nicole

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0000012416

From: [Kathy Ahgeak](#)
To: "[Hayes, Miriam \(Nicole\)](#)"; [Matthew Rexford](#); [City of Kaktovik - City Clerk](#); [Imm, Teresa](#); [Tonya Garnett](#); [Tiffany Yatlin](#); [patrick hanson](#); [Norajane Burns](#); [Thomas L. Lohman](#); [Kevin S. Fisher](#); [Fannie Soplu](#); [Janowski, Tyler](#); [Tommy Nageak](#); [Fenton Rexford](#)
Cc: [Joseph Keeney](#); [Sarah LaMarr](#); [Nichelle \(Shelly\) Jones](#); [Edward Decleva](#); [Faith C Martineau \(DNR\)](#); [Eugene Marino](#); [jake.anders@srbak.com](#); [Paul Lawrence](#); [judy.bittner@alaska.gov](#); [Wendy Loya](#); [Chad Ricklefs](#); [sarah.meitl@alaska.gov](#); [Robert \(Bob\) King](#); [Tom McCulloch](#); [Stephen Braund](#)
Subject: [EXTERNAL] RE: Notes from 10.25.18 Coastal Plain PA meeting
Date: Friday, October 26, 2018 6:46:51 PM

Kathy with IHLC noted the importance of involving the affected tribal governments and include ICAS Executive Director Frederick Brower, and to also include Fenton Rexford, NSB Tribal Liaison from Kaktovik and NSB Cultural Resource Specialist Tommy Nageak. Kathy hoped that all available cultural resource information includes publications such as the Archaeological and Historic Resource Reconnaissance of the Coastal Plain Area of the Arctic National Wildlife Refuge by Ed Hall and Associates. The NSB also has the Traditional Land Use Inventory that has at least 41 sites in the Kaktovik land use area.

Kathy with IHLA noted it was really important to loop Frederick Brower, ICAS Executive Director, Tommy Nageak and Fenton Rexford (tribal liaison) into the process. Fenton had been instrumental in developing the TLUI with the SHPO for the AHRs. She also noted that there was a draft report available with a lot of good information by Ed Hall and Associates. 41 sites were identified in the Kaktovik TLUI and it is important that work is conducted sensitive to these areas and considerate of the information out there.

From: Hayes, Miriam (Nicole) [<mailto:mnhayes@blm.gov>]
Sent: Friday, October 26, 2018 4:24 PM
To: Matthew Rexford; City of Kaktovik - City Clerk; Imm, Teresa; Tonya Garnett; Tiffany Yatlin; patrick hanson; Norajane Burns; Thomas L. Lohman; Kevin S. Fisher; Fannie Soplu; Janowski, Tyler; Kathy Ahgeak; Tommy Nageak; Fenton Rexford
Cc: Joseph Keeney; Sarah LaMarr; Nichelle (Shelly) Jones; Edward Decleva; Faith C Martineau (DNR); Eugene Marino; Jake.Anders@srbak.com; Paul Lawrence; judy.bittner@alaska.gov; Wendy Loya; Chad Ricklefs; sarah.meitl@alaska.gov; Robert (Bob) King; Tom McCulloch; Stephen Braund
Subject: Notes from 10.25.18 Coastal Plain PA meeting

Hi,

Thank you all for your participation in the meeting yesterday. I am attaching the draft notes but please let me know if there are any errors or additions. I may have missed a few names.

Also, I apologize to those who may have had trouble calling in due to the bridge line reaching capacity. I will work to ensure this doesn't happen again.

I will be reaching out to you all individually in the very near future.

Respectfully,
Nicole

Nicole Hayes

0000012417

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From: [Jones, Nichelle \(Shelly\)](#)
To: [Wendy Loya](#); [Joseph Keeney](#); [LaMarr, Sarah](#); [Hayes, Miriam \(Nicole\)](#)
Cc: [Decleva, Edward](#); rita_miraglia@fws.gov; [Steve Berendzen](#)
Subject: Re: Sec 106 for Arctic Refuge Seismic EA: FWS contacts
Date: Friday, November 2, 2018 2:38:24 PM

I just sent a letter to the tribal offices in Kaktovik, Venetie and Arctic Village on Thursday this week, following up on their offer to set up listening sessions to help inform both the leasing EIS and the seismic EA. We don't have a big window of time on the EA, so we are focusing on the next 30 days for that. There may be additional meetings into the future and even the baseline info can inform both projects, so Nicole asked that Stephen R. Braund be included in the meetings with Joe Keeney if schedules permit.

We definitely want to make sure everyone is in the loop and knows what is going on. If there are any additional questions or concerns right now, please let me know. Also any advice or suggestions for the listening sessions would be welcome as well.

I will ask Joe to keep us advised as the meetings get scheduled and we will hopefully soon have some additional information to consider.

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(907) 460-0086 (c)

On Fri, Nov 2, 2018 at 10:08 AM Wendy Loya <wendy_loya@fws.gov> wrote:

Hi Shelly,

I understand that BLM will be offering to conducting Sec 106 consultation for the Seismic EA. FWS is working with BLM/Nicole Hayes on the Sec 106 Programmatic Agreement for the Leasing EIS, so I wanted to make sure that I looped the FWS Historic Preservation Officer (Ed DeCleva) and our Archaeologist (Rita Miraglia) in on the EA Sec 106 as well. I couldn't find Ed to ask him to reach out to your directly (or even if he really needed to), so this email serves an introduction so you all can collaborate as needed.

Thank you,

Wendy

Dr. Wendy M. Loya

Arctic Program Coordinator

US Fish and Wildlife Service, Office of Science Applications

Anchorage, Alaska

907.786.3532 (office)

907.227.2942 (mobile)

From: [Jones, Nichelle \(Shelly\)](#)
To: [Steve Berendzen](#); [Fox, Joanna](#); [Wendy Loya](#); [Joshua Rose](#); [Paul Leonard](#); [Eric Geisler](#)
Subject: Fwd: [EXTERNAL] [dmlw.tundra.notification] Winter 2018/2019 Season
Date: Tuesday, November 6, 2018 11:33:24 AM
Attachments: [SnowSampling_20181105_Revision.pdf](#)

FYI. This has some good info for how DNR handles some of their pre-packing and other trust/verify methods of collecting snow data that might provide some ideas for our future discussions.

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----- Forwarded message -----

From: **Fritz, Stacey** <sfritz@blm.gov>
Date: Mon, Nov 5, 2018 at 4:29 PM
Subject: Fwd: [EXTERNAL] [dmlw.tundra.notification] Winter 2018/2019 Season
To: Shelly W Jones <njones@blm.gov>

See esp. the text I bolded below:

----- Forwarded message -----

From: **Head, Melissa M (DNR)** <melissa.head@alaska.gov>
Date: Mon, Nov 5, 2018 at 4:11 PM
Subject: [EXTERNAL] [dmlw.tundra.notification] Winter 2018/2019 Season
To: dmlw.tundra.notification <dmlw.tundra.notification@list.state.ak.us>

Happy Monday Tundra Travel Enthusiasts!

Once again, the ice road and winter off-road travel season is upon us! We wanted to take this opportunity to remind everyone of a few details so that this season can proceed smoothly.

The DMLW Northern Oil & Gas Team monitors snow depth and soil temperature conditions starting in November (our first scheduled trip is next week). We send out weekly Status Reports to this Listserv to keep everyone updated. Expect our first Status Report around November 16. As areas meet tundra opening criteria (Coastal Areas: 6" snow, -5C at 30cm; Foothills: 9" snow, -5C at 30cm) our team sends out Opening Reports to this Listserv as well.

Off-road travel and ice road construction requests should include the following information:

1. Permit number
2. Purpose of activity
3. Detailed description of activity location
4. Vehicles to be used (types and number)
5. Estimated number of trips expected

6. Timeframe
7. Contact Person

Prepacking requests should be emailed to our team closer to when prepacking activities are scheduled to begin (we tend to like requests that appear a week to a few days ahead of time). In addition to the information provided in 1 - 7 above, the requests should also detail:

1. Snow observations in the area (please follow the Snow Sampling Protocol)
2. Methods and vehicles that will be employed (summer approved vehicles only)
3. Maps and GIS data (if we don't already have them)

If prepacking activities allow a route to meet opening standards, we may allow standard ice road construction methods to commence for that particular route (essentially the route has met our opening criteria). Again, a request to start standard construction is required and a site visit from one of our team members may be necessary. However, if the permittee can sufficiently document that there is enough snow within the ice road route and thermistors indicate that soil temperature criteria has been met, we may approve standard construction without a site visit.

Requests for **standard ice construction** should commonly be submitted after an area opens for general winter off-road travel and are approved by our office via email. The exception to this is when prepacking is conducted.

A few other things to keep in mind:

1. You must have a valid off-road travel or ice road permit when traveling off any graveled road on the North Slope.
2. Snowmobile travel is generally approved once we make the determination (based on snow cover). We will send out "Sno-Go" letters when this occurs. These letters explain that we do not need to receive individual requests for snowmobile use; snowmobiles can be used as needed with the approval of the environmental personnel (HSE) of the permitted company.
3. All off-road travel (aside from snowmobile use) must be approved by our office in writing. Please send your requests to DNRMLWNorthernO&G@alaska.gov. Using this email address ensures that your request is seen by all members of our team and will be addressed in a timely manner.

Attached for your reference is the **Snow Sampling Protocol** that was completed and implemented in 2014. Minor revisions have been made to the protocol this year. We've received great data from those who provided it for their projects and look forward to another successful season of snow data collection and reporting.

As always, if you have any questions or concerns, please feel free to contact us anytime (individual contact information is listed below). We are also happy to conduct site visits while we are on the North Slope. Either contact us at the Northern Regional Office or you can call us while we are based in Deadhorse at 907-659-2830 (office). Our mobile phone number for North Slope work is 907-328-8986.

To join or leave the **Tundra Notification Listserv**, simply click on the following link:
<http://list.state.ak.us/mailman/listinfo/dmlw.tundra.notification> Use the "Subscribing to

dmlw.tundra.notification" or "UnSubscribe from dmlw.tundra.notification" as needed. Feel free to pass this information on to others who may benefit from our updates.

In addition to the Listserv, updates will be made to our **Tundra Travel website**:
<http://dnr.alaska.gov/mlw/tundratravel/>

Keep an eye out for our reports and updates throughout the season.

Safe traveling, we'll see you on the tundra!

Kind Regards,

The DNR/DMLW Northern Oil & Gas Team

Melissa Head Natural Resource Manager 907-451-2719 melissa.head@alaska.gov	Becky Baird Natural Resource Specialist III 907-451-2732 becky.baird@alaska.gov	Clif Enochs Natural Resource Specialist III 907-451-2724 clif.enochs@alaska.gov	Kimberley Maher Natural Resource Specialist III 907-451-2737 kimberley.maher@alaska.gov
--	--	--	---

List Name: dmlw.tundra.notification@list.state.ak.us

You subscribed as: sfritz@blm.gov

Unsubscribe at: <http://list.state.ak.us/mailman/options/dmlw.tundra.notification/sfritz%40blm.gov>

--

~~~~~  
Stacey Fritz, PhD  
Anthropologist/Subsistence Specialist  
Bureau of Land Management Arctic District Office  
Phone: (907) 474-2309; Cell: (907) 687-6549; Email: [sfritz@blm.gov](mailto:sfritz@blm.gov)  
Mail: 222 University Ave., Fairbanks, AK, 99709  
[BLM NPR-A Subsistence Website](#)

**From:** [Keeney, Joseph](#)  
**To:** [Miriam \(Nicole\) Hayes](#)  
**Cc:** [King, Robert \(Bob\)](#); [Bittner, Judith E \(DNR\)](#); [Sarah Meitl](#); [Tom McCulloch](#); [Wendy Loya](#); [Edward Decleva](#); [rita\\_miraglia@fws.gov](mailto:rita_miraglia@fws.gov); [Nichelle \(Shelly\) Jones](#); [LaMarr, Sarah](#)  
**Subject:** Re: Initial Questions - please provide feedback by COB today  
**Date:** Tuesday, November 6, 2018 4:25:32 PM

---

Hi Nicole,

I think this looks like a good list, with good questions to help stimulate some thinking about the PA. A few minor tweaks I would make are:

2. What is the method that you wish to be contacted regarding the Programmatic Agreement in the future (e.g., phone, email, formal letter)?
6. Which existing repositories for historical information do you think would best help to inform about historic use in the program area?

Joe

On Tue, Nov 6, 2018 at 11:46 AM Hayes, Miriam (Nicole) <[mnhayes@blm.gov](mailto:mnhayes@blm.gov)> wrote:

These questions are what we had discussed asking in our initial individual consultations with the consulting parties. Please provide feedback ASAP - I apologize for the short notice.

Questions:

1. Who are the one or two people that BLM should coordinate with for discussions pertaining to Section 106 of the NHPA?
2. What is the method that you wish to be contacted regarding the Programmatic Agreement in the future?
3. If we scheduled annual meetings pertaining to the Programmatic Agreement, what is the best way to coordinate with your [organization] recognizing staff may change over a year period.
4. What are the best ways improve our understanding of the program area/community/culture?
5. Are there administrative things we could do, such as ????, which could enhance the existing culture and community?
6. What are existing repositories of historical information we should look to for information about the program area?
7. What are some common features of historical or culturally significant areas we should consider including in the Programmatic Agreement for consideration of future surveys?
8. Are there mitigation measures we should consider including in the Programmatic Agreement at the leasing stage to avoid or minimize potential impacts to historic properties or cultural resources?
9. Are there other questions we should be asking to help inform development of a Programmatic Agreement at the leasing stage?

0000012424

**Nicole Hayes**

Project Coordinator  
Bureau of Land Management  
222 W. 7th Avenue #13  
Anchorage, Alaska 99513  
Desk: (907) 271-4354  
Cell: (907) 290-0179

--

Joe Keeney  
Archaeologist  
BLM Arctic District Office  
222 University Avenue  
Fairbanks, Alaska 99709  
907-474-2312  
[jkeeney@blm.gov](mailto:jkeeney@blm.gov)

**From:** [Hayes, Miriam \(Nicole\)](#)  
**To:** [Fannie Soplú](#); [Matthew Rexford](#)  
**Cc:** [Joseph Keeney](#); [Robert \(Bob\) King](#); [coastalplainAR@empsi.com](mailto:coastalplainAR@empsi.com); [Paul Lawrence](#); [Jake.Anders@srbak.com](mailto:Jake.Anders@srbak.com); [Stephen Braund](#); [Tom McCulloch](#); [Wendy.Loya@alaska.gov](mailto:Wendy.Loya@alaska.gov); [judy.bittner@alaska.gov](mailto:judy.bittner@alaska.gov); [Edward Declava](#); [Faith C Martineau \(DNR\)](#); [Rita.Miraglia@alaska.gov](mailto:Rita.Miraglia@alaska.gov); [sarah.meitl@alaska.gov](mailto:sarah.meitl@alaska.gov); [Nichelle \(Shelly\) Jones](#)  
**Subject:** Draft questions for tomorrow  
**Date:** Wednesday, November 7, 2018 9:12:41 AM

---

Good morning, below are draft questions pertaining to our 106 Consultation for KIC to consider. We look forward to discussing them with you all tomorrow at 10:30 a.m.

1. Who are the one or two people that BLM should coordinate with for discussions pertaining to Section 106 of the NHPA?
2. What is the method that you wish to be contacted regarding the Programmatic Agreement in the future (e.g., phone, email, formal letter)?
3. If we scheduled annual meetings pertaining to the Programmatic Agreement, what is the best way to coordinate with KIC recognizing staff and/or leadership may change over a year period.
4. What are the best ways improve our understanding of the program area/community/culture?
5. Who is the most knowledgeable person or people that know about
  - a) the archaeological and historic sites in the Coastal Plain?
  - b) how people use the Coastal Plain today?
  - c) the Coastal Plain whom we may not know about?
  - d) information we need to consider about the Coastal Plain that you think we might not know about?
6. Which existing repositories for historical information do you think would best help to inform about historic use in the program area?
7. What are some common features of historical or culturally significant areas we should consider including in the Programmatic Agreement for consideration of future surveys?
8. Are there mitigation measures we should consider including in the Programmatic Agreement at the leasing stage to avoid or minimize potential impacts to historic properties or cultural resources?
9. Are there other questions we should be asking to help inform development of a Programmatic Agreement at the leasing stage?

Respectfully,  
Nicole

**Nicole Hayes**  
Project Coordinator  
Bureau of Land Management  
222 W. 7th Avenue #13  
Anchorage, Alaska 99513  
Desk: (907) 271-4354  
Cell: (907) 290-0179

**To:** Greg Siekaniec[greg\_siekaniec@fws.gov]  
**Cc:** karen\_clark@fws.gov[karen\_clark@fws.gov]; A Alvarez[aeric\_alvarez@fws.gov]; Doug Damberg[doug\_damberg@fws.gov]; Lor, Socheata[socheata\_lor@fws.gov]  
**From:** Mitch Ellis  
**Sent:** 2018-04-16T21:47:37-04:00  
**Importance:** Normal  
**Subject:** Re: [EXTERNAL] Porcupine Caribou Workshop/ Whitehorse May 2018/ Please respond with availability for May 2018  
**Received:** 2018-04-16T21:47:41-04:00

Great! Is Eric okay with expediting the approvals?

Sent from my iPhone

On Apr 16, 2018, at 4:46 PM, Greg Siekaniec <[greg\\_siekaniec@fws.gov](mailto:greg_siekaniec@fws.gov)> wrote:

Yes, we should try and clear the path. Karen, please call Steve and discuss. If you need me to touch base with Steve let me know.

Thank you,

Greg

Sent from my iPhone

On Apr 16, 2018, at 5:04 PM, Ellis, Mitch <[mitch\\_ellis@fws.gov](mailto:mitch_ellis@fws.gov)> wrote:

Greg and Eric see email chain below. We would like your support to fast track approval for Steve Arthur's attendance at the caribou workshop in Canada if possible. Might be a good idea to run by Steve Wackowski to make sure he's okay with it? Thoughts?

---

Mitch Ellis  
Chief of Refuges - Alaska  
National Wildlife Refuge System  
US Fish and Wildlife Service  
(907)786-3667 wk  
(907)947-4416 mob

----- Forwarded message -----

**From:** **Damberg, Doug** <[doug\\_damberg@fws.gov](mailto:doug_damberg@fws.gov)>  
**Date:** Fri, Apr 13, 2018 at 8:30 AM  
**Subject:** Re: [EXTERNAL] Porcupine Caribou Workshop/ Whitehorse May 2018/  
Please respond with availability for May 2018  
**To:** "Castellanos, Gilbert" <[gilbert\\_castellanos@fws.gov](mailto:gilbert_castellanos@fws.gov)>  
**Cc:** Mitch Ellis <[Mitch\\_Ellis@fws.gov](mailto:Mitch_Ellis@fws.gov)>, Wendy Loya <[wendy\\_loya@fws.gov](mailto:wendy_loya@fws.gov)>

Mitch:

Do you want to talk about this with Greg to see if he would like to pursue it?

Thx,

Doug Damberg

Refuge Supervisor, AK North Zone

U.S. Fish and Wildlife Service

1011 E. Tudor Rd.; Anchorage, AK 99503

Office: (907) 786-3329

Cell: (907) 947-6302

On Thu, Apr 12, 2018 at 2:54 PM, Castellanos, Gilbert

[<gilbert\\_castellanos@fws.gov>](mailto:gilbert_castellanos@fws.gov) wrote:

The two key issues from an approval standpoint would be getting FWS-HQ-IA to approve on short notice, and I'm sure we could get DOI approval after that, assuming there was support from leadership. It would require Greg speaking with FWS-HQ.

I would think we'd want to discuss this with, and get support from, Steve W. as a first step?

Gilbert-

On Thu, Apr 12, 2018 at 2:40 PM, Doug Damberg [<doug\\_damberg@fws.gov>](mailto:doug_damberg@fws.gov) wrote:

Mitch/Gilbert:

Please see Joanna's note below. It's very likely we missed the window to get approval for Steve to attend this workshop but do you think it is worth pursuing given the importance?

Sent from my iPhone

Begin forwarded message:

**From:** "Fox, Joanna" [<joanna\\_fox@fws.gov>](mailto:joanna_fox@fws.gov)  
**Date:** April 12, 2018 at 2:18:10 PM AKDT  
**To:** Doug Damberg [<doug\\_damberg@fws.gov>](mailto:doug_damberg@fws.gov)  
**Cc:** Steve Berendzen [<steve\\_berendzen@fws.gov>](mailto:steve_berendzen@fws.gov)  
**Subject:** Fwd: [EXTERNAL] Porcupine Caribou Workshop/  
Whitehorse May 2018/ Please respond with  
availability for May 2018

0000012428

Hi Doug,  
Steve has been asked to participate in a Porcupine Caribou workshop in Whitehorse in May. We think we've missed the window for approval for travel to Canada, but also know there's a possibility this may be a Department priority. Can you look into this further - perhaps touch bases with Mitch and Gilbert? I'm pretty sure there was some brief conversation about meetings like this during the last meeting we had with Greg - and I thought he seemed to think it would be a priority for us to participate.

Thank you!  
Joanna

---

Joanna L. Fox  
Deputy Refuge Manager  
Arctic National Wildlife Refuge  
101 12th Avenue, Room 236  
Fairbanks, AK 99701  
(907) 456-0549

Follow us on Facebook!  
[www.facebook.com/arcticnationalwildliferefuge](http://www.facebook.com/arcticnationalwildliferefuge)

*"Do what you can, with what you have, where you are." -- Theodore Roosevelt*

----- Forwarded message -----

From: **Arthur, Stephen** <[stephen\\_arthur@fws.gov](mailto:stephen_arthur@fws.gov)>  
Date: Thu, Apr 12, 2018 at 12:26 PM  
Subject: Fwd: [EXTERNAL] Porcupine Caribou Workshop/ Whitehorse  
May 2018/ Please respond with availability for May  
2018  
To: Joanna Fox <[joanna\\_fox@fws.gov](mailto:joanna_fox@fws.gov)>, Steve Berendzen  
<[steve\\_berendzen@fws.gov](mailto:steve_berendzen@fws.gov)>

Attached is a notice of a proposed workshop to be held in Whitehorse, YT, to discuss issues related to development impacts on the Porcupine caribou herd. I think it would be worthwhile for me to attend, but the timeframe is likely too soon for me to get approval for travel to Canada. I have asked if this could be postponed to June, but I was

wondering if you agree that I should attend, and if you think this would be approved by the Regional office? Are there others who we should consult on this?

Steve

Stephen M. Arthur, Ph.D.

*Supervisory Wildlife Biologist  
Arctic National Wildlife Refuge  
101 12th Ave., Room 236  
Fairbanks, AK 99701  
(907)455-1830*

----- Forwarded message -----

From: **Stotyn, Shannon (EC)** <[shannon.stotyn@canada.ca](mailto:shannon.stotyn@canada.ca)>

Date: Thu, Apr 12, 2018 at 11:02 AM

Subject: [EXTERNAL] Porcupine Caribou Workshop/ Whitehorse May 2018/ Please respond with availability for May 2018

To: "Tavares, David (PC)" <[david.tavares@canada.ca](mailto:david.tavares@canada.ca)>, Deana Lemke  
(b) (6) >, Édouard Bélanger  
<[ebelanger@grrb.nt.ca](mailto:ebelanger@grrb.nt.ca)>, "McDonald2, Ian (PC)"  
<[ian.mcdonald2@canada.ca](mailto:ian.mcdonald2@canada.ca)>, Julia Ahlgren  
<[Julia.Ahlgren@gov.yk.ca](mailto:Julia.Ahlgren@gov.yk.ca)>,  
"Kyle.Russell@gov.yk.ca"  
<[Kyle.Russell@gov.yk.ca](mailto:Kyle.Russell@gov.yk.ca)>,  
"Marsha\_Branigan@gov.nt.ca"  
<[Marsha\\_Branigan@gov.nt.ca](mailto:Marsha_Branigan@gov.nt.ca)>,  
"Martin.Kienzler@gov.yk.ca"  
<[Martin.Kienzler@gov.yk.ca](mailto:Martin.Kienzler@gov.yk.ca)>, "Leblond3, Mathieu  
(EC)" <[mathieu.leblond3@canada.ca](mailto:mathieu.leblond3@canada.ca)>,  
"Mike.Suitor@gov.yk.ca" <[Mike.Suitor@gov.yk.ca](mailto:Mike.Suitor@gov.yk.ca)>,  
"Tracy\_Davison@gov.nt.ca"  
<[Tracy\\_Davison@gov.nt.ca](mailto:Tracy_Davison@gov.nt.ca)>,  
"beth.lenart@alaska.gov" <[beth.lenart@alaska.gov](mailto:beth.lenart@alaska.gov)>,  
"Brad Griffiths ([dbgriffith@alaska.edu](mailto:dbgriffith@alaska.edu))"  
<[dbgriffith@alaska.edu](mailto:dbgriffith@alaska.edu)>,  
"jason.caikoski@alaska.gov"  
<[jason.caikoski@alaska.gov](mailto:jason.caikoski@alaska.gov)>, Paul Leonard  
<[paul\\_leonard@fws.gov](mailto:paul_leonard@fws.gov)>, Steve Arthur  
<[stephen\\_arthur@fws.gov](mailto:stephen_arthur@fws.gov)>, Wendy Loya  
<[wendy\\_loya@fws.gov](mailto:wendy_loya@fws.gov)>

Hello,

The Canadian Wildlife Service, Yukon Government and Government of

0000012430

Northwest Territories are organizing a two day workshop in Whitehorse, Yukon to address issues related to potential industrial development within the calving grounds of the Porcupine caribou herd. The primary goal of the workshop is to identify a path forward for managing impacts on the PCH through input from biologists, environmental assessment specialists and researchers with experience on this topic.

Outcomes will include:

- A better understanding of what is coming in the process and potential impacts
- Identification of key short and medium term priorities for input to the expected Environmental Impact Statement that will be prepared in the coming months and reviewed thereafter
- Suggestions for agencies tasked with monitoring the herd for priority sampling and structure of long term herd monitoring
- Identification of potential collaborations and work needed

If your organization is interested in participating **please complete the doodle poll below to indicate your availability. We have allocated two days for this meeting.** If you have any colleagues in your organization that have experience addressing these issues we would be excited to have them participate. We will also have teleconference capability if you are unable to attend in person.

<https://doodle.com/poll/9nf7dc8kihwk5iez>

Following this two day meeting we will ask the

Canadian representatives to stay for an extra day to flesh out the contents of a science summary for use in the upcoming US regulatory processes. Further details will be sent to the Canadian representatives in the next few days.

Looking forward to hearing from you and please contact myself or Mike Sutor ([mike.sutor@gov.yk.ca](mailto:mike.sutor@gov.yk.ca)) if you have any further questions.

Thanks,

Shannon Stotyn

**Shannon Stotyn**

Species at Risk Biologist  
Canadian Wildlife Service  
Environment and Climate Change Canada  
91780 Alaska Highway  
Whitehorse, YT, Canada Y1A 5X7  
[shannon.stotyn@ec.gc.ca](mailto:shannon.stotyn@ec.gc.ca)  
Telephone 867-667-3929  
Cellular: 867-333-9891  
Facsimile 867-393-7970  
Government of Canada  
Website [www.ec.gc.ca](http://www.ec.gc.ca)

**Shannon Stotyn**

Biologiste d'Espèces en Péril  
Service Canadien de la faune  
Environnement et Changement Climatique Canada

91780 autoroute Alaska  
Whitehorse, YT, Canada Y1A 5X7  
shannon.stotyn@ec.gc.ca  
Téléphone 867-667-3929  
Cellulaire: 867-333-9891  
Télécopieur 867-393-7970  
Gouvernement du Canada  
Site Web www.ec.gc.ca

--

Gilbert Castellanos  
International Affairs Specialist

U.S. Fish and Wildlife Service Alaska Region  
Office of International Conservation  
1011 E. Tudor Road, MS 281  
Anchorage, Alaska 99503

E mail: Gilbert\_Castellanos@fws.gov  
Phone: 907 786 3850  
Fax: 907 786 3303

**To:** Greg Siekaniec[greg\_siekaniec@fws.gov]  
**Cc:** Ellis, Mitch[mitch\_ellis@fws.gov]; A Alvarez[aeric\_alvarez@fws.gov]; Doug Damberg[doug\_damberg@fws.gov]; Lor, Socheata[socheata\_lor@fws.gov]  
**From:** Clark, Karen  
**Sent:** 2018-04-17T12:29:42-04:00  
**Importance:** Normal  
**Subject:** Re: [EXTERNAL] Porcupine Caribou Workshop/ Whitehorse May 2018/ Please respond with availability for May 2018  
**Received:** 2018-04-17T12:30:45-04:00

I'm on it!

Karen P. Clark  
Deputy Regional Director  
U.S. Fish & Wildlife Service- Alaska Region  
1011 E Tudor Rd, MS 374  
Anchorage, AK 99503  
[karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)  
907.786.3542 office  
907.786.3493 direct  
907.786.3306 fax

On Mon, Apr 16, 2018 at 4:46 PM, Greg Siekaniec <[greg\\_siekaniec@fws.gov](mailto:greg_siekaniec@fws.gov)> wrote:

Yes, we should try and clear the path. Karen, please call Steve and discuss. If you need me to touch base with Steve let me know.

Thank you,

Greg

Sent from my iPhone

On Apr 16, 2018, at 5:04 PM, Ellis, Mitch <[mitch\\_ellis@fws.gov](mailto:mitch_ellis@fws.gov)> wrote:

Greg and Eric see email chain below. We would like your support to fast track approval for Steve Arthur's attendance at the caribou workshop in Canada if possible. Might be a good idea to run by Steve Wackowski to make sure he's okay with it? Thoughts?

---

Mitch Ellis  
Chief of Refuges - Alaska  
National Wildlife Refuge System  
US Fish and Wildlife Service  
(907)786-3667 wk  
(907)947-4416 mob

0000012434

----- Forwarded message -----

From: **Damberg, Doug** <[doug\\_damberg@fws.gov](mailto:doug_damberg@fws.gov)>

Date: Fri, Apr 13, 2018 at 8:30 AM

Subject: Re: [EXTERNAL] Porcupine Caribou Workshop/ Whitehorse May 2018/ Please respond with availability for May 2018

To: "Castellanos, Gilbert" <[gilbert\\_castellanos@fws.gov](mailto:gilbert_castellanos@fws.gov)>

Cc: Mitch Ellis <[Mitch\\_Ellis@fws.gov](mailto:Mitch_Ellis@fws.gov)>, Wendy Loya <[wendy\\_loya@fws.gov](mailto:wendy_loya@fws.gov)>

Mitch:

Do you want to talk about this with Greg to see if he would like to pursue it?

Thx,

Doug Damberg

Refuge Supervisor, AK North Zone

U.S. Fish and Wildlife Service

1011 E. Tudor Rd.; Anchorage, AK 99503

Office: (907) 786-3329

Cell: (907) 947-6302

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Gilbert-

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Mitch/Gilbert:

Please see Joanna's note below. It's very likely we missed the window to get approval for Steve to attend this workshop but do you think it is worth pursuing given the importance?

Sent from my iPhone

Begin forwarded message:

0000012435

**From:** "Fox, Joanna" <[joanna\\_fox@fws.gov](mailto:joanna_fox@fws.gov)>  
**Date:** April 12, 2018 at 2:18:10 PM AKDT  
**To:** Doug Damberg <[doug\\_damberg@fws.gov](mailto:doug_damberg@fws.gov)>  
**Cc:** Steve Berendzen <[steve\\_berendzen@fws.gov](mailto:steve_berendzen@fws.gov)>  
**Subject:** Fwd: [EXTERNAL] Porcupine Caribou Workshop/ Whitehorse May 2018/ Please respond with availability for May 2018

Hi Doug,  
Steve has been asked to participate in a Porcupine Caribou workshop in Whitehorse in May. We think we've missed the window for approval for travel to Canada, but also know there's a possibility this may be a Department priority. Can you look into this further - perhaps touch bases with Mitch and Gilbert? I'm pretty sure there was some brief conversation about meetings like this during the last meeting we had with Greg - and I thought he seemed to think it would be a priority for us to participate.

Thank you!  
Joanna

---

Joanna L. Fox  
Deputy Refuge Manager  
Arctic National Wildlife Refuge  
101 12th Avenue, Room 236  
Fairbanks, AK 99701  
(907) 456-0549

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[www.facebook.com/arcticonationalwildliferefuge](http://www.facebook.com/arcticonationalwildliferefuge)

*"Do what you can, with what you have, where you are." -- Theodore Roosevelt*

----- Forwarded message -----

**From:** Arthur, Stephen <[stephen\\_arthur@fws.gov](mailto:stephen_arthur@fws.gov)>  
**Date:** Thu, Apr 12, 2018 at 12:26 PM  
**Subject:** Fwd: [EXTERNAL] Porcupine Caribou Workshop/ Whitehorse May 2018/ Please respond with availability for May 2018  
**To:** Joanna Fox <[joanna\\_fox@fws.gov](mailto:joanna_fox@fws.gov)>, Steve Berendzen <[steve\\_berendzen@fws.gov](mailto:steve_berendzen@fws.gov)>

Attached is a notice of a proposed workshop to be held in Whitehorse, YT, to discuss issues related to development impacts on the Porcupine

caribou herd. I think it would be worthwhile for me to attend, but the timeframe is likely too soon for me to get approval for travel to Canada. I have asked if this could be postponed to June, but I was wondering if you agree that I should attend, and if you think this would be approved by the Regional office? Are there others who we should consult on this?

Steve

Stephen M. Arthur, Ph.D.

*Supervisory Wildlife Biologist  
Arctic National Wildlife Refuge  
101 12th Ave., Room 236  
Fairbanks, AK 99701  
(907)455-1830*

----- Forwarded message -----

From: **Stotyn, Shannon (EC)** <[shannon.stotyn@canada.ca](mailto:shannon.stotyn@canada.ca)>

Date: Thu, Apr 12, 2018 at 11:02 AM

Subject: [EXTERNAL] Porcupine Caribou Workshop/ Whitehorse May 2018/

Please respond with availability for May 2018

To: "Tavares, David (PC)" <[david.tavares@canada.ca](mailto:david.tavares@canada.ca)>, Deana Lemke

(b) (6) >, Édouard Bélanger

<[ebelanger@grrb.nt.ca](mailto:ebelanger@grrb.nt.ca)>, "Mcdonald2, Ian (PC)"

<[ian.mcdonald2@canada.ca](mailto:ian.mcdonald2@canada.ca)>, Julia Ahlgren

<[Julia.Ahlgren@gov.yk.ca](mailto:Julia.Ahlgren@gov.yk.ca)>, "Kyle.Russell@gov.yk.ca"

<[Kyle.Russell@gov.yk.ca](mailto:Kyle.Russell@gov.yk.ca)>, "Marsha\_Branigan@gov.nt.ca"

<[Marsha\\_Branigan@gov.nt.ca](mailto:Marsha_Branigan@gov.nt.ca)>, "Martin.Kienzler@gov.yk.ca"

<[Martin.Kienzler@gov.yk.ca](mailto:Martin.Kienzler@gov.yk.ca)>, "Leblond3, Mathieu (EC)"

<[mathieu.leblond3@canada.ca](mailto:mathieu.leblond3@canada.ca)>, "Mike.Suitor@gov.yk.ca"

<[Mike.Suitor@gov.yk.ca](mailto:Mike.Suitor@gov.yk.ca)>, "Tracy\_Davison@gov.nt.ca"

<[Tracy\\_Davison@gov.nt.ca](mailto:Tracy_Davison@gov.nt.ca)>, "beth.lenart@alaska.gov"

<[beth.lenart@alaska.gov](mailto:beth.lenart@alaska.gov)>, "Brad Griffiths

([dbgriffith@alaska.edu](mailto:dbgriffith@alaska.edu))" <[dbgriffith@alaska.edu](mailto:dbgriffith@alaska.edu)>,

"[jason.caikoski@alaska.gov](mailto:jason.caikoski@alaska.gov)" <[jason.caikoski@alaska.gov](mailto:jason.caikoski@alaska.gov)>, Paul

Leonard <[paul\\_leonard@fws.gov](mailto:paul_leonard@fws.gov)>, Steve Arthur

<[stephen\\_arthur@fws.gov](mailto:stephen_arthur@fws.gov)>, Wendy Loya

<[wendy\\_loya@fws.gov](mailto:wendy_loya@fws.gov)>

Hello,

The Canadian Wildlife Service, Yukon Government and Government of Northwest Territories are organizing a two day workshop in Whitehorse, Yukon to address issues related to potential industrial development within the calving grounds of the Porcupine caribou herd. The

0000012437

primary goal of the workshop is to identify a path forward for managing impacts on the PCH through input from biologists, environmental assessment specialists and researchers with experience on this topic.

Outcomes will include:

- A better understanding of what is coming in the process and potential impacts
- Identification of key short and medium term priorities for input to the expected Environmental Impact Statement that will be prepared in the coming months and reviewed thereafter
- Suggestions for agencies tasked with monitoring the herd for priority sampling and structure of long term herd monitoring
- Identification of potential collaborations and work needed

If your organization is interested in participating **please complete the doodle poll below to indicate your availability. We have allocated two days for this meeting.** If you have any colleagues in your organization that have experience addressing these issues we would be excited to have them participate. We will also have teleconference capability if you are unable to attend in person.

<https://doodle.com/poll/9nf7dc8kihwk5iez>

Following this two day meeting we will ask the Canadian representatives to stay for an extra day to flesh out the contents of a science summary for use in the upcoming US regulatory processes. Further details will be sent to the Canadian representatives in the next few days.

Looking forward to hearing from you and please contact myself or

Mike Sutor ([mike.sutor@gov.yk.ca](mailto:mike.sutor@gov.yk.ca)) if you have any further questions.

Thanks,

Shannon Stotyn

**Shannon Stotyn**

Species at Risk Biologist  
Canadian Wildlife Service  
Environment and Climate Change Canada  
91780 Alaska Highway  
Whitehorse, YT, Canada Y1A 5X7  
[shannon.stotyn@ec.gc.ca](mailto:shannon.stotyn@ec.gc.ca)  
Telephone 867-667-3929  
Cellular: 867-333-9891  
Facsimile 867-393-7970  
Government of Canada  
Website [www.ec.gc.ca](http://www.ec.gc.ca)

**Shannon Stotyn**

Biologiste d'Espèces en Péril  
Service Canadien de la faune  
Environnement et Changement Climatique Canada  
91780 autoroute Alaska  
Whitehorse, YT, Canada Y1A 5X7  
[shannon.stotyn@ec.gc.ca](mailto:shannon.stotyn@ec.gc.ca)  
Téléphone 867-667-3929  
Cellulaire: 867-333-9891  
Télécopieur 867-393-7970  
Gouvernement du Canada  
Site Web [www.ec.gc.ca](http://www.ec.gc.ca)

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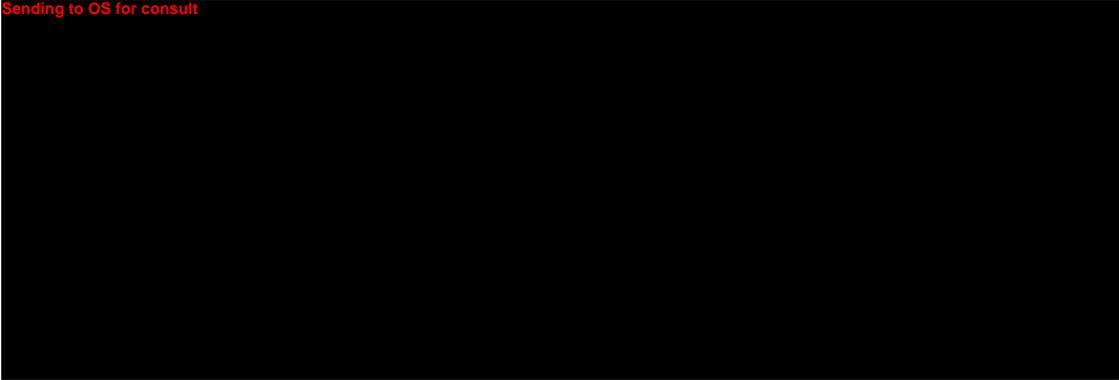
Gilbert Castellanos  
International Affairs Specialist

U.S. Fish and Wildlife Service Alaska Region  
Office of International Conservation  
1011 E. Tudor Road, MS 281  
Anchorage, Alaska 99503

E mail: [Gilbert\\_Castellanos@fws.gov](mailto:Gilbert_Castellanos@fws.gov)  
Phone: 907 786 3850  
Fax: 907 786 3303

**To:** Christopher Putnam[christopher\_putnam@fws.gov]; Mary Colligan[mary\_colligan@fws.gov]; Christopher Noyles[christopher\_noyles@blm.gov]  
**Cc:** Karen Mouritsen[kmourits@blm.gov]; Greg Siekaniec[greg\_siekaniec@fws.gov]; Lesia Monson[lesia\_monson@ios.doi.gov]  
**From:** Wackowski, Stephen  
**Sent:** 2018-04-17T18:04:57-04:00  
**Importance:** Normal  
**Subject:** Fwd: ANWR 1002 Area PB Den IR Survey Summary  
**Received:** 2018-04-17T18:12:31-04:00  
[FWS Polar.Bear.Den 2018 AIR Final.Report.pdf](#)

Sending to OS for consult



Steve Wackowski  
Senior Adviser for Alaskan Affairs  
Department of the Interior  
4230 University Drive, Suite 300  
Anchorage, AK 99508  
907-271-5485

----- Forwarded message -----

From: Siekaniec, Greg <greg\_siekaniec@fws.gov>  
Date: Mon, Mar 19, 2018 at 3:16 PM  
Subject: Fwd: ANWR 1002 Area PB Den IR Survey Summary  
To: "Wackowski, Stephen" <stephen\_wackowski@ios.doi.gov>

Steve,

I think this will satisfy your request for polar bear information. I did not realize the report was this close to being provided. I see in the report there are a sampling of screen shots.

greg

----- Forwarded message -----

From: Colligan, Mary <mary\_colligan@fws.gov>  
Date: Sun, Mar 18, 2018 at 3:06 PM  
Subject: ANWR 1002 Area PB Den IR Survey Summary  
To: Gregory Siekaniec <greg\_siekaniec@fws.gov>

The U.S. Fish and Wildlife Service, Marine Mammals Management Office  
in coordination with the U.S. Geological Survey, Alaska Science

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Center, Polar Bear Program, contracted with Owyhee Air Research to conduct an aerial infrared survey for maternal polar bear dens in the 1002 Area of the Arctic National Wildlife Refuge. The objectives of this survey were to survey critical portions of the 1002 Area for occupied maternal polar bear dens and document all detected high interest infrared signals, or "hotspots"; develop survey strategies for the 1002 Area designed to ensure maximum area coverage and den detection rates; and identify high priority areas within the 1002 Area where maternal polar bear denning is most likely to occur.

Survey flights were conducted over a 10-day period between February 18 - 28, 2018. Weather conditions allowed survey flights for five of the ten days, with the survey crew grounded during the other five days due to unsuitable weather. Nine high interest hotspots were identified during the survey flights. Two of the nine hotspots were identified as occupied maternal polar bear dens, with one other hotspot an unconfirmed possible den. The rest of the hotspots were identified as false positives.

The survey results confirm the existing information regarding polar bear maternal denning habitat in the 1002 Area and our understanding of how polar bears use that habitat. There is a higher density of denning habitat in the 1002 area, and polar bears use it more frequently and farther inland than in other areas of the the north slope of Alaska. The survey also confirms that aerial infrared technology, and our survey methods, can detect polar bear maternal dens in the 1002 Area.

The report from the survey work is attached. Please let us know if you have any questions.

--

Mary Colligan  
Assistant Regional Director  
Fisheries and Ecological Services  
U.S. Fish and Wildlife Service, Alaska Region  
1011 E. Tudor Road, MS-361  
Anchorage, AK 99503  
907-786-3505  
cell: 907-223-5945

**To:** Wackowski, Stephen[stephen\_wackowski@ios.doi.gov]  
**Cc:** Christopher Putnam[christopher\_putnam@fws.gov]; Mary Colligan[mary\_colligan@fws.gov]; Christopher Noyles[christopher\_noyles@blm.gov]; Karen Mouritsen[kmourits@blm.gov]; Greg Siekaniec[greg\_siekaniec@fws.gov]; Lesia Monson[lesia\_monson@ios.doi.gov]; Hillis, Catherine[chillis@blm.gov]  
**From:** Noyles, Christopher  
**Sent:** 2018-04-17T19:21:15-04:00  
**Importance:** Normal  
**Subject:** Re: ANWR 1002 Area PB Den IR Survey Summary  
**Received:** 2018-04-17T19:30:25-04:00

Steve,

I working through some Windows 10 upgrade issues but once they are resolved I can cross reference the points in the report against the data we received. We did not get much usable data in late Feb early Mar due to poor weather however that last couple weeks have been very good for collection. I have a lot of data to review and cross reference.

Anytime Thursday or Friday would work for a call.

Cheers,

Chris

Christopher C. Noyles  
Civil Applications Committee - Alaska Liaison  
US Department of Interior/Bureau of Land Management  
Alaska State Office, Division of Support Services  
222 West 7th Ave # 13, Anchorage AK 99513  
Phone: (907) 271-5693  
Personal Cell: (b) (6)  
FAX: (907) 271-3118  
email: [cnoyles@blm.gov](mailto:cnoyles@blm.gov)



Click on this button to take a short survey and tell my boss how I'm doing

On Tue, Apr 17, 2018 at 2:04 PM, Wackowski, Stephen <[stephen\\_wackowski@ios.doi.gov](mailto:stephen_wackowski@ios.doi.gov)> wrote:

Chris-

Sending to OS for consult

0000012443

Sending to OS for consult

Steve Wackowski  
Senior Adviser for Alaskan Affairs  
Department of the Interior  
4230 University Drive, Suite 300  
Anchorage, AK 99508  
907-271-5485

----- Forwarded message -----

From: Siekaniec, Greg <[greg\\_siekaniec@fws.gov](mailto:greg_siekaniec@fws.gov)>  
Date: Mon, Mar 19, 2018 at 3:16 PM  
Subject: Fwd: ANWR 1002 Area PB Den IR Survey Summary  
To: "Wackowski, Stephen" <[stephen\\_wackowski@ios.doi.gov](mailto:stephen_wackowski@ios.doi.gov)>

Steve,

I think this will satisfy your request for polar bear information. I did not realize the report was this close to being provided. I see in the report there are a sampling of screen shots.

greg

----- Forwarded message -----

From: Colligan, Mary <[mary\\_colligan@fws.gov](mailto:mary_colligan@fws.gov)>  
Date: Sun, Mar 18, 2018 at 3:06 PM  
Subject: ANWR 1002 Area PB Den IR Survey Summary  
To: Gregory Siekaniec <[greg\\_siekaniec@fws.gov](mailto:greg_siekaniec@fws.gov)>

The U.S. Fish and Wildlife Service, Marine Mammals Management Office in coordination with the U.S. Geological Survey, Alaska Science Center, Polar Bear Program, contracted with Owyhee Air Research to conduct an aerial infrared survey for maternal polar bear dens in the 1002 Area of the Arctic National Wildlife Refuge. The objectives of this survey were to survey critical portions of the 1002 Area for occupied maternal polar bear dens and document all detected high

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interest infrared signals, or "hotspots"; develop survey strategies for the 1002 Area designed to ensure maximum area coverage and den detection rates; and identify high priority areas within the 1002 Area where maternal polar bear denning is most likely to occur.

Survey flights were conducted over a 10-day period between February 18 - 28, 2018. Weather conditions allowed survey flights for five of the ten days, with the survey crew grounded during the other five days due to unsuitable weather. Nine high interest hotspots were identified during the survey flights. Two of the nine hotspots were identified as occupied maternal polar bear dens, with one other hotspot an unconfirmed possible den. The rest of the hotspots were identified as false positives.

The survey results confirm the existing information regarding polar bear maternal denning habitat in the 1002 Area and our understanding of how polar bears use that habitat. There is a higher density of denning habitat in the 1002 area, and polar bears use it more frequently and farther inland than in other areas of the the north slope of Alaska. The survey also confirms that aerial infrared technology, and our survey methods, can detect polar bear maternal dens in the 1002 Area.

The report from the survey work is attached. Please let us know if you have any questions.

--

Mary Colligan  
Assistant Regional Director  
Fisheries and Ecological Services  
U.S. Fish and Wildlife Service, Alaska Region  
1011 E. Tudor Road, MS-361  
Anchorage, AK 99503  
907-786-3505  
cell: 907-223-5945

**To:** Greg Siekaniec[greg\_siekaniec@fws.gov]  
**Cc:** Damberg, Doug[doug\_damberg@fws.gov]; mitch\_ellis@fws.gov[mitch\_ellis@fws.gov]  
**From:** Karen Clark  
**Sent:** 2018-04-19T10:21:55-04:00  
**Importance:** Normal  
**Subject:** Re: [EXTERNAL] Porcupine Caribou Workshop/ Whitehorse May 2018/ Please respond with availability for May 2018  
**Received:** 2018-04-19T10:22:02-04:00

Sounds good, we'll keep you posted!  
Karen

Sent from my iPhone

On Apr 19, 2018, at 6:16 AM, Greg Siekaniec <[greg\\_siekaniec@fws.gov](mailto:greg_siekaniec@fws.gov)> wrote:

I'll try and keep it alive here in DC and you keep the Steve part alive. If you have any discussion with Steve let me know as I'm meeting with Susan at 2:15 DC time today.  
Greg

Sent from my iPad

On Apr 19, 2018, at 9:41 AM, Karen Clark <[karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)> wrote:

Hi everyone,  
After the email received on Monday, I have a conversation with Steve W going on this too- he asked us to pull together a proposal and he would mention to Susan. I've asked Mitch to help with that. I'm good with working this in whatever way makes sense, just don't want to duplicate efforts.  
Greg, do you want us to stand down on working with Steve given your interactions in DC? Just let me know!

Thanks, Karen

Sent from my iPhone

On Apr 19, 2018, at 4:21 AM, Greg Siekaniec <[greg\\_siekaniec@fws.gov](mailto:greg_siekaniec@fws.gov)> wrote:

Thank you. This is a big lift. I'm not sure DC is agreeable to even looking at this. Word is that DC summarily rejects anything within one month. I will speak with Steve Wackowski to see if he is willing to approve as he will be in the surname/approval routing.

I'm still talking with Service folks but this does not look good especially with the note that joining by teleconference is an option.

Greg

Sent from my iPad

On Apr 18, 2018, at 6:53 PM, Damberg, Doug <[doug\\_damberg@fws.gov](mailto:doug_damberg@fws.gov)> wrote:

Greg:

Current plans are to hold the meeting May 16 and 17, which likely means travel will start on May 15. The Refuge is working on the required training and travel package.

d

Doug Damberg  
Refuge Supervisor, AK North Zone  
U.S. Fish and Wildlife Service  
1011 E. Tudor Rd.; Anchorage, AK 99503  
Office: (907) 786-3329  
Cell: (907) 947-6302

On Wed, Apr 18, 2018 at 1:24 PM, Ellis, Mitch  
<[mitch\\_ellis@fws.gov](mailto:mitch_ellis@fws.gov)> wrote:

---

Mitch Ellis  
Chief of Refuges - Alaska  
National Wildlife Refuge System  
US Fish and Wildlife Service  
(907)786-3667 wk  
(907)947-4416 mob

On Wed, Apr 18, 2018 at 12:34 PM, Greg Siekaniec  
<[greg\\_siekaniec@fws.gov](mailto:greg_siekaniec@fws.gov)> wrote:

Do we know the dates of the meeting? It's important for asking the question here in DC.  
Thanks,

Greg

Sent from my iPhone

Begin forwarded message:

**From:** Greg Siekaniec  
<[greg\\_siekaniec@fws.gov](mailto:greg_siekaniec@fws.gov)>  
**Date:** April 17, 2018 at 9:20:30 AM EDT  
**To:** A Alvarez <[aeric\\_alvarez@fws.gov](mailto:aeric_alvarez@fws.gov)>  
**Cc:** "Ellis, Mitch" <[mitch\\_ellis@fws.gov](mailto:mitch_ellis@fws.gov)>, Doug Damberg  
<[doug\\_damberg@fws.gov](mailto:doug_damberg@fws.gov)>, "Lor, Socheata"  
<[socheata\\_lor@fws.gov](mailto:socheata_lor@fws.gov)>  
**Subject:** Re: [EXTERNAL] Porcupine Caribou Workshop/  
Whitehorse May 2018/  
Please respond with  
availability for May 2018

Thank you Eric,  
After our conversation that  
anything within 25 days is  
dead on arrival we will see  
when the proposed dates are  
and see if we have some room  
to maneuver.

Mitch, please let us know the proposed dates.

Greg

Sent from my iPhone11

On Apr 17, 2018, at 7:40 AM, A Alvarez  
<[aeric\\_alvarez@fws.gov](mailto:aeric_alvarez@fws.gov)>  
wrote:

We can give it  
the old college  
try. Greg and the  
AS-FWP have to  
sign off. Didn't  
see dates so not  
sure how much  
time we have.

Have you sent  
over the  
paperwork?

Sent from my iPhone

On Apr 16, 2018, at 8:04 PM, Ellis, Mitch

[mitch\\_ellis@fw  
s.gov](mailto:mitch_ellis@fw.s.gov)> wrote:

Greg  
and  
Eric  
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We  
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Mitch Ellis  
Chief of Refuges - Alaska  
National Wildlife Refuge System  
US Fish and Wildlife Service  
(907)786-3667 wk  
(907)947-4416 mob

----- Forwarded message -----  
From: **Damberg, Doug** <[doug\\_damberg@fws.gov](mailto:doug_damberg@fws.gov)>  
Date: Fri, Apr 13, 2018 at 8:30 AM  
Subject: Re: [EXTERNAL] Porcupine Caribou

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To: "Castellanos, Gilbert"

<[gilbert\\_castellanos@fws.gov](mailto:gilbert_castellanos@fws.gov)>

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>

Cc: Mitch Ellis <Mitch\_Ellis@fws.gov>, Wendy

Loya  
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@fw  
s.gov  
>

Mitch:

Do you want to talk about this with Greg to see if

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e it?

Thx,

Doug Damberg  
Refuge Supervisor, AK North Zone  
U.S. Fish and Wildlife Service  
1011 E. Tudor Rd.; Anchorage, AK 99503  
Office: (907) 786-3329  
Cell: (907) 947-6302

On Thu, Apr 12, 2018 at 2:54 PM, Castellanos,

Gilbe  
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Gilbert-

On Thu, Apr 12, 2018 at 2:40 PM, Doug Damberg  
<[doug\\_damberg@fws.gov](mailto:doug_damberg@fws.gov)>

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Sent from my iPhone

Begin forwarded message:

**From:** "Fox, Joanna"  
<[joanna\\_fox@fws.gov](mailto:joanna_fox@fws.gov)>  
**Date:** April 12, 2018 at 2:18:10 PM AKDT  
**To:** Doug Damberg  
<[doug\\_damberg@fws.gov](mailto:doug_damberg@fws.gov)>  
**Cc:** Steve Berendzen  
<[steve\\_berendzen@fws.gov](mailto:steve_berendzen@fws.gov)>  
**Subject:** Fwd: [EXTERNAL] Porcupine  
Caribou Workshop/ Whitehorse May 2018/  
Please respond with availability for May  
2018

Hi Doug,  
Steve has been asked to participate in a  
Porcupine Caribou workshop in Whitehorse  
in May. We think we've missed the window  
for approval for travel to Canada, but also  
know there's a possibility this may be a  
Department priority. Can you look into this

further - perhaps touch bases with Mitch and Gilbert? I'm pretty sure there was some brief conversation about meetings like this during the last meeting we had with Greg - and I thought he seemed to think it would be a priority for us to participate.

Thank you!  
Joanna

---

Joanna L. Fox  
Deputy Refuge Manager  
Arctic National Wildlife Refuge  
101 12th Avenue, Room 236  
Fairbanks, AK 99701  
(907) 456-0549

Follow us on Facebook!  
[www.facebook.com/arcticonationalwildliferefuge](http://www.facebook.com/arcticonationalwildliferefuge)

*"Do what you can, with what you have,  
where you are." -- Theodore Roosevelt*

----- Forwarded message -----

From: **Arthur, Stephen**  
<[stephen\\_arthur@fws.gov](mailto:stephen_arthur@fws.gov)>  
Date: Thu, Apr 12, 2018 at 12:26 PM  
Subject: Fwd: [EXTERNAL] Porcupine  
Caribou Workshop/ Whitehorse May 2018/  
Please respond with availability for May  
2018  
To: Joanna Fox <[joanna\\_fox@fws.gov](mailto:joanna_fox@fws.gov)>,  
Steve Berendzen  
<[steve\\_berendzen@fws.gov](mailto:steve_berendzen@fws.gov)>

Attached is a notice of a proposed workshop to be held in Whitehorse, YT, to discuss issues related to development impacts on the Porcupine caribou herd. I think it would be worthwhile for me to attend, but the timeframe is likely too soon for me to get approval for travel to Canada. I have asked if this could be postponed to June, but I was wondering if you agree that I should attend,

and if you think this would be approved by the Regional office? Are there others who we should consult on this?

Steve

Stephen M. Arthur, Ph.D.

*Supervisory Wildlife Biologist  
Arctic National Wildlife Refuge  
101 12th Ave., Room 236  
Fairbanks, AK 99701  
(907)455-1830*

----- Forwarded message -----

From: **Stotyn, Shannon (EC)**

<[shannon.stotyn@canada.ca](mailto:shannon.stotyn@canada.ca)>

Date: Thu, Apr 12, 2018 at 11:02 AM

Subject: [EXTERNAL] Porcupine Caribou Workshop/ Whitehorse May 2018/ Please respond with availability for May 2018

To: "Tavares, David (PC)"

<[david.tavares@canada.ca](mailto:david.tavares@canada.ca)>, Deana Lemke

(b) (6)

>, Édouard Bélanger <[ebelanger@grrb.nt.ca](mailto:ebelanger@grrb.nt.ca)>,

"McDonald2, Ian (PC)"

<[ian.mcdonald2@canada.ca](mailto:ian.mcdonald2@canada.ca)>, Julia Ahlgren

<[Julia.Ahlgren@gov.yk.ca](mailto:Julia.Ahlgren@gov.yk.ca)>,

"[Kyle.Russell@gov.yk.ca](mailto:Kyle.Russell@gov.yk.ca)"

<[Kyle.Russell@gov.yk.ca](mailto:Kyle.Russell@gov.yk.ca)>,

"[Marsha\\_Branigan@gov.nt.ca](mailto:Marsha_Branigan@gov.nt.ca)"

<[Marsha\\_Branigan@gov.nt.ca](mailto:Marsha_Branigan@gov.nt.ca)>,

"[Martin.Kienzler@gov.yk.ca](mailto:Martin.Kienzler@gov.yk.ca)"

<[Martin.Kienzler@gov.yk.ca](mailto:Martin.Kienzler@gov.yk.ca)>, "Leblond3,

Mathieu (EC)"

<[mathieu.leblond3@canada.ca](mailto:mathieu.leblond3@canada.ca)>,

"[Mike.Suitor@gov.yk.ca](mailto:Mike.Suitor@gov.yk.ca)"

<[Mike.Suitor@gov.yk.ca](mailto:Mike.Suitor@gov.yk.ca)>,

"[Tracy\\_Davison@gov.nt.ca](mailto:Tracy_Davison@gov.nt.ca)"

<[Tracy\\_Davison@gov.nt.ca](mailto:Tracy_Davison@gov.nt.ca)>,

"[beth.lenart@alaska.gov](mailto:beth.lenart@alaska.gov)"

<[beth.lenart@alaska.gov](mailto:beth.lenart@alaska.gov)>, "Brad Griffiths

([dbgriffith@alaska.edu](mailto:dbgriffith@alaska.edu))"

<[dbgriffith@alaska.edu](mailto:dbgriffith@alaska.edu)>,

"[jason.caikoski@alaska.gov](mailto:jason.caikoski@alaska.gov)"

<[jason.caikoski@alaska.gov](mailto:jason.caikoski@alaska.gov)>, Paul Leonard

<[paul\\_leonard@fws.gov](mailto:paul_leonard@fws.gov)>, Steve Arthur

<[stephen\\_arthur@fws.gov](mailto:stephen_arthur@fws.gov)>, Wendy Loya

<[wendy\\_loya@fws.gov](mailto:wendy_loya@fws.gov)>

0000012457

Hello,

The Canadian Wildlife Service, Yukon Government and Government of Northwest Territories are organizing a two day workshop in Whitehorse, Yukon to address issues related to potential industrial development within the calving grounds of the Porcupine caribou herd. The primary goal of the workshop is to identify a path forward for managing impacts on the PCH through input from biologists, environmental assessment specialists and researchers with experience on this topic.

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them participate. We will also have teleconference capability if you are unable to attend in person.

<https://doodle.com/poll/9nf7dc8kihwk5iez>

Following this two day meeting we will ask the Canadian representatives to stay for an extra day to flesh out the contents of a science summary for use in the upcoming US regulatory processes. Further details will be sent to the Canadian representatives in the next few days.

Looking forward to hearing from you and please contact myself or Mike Sutor ([mike.sutor@gov.yk.ca](mailto:mike.sutor@gov.yk.ca)) if you have any further questions.

Thanks,

Shannon Stotyn

**Shannon Stotyn**

Species at Risk Biologist  
Canadian Wildlife Service  
Environment and Climate Change Canada  
91780 Alaska Highway  
Whitehorse, YT, Canada Y1A 5X7  
[shannon.stotyn@ec.gc.ca](mailto:shannon.stotyn@ec.gc.ca)

Telephone 867-667-3929  
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**Shannon Stotyn**

Biologiste d'Espèces en Péril  
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--

Gilbert Castellanos  
International Affairs Specialist

U.S. Fish and Wildlife Service Alaska Region  
Office of International Conservation  
1011 E. Tudor Road, MS 281  
Anchorage, Alaska 99503

E mail: [Gilbert\\_Castellanos@fws.gov](mailto:Gilbert_Castellanos@fws.gov)  
Phone: 907 786 3850  
Fax: 907 786 3303

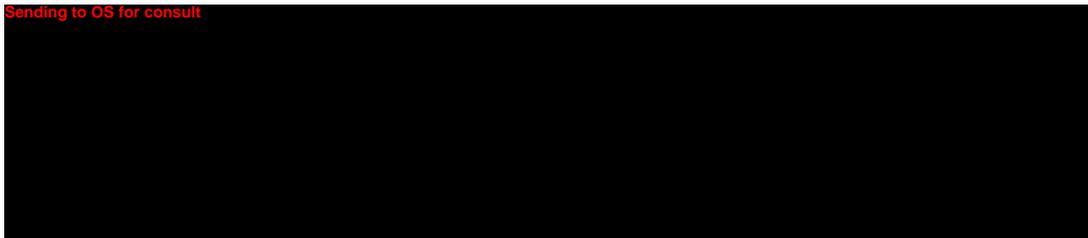
**To:** Greg Siekaniec[greg\_siekaniec@fws.gov]  
**From:** Clark, Karen  
**Sent:** 2018-04-19T15:10:50-04:00  
**Importance:** Normal  
**Subject:** Fwd: Porcupine Caribou Workshop participation- help?  
**Received:** 2018-04-19T15:11:39-04:00

Karen P. Clark  
Deputy Regional Director  
U.S. Fish & Wildlife Service- Alaska Region  
1011 E Tudor Rd, MS 374  
Anchorage, AK 99503  
[karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)  
907.786.3542 office  
907.786.3493 direct  
907.786.3306 fax

----- Forwarded message -----

**From:** **Wackowski, Stephen** <[stephen\\_wackowski@ios.doi.gov](mailto:stephen_wackowski@ios.doi.gov)>  
**Date:** Wed, Apr 18, 2018 at 10:52 AM  
**Subject:** Re: Porcupine Caribou Workshop participation- help?  
**To:** "Clark, Karen" <[karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)>

Sending to OS for consult



Steve Wackowski  
Senior Adviser for Alaskan Affairs  
Department of the Interior  
4230 University Drive, Suite 300  
Anchorage, AK 99508  
907-271-5485

On Wed, Apr 18, 2018 at 1:57 PM, Clark, Karen <[karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)> wrote:  
> Hey Steve, Just following up on this today in case it got lost in your email  
> yesterday. Is this something you can help us move through the process?  
>  
> Thanks, Karen

0000012461

>  
>  
>  
> Karen P. Clark  
> Deputy Regional Director  
> U.S. Fish & Wildlife Service- Alaska Region  
> 1011 E Tudor Rd, MS 374  
> Anchorage, AK 99503  
> [karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)  
> 907.786.3542 office  
> 907.786.3493 direct  
> 907.786.3306 fax  
>  
>  
>  
> On Tue, Apr 17, 2018 at 8:29 AM, Clark, Karen <[karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)> wrote:  
>>  
>> Hi Steve,  
>>  
>> Steve Arthur, our Arctic Refuge caribou biologist has just been asked to  
>> participate in a Porcupine Caribou Workshop in Whitehorse in May- leaving  
>> not enough time to get the necessary approvals without elevating the issue.  
>> Given the importance of this topic and that the Arctic is most definitely a  
>> priority, I'm wondering if you would you be willing to help us move this one  
>> through the process? I'm available to chat more if you'd like- just let me  
>> know.  
>>  
>> Thanks, Karen  
>>  
>>  
>> Karen P. Clark  
>> Deputy Regional Director  
>> U.S. Fish & Wildlife Service- Alaska Region  
>> 1011 E Tudor Rd, MS 374  
>> Anchorage, AK 99503  
>> [karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)  
>> 907.786.3542 office  
>> 907.786.3493 direct  
>> 907.786.3306 fax  
>>  
>>  
>

**To:** Damberg, Doug[doug\_damberg@fws.gov]  
**Cc:** Greg Siekaniec[greg\_siekaniec@fws.gov]; Mitch Ellis[mitch\_ellis@fws.gov]  
**From:** Clark, Karen  
**Sent:** 2018-04-19T16:43:39-04:00  
**Importance:** Normal  
**Subject:** Re: Updated version: Porcupine Caribou Workshop/ Whitehorse May 2018: Invitation and Justification  
**Received:** 2018-04-19T16:44:26-04:00

Thanks Doug, this is perfect!

Karen P. Clark  
Deputy Regional Director  
U.S. Fish & Wildlife Service- Alaska Region  
1011 E Tudor Rd, MS 374  
Anchorage, AK 99503  
[karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)  
907.786.3542 office  
907.786.3493 direct  
907.786.3306 fax

On Thu, Apr 19, 2018 at 11:35 AM, Damberg, Doug <[doug\\_damberg@fws.gov](mailto:doug_damberg@fws.gov)> wrote:

Karen:

The invitation for Steve Arthur to attend the porcupine caribou workshop is at the bottom of this email string. A draft agenda is attached.

Justification for attendance:

Dr. Stephen Arthur, Arctic National Wildlife Refuge (NWR) Wildlife Biologist, has been requested to attend a workshop concerning management and research needs of the Porcupine Caribou Herd in relation to proposed oil and gas development in the Arctic NWR coastal plain. The workshop will be held in Whitehorse, Yukon, Canada on May 16-17, 2018 and is being organized by the Canadian Wildlife Service. Participation from the U.S. Fish and Wildlife Service (FWS) has been specifically requested by the workshop organizers, and it is unlikely that any other FWS personnel will be able to attend. The meeting has been organized on relatively short notice due to the high level of concern among our Canadian colleagues regarding potential decisions that will be required in the near future to guide management and research of this herd during the coming years. Due to the large number of participants and the complexity of the issues to be discussed, an in-person meeting is the most effective means of achieving this meeting's objectives. Dr. Arthur can also serve an important advisory role to Mr.

Steve Wackowski, the Department of Interior Senior Adviser for Alaskan Affairs, in his role as Co-Chair of the International Porcupine Caribou Board (IPCB). Information from this meeting will be important for future IPCB engagement. The Office of International Affairs indicate that the request would be favorably considered.

Additional information:

The workshop dates have been confirmed. Steve would begin travel May 15th for the May 16/17 workshop. Steve has completed the U.S. Department of State training *HT401 High Threat Security Overseas Seminar*. The travel package is in the approval process.

Please let me know if you need any additional information.

Doug Damberg  
Refuge Supervisor, AK North Zone  
U.S. Fish and Wildlife Service  
1011 E. Tudor Rd.; Anchorage, AK 99503  
Office: (907) 786-3329  
Cell: (907) 947-6302

----- Forwarded message -----

From: **Stotyn, Shannon (EC)** <[shannon.stotyn@canada.ca](mailto:shannon.stotyn@canada.ca)>

Date: Thu, Apr 12, 2018 at 11:02 AM

Subject: [EXTERNAL] Porcupine Caribou Workshop/ Whitehorse May 2018/ Please respond with availability for May 2018

To: "Tavares, David (PC)" <[david.tavares@canada.ca](mailto:david.tavares@canada.ca)>, Deana Lemke

<<sup>(b) (6)</sup>>, Édouard Bélanger <[ebelanger@grrb.nt.ca](mailto:ebelanger@grrb.nt.ca)>, "Mcdonald2, Ian (PC)" <[ian.mcdonald2@canada.ca](mailto:ian.mcdonald2@canada.ca)>, Julia Ahlgren <[Julia.Ahlgren@gov.yk.ca](mailto:Julia.Ahlgren@gov.yk.ca)>, "[Kyle.Russell@gov.yk.ca](mailto:Kyle.Russell@gov.yk.ca)" <[Kyle.Russell@gov.yk.ca](mailto:Kyle.Russell@gov.yk.ca)>, "[Marsha\\_Branigan@gov.nt.ca](mailto:Marsha_Branigan@gov.nt.ca)" <[Marsha\\_Branigan@gov.nt.ca](mailto:Marsha_Branigan@gov.nt.ca)>, "[Martin.Kienzler@gov.yk.ca](mailto:Martin.Kienzler@gov.yk.ca)" <[Martin.Kienzler@gov.yk.ca](mailto:Martin.Kienzler@gov.yk.ca)>, "Leblond3, Mathieu (EC)" <[mathieu.leblond3@canada.ca](mailto:mathieu.leblond3@canada.ca)>, "[Mike.Suitor@gov.yk.ca](mailto:Mike.Suitor@gov.yk.ca)" <[Mike.Suitor@gov.yk.ca](mailto:Mike.Suitor@gov.yk.ca)>, "[Tracy\\_Davison@gov.nt.ca](mailto:Tracy_Davison@gov.nt.ca)" <[Tracy\\_Davison@gov.nt.ca](mailto:Tracy_Davison@gov.nt.ca)>, "[beth.lenart@alaska.gov](mailto:beth.lenart@alaska.gov)" <[beth.lenart@alaska.gov](mailto:beth.lenart@alaska.gov)>, "Brad Griffiths ([dbgriffith@alaska.edu](mailto:dbgriffith@alaska.edu))" <[dbgriffith@alaska.edu](mailto:dbgriffith@alaska.edu)>, "[jason.caikoski@alaska.gov](mailto:jason.caikoski@alaska.gov)" <[jason.caikoski@alaska.gov](mailto:jason.caikoski@alaska.gov)>, Paul Leonard <[paul\\_leonard@fws.gov](mailto:paul_leonard@fws.gov)>, Steve Arthur <[stephen\\_arthur@fws.gov](mailto:stephen_arthur@fws.gov)>, Wendy Loya <[wendy\\_loya@fws.gov](mailto:wendy_loya@fws.gov)>

Hello,

The Canadian Wildlife Service, Yukon Government and Government of Northwest Territories

0000012464

are organizing a two day workshop in Whitehorse, Yukon to address issues related to potential industrial development within the calving grounds of the Porcupine caribou herd. The primary goal of the workshop is to identify a path forward for managing impacts on the PCH through input from biologists, environmental assessment specialists and researchers with experience on this topic.

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<https://doodle.com/poll/9nf7dc8kihwk5iez>

Following this two day meeting we will ask the Canadian representatives to stay for an extra day to flesh out the contents of a science summary for use in the upcoming US regulatory processes. Further details will be sent to the Canadian representatives in the next few days.

Looking forward to hearing from you and please contact myself or Mike Suitor ([mike.suitor@gov.yk.ca](mailto:mike.suitor@gov.yk.ca)) if you have any further questions.

Thanks,

Shannon Stotyn

**Shannon Stotyn**

Species at Risk Biologist  
Canadian Wildlife Service  
Environment and Climate Change Canada  
91780 Alaska Highway  
Whitehorse, YT, Canada Y1A 5X7  
[shannon.stotyn@ec.gc.ca](mailto:shannon.stotyn@ec.gc.ca)  
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**Shannon Stotyn**

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Cellulaire: 867-333-9891  
Télécopieur 867-393-7970  
Gouvernement du Canada  
Site Web [www.ec.gc.ca](http://www.ec.gc.ca)

**To:** stephen\_wackowski@ios.doi.gov[stephen\_wackowski@ios.doi.gov]  
**Cc:** karen\_clark@fws.gov[karen\_clark@fws.gov]  
**From:** Greg Siekaniec  
**Sent:** 2018-04-19T17:42:24-04:00  
**Importance:** Normal  
**Subject:** Fwd: Updated version: Porcupine Caribou Workshop/ Whitehorse May 2018: Invitation and Justification  
**Received:** 2018-04-19T17:42:32-04:00  
[ATT00001.htm](#)  
[PCH\\_WORKSHOP\\_MAY2018\\_draft\\_agenda.docx](#)

Steve,

Greetings from DC. Had a good visit with Susan. Drinking from the Texas fire hose. The following has been noted in FWS leadership and agreed to push it forward with your support. We know it's in the awkward time window but the request came about only recently and will reflect on Arctic 1002 area caribou discussions around EIS development.

Thanks, I'm headed for the airport if want to discuss.

Greg

Sent from my iPhone

Begin forwarded message:

**From:** "Clark, Karen" <[karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)>  
**Date:** April 19, 2018 at 4:42:20 PM EDT  
**To:** Stephen Wackowski <[stephen\\_wackowski@ios.doi.gov](mailto:stephen_wackowski@ios.doi.gov)>  
**Cc:** Greg Siekaniec <[greg\\_siekaniec@fws.gov](mailto:greg_siekaniec@fws.gov)>  
**Subject:** **Fwd: Updated version: Porcupine Caribou Workshop/ Whitehorse May 2018: Invitation and Justification**

Hi Steve,

Please see the justification, draft agenda and invite for Steve Arthur below. If you would like more information, please let me know!

Thanks for helping us out with this- Steve's participation in this meeting will help us effectively implement the oil and gas program on the Arctic Refuge.

Karen

Karen P. Clark  
Deputy Regional Director  
U.S. Fish & Wildlife Service- Alaska Region

0000012467

1011 E Tudor Rd, MS 374  
Anchorage, AK 99503  
[karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)  
907.786.3542 office  
907.786.3493 direct  
907.786.3306 fax

----- Forwarded message -----

From: **Damberg, Doug** <[doug\\_damberg@fws.gov](mailto:doug_damberg@fws.gov)>  
Date: Thu, Apr 19, 2018 at 11:35 AM  
Subject: Updated version: Porcupine Caribou Workshop/ Whitehorse May 2018:  
Invitation and Justification  
To: Karen Clark <[karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)>  
Cc: Greg Siekaniec <[greg\\_siekaniec@fws.gov](mailto:greg_siekaniec@fws.gov)>, Mitch Ellis <[mitch\\_ellis@fws.gov](mailto:mitch_ellis@fws.gov)>

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Office: (907) 786-3329  
Cell: (907) 947-6302

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Date: Thu, Apr 12, 2018 at 11:02 AM  
Subject: [EXTERNAL] Porcupine Caribou Workshop/ Whitehorse May 2018/ Please respond with availability for May 2018  
To: "Tavares, David (PC)" <[david.tavares@canada.ca](mailto:david.tavares@canada.ca)>, Deana Lemke <[\(b\) \(6\)@canada.ca](mailto:(b) (6)@canada.ca)>, Édouard Bélanger <[ebelanger@grrb.nt.ca](mailto:ebelanger@grrb.nt.ca)>, "Mcdonald2, Ian (PC)" <[ian.mcdonald2@canada.ca](mailto:ian.mcdonald2@canada.ca)>, Julia Ahlgren <[Julia.Ahlgren@gov.yk.ca](mailto:Julia.Ahlgren@gov.yk.ca)>, "Kyle.Russell@gov.yk.ca" <[Kyle.Russell@gov.yk.ca](mailto:Kyle.Russell@gov.yk.ca)>, "Marsha Branigan@gov.nt.ca" <[Marsha\\_Branigan@gov.nt.ca](mailto:Marsha_Branigan@gov.nt.ca)>, "Martin.Kienzler@gov.yk.ca" <[Martin.Kienzler@gov.yk.ca](mailto:Martin.Kienzler@gov.yk.ca)>, "Leblond3, Mathieu (EC)" <[mathieu.leblond3@canada.ca](mailto:mathieu.leblond3@canada.ca)>, "Mike.Suitor@gov.yk.ca" <[Mike.Suitor@gov.yk.ca](mailto:Mike.Suitor@gov.yk.ca)>, "Tracy Davison@gov.nt.ca" <[Tracy\\_Davison@gov.nt.ca](mailto:Tracy_Davison@gov.nt.ca)>, "beth.lenart@alaska.gov" <[beth.lenart@alaska.gov](mailto:beth.lenart@alaska.gov)>, "Brad Griffiths (dbgriffith@alaska.edu)" <[dbgriffith@alaska.edu](mailto:dbgriffith@alaska.edu)>, "jason.caikoski@alaska.gov" <[jason.caikoski@alaska.gov](mailto:jason.caikoski@alaska.gov)>, Paul Leonard <[paul\\_leonard@fws.gov](mailto:paul_leonard@fws.gov)>, Steve Arthur <[stephen\\_arthur@fws.gov](mailto:stephen_arthur@fws.gov)>, Wendy Loya <[wendy\\_loya@fws.gov](mailto:wendy_loya@fws.gov)>

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**Shannon Stotyn**

Species at Risk Biologist  
Canadian Wildlife Service  
Environment and Climate Change Canada  
91780 Alaska Highway  
Whitehorse, YT, Canada Y1A 5X7  
[shannon.stotyn@ec.gc.ca](mailto:shannon.stotyn@ec.gc.ca)  
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Cellulaire: 867-333-9891  
Télécopieur 867-393-7970  
Gouvernement du Canada  
Site Web [www.ec.gc.ca](http://www.ec.gc.ca)

**To:** Greg Siekaniec[greg\_siekaniec@fws.gov]  
**Cc:** karen\_clark@fws.gov[karen\_clark@fws.gov]  
**From:** Stephen Wackowski  
**Sent:** 2018-04-19T19:46:47-04:00  
**Importance:** Normal  
**Subject:** Re: Updated version: Porcupine Caribou Workshop/ Whitehorse May 2018: Invitation and Justification  
**Received:** 2018-04-19T19:46:57-04:00

I support this, particularly because I need some guidance from him as we spin up the IPCH treaty board.

My only ask before he goes and communicates further with them (beyond his ok to attend) is that we all have a short meeting so we can all be on the same page.

I'd also like a detailed briefing from him after the meeting to include some details on who is who with regards to our Canadian counterparts.

Sent from my iPhone

On Apr 19, 2018, at 2:42 PM, Greg Siekaniec <[greg\\_siekaniec@fws.gov](mailto:greg_siekaniec@fws.gov)> wrote:

Steve,

Greetings from DC. Had a good visit with Susan. Drinking from the Texas fire hose.

The following has been noted in FWS leadership and agreed to push it forward with your support. We know it's in the awkward time window but the request came about only recently and will reflect on Arctic 1002 area caribou discussions around EIS development.

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Sent from my iPhone

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**From:** "Clark, Karen" <[karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)>  
**Date:** April 19, 2018 at 4:42:20 PM EDT  
**To:** Stephen Wackowski <[stephen\\_wackowski@ios.doi.gov](mailto:stephen_wackowski@ios.doi.gov)>  
**Cc:** Greg Siekaniec <[greg\\_siekaniec@fws.gov](mailto:greg_siekaniec@fws.gov)>  
**Subject:** Fwd: Updated version: Porcupine Caribou Workshop/ Whitehorse May 2018: Invitation and Justification

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Karen

Karen P. Clark  
Deputy Regional Director  
U.S. Fish & Wildlife Service- Alaska Region  
1011 E Tudor Rd, MS 374  
Anchorage, AK 99503  
[karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)  
907.786.3542 office  
907.786.3493 direct  
907.786.3306 fax

----- Forwarded message -----

From: **Damberg, Doug** <[doug\\_damberg@fws.gov](mailto:doug_damberg@fws.gov)>

Date: Thu, Apr 19, 2018 at 11:35 AM

Subject: Updated version: Porcupine Caribou Workshop/ Whitehorse May 2018:  
Invitation and Justification

To: Karen Clark <[karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)>

Cc: Greg Siekaniec <[greg\\_siekaniec@fws.gov](mailto:greg_siekaniec@fws.gov)>, Mitch Ellis  
<[mitch\\_ellis@fws.gov](mailto:mitch_ellis@fws.gov)>

Karen:

The invitation for Steve Arthur to attend the porcupine caribou workshop is at the bottom of this email string. A draft agenda is attached.

Justification for attendance:

Dr. Stephen Arthur, Arctic National Wildlife Refuge (NWR) Wildlife Biologist, has been requested to attend a workshop concerning management and research needs of the Porcupine Caribou Herd in relation to proposed oil and gas development in the Arctic NWR coastal plain. The workshop will be held in Whitehorse, Yukon, Canada on May 16-17, 2018 and is

being organized by the Canadian Wildlife Service. Participation from the U.S. Fish and Wildlife Service (FWS) has been specifically requested by the workshop organizers, and it is unlikely that any other FWS personnel will be able to attend. The meeting has been organized on relatively short notice due to the high level of concern among our Canadian colleagues regarding potential decisions that will be required in the near future to guide management and research of this herd during the coming years. Due to the large number of participants and the complexity of the issues to be discussed, an in-person meeting is the most effective means of achieving this meeting's objectives. Dr. Arthur can also serve an important advisory role to Mr. Steve Wackowski, the Department of Interior Senior Adviser for Alaskan Affairs, in his role as Co-Chair of the International Porcupine Caribou Board (IPCB). Information from this meeting will be important for future IPCB engagement. The Office of International Affairs indicate that the request would be favorably considered.

Additional information:

The workshop dates have been confirmed. Steve would begin travel May 15th for the May 16/17 workshop. Steve has completed the U.S. Department of State training *HT401 High Threat Security Overseas Seminar*. The travel package is in the approval process.

Please let me know if you need any additional information.

Doug Damberg  
Refuge Supervisor, AK North Zone  
U.S. Fish and Wildlife Service  
1011 E. Tudor Rd.; Anchorage, AK 99503  
Office: (907) 786-3329  
Cell: (907) 947-6302

----- Forwarded message -----

From: **Stotyn, Shannon (EC)** <[shannon.stotyn@canada.ca](mailto:shannon.stotyn@canada.ca)>  
Date: Thu, Apr 12, 2018 at 11:02 AM  
Subject: [EXTERNAL] Porcupine Caribou Workshop/ Whitehorse May 2018/  
Please respond with availability for May 2018  
To: "Tavares, David (PC)" <[david.tavares@canada.ca](mailto:david.tavares@canada.ca)>, Deana Lemke  
(b) (6) >, Édouard Bélanger

<ebelanger@grrb.nt.ca>, "Mcdonald2, Ian (PC)"  
<ian.mcdonald2@canada.ca>, Julia Ahlgren  
<Julia.Ahlgren@gov.yk.ca>, "Kyle.Russell@gov.yk.ca"  
<Kyle.Russell@gov.yk.ca>, "Marsha\_Branigan@gov.nt.ca"  
<Marsha\_Branigan@gov.nt.ca>, "Martin.Kienzler@gov.yk.ca"  
<Martin.Kienzler@gov.yk.ca>, "Leblond3, Mathieu (EC)"  
<mathieu.leblond3@canada.ca>, "Mike.Suitor@gov.yk.ca"  
<Mike.Suitor@gov.yk.ca>, "Tracy\_Davison@gov.nt.ca"  
<Tracy\_Davison@gov.nt.ca>, "beth.lenart@alaska.gov"  
<beth.lenart@alaska.gov>, "Brad Griffiths (dbgriffith@alaska.edu)"  
<dbgriffith@alaska.edu>, "jason.caikoski@alaska.gov"  
<jason.caikoski@alaska.gov>, Paul Leonard  
<paul\_leonard@fws.gov>, Steve Arthur <stephen\_arthur@fws.gov>,  
Wendy Loya <wendy\_loya@fws.gov>

Hello,

The Canadian Wildlife Service, Yukon Government and Government of Northwest Territories are organizing a two day workshop in Whitehorse, Yukon to address issues related to potential industrial development within the calving grounds of the Porcupine caribou herd. The primary goal of the workshop is to identify a path forward for managing impacts on the PCH through input from biologists, environmental assessment specialists and researchers with experience on this topic.

Outcomes will include:

- A better understanding of what is coming in the process and potential impacts
- Identification of key short and medium term priorities for input to the expected Environmental Impact Statement that will be prepared in the coming months and reviewed thereafter
- Suggestions for agencies tasked with monitoring the herd for priority sampling and structure of long term herd monitoring
- Identification of potential collaborations and work needed

If your organization is interested in participating **please complete the doodle poll below to indicate your availability. We have allocated two days for this meeting.** If you have any colleagues in your organization that have experience addressing these issues we would be excited to have them participate. We will also have teleconference capability if you are unable to attend in person.

<https://doodle.com/poll/9nf7dc8kihwk5iez>

Following this two day meeting we will ask the Canadian representatives to stay for an extra day to flesh out the contents of a science summary for use in the upcoming US regulatory processes. Further details will be sent to the Canadian representatives in the next few days.

Looking forward to hearing from you and please contact myself or Mike Suitor ([mike.suitor@gov.yk.ca](mailto:mike.suitor@gov.yk.ca)) if you have any further questions.

Thanks,

Shannon Stotyn

**Shannon Stotyn**

Species at Risk Biologist  
Canadian Wildlife Service  
Environment and Climate Change Canada  
91780 Alaska Highway  
Whitehorse, YT, Canada Y1A 5X7  
[shannon.stotyn@ec.gc.ca](mailto:shannon.stotyn@ec.gc.ca)

**To:** Greg Siekaniec[greg\_siekaniec@fws.gov]  
**From:** Crane, Drew  
**Sent:** 2018-04-20T12:31:57-04:00  
**Importance:** Normal  
**Subject:** Re: Coastal Plain  
**Received:** 2018-04-20T12:32:06-04:00

No worries. Thanks for sending it along!

Drew Crane  
Regional Endangered Species Coordinator  
Alaska Region  
U.S. Fish and Wildlife Service  
1011 E. Tudor Road  
Anchorage, AK 99503  
907-786-3323

On Fri, Apr 20, 2018 at 7:01 AM, Greg Siekaniec <[greg\\_siekaniec@fws.gov](mailto:greg_siekaniec@fws.gov)> wrote:

I forgot that you are the interim “all things Arctic” for a couple of weeks.

Greg

Sent from my iPhone

Begin forwarded message:

**From:** Greg Siekaniec <[greg\\_siekaniec@fws.gov](mailto:greg_siekaniec@fws.gov)>  
**Date:** April 20, 2018 at 6:57:00 AM AKDT  
**To:** [wendy\\_loya@fws.gov](mailto:wendy_loya@fws.gov), [karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)  
**Subject:** Fwd: Coastal Plain

FYI

Sent from my iPhone

Begin forwarded message:

**From:** Karen Mouritsen <[kmourits@blm.gov](mailto:kmourits@blm.gov)>  
**Date:** April 19, 2018 at 8:49:44 PM AKDT  
**To:** Greg Siekaniec <[greg\\_siekaniec@fws.gov](mailto:greg_siekaniec@fws.gov)>, [karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)  
**Subject:** Fwd: Coastal Plain

Sent from my iPad

Begin forwarded message:

0000012477

**From:** "Murphy, Ted" <t75murph@blm.gov>

**Date:** April 19, 2018 at 10:39:20 AM AKDT

**To:** Joseph Balash <joseph\_balash@ios.doi.gov>, Michael Nedd  
<mnedd@blm.gov>

**Cc:** "Wackowski, Stephen" <stephen\_wackowski@ios.doi.gov>, Michael  
Gieryic <mike.gieryic@sol.doi.gov>, Karen Mouritsen  
<kmourits@blm.gov>, "Seidlitz, Joseph (Gene)"  
<gseidlit@blm.gov>, Aaron Moody  
<aaron.moody@sol.doi.gov>, "Collier, Briana"  
<briana.collier@sol.doi.gov>, Katharine Macgregor  
<kate\_macgregor@ios.doi.gov>, Kathleen Benedetto  
<kbenedetto@blm.gov>, Brian Steed  
<bsteed@blm.gov>, "Miriam (Nicole) Hayes"  
<mnhayes@blm.gov>

**Subject:** Coastal Plain

On April 18, 2018 the contract for development and completion of the EIS for the Coastal Plain was awarded to Environmental Management and Planning Solutions (EMPSI), Boulder Colorado with offices in Alaska.

EMPSi has partnered with ABR, Inc., Arctic Hydrological Consultants, Stephen R. Braund & Assoc., Northern Economics, DOWL, and HDR, Inc.

Ted

--

Ted A Murphy  
Alaska-Associate State Director  
907-271-5076

0000012478

**To:** Greg Siekaniec[greg\_siekaniec@fws.gov]; Clark, Karen[karen\_clark@fws.gov]  
**From:** Crane, Drew  
**Sent:** 2018-04-20T12:39:31-04:00  
**Importance:** Normal  
**Subject:** Fwd: Documents to share  
**Received:** 2018-04-20T12:39:43-04:00  
[CoastalPlain\\_Q\\_A.pdf](#)  
[DTS 1996 Coastal Plain EIS NOI 4.16.18.docx](#)  
[Coastal Plain NOI News Release 04.19.18.pdf](#)

Mainly FYI.  
I shared these with Andrea and Sara yesterday.

Thanks  
Drew Crane  
Regional Endangered Species Coordinator  
Alaska Region  
U.S. Fish and Wildlife Service  
1011 E. Tudor Road  
Anchorage, AK 99503  
907-786-3323

----- Forwarded message -----  
**From:** Hayes, Miriam (Nicole) <[mnhayes@blm.gov](mailto:mnhayes@blm.gov)>  
**Date:** Thu, Apr 19, 2018 at 1:07 PM  
**Subject:** Documents to share  
**To:** Drew Crane <[drew\\_crane@fws.gov](mailto:drew_crane@fws.gov)>

Here you go!

**Nicole Hayes**  
Project Coordinator  
Bureau of Land Management  
222 W. 7th Avenue #13  
Anchorage, Alaska 99513  
Desk: (907) 271-4354

**To:** Karen Clark[karen\_clark@fws.gov]; Greg Siekaniec[greg\_siekaniec@fws.gov]; Doug Damberg[doug\_damberg@fws.gov]  
**From:** Fox, Joanna  
**Sent:** 2018-04-20T13:26:00-04:00  
**Importance:** Normal  
**Subject:** Fwd: 1002 area  
**Received:** 2018-04-20T13:26:53-04:00  
[Vote Button sm.ico](#)  
[2018\\_HighResolutionOrthoimagery\\_ANWR\\_1002.docx](#)

Here's the correspondence I just referred to in this morning's meeting. I received it 2 days ago.

---

Joanna L. Fox  
Deputy Refuge Manager  
Arctic National Wildlife Refuge  
101 12th Avenue, Room 236  
Fairbanks, AK 99701  
(907) 456-0549

Follow us on Facebook!  
[www.facebook.com/arcticonationalwildliferefuge](http://www.facebook.com/arcticonationalwildliferefuge)

*"Do what you can, with what you have, where you are." -- Theodore Roosevelt*

----- Forwarded message -----  
**From:** **Trawicki, John** <[john\\_trawicki@fws.gov](mailto:john_trawicki@fws.gov)>  
**Date:** Wed, Apr 18, 2018 at 12:53 PM  
**Subject:** Fwd: 1002 area  
**To:** Joanna Fox <[joanna\\_fox@fws.gov](mailto:joanna_fox@fws.gov)>

fyi

----- Forwarded message -----  
**From:** **Laker, Mark** <[mark\\_laker@fws.gov](mailto:mark_laker@fws.gov)>  
**Date:** Wed, Apr 18, 2018 at 11:27 AM  
**Subject:** Re: 1002 area  
**To:** "Wackowski, Stephen" <[stephen\\_wackowski@ios.doi.gov](mailto:stephen_wackowski@ios.doi.gov)>  
**Cc:** "Wright, Brian" <[bwright@usgs.gov](mailto:bwright@usgs.gov)>, Nathan Olson <[nathan\\_olson@fws.gov](mailto:nathan_olson@fws.gov)>, Chris Noyles <[cnoyles@blm.gov](mailto:cnoyles@blm.gov)>, Tracy Fuller <[tfuller@usgs.gov](mailto:tfuller@usgs.gov)>, "Bathrick, Mark" <[mark\\_bathrick@ios.doi.gov](mailto:mark_bathrick@ios.doi.gov)>, Wendy Loya <[Wendy\\_loya@fws.gov](mailto:Wendy_loya@fws.gov)>, John Trawicki <[john\\_trawicki@fws.gov](mailto:john_trawicki@fws.gov)>, Brian Lubinski <[brian\\_lubinski@fws.gov](mailto:brian_lubinski@fws.gov)>, Bradley Koeckeritz <[bradley\\_koeckeritz@ios.doi.gov](mailto:bradley_koeckeritz@ios.doi.gov)>

Steve,

Attached is a proposal Nate Olson and I submitted a few weeks ago for creating an orthomosaic of the 1002 lands at a resolution of 45cm. This is a cost w/o ground control, so the accuracy would be around 1-2 meters. With 8-10 ground control points and scale bars this can be

decreased to <10cm.

Having BLM do the ground control may be most cost effective.

I haven't seen what the actual desired products and specs are, so I can't give a definitive cost estimate. If needed we have access to higher end camera systems such as a Phase One camera, Applanix mount, and IMU within FWS. I also have a very good relationship with Alaska Division of Geological & Geophysical Surveys. They have just acquired a LiDAR unit, so it may be possible to partner with them, if some LiDAR acquisition is needed.

Again, I can be more helpful knowing what the desired products are.

thx,

m

On Wed, Apr 18, 2018 at 9:09 AM, Wackowski, Stephen <[stephen\\_wackowski@ios.doi.gov](mailto:stephen_wackowski@ios.doi.gov)> wrote:

Gents-

Thanks for taking the initiative on this. Any in-house DEM capability should be looks at first, especially if it meets the data requirements for BLM and USFWS as we undertake the congressional mandated 1002 lease sale. As I am sure you all know, this is a top secretarial priority for Alaska.

I'm adding Mark Bathrick at OAS to the chain. Mark- Can you cast a net and see if we have any additional L48 capability to collect structure for motion or LIDAR/LIDAR like elevation data. I wish we had BVLOS UAS capability to do it, but 1002 is so large that manned aircraft is probably our best and only option.

-Steve

Steve Wackowski  
Senior Adviser for Alaskan Affairs  
Department of the Interior  
4230 University Drive, Suite 300  
Anchorage, AK 99508  
907-271-5485

On Wed, Apr 18, 2018 at 1:01 PM, Wright, Brian <[bwright@usgs.gov](mailto:bwright@usgs.gov)> wrote:

Mark,

In February, I was contacted by the Arctic LCC regarding elevation data available for the 1002 area. During the conversation, the FWS was making inquires at acquiring high resolution elevation data for the 1002.

I provided an overview of the 3DEP Broad Agency Announcement and the matching federal funding for the collection of lidar at QL2 level. I noted that sfm is currently not a collection methods approved by the program to gain federal funding assistance. FWS mentioned the possibility of collecting sfm and I believe they were in contact with Matt Nolan out of Fairbanks.

The FWS is also interested in updating the hydrography for the 1002 area and has made some inquires on possible options on how to complete.

Brian

Paul Leonard, PhD  
Science Coordinator  
Arctic LCC  
(907) 456-0445  
[paul\\_leonard@fws.gov](mailto:paul_leonard@fws.gov)

On Tue, Apr 17, 2018 at 3:56 PM, Noyles, Christopher <[cnoyles@blm.gov](mailto:cnoyles@blm.gov)> wrote:

Steve,

I've had a couple discussion with folks about the potential interest in collecting Lidar or Structure for Motion (SfM) data in the 1002 area. If you recall we talked briefly about this in our initial PB meeting with FWS. At the time, I reminded folks of the available IfSAR data which Brian Wright has delivered.

The topic of SfM has come up as an item of interest. Which is why I'm passing this info along. Mark Laker from the USFWS Kenai National Wildlife Refuge has been doing SfM for a while. I recently asked him for if anyone had approached him about the 1002 Area, he said no. I asked if had a ball park figure to fly and process the data. See below for detail. Might be a cheap in-house opportunity worth consideration. It's not Lidar but a whole lot cheaper.

Cheers,

Chris

Christopher C. Noyles  
Civil Applications Committee - Alaska Liaison  
US Department of Interior/Bureau of Land Management  
Alaska State Office, Division of Support Services  
222 West 7th Ave # 13, Anchorage AK 99513  
Phone: (907) 271-5693

Personal Cell: (b) (6)  
FAX: (907) 271-3118  
email: [cnoyles@blm.gov](mailto:cnoyles@blm.gov)



Click on this button to take a short survey and tell my boss how I'm doing

----- Forwarded message -----

From: **Laker, Mark** <[mark\\_laker@fws.gov](mailto:mark_laker@fws.gov)>  
Date: Thu, Mar 22, 2018 at 1:48 PM  
Subject: 1002 area  
To: "Noyles, Christopher" <[cnoyles@blm.gov](mailto:cnoyles@blm.gov)>  
Cc: Nathan Olson <[nathan\\_olson@fws.gov](mailto:nathan_olson@fws.gov)>

Chris,

Flying the 1002 area would take about 10 hours (not including ferry time) for 50 cm ortho and DSM. That's using the Aero Commander, flying at 10,000 MSL going 220 kt. I'm not sure what the current wet rate of the commander is, probably around \$2800.

Since it would only take a couple days, if someone can contract and pay for the aircraft, I will fly the mission and process the data. If they want high spatial resolution, we should set out some targets if there aren't any natural ones. I'm not sure what they have for CORS up there, we could put a mobile base in Arctic Village.

thx,

m

--

Mark Laker - Ecologist  
Kenai National Wildlife Refuge  
(907) 260-2809 phone  
(907) 398-9589 cell

--

Brian Wright  
National Map Liaison - Alaska  
US Geological Survey  
4210 University Drive  
Grace Hall, Room 228  
[Anchorage, AK 99508](http://Anchorage.AK.99508)

0000012483

Office/Cell: 907-201-0113  
Email: [bwright@usgs.gov](mailto:bwright@usgs.gov)

**The National Map - Your Source for Topographic**

--

Mark Laker - Ecologist  
Kenai National Wildlife Refuge  
(907) 260-2809 phone  
(907) 398-9589 cell

--

John Trawicki  
Water Resources Branch Chief  
National Wildlife Refuge System, Alaska  
U.S. Fish and Wildlife Service  
1011 E. Tudor Road  
Anchorage, AK 99503  
Work: (907) 786-3474  
Mobile: (907) 360-1656

"The single biggest problem with communication is the illusion that it has taken place"  
George Bernard Shaw

**To:** Greg Siekaniec[greg\_siekaniec@fws.gov]  
**Cc:** Karen Clark[karen\_clark@fws.gov]  
**From:** Berendzen, Steve  
**Sent:** 2018-04-23T12:04:54-04:00  
**Importance:** Normal  
**Subject:** Re: This week  
**Received:** 2018-04-23T12:05:02-04:00

Not a problem, Greg - I can go to Venetie this week, and we'll be able to do an impromptu visit or meeting when needed.

Steve Berendzen  
Refuge Manager, Arctic National Wildlife Refuge  
907 456 0253

On Mon, Apr 23, 2018 at 7:42 AM, Greg Siekaniec <[greg\\_siekaniec@fws.gov](mailto:greg_siekaniec@fws.gov)> wrote:

Steve,

Good morning. In thinking about my conversations last week with Steve W and their visit to Fairbanks I can't find I my notes that we actually connected. Must be too many things going on.

I hope you can find the tone to join the visit to Consult with Tribal village councils. I did ask Steve W that you accompany so as not to have it appear that Hollis is representing the refuge in 1002 area matters concerning development.

The visit to Fairbanks may not work out to be a FWS/BLM but a chance to catch up with you and employees in the FWS office.

Sorry if the last note was confusing.

Greg

Sent from my iPhone

**To:** Greg Siekaniec[greg\_siekaniec@fws.gov]  
**From:** Clark, Karen  
**Sent:** 2018-04-25T15:56:44-04:00  
**Importance:** Normal  
**Subject:** Re: At the Denver airport  
**Received:** 2018-04-25T15:57:31-04:00

What??? That must be a new thing.. I go to the one at DCA every time and have never had to pay? What is this world coming to?

Karen P. Clark  
Deputy Regional Director  
U.S. Fish & Wildlife Service- Alaska Region  
1011 E Tudor Rd, MS 374  
Anchorage, AK 99503  
[karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)  
907.786.3542 office  
907.786.3493 direct  
907.786.3306 fax

On Wed, Apr 25, 2018 at 11:52 AM, Greg Siekaniec <[greg\\_siekaniec@fws.gov](mailto:greg_siekaniec@fws.gov)> wrote:

Thanks. United Lounge is different. All drinks have to be purchased. Wine is 15.00 a glass.  
What has happened?

Sent from my iPhone

On Apr 25, 2018, at 1:33 PM, Clark, Karen <[karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)> wrote:

OK, will do.

Karen P. Clark  
Deputy Regional Director  
U.S. Fish & Wildlife Service- Alaska Region  
1011 E Tudor Rd, MS 374  
Anchorage, AK 99503  
[karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)  
907.786.3542 office  
907.786.3493 direct  
907.786.3306 fax

On Wed, Apr 25, 2018 at 11:31 AM, Greg Siekaniec <[greg\\_siekaniec@fws.gov](mailto:greg_siekaniec@fws.gov)> wrote:

Ted just called. The seismic analysis discussion is starting today. He plans to reach out to Mitch to find out who needs to be in on the discussions. I indicated that Mitch will know who. I also let Ted know that completing the MMPA requirements with a 90 day window of their EA regs will likely be impossible but that's why we start the discussions. Should let Mary know as well. They want to set up a call for 4:00 this afternoon.

I also recommended that Ted speak with you. You may want to call him and get in the loop.

Thanks,

Greg

Sent from my iPhone

**To:** Gregory Siekaniec[greg\_siekaniec@fws.gov]  
**From:** Cribley, Bud  
**Sent:** 2018-04-30T12:40:47-04:00  
**Importance:** Normal  
**Subject:** Updating  
**Received:** 2018-04-30T12:41:13-04:00

Good morning,

Greg, I just wanted to check in with you to see if you have any new information on what is happening with the Coastal Plain O&G leasing EIS. Also any additional information on the exploration application BLM received. Nobody is saying anything here.

I hope it is a good week.

bud

--

**Bud C Cribley**  
**Senior Advisor for Energy with the U.S. Fish & Wildlife Service**  
**Office # 202-208-4331**  
**Cell # 907-717-5141**  
**Office # MIB 3341**  
**email: [bud\\_cribley@fws.gov](mailto:bud_cribley@fws.gov)**

**To:** Clark, Karen[karen\_clark@fws.gov]  
**Cc:** Gregory Siekaniec[greg\_siekaniec@fws.gov]; Sarah Conn[sarah\_conn@fws.gov]; Kenneth Lord[ken.lord@sol.doi.gov]; Patrick Lemons[patrick\_lemons@fws.gov]; Christopher Putnam[christopher\_putnam@fws.gov]  
**From:** Colligan, Mary  
**Sent:** 2018-05-04T00:17:19-04:00  
**Importance:** Normal  
**Subject:** Re: Seismic in 1002  
**Received:** 2018-05-04T00:17:25-04:00

Hi Karen No, they did not mention the idea of the workshop. They have worked with Christopher in the past and seemed pretty comfortable with his knowledge of their operations and willingness to work with them. Both Patrick and Christopher did a great job.

Thanks,  
Mary

On Thu, May 3, 2018 at 2:53 PM, Clark, Karen <karen\_clark@fws.gov> wrote:

Thanks for finding a time to get together- I know you have a lot going on with the ANCC.  
Please let us know if you need any assistance from us.  
Did they mention the workshop idea?

Karen

Karen P. Clark  
Deputy Regional Director  
U.S. Fish & Wildlife Service- Alaska Region  
1011 E Tudor Rd, MS 374  
Anchorage, AK 99503  
[karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)  
907.786.3542 office  
907.786.3493 direct  
907.786.3306 fax

On Thu, May 3, 2018 at 2:19 PM, Colligan, Mary <mary\_colligan@fws.gov> wrote:

Patrick, Christopher and I just met with Teresa Imm (ASRC) and Jeff Hastings (SAE) regarding the application for seismic work in the 1002 area. They briefly described their proposal and said they are in the process today of revising their application so that a public version can be ready for the BLM hosted NEPA discussion tomorrow. So, we should receive the application either later today or tomorrow. We impressed upon them the importance of getting us those details as soon as possible even if the application is incomplete and then we can start working and talking through questions and issues with them. Once we have their application we can work up scenarios and options and talk with them further on timeline. This will be a challenge for either IHA or ITRs. If their work is likely to span 2 years, ITRs are really more appropriate but we will have to see their proposal and also work up our timeline to see what is possible. Either path will require lots of cooperation at all levels of review.

It was a very productive discussion and they seemed very pleased to receive the information on requirements and options

and have the chance to ask questions and talk through issues. As you mentioned previously, they said they have been talking to the Department for months and appear to have been told that no MMPA authorization was required.

Please let me know if you have any questions. We will provide an update next week once we have the application in hand and have had a chance to run some options.

Thanks,  
Mary

--

Mary Colligan  
Assistant Regional Director  
Fisheries and Ecological Services  
U.S. Fish and Wildlife Service, Alaska Region  
1011 E. Tudor Road, MS-361  
Anchorage, AK 99503  
907-786-3505  
cell: 907-223-5945

--

Mary Colligan  
Assistant Regional Director  
Fisheries and Ecological Services  
U.S. Fish and Wildlife Service, Alaska Region  
1011 E. Tudor Road, MS-361  
Anchorage, AK 99503  
907-786-3505  
cell: 907-223-5945

**To:** Greg Siekaniec[greg\_siekaniec@fws.gov]  
**From:** Mouritsen, Karen  
**Sent:** 2018-05-04T21:22:51-04:00  
**Importance:** Normal  
**Subject:** Fwd: April 30 Agenda  
**Received:** 2018-05-04T21:23:20-04:00  
[Arctic Village Council.pdf](#)  
[AK 18-XX-Coastal Plain Public Meeting Schedule \(1\).docx](#)  
[Agenda May 2 2018.docx](#)

Karen E. Mouritsen  
Acting State Director for BLM-Alaska  
phone 907-271-5080  
cell 202-329-2030

----- Forwarded message -----

**From:** **Murphy, Ted** <t75murph@blm.gov>  
**Date:** Wed, May 2, 2018 at 10:32 AM  
**Subject:** Re: April 30 Agenda  
**To:** Joseph Balash <joseph\_balash@ios.doi.gov>, "Wackowski, Stephen" <stephen\_wackowski@ios.doi.gov>, Karen Mouritsen <kmourits@blm.gov>, Aaron Moody <aaron.moody@sol.doi.gov>, Katharine Macgregor <kate\_macgregor@ios.doi.gov>, "Seidlitz, Joseph (Gene)" <gseidlitz@blm.gov>, "Collier, Briana" <briana.collier@sol.doi.gov>, Kathleen Benedetto <kbenedetto@blm.gov>, Michael Gieryic <mike.gieryic@sol.doi.gov>, Michael Nedd <mnedd@blm.gov>, "Miriam (Nicole) Hayes" <mnhayes@blm.gov>, Laura Brown <Laura.Brown@sol.doi.gov>, Ted Murphy <t75murph@blm.gov>

Hello,

Today's Agenda topics and associated attachments.

Ted

--

Ted A Murphy  
Alaska-Associate State Director  
907-271-5076

0000012491

**To:** Wackowski, Stephen[stephen\_wackowski@ios.doi.gov]  
**From:** Siekaniec, Greg  
**Sent:** 2018-05-07T12:33:52-04:00  
**Importance:** Normal  
**Subject:** Fwd: FW: [EXTERNAL] PCH Workshop / May 16-17th / Agenda, meeting location, call-in information and background documents  
**Received:** 2018-05-07T12:35:01-04:00  
[SawyerEtAl MuleDeerEnergyDevelopHabitAbund 2017.pdf](#)  
[Initial Scoping and Annotated Bibliography - Barren-ground Caribou Respo....pdf](#)  
[PCHWorkshop May16 17 2018 FullAgenda 20180506.docx](#)

Steve,

Agenda for the Technical group attached. Two days with discussions that are appropriate for the group from what I can tell. No mention of a third day for this group.

Greg

---

**From:** Stotyn, Shannon (EC) <[shannon.stotyn@canada.ca](mailto:shannon.stotyn@canada.ca)>  
**Sent:** Sunday, May 6, 2018 12:59 PM  
**To:** Deana Lemke <sup>(b) (6)</sup>>; Don Russell (<[drussell@yukoncollege.yk.ca](mailto:drussell@yukoncollege.yk.ca)>); Édouard Bélanger (<[ebelanger@grrb.nt.ca](mailto:ebelanger@grrb.nt.ca)>); Heather Sayine-Crawford (<[heather\\_sayine-crawford@gov.nt.ca](mailto:heather_sayine-crawford@gov.nt.ca)>); Mcdonald2, Ian (PC) (<[ian.mcdonald2@canada.ca](mailto:ian.mcdonald2@canada.ca)>); John.Ryder@gov.yk.ca; Julia Ahlgren (<[Julia.Ahlgren@gov.yk.ca](mailto:Julia.Ahlgren@gov.yk.ca)>); Karin Clark (<[karin\\_clark@gov.nt.ca](mailto:karin_clark@gov.nt.ca)>); Kyle.Russell@gov.yk.ca; Marsha Branigan@gov.nt.ca; Martin.Kienzler@gov.yk.ca; Leblond3, Mathieu (EC) (<[mathieu.leblond3@canada.ca](mailto:mathieu.leblond3@canada.ca)>); Mike.Suitor@gov.yk.ca; beth.lenart@alaska.gov; Brad Griffiths (<[dbgriffith@alaska.edu](mailto:dbgriffith@alaska.edu)>); jason.caikoski@alaska.gov; Paul Leonard (<[paul\\_leonard@fws.gov](mailto:paul_leonard@fws.gov)>); Steve Arthur (<[stephen\\_arthur@fws.gov](mailto:stephen_arthur@fws.gov)>); Wendy Loya (<[wendy\\_loya@fws.gov](mailto:wendy_loya@fws.gov)>); anne gunn <sup>(b) (6)</sup> <<sup>(b) (6)</sup>>; John Nishi (<[John@Nishi.ca](mailto:John@Nishi.ca)>); Kim Poole (<[klpoole@shaw.ca](mailto:klpoole@shaw.ca)>); Mary Gamberg <sup>(b) (6)</sup>>; Susan Kutz (<[skutz@ucalgary.ca](mailto:skutz@ucalgary.ca)>); jhepler3@alaska.edu; joelle.taillon@mffp.gouv.qc.ca; john@nishi.ca; boulangé@ecological.bc.ca; lawhead@abrinc.com; aprichard@abrinc.com; Worthington, Lisa (EC) (<[lisa.worthington@canada.ca](mailto:lisa.worthington@canada.ca)>); Joel.Potie@gov.yk.ca; <sup>(b) (6)</sup>>;  
**Cc:** John Glynn Morris <sup>(b) (6)</sup> <<sup>(b) (6)</sup>>; Machtans, Craig (EC) (<[craig.machtans@canada.ca](mailto:craig.machtans@canada.ca)>)  
**Subject:** [EXTERNAL] PCH Workshop / May 16-17th / Agenda, meeting location, call-in information and background documents

Hello,

Thanks everyone for coming to Whitehorse in a couple weeks (May 16-17<sup>th</sup>). I hope it will be

spring by then! Mike and I have put together an agenda together that was designed to both inform and to encourage discussion through a series of 15 minute presentations (+ 10 minutes for immediate questions) followed by workshop sessions on the background, impacts, monitoring and mitigation of possible development on the Porcupine caribou herd. We hope this information will prove useful for consideration in your future planning and assessment processes. If you are unable to attend in person we have WebEx and teleconference capability available throughout the duration of the workshop.

We have a lot of material to cover and limited time to do so. If you have suggestions on key areas of discussion for the workshop under each subheading, please send along to us and we will try to ensure the sessions are scoped appropriately based on our thoughts and your feedback. Please note that the titles provided for the talks are rough as the agenda continues to tweak a bit given the tight timelines we've pulled this together on. We anticipate what we have on the agenda will be about right though!

To help you prepare for the meeting, we are also attaching the following:

- An annotated bibliography of barren-ground caribou responses to disturbance (attached)
- A paper by Hall Sawyer (attached). Hall's presentation will be based on this paper but will expand from it discussion will help us understand a major oil and gas development in western Wyoming and provide us insight on what worked and what didn't work well over 17 years of monitoring and management there. The science completed for large mammal communities associated with that development was one of the better case examples with regard to major oil and gas developments in North America, even though the outcome was not a positive one for wildlife.
- "Summary of wildlife-related research on the Coastal Plain of the ANWR, Alaska" provides background information on what is available based on recent research (2002-2017). <https://pubs.usgs.gov/of/2018/1003/ofr20181003.pdf>
- The annual summary report completed for the PCH by the Porcupine Caribou Technical Committee is found here. This document focuses on monitoring metrics used to better understand population trends. <http://pcmb.ca/PDF/ahm/2018%20Annual%20Harvest%20Meeting%20Documents/2017%20PCH%20Annual%20Summary%20Report.pdf>
- There are a host of other documents for the herd available at [www.PCMB.ca](http://www.PCMB.ca) under the Resources/Tools tab if you have a bunch of extra time!

Looking forward to a very informative workshop and seeing everyone on May 16-17<sup>th</sup>! Just a

reminder that Canadian participants will be meeting again on May 18<sup>th</sup> ; an agenda and meeting information for that day will follow shortly.

Thanks again,

Shannon and Mike

**Shannon Stotyn**

Species at Risk Biologist  
Canadian Wildlife Service  
Environment and Climate Change Canada  
91780 Alaska Highway  
Whitehorse, YT, Canada Y1A 5X7  
[shannon.stotyn@ec.gc.ca](mailto:shannon.stotyn@ec.gc.ca)  
Telephone 867-667-3929  
Cellular: 867-333-9891  
Facsimile 867-393-7970  
Government of Canada  
Website [www.ec.gc.ca](http://www.ec.gc.ca)

**Shannon Stotyn**

Biologiste d'Espèces en Péril  
Service Canadien de la faune  
Environnement et Changement Climatique Canada  
91780 autoroute Alaska  
Whitehorse, YT, Canada Y1A 5X7  
[shannon.stotyn@ec.gc.ca](mailto:shannon.stotyn@ec.gc.ca)  
Téléphone 867-667-3929  
Cellulaire: 867-333-9891  
Télécopieur 867-393-7970  
Gouvernement du Canada  
Site Web [www.ec.gc.ca](http://www.ec.gc.ca)

**To:** greg\_siekaniec@fws.gov[greg\_siekaniec@fws.gov];  
karen\_clark@fws.gov[karen\_clark@fws.gov]  
**From:** Aimee Devaris  
**Sent:** 2018-05-09T20:42:59-04:00  
**Importance:** Normal  
**Subject:** Fwd: USGS Briefing Paper -- New Open-File Report on Polar Bear Denning Habitat  
**Received:** 2018-05-09T20:43:06-04:00  
[ATT00001.htm](#)  
[USGS Briefing Paper Polar Bear Denning Habitat OFR.5.9.2018.docx](#)

FYI.

Sent from my iPhone

Begin forwarded message:

**From:** "Taylor, Joanne" <jctaylor@usgs.gov>  
**Date:** May 9, 2018 at 1:16:32 PM AKDT  
**To:** William Lukas <wlukas@usgs.gov>  
**Cc:** William Werkheiser <whwerkhe@usgs.gov>, "Applegate, David" <applegate@usgs.gov>, Judy Nowakowski <jnowakowski@usgs.gov>, Aimee Devaris <adevaris@usgs.gov>, Anne Kinsinger <akinsinger@usgs.gov>, Leslie Jones <ljones@usgs.gov>, Durelle Smith <dpsmith@usgs.gov>, Kenneth Rice <krice@usgs.gov>, Colette Charbonneau <ccharbonneau@usgs.gov>, Anne-Berry Wade <abwade@usgs.gov>  
**Subject:** USGS Briefing Paper -- New Open-File Report on Polar Bear Denning Habitat

Sending to USGS for consult

Joanne  
Joanne C. Taylor, USGS  
Deputy Chief of Staff, Reston, VA  
703-648-6837; jctaylor@usgs.gov

**To:** Cribley, Bud[bud\_cribley@fws.gov]  
**Cc:** Greg Siekaniec[greg\_siekaniec@fws.gov]  
**From:** Karen Mouritsen  
**Sent:** 2018-05-10T14:45:23-04:00  
**Importance:** Normal  
**Subject:** Re: BLM announces public meeting schedule for Coastal Plain Oil and Gas Leasing Program EIS  
**Received:** 2018-05-10T14:45:30-04:00

I don't know Bud. Schedules are changing so fast I need a day or two to figure it out.

Karen Mouritsen  
Acting State Director for Alaska  
Phone 907-271-5080  
Cell 202-329-2030

On May 10, 2018, at 11:43 AM, Cribley, Bud <[bud\\_cribley@fws.gov](mailto:bud_cribley@fws.gov)> wrote:

Karen,

Thank you and will you be coming back for the DC meeting?

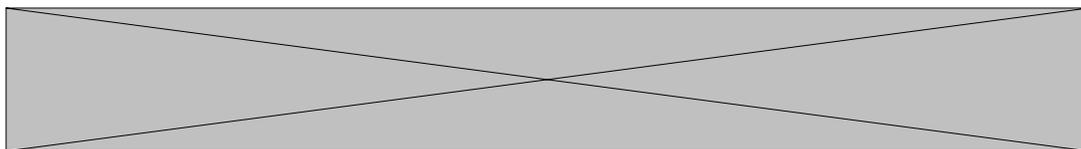
Bud

On Thu, May 10, 2018 at 12:17 PM, Mouritsen, Karen <[kmourits@blm.gov](mailto:kmourits@blm.gov)> wrote:

Karen E. Mouritsen  
Acting State Director for BLM-Alaska  
phone 907-271-5080  
cell 202-329-2030

----- Forwarded message -----

**From:** **Communications, BLM\_AK** <[blm\\_ak\\_communications@blm.gov](mailto:blm_ak_communications@blm.gov)>  
**Date:** Wed, May 9, 2018 at 2:59 PM  
**Subject:** BLM announces public meeting schedule for Coastal Plain Oil and Gas Leasing Program EIS  
**To:**



# News Release

**BLM, Alaska State Office, Office of Communications**  
**Release No. 18-16**  
**222 W. 7<sup>th</sup> Avenue #13, Anchorage AK 99513-7504**

**News**

**FOR IMMEDIATE RELEASE**  
**9, 2018**

**Date: May**

**Contact: Lesli Ellis-Wouters (907) 271-4418; [lellis@blm.gov](mailto:lellis@blm.gov)**

## **BLM announces public meeting schedule for Coastal Plain Oil and Gas Leasing Program EIS**

**ANCHORAGE** The Bureau of Land Management is engaging communities across Alaska in person to gather relevant comments, concerns and/or issues pertaining to the development of the Coastal Plain Oil and Gas Leasing Program Environmental Impact Statement (EIS). The BLM will host meetings in communities in and near the program area and additional meetings in Anchorage, Fairbanks, Utqiagvik and Washington D.C. The meetings in Anchorage and Fairbanks will be livestreamed to reach a broader audience.

At the meetings, the BLM seeks to identify relevant comments, concerns and/or issues that will influence the scope of the EIS and guide its development, including the formation of alternatives to the proposed action within the parameters outlined in the 2017 Tax Cuts and Jobs Act (Tax Act). The complete meeting schedule is available at the project website at [www.blm.gov/alaska/coastal-plain-eis](http://www.blm.gov/alaska/coastal-plain-eis).

Those unable to attend one of the meetings are encouraged to participate via BLM's project website, which includes a project area map and frequently asked questions. Comments can be submitted via the project website or email to [blm\\_ak\\_coastalplain\\_eis@blm.gov](mailto:blm_ak_coastalplain_eis@blm.gov). BLM will accept comments through June 19, 2018.

"We have already received a substantial amount of input on this project and look forward to these meetings and listening to the concerns people have," said Acting State Director Karen Mouritsen. "It's important that we take the time to gather all the relevant issues to guide our environmental analysis of the Coastal Plain. We realize the importance of this place to not only Alaskans, but the nation in its quest to responsibly develop our natural resources and achieve energy dominance."

Meetings are scheduled in Anchorage, Fairbanks, and Washington, D.C. from 4:30 p.m. to 9 p.m. The Fairbanks meeting will take place May 29 at the Carlson Center at 2010 2nd. Ave., in Fairbanks and the Anchorage meeting will take place May 30 at the Dena'ina Center located at 600 W. 7th Ave. The

Washington, D.C. meeting will take place June 15 at the National Housing Center located at 1201 15<sup>th</sup> St., NW. There will be scheduled speaking spots for representatives of interested organizations and/or governments. All meetings will afford the public an opportunity to provide input on the process and anyone wishing to provide public comments will need to sign up in person. Public meeting procedures will be available on the BLM Alaska website at [www.blm.gov/alaska](http://www.blm.gov/alaska). The Fairbanks and Anchorage events can be viewed live at [www.blm.gov/live](http://www.blm.gov/live). Computers will be available for the public to comment electronically.

Meetings for Kaktovik, Arctic Village, Utqiagvik, and Venetie are as follows:

May 22: Kaktovik Community Hall 6:30 p.m.  
May 24: Arctic Village Community Hall 10 a.m.  
May 31: Utqiagvik Iñupiat Heritage Center 5 p.m.  
June 12: Venetie Village of Venetie Tribal Hall 10 a.m.

The Leasing EIS will serve to inform the BLM's implementation of the Tax Act, including the requirement to hold not fewer than two lease sales area-wide. It may also inform post-lease activities, including seismic and drilling exploration, development, and transportation of oil and gas in and from the Coastal Plain. Specifically, the Leasing EIS will consider and analyze the potential environmental impacts of various leasing alternatives, including the areas to offer for sale, and the terms and conditions (i.e., lease stipulations and best management practices) to be applied to leases and associated oil and gas activities to properly balance oil and gas development with existing uses and conservation of surface resources, and to limit the footprint of production and support facilities on Federal lands to no more than 2,000 surface acres. The area comprising the Coastal Plain includes approximately 1.6 million acres within the approximately 19.3 million-acre Arctic National Wildlife Refuge.

###

The BLM manages more than 245 million acres of public land located primarily in 12 Western states, including Alaska. The BLM also administers 700 million acres of sub-surface mineral estate throughout the nation. The agency's mission is to sustain the health, diversity, and productivity of America's public lands for the use and enjoyment of present and future generations. Diverse activities authorized on these lands generated \$75 billion in sales of goods and services throughout the American economy in fiscal year 2016 more than any other agency in the Department of the Interior. These activities supported more than 372,000 jobs.

--

**Bud C Cribley**

**Senior Advisor for Energy with the U.S. Fish & Wildlife Service**

**Office # 202-208-4331**

**Cell # 907-717-5141**

**Office # MIB 3341**

**email: [bud\\_cribley@fws.gov](mailto:bud_cribley@fws.gov)**

**To:** Ellis, Mitch[mitch\_ellis@fws.gov]; Mary Colligan[mary\_colligan@fws.gov]; Karen Clark[karen\_clark@fws.gov]  
**From:** Siekaniec, Greg  
**Sent:** 2018-05-10T15:45:00-04:00  
**Importance:** Normal  
**Subject:** Fwd: Senate Interior Budget Hearing Summary  
**Received:** 2018-05-10T15:45:48-04:00  
FY 2019 Senate Interior Appropriations Hearing.docx

Looks like some questions for the record will be forthcoming. Secretary was asked for an update on the Kenai land exchange in support of the highway project. Science for the Arctic EIS decision process. And, some confusion on the Izembek question when referenced that an EIS was being completed and on schedule... perhaps the Ambler Road.

greg

----- Forwarded message -----

**From:** Nolin, Chris <chris\_nolin@fws.gov>  
**Date:** Thu, May 10, 2018 at 11:28 AM  
**Subject:** Fwd: Senate Interior Budget Hearing Summary  
**To:** FWS Directorate & Deputies <fwsdirectanddep@fws.gov>

Good afternoon,

Attached is a summary of today's hearing on the DOI's FY 2019 Budget Request in front of the Senate Interior Appropriations Committee.

--

Chris Nolin  
Budget Officer  
US Fish & Wildlife Service  
703-358-2343 desk  
240-305-0490 cell  
U.S. Fish and Wildlife Service Headquarters  
MS: BPHC  
5275 Leesburg Pike

Falls Church, VA 22041-3803

0000012500

**To:** Howard, Amee[amee\_howard@fws.gov]  
**Cc:** Gregory Siekaniec[gregory\_siekaniec@fws.gov]; Karen Clark[karen\_clark@fws.gov]; Leonetti, Crystal[crystal\_leonetti@fws.gov]; Andrea Medeiros[andrea\_medeiros@fws.gov]  
**From:** Sara Boario  
**Sent:** 2018-05-10T17:36:26-04:00  
**Importance:** Normal  
**Subject:** Re: Notice for Scoping Meetings - Coastal Plain Oil and Gas Leasing Program Environmental Impact Statement  
**Received:** 2018-05-10T17:36:37-04:00

Thanks Amee. I know HQ-EA was waiting on this to help us finalize our comms plan. I'll get it to them now.  
Sb

Sent from my iPhone

On May 10, 2018, at 1:21 PM, Howard, Amee <[amee\\_howard@fws.gov](mailto:amee_howard@fws.gov)> wrote:

FYI

----- Forwarded message -----

**From:** CoastalPlain\_EIS, BLM\_AK <[blm\\_ak\\_coastalplain\\_eis@blm.gov](mailto:blm_ak_coastalplain_eis@blm.gov)>  
**Date:** Thu, May 10, 2018 at 1:19 PM  
**Subject:** Notice for Scoping Meetings - Coastal Plain Oil and Gas Leasing Program Environmental Impact Statement  
**To:** BLM\_AK CoastalPlain\_EIS <[blm\\_ak\\_coastalplain\\_eis@blm.gov](mailto:blm_ak_coastalplain_eis@blm.gov)>

<blm logo.jpg>

## Notice for Public Scoping Meetings

*Please forward this to anyone you think may be interested!*

The Bureau of Land Management (BLM) invites you to attend a public scoping meeting to identify issues for the **Coastal Plain Oil and Gas Leasing Program Environmental Impact Statement (EIS)**. At the meetings, the BLM seeks to identify relevant comments, concerns and/or issues that will influence the scope of the EIS and guide its development, including the formation of alternatives to the proposed action within the parameters outlined in the 2017 Tax Cuts and Jobs Act (Tax Act).

The complete meeting schedule is available at the project website at [www.blm.gov/alaska/coastal-plain-eis](http://www.blm.gov/alaska/coastal-plain-eis). Those unable to attend a meeting are encouraged to participate via the project website, which includes a project map, a place to submit comments,

and frequently asked questions. Comments and input may also be submitted by email to [blm\\_ak\\_coastalplain\\_eis@blm.gov](mailto:blm_ak_coastalplain_eis@blm.gov) through **June 19, 2018**. For more information or special needs requests, please contact Nicole Hayes at (907) 271-4354, email [blm\\_ak\\_coastalplain\\_eis@blm.gov](mailto:blm_ak_coastalplain_eis@blm.gov), or visit the project website listed above.

**Kaktovik: Tuesday May 22**

6:30 pm, Community Hall

**Arctic Village: Thursday, May 24**

10:00 am, Community Hall

**Fairbanks: Tuesday May 29**

Carlson Center, 2010 2<sup>nd</sup> Ave.

3:00-4:30pm open house, followed a presentation and comment period until 9:00pm.

**Anchorage: Wednesday May 30**

Dena'ina Center, 600 W. 7<sup>th</sup> Ave.

3:00-4:30pm open house, followed by a presentation and comment period until 9:00pm.

**Utqiagvik: Thursday, May 31**

5:00 pm, Iñupiat Heritage Center

**Venetie: Tuesday, June 12**

10:00 am, Community Hall

**Washington, DC: Friday, June 15**

National Housing Center, 1201 15<sup>th</sup> St., NW

3:00-4:30pm open house, followed by a presentation and comment period until 9:00pm.

Meeting dates, times, and locations are subject to change. Please check the project website for updates.

--

*Amee Howard*

*Congressional and State Liaison*

U.S. Fish & Wildlife Service

Anchorage, Alaska

Office: (907)786-3509

Mobile: (907)229-8575

Get Inspired

**To:** Clark, Karen[karen\_clark@fws.gov]  
**Cc:** Mitch Ellis[Mitch\_Ellis@fws.gov]; Doug Damberg[doug\_damberg@fws.gov]; Greg Siekaniec[greg\_siekaniec@fws.gov]  
**From:** Lor, Socheata  
**Sent:** 2018-05-11T15:27:35-04:00  
**Importance:** Normal  
**Subject:** Re: Briefing paper on Caribou  
**Received:** 2018-05-11T15:28:11-04:00

Yes, we'll get in by Tues noon.

Soch

~~~~~  
Socbeata Lor, Ph.D.
Deputy Assistant Regional Director Region 7
National Wildlife Refuge System
U.S. Fish and Wildlife Service
1011 E. Tudor Road
Anchorage, AK 99503
Office: 907.786.3420
Cell: 907.891.6194
~~~~~

On Fri, May 11, 2018 at 11:10 AM, Clark, Karen <karen\_clark@fws.gov> wrote:

Hi Mitch and Soch, please see the request below. I believe we have one that speaks to the Board- please use the attached template to update and talk more about what's going on now- the meeting and our involvement in technical discussions as we always have been... and anything else you think should be included. Needs to move to HQ by COB Tuesday- can you guys pull this together by noon on Tuesday?

Thanks, Karen

Karen P. Clark  
Deputy Regional Director  
U.S. Fish & Wildlife Service- Alaska Region  
1011 E Tudor Rd, MS 374  
Anchorage, AK 99503  
[karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)  
907.786.3542 office  
907.786.3493 direct  
907.786.3306 fax

----- Forwarded message -----  
From: **Morris, Charisa** <[charisa\\_morris@fws.gov](mailto:charisa_morris@fws.gov)>

0000012503

Date: Fri, May 11, 2018 at 11:00 AM

Subject: Fwd: Briefing paper on Caribou

To: Gregory Siekaniec <[greg\\_siekaniec@fws.gov](mailto:greg_siekaniec@fws.gov)>, Karen Clark <[karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)>, Jerome Ford <[Jerome\\_ford@fws.gov](mailto:Jerome_ford@fws.gov)>, Mike Johnson <[mike\\_j\\_johnson@fws.gov](mailto:mike_j_johnson@fws.gov)>

Good afternoon!

FWP requests a BP on caribou, Arctic NWR, and work with Canada. Could you work together to send in a draft by COB, Tuesday, May 15th using the attached template? Please feel free to add whomever else you think is appropriate to this thread (i.e., regional leadership).

Thanks!

Charisa



----- Forwarded message -----

From: **Foster, Maureen** <[maureen\\_foster@ios.doi.gov](mailto:maureen_foster@ios.doi.gov)>

Date: Fri, May 11, 2018 at 2:38 PM

Subject: Briefing paper on Caribou

To: Kashyap Patel <[kashyap\\_patel@fws.gov](mailto:kashyap_patel@fws.gov)>, Charisa Morris <[charisa\\_morris@fws.gov](mailto:charisa_morris@fws.gov)>

FWS:

I need a briefing memo on caribou, Arctic NWR, and work with Canada please.

Due date: COB Wednesday, May 16.

Let me know if you have any questions.

Maureen

---

Maureen D. Foster  
Chief of Staff  
Office of the Assistant Secretary  
for Fish and Wildlife and Parks  
1849 C Street, NW, Room 3161  
Washington, DC 20240

202.208.5970 (desk)

202.208.4416 (main)

[Maureen\\_Foster@ios.doi.gov](mailto:Maureen_Foster@ios.doi.gov)

--

[Charisa\\_Morris@fws.gov](mailto:Charisa_Morris@fws.gov) | Chief of Staff, Office of the Director | U.S. Fish & Wildlife

0000012504

Service | 1849 C Street NW, Room 3348 | Washington, DC 20240 | (202) 208-3843 | For urgent matters,  
please dial cell: 301-875-8937

**To:** Clark, Karen[karen\_clark@fws.gov]  
**Cc:** Gregory Siekaniec[greg\_siekaniec@fws.gov]; Jerome Ford[Jerome\_ford@fws.gov]; Mike Johnson[mike\_j\_johnson@fws.gov]; Kashyap Patel[kashyap\_patel@fws.gov]  
**From:** Morris, Charisa  
**Sent:** 2018-05-11T17:07:14-04:00  
**Importance:** Normal  
**Subject:** Re: Briefing paper on Caribou  
**Received:** 2018-05-11T17:08:01-04:00

+ Kashyap

Thank you!

On Fri, May 11, 2018 at 5:03 PM, Clark, Karen <karen\_clark@fws.gov> wrote:

We are on it Charisa. We'll have something to you by COB Tuesday.  
Karen

Karen P. Clark  
Deputy Regional Director  
U.S. Fish & Wildlife Service- Alaska Region  
1011 E Tudor Rd, MS 374  
Anchorage, AK 99503  
[karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)  
907.786.3542 office  
907.786.3493 direct  
907.786.3306 fax

On Fri, May 11, 2018 at 11:00 AM, Morris, Charisa <charisa\_morris@fws.gov> wrote:

Good afternoon!  
FWP requests a BP on caribou, Arctic NWR, and work with Canada. Could you work together to send in a draft by COB, Tuesday, May 15th using the attached template? Please feel free to add whomever else you think is appropriate to this thread (i.e., regional leadership).

Thanks!  
Charisa



----- Forwarded message -----

**From:** Foster, Maureen <maureen\_foster@ios.doi.gov>  
**Date:** Fri, May 11, 2018 at 2:38 PM  
**Subject:** Briefing paper on Caribou  
**To:** Kashyap Patel <kashyap\_patel@fws.gov>, Charisa Morris <charisa\_morris@fws.gov>

FWS:

I need a briefing memo on caribou, Arctic NWR, and work with Canada please.

Due date: COB Wednesday, May 16.

Let me know if you have any questions.

Maureen

---

Maureen D. Foster  
Chief of Staff  
Office of the Assistant Secretary  
for Fish and Wildlife and Parks  
1849 C Street, NW, Room 3161  
Washington, DC 20240

202.208.5970 (desk)

202.208.4416 (main)

[Maureen\\_Foster@ios.doi.gov](mailto:Maureen_Foster@ios.doi.gov)

--

[Charisa Morris@fws.gov](mailto:Charisa_Morris@fws.gov) | Chief of Staff, Office of the Director | U.S. Fish & Wildlife  
Service | 1849 C Street NW, Room 3348 | Washington, DC 20240 | (202) 208-3843 | For urgent matters,  
please dial cell: 301-875-8937

--

[Charisa Morris@fws.gov](mailto:Charisa_Morris@fws.gov) | Chief of Staff, Office of the Director | U.S. Fish & Wildlife  
Service | 1849 C Street NW, Room 3348 | Washington, DC 20240 | (202) 208-3843 | For urgent matters,  
please dial cell: 301-875-8937

**To:** Greg Siekaniec[greg\_siekaniec@fws.gov]  
**From:** Karen Mouritsen  
**Sent:** 2018-05-13T13:12:06-04:00  
**Importance:** Normal  
**Subject:** Re: EIS Scoping  
**Received:** 2018-05-13T13:12:12-04:00

Thanks Greg. (b) (6)

We can certainly use the conference room at the Campbell tract offices. The nice conference room is actually the FWS room, but i have used it a couple times for meetings. There are probably other rooms out there also.

I will miss the second week of public meetings. But then we have the meeting on Friday, June 15. I think I will go to that one, (b) (6). you should try to go to DC for that one also.

Call if you need something from us at BLM while you are away.

Thanks, Karen

Sent from my iPad

On May 13, 2018, at 9:23 AM, Greg Siekaniec <[greg\\_siekaniec@fws.gov](mailto:greg_siekaniec@fws.gov)> wrote:

Good Morning Karen,

Thank you for the notes. Your report out is correct. I spoke with Jim and he is preparing an agenda. (b) (6)

(b) (6) I will be back for the second phase of scoping meetings.

We would like to gain access to the Campbell tract for our RDs meeting if possible.

Somewhere away from the "office" where we all get distracted. After our meeting we envision a second round with others when we have determined what we want to explore further for possible action.

I'm available by phone if you would like to discuss anything around EIS or DOI...

Thanks, travel well,

Greg

Sent from my iPhone

On May 11, 2018, at 6:05 PM, Karen Mouritsen <[kmourits@blm.gov](mailto:kmourits@blm.gov)> wrote:

And, i have some really good notes from Rob Ellefson about the APCG meeting yesterday. I kept losing connection so finally hung up. Let me know if you want to talk next week about that, or if you want me to help in arranging a meeting. Rob said that you and Jim K

will convene an all day meeting to select 3 or 4 areas to consolidate and to discuss role of Interior Regional Director. Sounds like you are out for a bit and we have two weeks of scoping meetings, the second week of which I will miss.(the ones in Anchorage and Fairbanks) And I will be in DC the week of June 5. I don't know how soon we need to have the meeting. The IT part continues to concern me.  
Safe travels, Karen

Sent from my iPad

On May 11, 2018, at 8:46 PM, Karen Mouritsen <[kmourits@blm.gov](mailto:kmourits@blm.gov)> wrote:

Thanks Greg. We will add Steve B to the list. I agree he should be there.

Good luck with your travels and we will be in touch

Sent from my iPad

On May 11, 2018, at 6:06 PM, Siekaniec, Greg <[greg\\_siekaniec@fws.gov](mailto:greg_siekaniec@fws.gov)> wrote:

Karen and Nicole,

Thank you for all the coordination around the coming scoping and consultations. The effort will prove to be a challenge given the remote locations and interested constituents and this is a good initiation.

I understand that there may be space for one FWS representative on a flight chartered for the public scoping and government to government consultations regarding the Coastal Plain EIS. It is my recommendation that the Manager of the Arctic Refuge, Mr. Steve Berendzen, be assigned that seat. Steve will best be able to represent the FWS in answering questions related to the fish, wildlife and lands of the Coastal Plain and the other purposes of the Refuge, as well as respond to questions about other activities permitted by FWS in the Refuge. Mr. Hollis Twitchell, Assistant Refuge Manager, will try to fly to both meetings independently, but if he is unable to fly due to weather or other constraints, he will take a commercial flight to Arctic Village and be available for government to government consultation there.

Also, Karen Clark will plan to attend the Arctic Village meetings if schedules and flights work out in her favor given weather considerations and

commercial flight routing. I'm sure there will be coordination discussions next week at travel plans are firmed up.

I apologize for not being available but will be for future meetings beyond the initial Kaktovik and Arctic Village. I can be reached via cell when I'm out for personal matters.

Regards,

Greg

907-250-1787

**To:** Boario, Sara[sara\_boario@fws.gov]  
**From:** Greg Siekaniec  
**Sent:** 2018-05-15T18:55:19-04:00  
**Importance:** Normal  
**Subject:** Re: R7 successes to share in Sheehan's all employee remarks  
**Received:** 2018-05-15T18:55:26-04:00

I think this works. The refuge will still be Arctic NWR and our role is to help BLM ensure we continue to meet all the purposes of the refuge.

Sent from my iPhone

On May 15, 2018, at 5:04 PM, Boario, Sara <[sara\\_boario@fws.gov](mailto:sara_boario@fws.gov)> wrote:

Something like this for Arctic? It's a kind of tricky one...

**Cooperating on the Coastal Plain of Arctic Refuge:** The 1.6 million acre Coastal Plain within the Arctic Refuge is an ecologically unique place with connections to people and wildlife from around the world. Refuge and Service staff across the region have been committed stewards of this special land and its resources for several decades. Now that the BLM is in the process of developing the EIS for the Arctic Refuge Coastal Plain Oil and Gas Leasing Program, I have heard nothing but praise for the professional response of USFWS-Alaska employees, who have been contributing their information and expertise to this process. Thank you for your hard work and contributions to this process, often under tight timelines.

He only wants around four examples so this is probably the most important one to add

On Tue, May 15, 2018 at 1:44 PM, Boario, Sara <[sara\\_boario@fws.gov](mailto:sara_boario@fws.gov)> wrote:

thanks greg. i'll play with it a little more!

also, take a look thru your email for attu employee message. sorry to bother you at all this week.

sb

On Tue, May 15, 2018 at 1:33 PM, Greg Siekaniec <[greg\\_siekaniec@fws.gov](mailto:greg_siekaniec@fws.gov)> wrote:

These are good. Private partnerships such as the Fish Habitat work in the MatSu Valley could be a good talking point. All migratory bird (brant, geese and ducks - Eric will know) stories or highlights are good (beyond emperor geese) to recognize. Refuges and subsistence opportunities to hunt and fish and live

off the land. Might need to speak to Arctic Refuge and congressional opening of the 1002 area. (b) (5) DPP [REDACTED] Should talk to state relations and aligning with state regs via the hunt fish chiefs work.

Sent from my iPhone

On May 15, 2018, at 3:54 PM, Boario, Sara <[sara\\_boario@fws.gov](mailto:sara_boario@fws.gov)> wrote:

let me know if you think these are ok. my edits are obvious ones in track changes; all other text from director's staff.

thanks

sb

--

Sara D. Boario  
Assistant Regional Director External Affairs  
U.S. Fish and Wildlife Service, Alaska Region  
Anchorage, Alaska  
907 786 3431



<Sheehan All Emp Remarks - draft with R7 examples.docx>

--

Sara D. Boario  
Assistant Regional Director External Affairs  
U.S. Fish and Wildlife Service, Alaska Region  
Anchorage, Alaska  
907 786 3431



--

Sara D. Boario  
Assistant Regional Director External Affairs  
U.S. Fish and Wildlife Service, Alaska Region  
Anchorage, Alaska  
907 786 3431



**To:** Greg Siekaniec[greg\_siekaniec@fws.gov]  
**From:** Karen Clark  
**Sent:** 2018-05-15T21:00:15-04:00  
**Importance:** Normal  
**Subject:** Fwd: Briefing paper on Caribou  
**Received:** 2018-05-15T21:00:17-04:00  
[ATT00001.htm](#)  
[FWP BP Porcupine Caribou May15 2018.docx](#)

Did you get a chance to look at this? It has all the basics, I'm inclined to send forward as is. Thoughts?

Sent from my iPhone

Begin forwarded message:

**From:** "Ellis, Mitch" <[mitch\\_ellis@fws.gov](mailto:mitch_ellis@fws.gov)>  
**Date:** May 15, 2018 at 12:11:33 PM AKDT  
**To:** "Clark, Karen" <[karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)>  
**Cc:** Socheata Lor <[socheata\\_lor@fws.gov](mailto:socheata_lor@fws.gov)>, Doug Damberg <[doug\\_damberg@fws.gov](mailto:doug_damberg@fws.gov)>, Greg Siekaniec <[greg\\_siekaniec@fws.gov](mailto:greg_siekaniec@fws.gov)>  
**Subject: Re: Briefing paper on Caribou**

Here is the BP requested.

---

Mitch Ellis  
Chief of Refuges - Alaska  
National Wildlife Refuge System  
US Fish and Wildlife Service  
(907)786-3667 wk  
(907)947-4416 mob

On Fri, May 11, 2018 at 11:10 AM, Clark, Karen <[karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)> wrote:

Hi Mitch and Soch, please see the request below. I believe we have one that speaks to the Board- please use the attached template to update and talk more about what's going on now- the meeting and our involvement in technical discussions as we always have been... and anything else you think should be included. Needs to move to HQ by COB Tuesday- can you guys pull this together by noon on Tuesday?

Thanks, Karen

Karen P. Clark  
Deputy Regional Director

U.S. Fish & Wildlife Service- Alaska Region  
1011 E Tudor Rd, MS 374  
Anchorage, AK 99503  
[karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)  
907.786.3542 office  
907.786.3493 direct  
907.786.3306 fax

----- Forwarded message -----

From: **Morris, Charisa** <[charisa\\_morris@fws.gov](mailto:charisa_morris@fws.gov)>  
Date: Fri, May 11, 2018 at 11:00 AM  
Subject: Fwd: Briefing paper on Caribou  
To: Gregory Siekaniec <[greg\\_siekaniec@fws.gov](mailto:greg_siekaniec@fws.gov)>, Karen Clark  
<[karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)>, Jerome Ford <[Jerome\\_ford@fws.gov](mailto:Jerome_ford@fws.gov)>, Mike Johnson  
<[mike\\_j\\_johnson@fws.gov](mailto:mike_j_johnson@fws.gov)>

Good afternoon!  
FWP requests a BP on caribou, Arctic NWR, and work with Canada. Could you work together to send in a draft by COB, Tuesday, May 15th using the attached template? Please feel free to add whomever else you think is appropriate to this thread (i.e., regional leadership).

Thanks!  
Charisa



----- Forwarded message -----

From: **Foster, Maureen** <[maureen\\_foster@ios.doi.gov](mailto:maureen_foster@ios.doi.gov)>  
Date: Fri, May 11, 2018 at 2:38 PM  
Subject: Briefing paper on Caribou  
To: Kashyap Patel <[kashyap\\_patel@fws.gov](mailto:kashyap_patel@fws.gov)>, Charisa Morris  
<[charisa\\_morris@fws.gov](mailto:charisa_morris@fws.gov)>

FWS:

I need a briefing memo on caribou, Arctic NWR, and work with Canada please.

Due date: COB Wednesday, May 16.

Let me know if you have any questions.

Maureen

---

Maureen D. Foster  
Chief of Staff  
Office of the Assistant Secretary

for Fish and Wildlife and Parks  
1849 C Street, NW, Room 3161  
Washington, DC 20240

202.208.5970 (desk)  
202.208.4416 (main)

[Maureen\\_Foster@ios.doi.gov](mailto:Maureen_Foster@ios.doi.gov)

--

[Charisa\\_Morris@fws.gov](mailto:Charisa_Morris@fws.gov) | Chief of Staff, Office of the Director | U.S. Fish &  
Wildlife Service | 1849 C Street NW, Room 3348 | Washington, DC 20240 | (202) 208-3843  
| For urgent matters, please dial cell: 301-875-8937

**To:** Greg Siekaniec[greg\_siekaniec@fws.gov]  
**From:** Karen Clark  
**Sent:** 2018-05-15T23:59:35-04:00  
**Importance:** Normal  
**Subject:** Re: Briefing paper on Caribou  
**Received:** 2018-05-15T23:59:37-04:00

Sounds good... I'm with you, we can respond to questions, but this is a good start. I'll move it forward.

Sent from my iPhone

On May 15, 2018, at 7:57 PM, Greg Siekaniec <[greg\\_siekaniec@fws.gov](mailto:greg_siekaniec@fws.gov)> wrote:

I think it is okay. We could raise the interest of the Stare being a partner in the board and technical aspects of monitoring and understanding. Another interest could be a good thing with the department. Not knowing the departments interest it is hard to guess whether expanding the discussion would be good. Send it along and we can wait for questions.

Thanks,

Greg

Sent from my iPhone

On May 15, 2018, at 8:00 PM, Karen Clark <[karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)> wrote:

Did you get a chance to look at this? It has all the basics, I'm inclined to send forward as is. Thoughts?

Sent from my iPhone

Begin forwarded message:

**From:** "Ellis, Mitch" <[mitch\\_ellis@fws.gov](mailto:mitch_ellis@fws.gov)>  
**Date:** May 15, 2018 at 12:11:33 PM AKDT  
**To:** "Clark, Karen" <[karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)>  
**Cc:** Socheata Lor <[socheata\\_lor@fws.gov](mailto:socheata_lor@fws.gov)>, Doug Damberg <[doug\\_damberg@fws.gov](mailto:doug_damberg@fws.gov)>, Greg Siekaniec <[greg\\_siekaniec@fws.gov](mailto:greg_siekaniec@fws.gov)>  
**Subject:** Re: Briefing paper on Caribou

Here is the BP requested.

---

Mitch Ellis  
Chief of Refuges - Alaska  
National Wildlife Refuge System  
US Fish and Wildlife Service  
(907)786-3667 wk  
(907)947-4416 mob

On Fri, May 11, 2018 at 11:10 AM, Clark, Karen <[karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)>  
wrote:

Hi Mitch and Soch, please see the request below. I believe we have one that speaks to the Board- please use the attached template to update and talk more about what's going on now- the meeting and our involvement in technical discussions as we always have been... and anything else you think should be included. Needs to move to HQ by COB Tuesday- can you guys pull this together by noon on Tuesday?

Thanks, Karen

Karen P. Clark  
Deputy Regional Director  
U.S. Fish & Wildlife Service- Alaska Region  
1011 E Tudor Rd, MS 374  
Anchorage, AK 99503  
[karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)  
907.786.3542 office  
907.786.3493 direct  
907.786.3306 fax

----- Forwarded message -----

From: **Morris, Charisa** <[charisa\\_morris@fws.gov](mailto:charisa_morris@fws.gov)>  
Date: Fri, May 11, 2018 at 11:00 AM  
Subject: Fwd: Briefing paper on Caribou  
To: Gregory Siekaniec <[greg\\_siekaniec@fws.gov](mailto:greg_siekaniec@fws.gov)>, Karen Clark <[karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)>, Jerome Ford <[Jerome\\_ford@fws.gov](mailto:Jerome_ford@fws.gov)>, Mike Johnson <[mike\\_j\\_johnson@fws.gov](mailto:mike_j_johnson@fws.gov)>

Good afternoon!

0000012517

FWP requests a BP on caribou, Arctic NWR, and work with Canada. Could you work together to send in a draft by COB, Tuesday, May 15th using the attached template? Please feel free to add whomever else you think is appropriate to this thread (i.e., regional leadership).

Thanks!  
Charisa



----- Forwarded message -----

From: **Foster, Maureen** <[maureen\\_foster@ios.doi.gov](mailto:maureen_foster@ios.doi.gov)>  
Date: Fri, May 11, 2018 at 2:38 PM  
Subject: Briefing paper on Caribou  
To: Kashyap Patel <[kashyap\\_patel@fws.gov](mailto:kashyap_patel@fws.gov)>, Charisa Morris <[charisa\\_morris@fws.gov](mailto:charisa_morris@fws.gov)>

FWS:

I need a briefing memo on caribou, Arctic NWR, and work with Canada please.

Due date: COB Wednesday, May 16.

Let me know if you have any questions.

Maureen

---

Maureen D. Foster  
Chief of Staff  
Office of the Assistant Secretary  
for Fish and Wildlife and Parks  
1849 C Street, NW, Room 3161  
Washington, DC 20240

202.208.5970 (desk)  
202.208.4416 (main)

[Maureen\\_Foster@ios.doi.gov](mailto:Maureen_Foster@ios.doi.gov)

--  
[Charisa\\_Morris@fws.gov](mailto:Charisa_Morris@fws.gov) | Chief of Staff, Office of the Director | U.S.  
Fish & Wildlife Service | 1849 C Street NW, Room 3348  
| Washington, DC 20240 | (202) 208-3843 | For urgent  
matters, please dial cell: 301-875-8937

0000012518

<mime-attachment.html>

<FWP BP Porcupine Caribou May15 2018.docx>

**To:** kashyap\_patel@fws.gov[kashyap\_patel@fws.gov];  
Charisa\_Morris@fws.gov[Charisa\_Morris@fws.gov]  
**Cc:** Greg Siekaniec[greg\_siekaniec@fws.gov]  
**From:** Karen Clark  
**Sent:** 2018-05-16T00:04:51-04:00  
**Importance:** Normal  
**Subject:** Fwd: Briefing paper on Caribou  
**Received:** 2018-05-16T00:04:58-04:00  
[ATT00001.htm](#)  
[FWP BP Porcupine Caribou May15 2018.docx](#)

Hey Charisa, here is the BP. Please let us know if you have any questions!  
Karen

Sent from my iPhone

Begin forwarded message:

**From:** "Ellis, Mitch" <[mitch\\_ellis@fws.gov](mailto:mitch_ellis@fws.gov)>  
**Date:** May 15, 2018 at 12:11:33 PM AKDT  
**To:** "Clark, Karen" <[karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)>  
**Cc:** Socheata Lor <[socheata\\_lor@fws.gov](mailto:socheata_lor@fws.gov)>, Doug Damberg  
<[doug\\_damberg@fws.gov](mailto:doug_damberg@fws.gov)>, Greg Siekaniec <[greg\\_siekaniec@fws.gov](mailto:greg_siekaniec@fws.gov)>  
**Subject:** **Re: Briefing paper on Caribou**

Here is the BP requested.

---

Mitch Ellis  
Chief of Refuges - Alaska  
National Wildlife Refuge System  
US Fish and Wildlife Service  
(907)786-3667 wk  
(907)947-4416 mob

----- Forwarded message -----

**From:** **Morris, Charisa** <[charisa\\_morris@fws.gov](mailto:charisa_morris@fws.gov)>  
**Date:** Fri, May 11, 2018 at 11:00 AM  
**Subject:** Fwd: Briefing paper on Caribou  
**To:** Gregory Siekaniec <[greg\\_siekaniec@fws.gov](mailto:greg_siekaniec@fws.gov)>, Karen Clark  
<[karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)>, Jerome Ford <[Jerome\\_ford@fws.gov](mailto:Jerome_ford@fws.gov)>, Mike Johnson  
<[mike\\_j\\_johnson@fws.gov](mailto:mike_j_johnson@fws.gov)>

Good afternoon!

0000012520

FWP requests a BP on caribou, Arctic NWR, and work with Canada. Could you work together to send in a draft by COB, Tuesday, May 15th using the attached template? Please feel free to add whomever else you think is appropriate to this thread (i.e., regional leadership).

Thanks!  
Charisa



----- Forwarded message -----

From: **Foster, Maureen** <[maureen\\_foster@ios.doi.gov](mailto:maureen_foster@ios.doi.gov)>  
Date: Fri, May 11, 2018 at 2:38 PM  
Subject: Briefing paper on Caribou  
To: Kashyap Patel <[kashyap\\_patel@fws.gov](mailto:kashyap_patel@fws.gov)>, Charisa Morris <[charisa\\_morris@fws.gov](mailto:charisa_morris@fws.gov)>

FWS:

I need a briefing memo on caribou, Arctic NWR, and work with Canada please.

Due date: COB Wednesday, May 16.

Let me know if you have any questions.

Maureen

---

Maureen D. Foster  
Chief of Staff  
Office of the Assistant Secretary  
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Washington, DC 20240

202.208.5970 (desk)  
202.208.4416 (main)

[Maureen\\_Foster@ios.doi.gov](mailto:Maureen_Foster@ios.doi.gov)

--

[Charisa\\_Morris@fws.gov](mailto:Charisa_Morris@fws.gov) | Chief of Staff, Office of the Director | U.S. Fish & Wildlife Service | 1849 C Street NW, Room 3348 | Washington, DC 20240 | (202) 208-3843  
| For urgent matters, please dial cell: 301-875-8937

0000012521

**To:** Clark, Karen[karen\_clark@fws.gov]  
**From:** Greg Siekaniec  
**Sent:** 2018-05-22T12:11:41-04:00  
**Importance:** Normal  
**Subject:** Re: URGENT-INPUT NEEDED: 1002 remarks  
**Received:** 2018-05-22T12:11:51-04:00

The answer to Q&A 4 is missing a word in the last sentence. Otherwise, I didn't see or read anything via phone review. Looks to be in decent shape.  
Thanks.

Sent from my iPhone

On May 22, 2018, at 10:46 AM, Clark, Karen <[karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)> wrote:

I made a couple minor additional edits. Greg, do you have any additional edits?  
Andrea, let's talk about next steps this morning.

Thanks to everyone for their work on this!

Karen

Karen P. Clark  
Deputy Regional Director  
U.S. Fish & Wildlife Service- Alaska Region  
1011 E Tudor Rd, MS 374  
Anchorage, AK 99503  
[karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)  
907.786.3542 office  
907.786.3493 direct  
907.786.3306 fax

On Mon, May 21, 2018 at 3:29 PM, Andrea Medeiros <[andrea\\_medeiros@fws.gov](mailto:andrea_medeiros@fws.gov)> wrote:

I can take care of all of that once I get everyone's edits.

---

Andrea Medeiros  
U.S. Fish and Wildlife Service,  
Alaska Region, External Affairs **tEAm**  
Public Affairs Specialist  
(907) 786-3695

Mobile: (907) 227-4788

Connect with us:



On Mon, May 21, 2018 at 3:24 PM Greg Siekaniec <[greg\\_siekaniec@fws.gov](mailto:greg_siekaniec@fws.gov)> wrote:

Thank you Mary,  
Nice work editing the language. It may be my iPad but there are some edits needed as spaces are missing, double periods, etc.

Greg  
Sent from my iPad

On May 21, 2018, at 6:01 PM, Ellis, Mitch <[mitch\\_ellis@fws.gov](mailto:mitch_ellis@fws.gov)> wrote:

I agree with Mary's comments and added two additional edits. See attached.

---

Mitch Ellis  
Chief of Refuges - Alaska  
National Wildlife Refuge System  
US Fish and Wildlife Service  
(907)786-3667 wk  
(907)947-4416 mob

On Mon, May 21, 2018 at 1:59 PM, Colligan, Mary <[mary\\_colligan@fws.gov](mailto:mary_colligan@fws.gov)> wrote:

My suggested edits are included in the attached.

On Mon, May 21, 2018 at 10:12 AM, Andrea Medeiros <[andrea\\_medeiros@fws.gov](mailto:andrea_medeiros@fws.gov)> wrote:

Hi All,  
Here is a draft of the communications plan RE 1002. It provides a schedule of meetings, identifies USFWS representatives attending scoping meetings, an opening statement, plan for Refuge website Home page post, and a Q and As.

The schedule of scoping meetings will need to be updated to reflect the change in the date of the Kaktovik meeting.

---

Andrea Medeiros  
U.S. Fish and Wildlife Service,  
Alaska Region, External Affairs **tEAm**  
Public Affairs Specialist  
(907) 786-3695  
Mobile: (907) 227-4788

Connect with us:



----- Forwarded message -----

From: Andrea Medeiros <[andrea\\_medeiros@fws.gov](mailto:andrea_medeiros@fws.gov)>  
Date: Thu, May 17, 2018 at 2:57 PM  
Subject: Re: URGENT-INPUT NEEDED: 1002 remarks  
To: Laury Parramore <[laury\\_parramore@fws.gov](mailto:laury_parramore@fws.gov)>  
Cc: Sara Boario <[sara\\_boario@fws.gov](mailto:sara_boario@fws.gov)>, Wendy Loya <[wendy\\_loya@fws.gov](mailto:wendy_loya@fws.gov)>

Hi Laury,  
Here is the revised communications document for 1002.

---

Andrea Medeiros  
U.S. Fish and Wildlife Service,  
Alaska Region, External Affairs **tEAm**  
Public Affairs Specialist  
(907) 786-3695  
Mobile: (907) 227-4788

Connect with us:



On Wed, May 16, 2018 at 9:37 AM Laury Parramore  
<[laury\\_parramore@fws.gov](mailto:laury_parramore@fws.gov)> wrote:

Hi Sara and Andrea,  
Attached is a version that has been reviewed by AD-AEA  
(Barbara) and AD-NWRS (Cynthia). This version reflects  
their revisions. Would you please address the questions in  
the comments? Then this can move forward to Greg

and/or DOI-OCO.  
Laury Marshall Parramore

--

Mary Colligan  
Assistant Regional Director  
Fisheries and Ecological Services  
U.S. Fish and Wildlife Service, Alaska Region  
1011 E. Tudor Road, MS-361  
Anchorage, AK 99503  
907-786-3505  
cell: 907-223-5945

<1002 Communications-EA-NRWS MRE.docx>

<1002 Communications-EA-NRWS MRE KPC.docx>

**To:** Greg Siekaniec[greg\_siekaniec@fws.gov]  
**From:** Kurth, Jim  
**Sent:** 2018-05-22T14:39:37-04:00  
**Importance:** Normal  
**Subject:** Re: Alaska 1002  
**Received:** 2018-05-22T14:39:44-04:00

Great! Thanks.

On Tue, May 22, 2018 at 2:32 PM, Greg Siekaniec <[greg\\_siekaniec@fws.gov](mailto:greg_siekaniec@fws.gov)> wrote:

Absolutely. We are pushing BLM hard on tribal consults.

Sent from my iPhone

On May 22, 2018, at 1:24 PM, Jim Kurth <[jim\\_kurth@fws.gov](mailto:jim_kurth@fws.gov)> wrote:

I didn't see any tribal consultations in the timeline, are there plans for them?

Sent from my iPhone

On May 22, 2018, at 2:13 PM, Greg Siekaniec <[greg\\_siekaniec@fws.gov](mailto:greg_siekaniec@fws.gov)> wrote:

Jim,  
We are in middle of these discussions and planning approach to the seismic application.

Polar bear will be the challenge given the timeline requested.

Greg

Sent from my iPhone

On May 22, 2018, at 8:32 AM, Kurth, Jim <[jim\\_kurth@fws.gov](mailto:jim_kurth@fws.gov)> wrote:

Cynthia, Gary - FYI  
Greg, I assume you already have this information.

----- Forwarded message -----

**From:** **Bud Cribley** <[bud\\_cribley@fws.gov](mailto:bud_cribley@fws.gov)>  
**Date:** Tue, May 22, 2018 at 9:28 AM  
**Subject:** Fwd: Alaska 1002  
**To:** [aurelia\\_skipwith@ios.doi.gov](mailto:aurelia_skipwith@ios.doi.gov)  
**Cc:** Charisa Morris <[Charisa\\_Morris@fws.gov](mailto:Charisa_Morris@fws.gov)>, Jim Kurth <[jim\\_kurth@fws.gov](mailto:jim_kurth@fws.gov)>

Aurelia,

On April 19th the BLM-AK received an application to conduct seismic surveys in the Coastal Plain of the Arctic National Wildlife Refuge. BLM has been working with cooperators to put together a plan to process this application. Following is a more detailed description of the project and the proposed timeline.

The BLM State Office received the Marsh Creek 3D Plan of Operations from SAExploration (SAE), Inc. for winter seismic surveys in the Coastal Plain on April 19, 2018. SAE is proposing to acquire seismic data across the Arctic National Wildlife Refuge Coastal Plain (2602 sq. miles) using rubber tracked/buggy vibrators and wireless, autonomous recording channels (nodes) during the winter of 2018/2019 and 2019/2020. There could be two crews each winter season with work starting approximately December 1 and ending on May 31, depending on tundra closures.

Although the BLM is the lead agency for permitting oil and gas activities on the Coastal Plain, including seismic exploration, FWS staff will be integral in the planning and analysis of the proposed seismic exploration project.

It has been decided to use an Environmental Assessment as the NEPA tool to analyze the impacts of this project.

### **Timeframes**

Under the 43 CFR 3152 (Mineral Exploration in Alaska), the authorized officer is required to review and approve a seismic permit within

90 calendar days of receiving an application unless compliance with statutory requirements, such as NEPA, would delay the action. Due to the high likelihood of public interest in this project, the need for public outreach and the amount of time necessary for Endangered Species Act consultation, it is not feasible to meet the 90 day timeframe. See the proposed project timeline below.

### **Projected Timeline**

- May 11-** Due date for application questions from FWS and BLM to IDT Lead
- May 22** IDT Lead compiles application questions and sends letter to applicant
- May 22** Project Initiation Letter sent to IDT
- May 22-June 1** Draft Affected Environment (FWS and Key BLM IDT members) (Refer to Table 1)
- May 30** – Deadline for applicant response to questions
- May 30-June 6** - Finalize Proposed Action and post to BLM ePlanning website (IDT Lead)
- June - November** MMPA Incidental Take Regulations development (published in Federal Register in November and final rule in January)
- June 6** IDT Lead sends Proposed Action to team to drafting Issue Statements
- June 12** Deadline for Issue Statements from IDT to IDT Lead
- June 12** IDT Lead sends letter to applicant regarding schedule
- June 13-27** All IDT members draft proposed Best Management Practices and draft Alternatives based on Issues
- June 28** In person IDT meeting to finalize Alternatives and Best Management Practices (IDT)
- June 29** IDT Lead sends Alternatives including Best Management Practices to Managers for review
- July 3** IDT Lead sends list of projects to include in cumulative effects analysis to IDT for review
- July 5** Manager Alternative Briefing and Identify Preferred

Alternative (IDT Lead, Managers and key IDT members)

**July 6 - July 20** Joint Biological Assessment for ESA and MMPA consultations on preferred alternative (FWS polar bears, BLM - eiders) (BA for both seismic and the Incidental Take Regulations)

**July 6 - July 20** IDT writes Environmental Impacts including cumulative effects (BLM and Key FWS IDT members)(Refer to Table 1)

**July 20 – November 9** Joint MMPA and ESA Formal Consultation for both seismic and Incidental Take Regulations

**July 25** Manger Briefing on Environmental Impacts

**July 27** Post draft EA for 30 day comment period.

**August 6-15** Public Meetings and Government to Government

**August 27** All Public Comments Received

**August 27-September 14** IDT Responds to Comments

**November 9** Joint MMPA and ESA Formal Consultation Completed

**November 12** Sign FONSI and Decision (BLM District Manager)

**November 16** Incidental Take Regulations published in Federal Register

**January 2019** Final Incidental Take Regulations Rule

Sent from my iPhone

On May 21, 2018, at 6:14 PM, Aurelia Skipwith  
<[aurelia\\_skipwith@ios.doi.gov](mailto:aurelia_skipwith@ios.doi.gov)> wrote:

Bud,  
I hope you are doing well.

Charisa mentioned that you are the liaison with BLM. I need a status update of Alaska 1002 exploration and permits. Could provide me with an update, just a few sentences, by 9am tomorrow?

I apologize for the short turnaround. Thank you.

Aurelia Skipwith  
Deputy Assistant Secretary  
for Fish and Wildlife and Parks

U.S. Department of Interior  
1849 C Street NW, Room 3148  
Washington, DC 20240  
202-208-5837

**To:** Sara Boario[sara\_boario@fws.gov]; Karen Clark[karen\_clark@fws.gov]; Gregory Siekaniec[gregory\_siekaniec@fws.gov]  
**From:** Howard, Amee  
**Sent:** 2018-05-24T17:54:30-04:00  
**Importance:** Normal  
**Subject:** Fwd: Ethics Guidance re. Public Comments by FWS Employees  
**Received:** 2018-05-24T17:54:38-04:00  
[Employees-public-expression-of-personal-opinions.pdf](#)

Hi All,

Here is the guidance for your dissemination from our Ethics office regarding public comments by employees during the NEPA process.

Thanks so much!

Amee

----- Forwarded message -----

**From:** Aronson, Virginia <[virginia\\_aronson@fws.gov](mailto:virginia_aronson@fws.gov)>  
**Date:** Thu, May 24, 2018 at 1:43 PM  
**Subject:** Re: Ethics Questions  
**To:** "Howard, Amee" <[amee\\_howard@fws.gov](mailto:amee_howard@fws.gov)>

Hello,

I am forwarding this response:

Federal employees may voice their personal opinions but are prohibited under the Standards of Ethical Conduct (5 CFR 2635.701-705) from using their Service position, title or any authority associated with your public office in a manner that could reasonably be construed to imply that the Service or the Government sanctions or endorses any of their personal activities or opinions or the personal activities or opinions of another. It also cannot appear that they are speaking or writing on behalf of the Federal Government.

The only way employees can provide comments in-person or in writing on the oil and gas program in the Arctic Refuge is to do so in a personal capacity on their own time, not using any government resources and not make any reference to their position with the Service to make sure it does not appear that they are doing so on behalf of the Service.

Attached is some guidance about the public expression of personal opinions and how to stay within the ethics rules when expressing those opinions.

If specific situations come up, it is recommended to contact the Ethics Official for specific guidance before proceeding.

Virginia Aronson  
Human Resources Specialist (ER)  
AK Combined Services Center  
U.S. Fish and Wildlife Service  
1011 E. Tudor Road  
Anchorage, AK 99503  
Phone #: 907 786 3647  
Fax #: 907 786 3841

0000012531

Email Address: [virginia\\_aronson@fws.gov](mailto:virginia_aronson@fws.gov)

On Thu, May 24, 2018 at 9:10 AM, Howard, Ameer <[amee\\_howard@fws.gov](mailto:amee_howard@fws.gov)> wrote:

Hi Virginia,

It is in regard to the National Environmental Policy Act (NEPA) public process for establishing an oil and gas program in Arctic Refuge. BLM is the lead agency, FWS is a cooperating agency. We have a myriad of people working with BLM as subject matter experts to create the required NEPA documents.

The scenario is, what guidance should we give FWS employees that have concerns regarding the oil and gas program in Arctic Refuge who may want to comment (in person or in writing) as a private citizen?

Are there parameters that leadership can provide to keep everyone informed? It would be good to give dos and don'ts (if available) for all scenarios - written, public meetings, media, and social media.

Thank so much for your time and assistance in this effort.  
Ameer

On Thu, May 24, 2018 at 8:37 AM, Aronson, Virginia <[virginia\\_aronson@fws.gov](mailto:virginia_aronson@fws.gov)> wrote:

Good morning,

I was contacted by the HQ Ethics Office. These are the questions they asked:

- 1) What type of public comments are the employees anticipating?
- 2) Would it be providing comments online, or appearing at public hearings or what?
- 3) Would any of this involve media coverage?
- 4) What are the specific projects?

Virginia Aronson  
Human Resources Specialist (ER)  
AK Combined Services Center  
U.S. Fish and Wildlife Service  
1011 E. Tudor Road  
Anchorage, AK 99503  
Phone #: 907 786 3647  
Fax #: 907 786 3841  
Email Address: [virginia\\_aronson@fws.gov](mailto:virginia_aronson@fws.gov)

--

***Amee Howard***

*Congressional and State Liaison*

U.S. Fish & Wildlife Service

Anchorage, Alaska

Office: (907)786-3509

Mobile: (907)229-8575

Get Inspired

--

***Amee Howard***

*Congressional and State Liaison*

U.S. Fish & Wildlife Service

Anchorage, Alaska

Office: (907)786-3509

Mobile: (907)229-8575

Get Inspired

**To:** karen\_clark@fws.gov[karen\_clark@fws.gov]; mary\_colligan@fws.gov[mary\_colligan@fws.gov]  
**From:** Greg Siekaniec  
**Sent:** 2018-05-31T09:13:35-04:00  
**Importance:** Normal  
**Subject:** Fwd: [EXTERNAL] FW: Invitation to the 2018 Oil & Gas Forum  
**Received:** 2018-05-31T09:13:55-04:00  
[ATT00001.htm](#)  
[image001.jpg](#)  
[FinalOGforumReport.pdf](#)  
[ATT00002.htm](#)  
[GREG SIEKANIEC.pdf](#)  
[ATT00003.htm](#)

I received a call from the organizer to see if we have intentions of attending. I indicated I would be traveling to DC for the BLM Scoping meeting for the 1002 area of Arctic National Wildlife Refuge. I was asked to pass this along. Please take a look and see if you feel we should attend to gain perspective on what is to come regarding development that will need our attention. If so, please reply and if no interest please send regrets.

Thank you,

Greg

Sent from my iPhone

Begin forwarded message:

**From:** Seeseei Pili <[Seeseei.Pili@north-slope.org](mailto:Seeseei.Pili@north-slope.org)>  
**Date:** May 30, 2018 at 4:46:40 PM AKDT  
**To:** "'[gregory\\_siekaniec@fws.gov](mailto:gregory_siekaniec@fws.gov)'" <[gregory\\_siekaniec@fws.gov](mailto:gregory_siekaniec@fws.gov)>  
**Subject:** [EXTERNAL] FW: Invitation to the 2018 Oil & Gas Forum

Here is the invitation again!

Thank you,  
Seei

---

**From:** Seeseei Pili  
**Sent:** Wednesday, May 23, 2018 10:10 AM  
**To:** '[gregory\\_siekaniec@fws.gov](mailto:gregory_siekaniec@fws.gov)'  
**Subject:** Invitation to the 2018 Oil & Gas Forum

Good morning,

Welcome to the 2018 Oil & Gas Forum! Please find attached an invitation to the 2018 Oil & Gas Forum which will be held in Anchorage on **Thursday, June 14, 2018**. Also, attached for informational purposes is the 2016 Final Oil & Gas Forum report the

includes recommendations for future actions.

Once the 2018 Oil & Gas Forum agenda is finalized, we will send it out to our list of invitees.

Please **confirm** or **decline** your attendance directly through this email or a phone call to me at 907-852-0320 ext 5423.

If you have any questions or would like more information please let me know.

Quyanaq!

Seeseei Pili, Division Manager  
Planning & Community Services  
Phone: (907) 852-0320 ext. 5423  
P.O. Box 69  
Barrow, AK 99723

**To:** Stephen Wackowski[stephen\_wackowski@ios.doi.gov]  
**Cc:** Lesli Ellis-Wouters[lellis@blm.gov]; Katharine Macgregor[kate\_macgregor@ios.doi.gov]; Siekaniec, Greg[greg\_siekaniec@fws.gov]; Karen E. Mouritsen[kmourits@blm.gov]; Swift, Heather[heather\_swift@ios.doi.gov]; Rigas, Laura[laura\_rigas@ios.doi.gov]; Faith Vander Voort[faith\_vandervoort@ios.doi.gov]; Ted Murphy[t75murph@blm.gov]; Jeff Krauss[jkrauss@blm.gov]; Winston, Beverly[bwinston@blm.gov]; McIntosh, Stacie J[s05mcint@blm.gov]; Boario, Sara[sara\_boario@fws.gov]  
**From:** Cargile, Amber  
**Sent:** 2018-05-31T16:23:03-04:00  
**Importance:** Normal  
**Subject:** Re: Hard Stop on Comments RE: 1002 siesmic  
**Received:** 2018-05-31T16:23:14-04:00

Sending to OS for Consult



*Amber Cargile*  
**Acting BLM National Spokesperson**  
Bureau of Land Management  
Main Interior Building, Ste.5645  
Washington, D.C. 20240  
480.392.1422 (mobile)  
[www.blm.gov](http://www.blm.gov)

On Thu, May 31, 2018 at 12:57 PM, Boario, Sara <[sara\\_boario@fws.gov](mailto:sara_boario@fws.gov)> wrote:

Hi Steve -

0000012536

We have issued no statement out of the Alaska Regional office. The FWS statement referenced below was issued out of our HQ. My understanding is that it was a DOI approved statement.

sb

On Thu, May 31, 2018 at 11:53 AM, Lesli Ellis-Wouters <[lellis@blm.gov](mailto:lellis@blm.gov)> wrote:

This response was sent to the following outlets:

Washington Examiner Josh Siegal  
Anchorage Daily News Alex DeMarban  
Alaska Public Media Elizabeth Harball

*We have received an application from SA Exploration and partner Arctic Slope Regional Corporation to conduct seismic geophysical exploration within the Alaska Coastal Plain. The Alaska State Office is currently reviewing the application.*

*The 2017 Tax Cuts & Jobs Act directs the Secretary of the Interior to establish a competitive program for leasing, development, production, and transportation of oil and gas on Alaska's Coastal Plain. Currently, the BLM is conducting public scoping in preparation of an Environmental Impact Statement for the Coastal Plain Oil and Gas Leasing Program.*

Alex and Elizabeth sent follow up requests for a copy of the application where I replied with the FWS statement:

*There are no public documents to share at this time. However, such responses are part of a normal, iterative process whereby we work collaboratively with both the permit applicant and our sister federal agencies to identify shortcomings or gaps in information in the application so that we can fully and appropriately evaluate it.*

***Lesli J. Ellis-Wouters***

Communications Director  
Alaska State Office  
Bureau of Land Management  
907-271-4418 | cell - 907-331-8763

On Thu, May 31, 2018 at 11:44 AM Wackowski, Stephen <[stephen\\_wackowski@ios.doi.gov](mailto:stephen_wackowski@ios.doi.gov)> wrote:

Sara, Lesli-

Hard stop on any comments to press on the WaPo story until a response is coordinated with departmental comms (CC'd). Please send the group the statements you have put out so far and to whom.

We are working on detailing the myraid of inaccuracies in the story and want to have a unified response.

-Steve

Steve Wackowski  
Senior Adviser for Alaskan Affairs  
Department of the Interior  
4230 University Drive, Suite 300  
Anchorage, AK 99508  
907-271-5485

--

Sara D. Boario  
Assistant Regional Director External Affairs  
U.S. Fish and Wildlife Service, Alaska Region  
Anchorage, Alaska  
907 786 3431



**To:** Lucille A Frerich[lucille\_frerich@fws.gov]  
**From:** Siekaniec, Greg  
**Sent:** 2018-06-04T19:53:36-04:00  
**Importance:** Normal  
**Subject:** Fwd: Week 3 Itinerary - Venetie/Kaktovik/Washington, D.C.  
**Received:** 2018-06-04T19:54:25-04:00  
Week 3 June11-June15 VEN KAK DC v1.docx.docx

FYI

----- Forwarded message -----

**From:** Hayes, Miriam (Nicole) <mnhayes@blm.gov>  
**Date:** Mon, Jun 4, 2018 at 2:23 PM  
**Subject:** Week 3 Itinerary - Venetie/Kaktovik/Washington, D.C.  
**To:** Joseph Balash <joseph\_balash@ios.doi.gov>, Greg Siekaniec <greg\_siekaniec@fws.gov>, Karen Mouritsen <kmourits@blm.gov>, Michael Gieryic <mike.gieryic@sol.doi.gov>  
**Cc:** Lesli Ellis-Wouters <lellis@blm.gov>, "Murphy, Ted" <t75murph@blm.gov>, "Nichelle (Shelly) Jones" <njones@blm.gov>, "Seidlitz, Joseph (Gene)" <gseidlit@blm.gov>, Jill Moran <jcmoran@blm.gov>, Tracie Lassiter <tracie\_lassiter@ios.doi.gov>, Hilary Zarin <hzarin@blm.gov>, Jeff Brune <jbrune@blm.gov>, Michael Nedd <mnedd@blm.gov>, "Twitchell, Hollis" <hollis\_twitchell@fws.gov>, Steve Berendzen <steve\_berendzen@fws.gov>, Karen Clark <karen\_clark@fws.gov>, Jeff Krauss <jkrauss@blm.gov>, Beverly Winston <bwinston@blm.gov>, Steven Wells <slwells@blm.gov>, "Frost, Eileen" <efrost@blm.gov>, Leslie Rosenberger <lrosenberger@blm.gov>, Stephen Wackowski <stephen\_wackowski@ios.doi.gov>, Lesia Monson <lesia\_monson@ios.doi.gov>

All,

Attached is the itinerary for next week as they stand TODAY. There are a few details that are still being finalized, however, meeting times and DOI flight times are confirmed so that travel to/from Fairbanks and to/from DC may be arranged.

Please let me know if you have any questions.

Nicole

**Nicole Hayes**  
Project Coordinator  
Bureau of Land Management  
222 W. 7th Avenue #13  
Anchorage, Alaska 99513  
Desk: (907) 271-4354

0000012539

**To:** Mary Colligan[mary\_colligan@fws.gov]; Karen Clark[karen\_clark@fws.gov]; Ellis, Mitch[mitch\_ellis@fws.gov]  
**From:** Siekaniec, Greg  
**Sent:** 2018-06-05T12:33:34-04:00  
**Importance:** Normal  
**Subject:** Fwd: [EXTERNAL] FW: Invitation to the 2018 Oil & Gas Forum  
**Received:** 2018-06-05T12:35:39-04:00  
[FinalOGforumReport.pdf](#)  
[GREG SIEKANIEC.pdf](#)

Please close the loop on this invite. Thank you,  
greg

----- Forwarded message -----

**From:** Seeseei Pili <[Seeseei.Pili@north-slope.org](mailto:Seeseei.Pili@north-slope.org)>  
**Date:** Wed, May 30, 2018 at 4:46 PM  
**Subject:** [EXTERNAL] FW: Invitation to the 2018 Oil & Gas Forum  
**To:** "[gregory\\_siekaniec@fws.gov](mailto:gregory_siekaniec@fws.gov)" <[gregory\\_siekaniec@fws.gov](mailto:gregory_siekaniec@fws.gov)>

Here is the invitation again!

Thank you,

Seei

---

**From:** Seeseei Pili  
**Sent:** Wednesday, May 23, 2018 10:10 AM  
**To:** '[gregory\\_siekaniec@fws.gov](mailto:gregory_siekaniec@fws.gov)'  
**Subject:** Invitation to the 2018 Oil & Gas Forum

Good morning,

Welcome to the 2018 Oil & Gas Forum! Please find attached an invitation to the 2018 Oil & Gas Forum which will be held in Anchorage on **Thursday, June 14, 2018**. Also, attached for informational purposes is the 2016 Final Oil & Gas Forum report the includes recommendations for future actions.

Once the 2018 Oil & Gas Forum agenda is finalized, we will send it out to our list of invitees.

Please **confirm** or **decline** your attendance directly through this email or a phone call to me at 907-852-0320 ext 5423.

If you have any questions or would like more information please let me know.

Quyanaq!

Seeseei Pili, Division Manager

Planning & Community Services

Phone: (907) 852-0320 ext. 5423

P.O. Box 69

Barrow, AK 99723



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**To:** Greg Siekaniec[greg\_siekaniec@fws.gov]  
**From:** Karen Clark  
**Sent:** 2018-06-05T15:11:53-04:00  
**Importance:** Normal  
**Subject:** Fwd: edits  
**Received:** 2018-06-05T15:38:24-04:00  
[ATT00001.htm](#)  
[Draft Plan of Approvals for 1002 Responses to BLM 060418 KPC MAC.docx](#)

Mary and I edited- let me know what you think!

Sent from my iPhone

Begin forwarded message:

**From:** "Colligan, Mary" <mary\_colligan@fws.gov>  
**Date:** June 5, 2018 at 10:52:38 AM AKDT  
**To:** Karen Clark <karen\_clark@fws.gov>  
**Subject:** edits

Karen I accepted all of your edits and then edited on top of that version. Still a bit confusing, but hopefully not too horrible.

To be consistent I had all formal correspondence for ESA and MMPA go through the full surname process here in the Region. I anticipate that will be a challenge as our schedule for MMPA is really tight so we are going to need everyone to move documents quickly but we can cross that bridge when we get there.

Thanks for the opportunity for review and input

--

Mary Colligan  
Assistant Regional Director  
Fisheries and Ecological Services  
U.S. Fish and Wildlife Service, Alaska Region  
1011 E. Tudor Road, MS-361  
Anchorage, AK 99503  
907-786-3505  
cell: 907-223-5945

**To:** Gregory Siekaniec[gregory\_siekaniec@fws.gov]; Karen Clark[karen\_clark@fws.gov]  
**Cc:** Sara Boario[sara\_boario@fws.gov]  
**From:** Howard, Amee  
**Sent:** 2018-06-05T17:37:31-04:00  
**Importance:** Normal  
**Subject:** Fwd: CBS News on AK seismic application comms  
**Received:** 2018-06-05T17:37:40-04:00

FYI - update on communications from DOI

----- Forwarded message -----

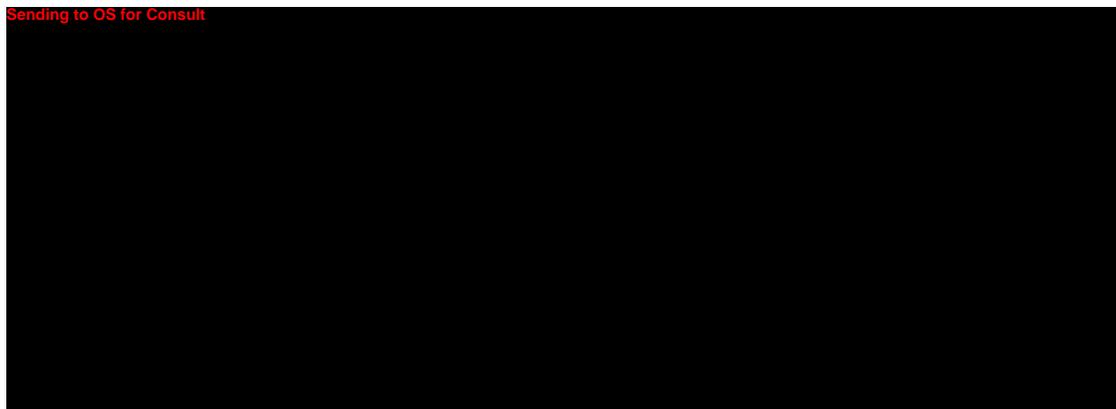
**From:** **Wackowski, Stephen** <[stephen\\_wackowski@ios.doi.gov](mailto:stephen_wackowski@ios.doi.gov)>  
**Date:** Tue, Jun 5, 2018 at 11:45 AM  
**Subject:** Fwd: CBS News on AK seismic application comms  
**To:** Sara Boario <[sara\\_boario@fws.gov](mailto:sara_boario@fws.gov)>, "Howard, Amee" <[amee\\_howard@fws.gov](mailto:amee_howard@fws.gov)>

Steve Wackowski  
Senior Adviser for Alaskan Affairs  
Department of the Interior  
4230 University Drive, Suite 300  
Anchorage, AK 99508  
907-271-5485

----- Forwarded message -----

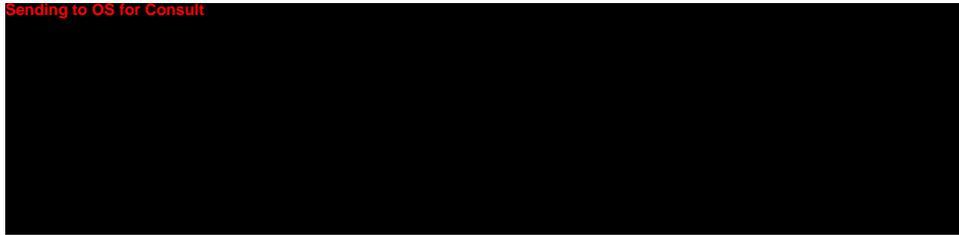
**From:** Swift, Heather <[heather\\_swift@ios.doi.gov](mailto:heather_swift@ios.doi.gov)>  
**Date:** Tue, Jun 5, 2018 at 3:43 PM  
**Subject:** Re: CBS News on AK seismic application comms  
**To:** Stephen Wackowski <[stephen\\_wackowski@ios.doi.gov](mailto:stephen_wackowski@ios.doi.gov)>  
**Cc:** "Cargile, Amber" <[acargile@blm.gov](mailto:acargile@blm.gov)>, Joe Balash <[joseph\\_balash@ios.doi.gov](mailto:joseph_balash@ios.doi.gov)>, Katharine MacGregor <[katharine\\_macgregor@ios.doi.gov](mailto:katharine_macgregor@ios.doi.gov)>, Faith Vander Voort <[faith\\_vandervoort@ios.doi.gov](mailto:faith_vandervoort@ios.doi.gov)>, Interior Press <[interior\\_press@ios.doi.gov](mailto:interior_press@ios.doi.gov)>, Jeff Krauss <[jkrauss@blm.gov](mailto:jkrauss@blm.gov)>, Beverly Winston <[bwinston@blm.gov](mailto:bwinston@blm.gov)>, Lesli Ellis-Wouters <[lellis@blm.gov](mailto:lellis@blm.gov)>, Megan Crandall <[mcrandal@blm.gov](mailto:mcrandal@blm.gov)>, Isabel Benemelis <[isabel\\_benemelis@ios.doi.gov](mailto:isabel_benemelis@ios.doi.gov)>

Sending to OS for Consult



0000012544

Sending to OS for Consult

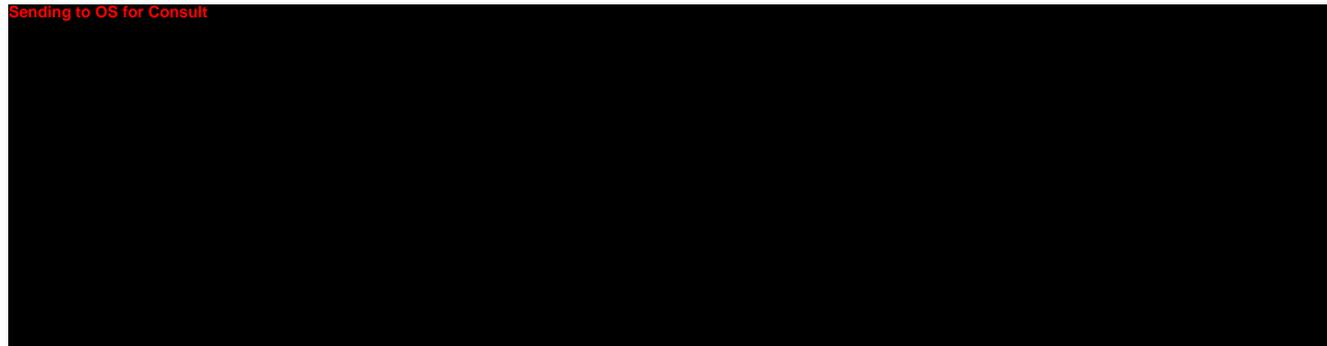


-  
Heather Swift  
Department of the Interior  
@DOIPressSec  
[Heather\\_Swift@ios.doi.gov](mailto:Heather_Swift@ios.doi.gov) | [Interior\\_Press@ios.doi.gov](mailto:Interior_Press@ios.doi.gov)

On Tue, Jun 5, 2018 at 3:38 PM, Stephen Wackowski  
<[stephen\\_wackowski@ios.doi.gov](mailto:stephen_wackowski@ios.doi.gov)> wrote:

>

Sending to OS for Consult



>

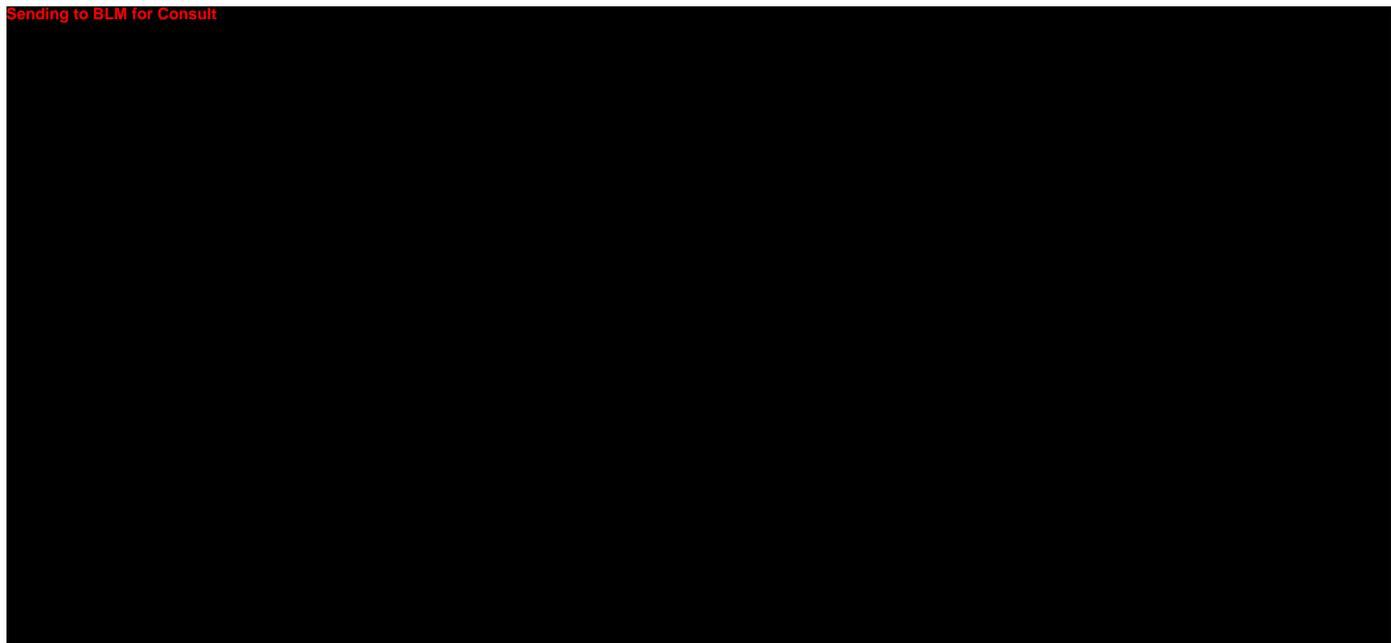
>

> Sent from my iPhone

>

> On Jun 5, 2018, at 11:07 AM, Cargile, Amber <[acargile@blm.gov](mailto:acargile@blm.gov)> wrote:

Sending to BLM for Consult



- > Amber Cargile
- > Acting BLM National Spokesperson
- > Bureau of Land Management
- > Main Interior Building, Ste.5645
- > Washington, D.C. 20240
- > 480.392.1422 (mobile)
- > [www.blm.gov](http://www.blm.gov)

--

*Amee Howard*

*Congressional and State Liaison*

U.S. Fish & Wildlife Service

Anchorage, Alaska

Office: (907)786-3509

Mobile: (907)229-8575

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**To:** Gregory Siekaniec[greg\_siekaniec@fws.gov]; Karen Clark[karen\_clark@fws.gov]  
**Cc:** Howard, Ameer[amee\_howard@fws.gov]; Andrea Medeiros[andrea\_medeiros@fws.gov]  
**From:** Boario, Sara  
**Sent:** 2018-06-05T17:47:15-04:00  
**Importance:** Normal  
**Subject:** Fwd: Statement  
**Received:** 2018-06-05T17:47:26-04:00

just keeping you in the loop on comms efforts and coordination with BLM-AK

----- Forwarded message -----

**From:** Lesli Ellis-Wouters <lellis@blm.gov>  
**Date:** Tue, Jun 5, 2018 at 1:28 PM  
**Subject:** Statement  
**To:** Sara Boario <sara\_boario@fws.gov>

Sara,

I just got approval from our Assistant Secretary to use the following statement when queried about the seismic application:

The BLM has received a preliminary application from SA Exploration and partner Arctic Slope Regional Corporation to conduct seismic geophysical exploration within the Alaska Coastal Plain of the Arctic National Wildlife Refuge. The BLM's Alaska State Office is actively working with the project proponents and the U.S. Fish and Wildlife Service to gather the necessary information to complete the application. Once the application is considered complete, the BLM will work with all stakeholders in the environmental review, to include Alaska Native communities like Kaktovik. As part of that review, mitigation measures and permit stipulations will be determined.

I'm also going to set up a Google drive to share all of our communication products.

***Lesli J. Ellis-Wouters***

Communications Director  
Alaska State Office  
Bureau of Land Management  
907-271-4418 | cell - 907-331-8763

--

Sara D. Boario  
Assistant Regional Director External Affairs  
U.S. Fish and Wildlife Service, Alaska Region  
Anchorage, Alaska  
907 786 3431



**To:** Gregory Siekaniec[gregory\_siekaniec@fws.gov]; Karen Clark[karen\_clark@fws.gov]; Sara Boario[sara\_boario@fws.gov]  
**From:** Howard, Amee  
**Sent:** 2018-06-05T17:51:12-04:00  
**Importance:** Normal  
**Subject:** Congressional Update at 2 - materials  
**Received:** 2018-06-05T17:51:20-04:00  
[06.05.18 Congressional Update Agenda.docx](#)  
[06.05.18 R7 Response for Senator Sullivan Amendment for S.1965 draft.pdf](#)  
[HQ data call LCC Status DRAFT3.docx](#)

Hi All,

In case you need the update materials electronically, they are attached below. I have hard copies and will bring them to the meeting.

Thanks so much!

Amee

--

*Amee Howard*

*Congressional and State Liaison*

U.S. Fish & Wildlife Service

Anchorage, Alaska

Office: (907)786-3509

Mobile: (907)229-8575

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**To:** Jim Kurth[jim\_kurth@fws.gov]  
**Cc:** Karen Clark[karen\_clark@fws.gov]  
**From:** Siekaniec, Greg  
**Sent:** 2018-06-05T20:00:26-04:00  
**Importance:** Normal  
**Subject:** Fwd: Draft Plan of Approvals for 1002 Documents and Information  
**Received:** 2018-06-05T20:01:09-04:00  
[Draft Plan of Approvals for 1002 Documents and Information 06052018.docx](#)

Jim,

Please review the draft plan for how we intend to conduct business. If you have requested changes please let me know in the next couple of days; otherwise this will be our operational approach.

Greg

**To:** Greg Siekaniec[greg\_siekaniec@fws.gov]  
**From:** Clark, Karen  
**Sent:** 2018-06-06T19:34:45-04:00  
**Importance:** Normal  
**Subject:** Fwd: 1002 Plan  
**Received:** 2018-06-06T19:35:32-04:00  
[1002 notes back to Jim.docx](#)  
[Draft Plan of Approvals for 1002 Documents and Information 06062018 MAC KPC.docx](#)

Hey Greg,  
I decided to wait to get this back to Jim today given the need for us to talk more about the reporting for Wendy. Mary did a great job addressing everything- I made a few edits. I'm hoping we can chat tomorrow morning and make some decisions.

Hope you had a great day in the field!

Karen

Karen P. Clark  
Deputy Regional Director  
U.S. Fish & Wildlife Service- Alaska Region  
1011 E Tudor Rd, MS 374  
Anchorage, AK 99503  
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907.786.3542 office  
907.786.3493 direct  
907.786.3306 fax

----- Forwarded message -----  
**From:** Colligan, Mary <[mary\\_colligan@fws.gov](mailto:mary_colligan@fws.gov)>  
**Date:** Wed, Jun 6, 2018 at 9:40 AM  
**Subject:** 1002 Plan  
**To:** Karen Clark <[karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)>

Karen I have attached an edited version of the document which attempts to address some of Jim's questions and concerns. I have also attached his questions with responses (some of which link back to edits made in the Plan and some of which are stand alone).

I guessed at some of the answers but tried to note where I was doing that. Obviously, it is your call how you want this to work but I just wanted to give you a starting point.

I will be standing by to help in whatever way you need....

--  
Mary Colligan

0000012550

Assistant Regional Director  
Fisheries and Ecological Services  
U.S. Fish and Wildlife Service, Alaska Region  
1011 E. Tudor Road, MS-361  
Anchorage, AK 99503  
907-786-3505  
cell: 907-223-5945

**To:** Greg Siekaniec[greg\_siekaniec@fws.gov]  
**Cc:** Colligan, Mary[mary\_colligan@fws.gov]; Karen Clark[karen\_clark@fws.gov]  
**From:** Lemons, Patrick  
**Sent:** 2018-06-07T13:05:44-04:00  
**Importance:** Normal  
**Subject:** Fwd: [EXTERNAL] RE: Recent News Coverage About Seismic Surveys in the Arctic NWR  
**Received:** 2018-06-07T13:05:51-04:00

Hi Greg,

After talking with you on Friday, I asked Christopher, our Regulatory Program Lead, to reach out to his contacts at SAE to make sure the Washington Post article has as little impact on our relationship as possible. Below is his email and their response. I just noticed that Jeff Hastings is cc'd on her response so wanted to make sure you were in the loop. From her response it seems we're on the right track so if anything changes, we'll let you know.

Let me know if you have questions or concerns.

Patrick

----- Forwarded message -----

**From:** Suzan Simonds <[ssimonds@contractor.saexploration.com](mailto:ssimonds@contractor.saexploration.com)>  
**Date:** Thu, Jun 7, 2018 at 8:45 AM  
**Subject:** [EXTERNAL] RE: Recent News Coverage About Seismic Surveys in the Arctic NWR  
**To:** Christopher Putnam <[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)>  
**Cc:** "Klein, Kimberly" <[kimberly\\_klein@fws.gov](mailto:kimberly_klein@fws.gov)>, Forrest Hannan <[forrest\\_hannan@fws.gov](mailto:forrest_hannan@fws.gov)>, Bridget Crokus <[bridget\\_crokus@fws.gov](mailto:bridget_crokus@fws.gov)>, "Lemons, Patrick" <[patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)>, Rick Trupp <[rtrupp@saexploration.com](mailto:rtrupp@saexploration.com)>, Forrest Burkholder <[fburkholder@saexploration.com](mailto:fburkholder@saexploration.com)>, Jeff Hastings <[jhastings@saexploration.com](mailto:jhastings@saexploration.com)>

Hi Christopher

I was disheartened reading the articles. I want to thank you for your kind words.

We have always welcomed your guidance support on our projects and considered it a necessary component to have a successful program. We at SAE also believe in our relationship with your group and will continue to work side by side to ensure we can have a successful program with little or no impact on the Polar Bears.

Sue Simonds

Permits and Regulatory Manager

0000012552

**SAExploration, Inc.**

**Safety – Acquisition - Experience**

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907-522-4498 Fax

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This e-mail may contain information that is confidential or privileged. Do not forward this message to any third party. If you are not the intended recipient, please notify the sender and delete all copies of this e-mail.

**From:** Christopher Putnam [mailto:[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)]

**Sent:** Tuesday, June 5, 2018 3:14 PM

**To:** Suzan Simonds <[ssimonds@contractor.saexploration.com](mailto:ssimonds@contractor.saexploration.com)>

**Cc:** Klein, Kimberly <[kimberly\\_klein@fws.gov](mailto:kimberly_klein@fws.gov)>; Forrest Hannan <[forrest\\_hannan@fws.gov](mailto:forrest_hannan@fws.gov)>;  
Bridget Crokus <[bridget\\_crokus@fws.gov](mailto:bridget_crokus@fws.gov)>; Lemons, Patrick <[patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)>

**Subject:** Recent News Coverage About Seismic Surveys in the Arctic NWR

Sue,

I'd like to address the recent news coverage about the response to SAE regarding the proposed seismic surveys in the Arctic NWR. I, and all of us in the Marine Mammals Management Office's (MMM), Regulatory Program, value the productive, collaborative, professional relationships we have developed with SAE and other oil and gas industry companies operating on the North Slope of Alaska. I want to offer my assurance that we will continue to work with you, other SAE personnel and contractors, and all others, in a professional and courteous manner. We will keep confidential the information provided to us that is considered proprietary. We will continue to ask that any proprietary or confidential information or

0000012553

documents be clearly labelled so we know how to appropriately handle them.

The work our Regulatory Program does in collaboration with oil and gas industry companies has allowed us all to accomplish our work while also allowing us all to meet our statutory and regulatory requirements. I think the work we do together allows us to achieve positive wildlife management and conservation outcomes for polar bears and Pacific walruses that we would not be able to achieve individually. I, and all the people in the MMM, Regulatory Program, will continue to work collaboratively with SAE and others to achieve these positive goals and outcomes.

As always, if you ever have any questions or concerns about the work we do together, don't hesitate to contact me.

Christopher Putnam

Supervisory Fish and Wildlife Biologist

Marine Mammals Management

U.S. Fish & Wildlife Service

1011 East Tudor Rd, MS 341

Anchorage, AK 99503-6199

907-786-3844 office

907-268-0577 mobile

907-786-3816 fax

"All that is gold does not glitter, not all those who wander are lost; the old that is strong does not wither, deep roots are not reached by the frost."

-- J.R.R. Tolkien

--

Patrick Lemons, Ph.D.  
Chief, Marine Mammals Management  
U.S. Fish and Wildlife Service  
1011 East Tudor Road  
Anchorage, AK 99503  
Work: 907-786-3668  
Cell: 907-717-6787  
Fax: 907-786-3816  
e-mail: [patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)

**To:** Kurth, Jim[jim\_kurth@fws.gov]  
**Cc:** Siekaniec, Greg[greg\_siekaniec@fws.gov]  
**From:** Clark, Karen  
**Sent:** 2018-06-07T18:12:36-04:00  
**Importance:** Normal  
**Subject:** Re: Draft Plan of Approvals for 1002 Documents and Information  
**Received:** 2018-06-07T18:13:21-04:00  
Draft Plan of Approvals for 1002 Documents and Information 06072018 Final.docx

Hey Jim,

Attached is an updated approach based on your comments. Also, responses to your questions are below. Please let us know if you have any additional thoughts.

Thanks, Karen

You should clarify what you mean when it says the RD surnames versus when the RD must sign. Can acting RD sign/surname?

We added text to be clear that documents are being surnamed through the RDs for approval by the DRD/RD. We stated that the DRD is authorized to sign for the RD.

Who is the Arctic Program Coordinator and who does this position report to? Back in the 1002 study era that role was Associate Regional Director Robyn Thorsen.

The Arctic Program Coordinator is Wendy Loya who currently reports to the Science Applications Coordinator. The Arctic Program Coordinator is a position of coordination – the ARDs are responsible for decision-making as it relates to their Program authorities and agency positions are being approved by the DRD/RD in our proposal. Our intent is to move this position to report to the RD's office.

What are the roles of Fairbanks ES project leader and Arctic Refuge Manager?

The ES Project Leader in Fairbanks (Sarah Conn) is coordinating her staff's input into the EA and EIS as it relates to the authorities the ES Program Administers (e.g. ESA, Fish and Wildlife Coordination Act). She is also leading Section 7 Consultations for the seismic activity and the leasing and development program. Similarly, the Marine Mammals Management Chief, Patrick Lemons, is coordinating his staff's input into the EA and EIS on marine mammal issues and is the overseeing his program's work with SAExploration on their application for MMPA ITRs for the seismic activity. Sarah and Patrick work through Drew Crane, FES' POC, to Wendy Loya to address consistency and overlap between the MMPA and ESA processes and the EA and EIS.

The Arctic Refuge Manager, Steve Berendzen, is leading efforts within the Refuge to provide input into the EA and EIS. He is coordinating the input of all of his staff and then working through the Chief of Refuges to provide this information through the Arctic Program Coordinator for communication to BLM. The Fairbanks office of BLM has the lead for the preparation of the EA for seismic activity and will work directly with Steve on an informal basis to facilitate preparation of that document, which is being prepared internally (compared to the use of a contractor for preparation of the EIS).

There is no discussion of coordination between the Region and HQ and DOI. How is this going to work? When is it necessary?

We have noted that coordination with HQ and DOI will occur at times deemed necessary and appropriate by the DRD/RD. We also noted that HQ EA has the lead on all communications with

the media.

You are focused on the roles in interagency coordination primarily with BLM. What about with others, e.g., State of Alaska, State and local officials, other Feds, Congress, Media. I think it should be clear how those are handle and who is authorized to speak.

We added a section at the end to address this concern.

Karen P. Clark  
Deputy Regional Director  
U.S. Fish & Wildlife Service- Alaska Region  
1011 E Tudor Rd, MS 374  
Anchorage, AK 99503  
[karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)  
907.786.3542 office  
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907.786.3306 fax

On Wed, Jun 6, 2018 at 5:49 AM, Kurth, Jim <[jim\\_kurth@fws.gov](mailto:jim_kurth@fws.gov)> wrote:

Greg,  
A couple thoughts:

You should clarify what you mean when it says the RD surnames versus when the RD must sign. Can acting RD sign/surname?

Who is the Arctic Program Coordinator and who does this position report to? Back in the 1002 study era that role was Associate Regional Director Robyn Thorsen.

What are the roles of Fairbanks ES project leader and Arctic Refuge Manager?

There is no discussion of coordination between the Region and HQ and DOI. How is this going to work? When is it necessary?

You are focused on the roles in interagency coordination primarily with BLM. What about with others, e.g., State of Alaska, State and local officials, other Feds, Congress, Media. I think it should be clear how those are handle and who is authorized to speak.

Trying to be helpful, you know the level of scrutiny.

jim

On Tue, Jun 5, 2018 at 8:00 PM, Siekaniec, Greg <[greg\\_siekaniec@fws.gov](mailto:greg_siekaniec@fws.gov)> wrote:

Jim,

Please review the draft plan for how we intend to conduct business. If you have requested changes please let me know in the next couple of days; otherwise this will be our operational approach.

Greg

**To:** Damberg, Doug[doug\_damberg@fws.gov]  
**Cc:** Clark, Karen[karen\_clark@fws.gov]; Socheata Lor[socheata\_lor@fws.gov]; Ellis, Mitch[mitch\_ellis@fws.gov]  
**From:** Greg Siekaniec  
**Sent:** 2018-06-07T18:13:31-04:00  
**Importance:** Normal  
**Subject:** Re: Please review/comment: Trump Administration Announces \$50 Million in Construction Projects Approved for the U.S. Fish and Wildlife Service: TEST  
**Received:** 2018-06-07T18:13:43-04:00

Thank you.

Sent from my iPhone

On Jun 7, 2018, at 1:12 PM, Damberg, Doug <doug\_damberg@fws.gov> wrote:

Yes - this is the same descriptions although with fewer details to allow for some flexibility as we get into the design and engineering phases. Steve W was looking for a rapid turn around today so Steve B is sending this as is (he and I just discussed it again).

Doug Damberg  
Refuge Supervisor, AK North Zone  
U.S. Fish and Wildlife Service  
1011 E. Tudor Rd.; Anchorage, AK 99503  
Office: (907) 786-3329  
Cell: (907) 947-6302

On Wed, Jun 6, 2018 at 9:29 PM, Greg Siekaniec <greg\_siekaniec@fws.gov> wrote:

Doug,  
As long as these descriptions are the same as we provided when we requested the funding I'm okay. I just want to be careful that we are not inadvertently changing the descriptive language or adding something different/new.

Greg

Sent from my iPhone

On Jun 6, 2018, at 4:43 PM, Damberg, Doug <doug\_damberg@fws.gov> wrote:

**Greg/Karen:**

**The information below is what we propose to provide in response to Steve Wackowski's information request regarding Arctic Refuge's construction projects. Please let me know if you have any edits. Steve Berendzen**

would like to respond to the end of this week.

Thanks,

d

**Doug Damberg**  
**Refuge Supervisor, AK North Zone**  
**U.S. Fish and Wildlife Service**  
**1011 E. Tudor Rd.; Anchorage, AK 99503**  
**Office: (907) 786-3329**  
**Cell: (907) 947-6302**

\$4M was allocated to Arctic National Wildlife Refuge as part of the 2018 House Omnibus Appropriations Bill for improvements to existing facilities and construction of various outbuildings to support heightened levels of activity associated with the oil and gas lease sale program on the Refuge's coastal plain. Projects could include:

- 1) **Kaktovik storage buildings:** Arctic Refuge's Kaktovik storage space is currently limited to a small single door garage. Additional storage space is needed to secure and protect vehicles, boats, motors, tools, building material, and other supplies that support operations.
  
- 2) **Kaktovik aviation fuel tank facility:** Arctic Refuge currently fuels aircraft using a mobile tank (100 gallon tank in the bed of a pickup truck). The Refuge needs a larger capacity fuel tank with modern safety and containment features located proximal to the runway for safety and ease of operations.
  
- 3) **Arctic Village bunkhouse:** Arctic Village airport serves as an important staging area for many activities on the Refuge including in the 1002 area. A small scale bunkhouse compatible with village norms would increase efficiencies of operations in the 1002 area as well as community relations.
  
- 4) **Galbraith Lake facility improvements:** The existing Galbraith Lake cabin and fuel tank also serve as an

important staging location for Refuge activities on the North Slope and in the 1002 area. It is located at an airstrip that supports flight operations on the North side of the Brooks Range and along the Haul Road which provides logistical support. Projects could include addition of a vault toilet, minor cabin expansion, and some storage space.

Additional projects may be considered depending on cost estimates.

On Wed, Jun 6, 2018 at 2:03 PM, Ellis, Mitch <[mitch\\_ellis@fws.gov](mailto:mitch_ellis@fws.gov)> wrote:

Thanks Karen!

---

Mitch Ellis  
Chief of Refuges - Alaska  
National Wildlife Refuge System  
US Fish and Wildlife Service  
(907)786-3667 wk  
(907)947-4416 mob

On Wed, Jun 6, 2018 at 1:58 PM, Clark, Karen <[karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)> wrote:

Looping you in...

Karen P. Clark  
Deputy Regional Director  
U.S. Fish & Wildlife Service- Alaska Region  
1011 E Tudor Rd, MS 374  
Anchorage, AK 99503  
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907.786.3493 direct  
907.786.3306 fax

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From: **Wackowski, Stephen** <[stephen\\_wackowski@ios.doi.gov](mailto:stephen_wackowski@ios.doi.gov)>

Date: Wed, Jun 6, 2018 at 1:38 PM

Subject: Fwd: Trump Administration Announces \$50 Million in Construction  
Projects Approved for the U.S. Fish and Wildlife Service: TEST

To: Greg Siekaniec <[greg\\_siekaniec@fws.gov](mailto:greg_siekaniec@fws.gov)>, Karen Clark  
<[karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)>, Steve Berendzen  
<[steve\\_berendzen@fws.gov](mailto:steve_berendzen@fws.gov)>, Miriam Hayes  
<[mnhayes@blm.gov](mailto:mnhayes@blm.gov)>, Joseph Balash  
<[joseph\\_balash@ios.doi.gov](mailto:joseph_balash@ios.doi.gov)>

Steve-

Could you give Nicole, Joe and I a quick rundown of the \$4M request? With Kaktovik and Venetie meetings coming up it will be good to know if any of those funds are going to improvements in the communities.

Thanks,

Steve

Steve Wackowski  
Senior Adviser for Alaskan Affairs  
Department of the Interior  
4230 University Drive, Suite 300  
Anchorage, AK 99508  
907-271-5485

----- Forwarded message -----

From: **Swift, Heather** <[heather\\_swift@ios.doi.gov](mailto:heather_swift@ios.doi.gov)>

Date: Wed, Jun 6, 2018 at 5:28 PM

Subject: Fwd: Trump Administration Announces \$50 Million in Construction  
Projects Approved for the U.S. Fish and Wildlife Service: TEST

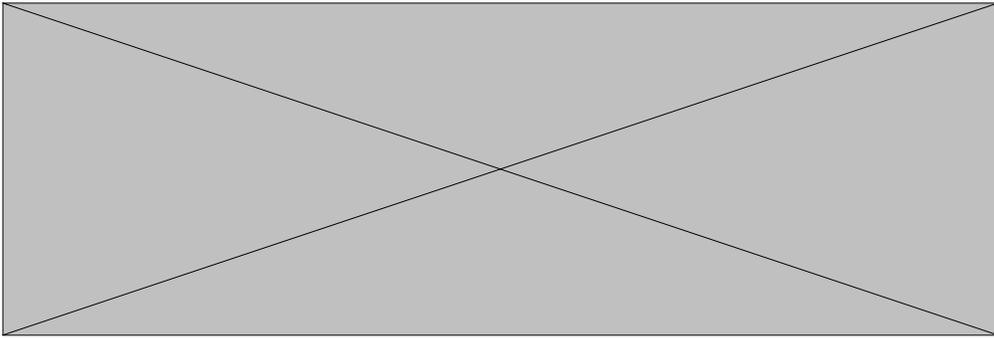
To: "Magallanes, Downey" <[downey\\_magallanes@ios.doi.gov](mailto:downey_magallanes@ios.doi.gov)>, Daniel Jorjani  
<[daniel.jorjani@sol.doi.gov](mailto:daniel.jorjani@sol.doi.gov)>, "Willens, Todd"  
<[todd\\_willens@ios.doi.gov](mailto:todd_willens@ios.doi.gov)>, Susan Combs  
<[susan\\_combs@ios.doi.gov](mailto:susan_combs@ios.doi.gov)>, Greg Sheehan  
<[greg\\_j\\_sheehan@fws.gov](mailto:greg_j_sheehan@fws.gov)>, Faith Vander Voort  
<[faith\\_vandervoort@ios.doi.gov](mailto:faith_vandervoort@ios.doi.gov)>, John Bockmier  
<[john\\_bockmier@ios.doi.gov](mailto:john_bockmier@ios.doi.gov)>, "Wackowski, Stephen"  
<[stephen\\_wackowski@ios.doi.gov](mailto:stephen_wackowski@ios.doi.gov)>, "Wynn, Todd"  
<[todd\\_wynn@ios.doi.gov](mailto:todd_wynn@ios.doi.gov)>, Micah Chambers  
<[micah\\_chambers@ios.doi.gov](mailto:micah_chambers@ios.doi.gov)>, "Tanner, John"  
<[john\\_tanner@ios.doi.gov](mailto:john_tanner@ios.doi.gov)>, Russell Newell  
<[russell\\_newell@ios.doi.gov](mailto:russell_newell@ios.doi.gov)>, Scott Cameron  
<[scott\\_cameron@ios.doi.gov](mailto:scott_cameron@ios.doi.gov)>

Please see press release below. **We plan to issue this and corresponding state releases tomorrow at 2PM. Please**

0000012562

**let me know if you have edits or issues by noon tomorrow.**

-  
Heather Swift  
Department of the Interior  
@DOIPressSec  
[Heather\\_Swift@ios.doi.gov](mailto:Heather_Swift@ios.doi.gov) | [Interior\\_Press@ios.doi.gov](mailto:Interior_Press@ios.doi.gov)



Date: June 6, 2018  
Contact: [Interior\\_Press@ios.doi.gov](mailto:Interior_Press@ios.doi.gov)

## **Trump Administration Announces \$50 Million in Construction Projects Approved for the U.S. Fish and Wildlife Service**

*Approved projects will repair and rehabilitate aging wildlife refuge and fish hatchery infrastructure*

**WASHINGTON**— U.S. Secretary of the Interior Ryan Zinke today announced \$50 million in approved funding to rebuild critical U.S. Fish and Wildlife Service infrastructure. The list includes projects like the rehabilitation of the water treatment system at the Dwight D. Eisenhower National Fish Hatchery in Vermont, replacing the Mary Lake fishing pier at Rocky Mountain Arsenal National Wildlife Refuge in Colorado and repairing Sandy Point public access road at Hagerman National Wildlife Refuge in Texas—all dire maintenance and repair projects contributing to \$1.4 million backlog facing the U.S. Fish and Wildlife Service.

The U.S. Fish and Wildlife Service manages 566 national wildlife refuges and 38 wetland management areas and operates national fish hatcheries,

fish technology centers and fish health centers. The agency is responsible for over \$46 billion in constructed real property assets that include over 25,000 structures (e.g., buildings and water management structures) as well as nearly 14,000 roads, bridges, and dams.

“The President is a builder, he loves to build and he loves our public lands, so it is a natural fit that the Trump Administration is dedicating so much attention to rebuilding our aging Fish and Wildlife Service infrastructure. These approved projects are more than just line items on an Excel spreadsheet. For many sportsmen and women, National Wildlife Refuges are the only opportunities they have to hunt or fish," **said Secretary Zinke.** "These projects have a tangible effect on a person’s experience when hunting, fishing or visiting a wildlife refuge. Today’s announcement is another step toward eliminating the \$1.4 billion in maintenance facing our nation’s refuges. It’s another step toward prioritizing infrastructure because it is an investment that bolsters local economies. And it is another step in prioritizing access for all Americans to our public lands.”

Secretary Zinke has made tackling Interior’s deferred maintenance backlog one of his top priorities. In April, he signed an memorandum of understanding committing Interior to follow President Trump’s One Federal Decision framework for processing of environmental reviews and permits for major infrastructure projects. In March, Interior announced the Secretary’s partnership with Congress on a bipartisan bill to address rebuild and repair National Park Service infrastructure.

Approved Fiscal Year 2018 U.S. Fish and Wildlife Service construction projects:

| Unit Name                                              | Project Title                                                                                                                                        | State | Total       |
|--------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------------|
| Arctic National Wildlife Refuge                        | 1002 Area Oil Exploration Readiness - Improvements to existing facilities and construction of outbuildings to support heightened levels of activity. | AK    | \$4,000,000 |
| Don Edwards San Francisco Bay National Wildlife Refuge | Levee and Water Control Structure Rehabilitation, Phase I of III.                                                                                    | CA    | \$6,400,000 |
| Canaan Valley National Wildlife Refuge                 | Visitor Center and Administrative Building.                                                                                                          | WV    | \$7,000,000 |
| Wheeler National Wildlife Refuge                       | Facility Improvements to Increase Access and Management                                                                                              | AL    | \$5,443,000 |

|                                                                           |                                                                                  |    |             |
|---------------------------------------------------------------------------|----------------------------------------------------------------------------------|----|-------------|
|                                                                           | Capabilities.                                                                    |    |             |
| Lahontan National Fish Hatchery                                           | Water Re-use and Well System Modernization.                                      | NV | \$3,500,000 |
| Pendills Creek and Sullivan Creek National Fish Hatchery                  | Effluent Treatment System Modernization.                                         | MI | \$1,970,006 |
| National Black-footed Ferret Center                                       | Pre-conditioning Pens and Facility Rehabilitation, Repair, and New Construction. | CO | \$3,588,000 |
| Humboldt Bay National Wildlife Refuge                                     | Repair Main Public Access Road.                                                  | CA | \$301,000   |
| Arrowwood National Wildlife Refuge                                        | Replace West Arrowwood Coulee Lake Public Access Trail.                          | ND | \$194,000   |
| Modoc National Wildlife Refuge                                            | Repair Public Access Road.                                                       | CA | \$50,000    |
| Wichita Mountains Wildlife Refuge                                         | Rehabilitate Public Access Road, West Gate.                                      | OK | \$80,000    |
| Wichita Mountains Wildlife Refuge                                         | Repair Public Access Bridges, Headquarters Entrance and Blue Beaver Creek.       | OK | \$76,000    |
| Hagerman National Wildlife Refuge                                         | Repair Sandy Point Public Access Road.                                           | TX | \$109,000   |
| Cypress Creek National Wildlife Refuge                                    | Repair Bellrose Levee on Big Creek Road.                                         | IL | \$204,000   |
| Upper Mississippi River National Wildlife and Fish Refuge-Winona District | Rehabilitate Winona Public Fishing and Boating Facilities.                       | MN | \$117,000   |
| Lower Suwannee National Wildlife Refuge                                   | Repair Dixie Mainline Public Access Road.                                        | FL | \$107,000   |
| J Clark Salyer National Wildlife Refuge                                   | Replace 3 Public Use Pit Toilets.                                                | ND | \$166,000   |
| Ozark Plateau National Wildlife Refuge                                    | Replace Public use Pavilion on Looney Tract.                                     | OK | \$84,000    |
| Bosque del Apache National Wildlife Refuge                                | Replace Public Restroom at Headquarters Facility.                                | NM | \$180,000   |
| Muleshoe National Wildlife Refuge                                         | Rehabilitate Public Campground and Picnic Area.                                  | TX | \$86,000    |
| Rydell National Wildlife Refuge                                           | Replace Public Use Observation Deck.                                             | MN | \$375,000   |
| Audubon National Wildlife Refuge                                          | Rehabilitate Wetland Learning Site Public Access Trail.                          | ND | \$307,000   |
| Wapato Lake National Wildlife Refuge                                      | Replace Pump House Public Access Bridge.                                         | OR | \$1,397,000 |

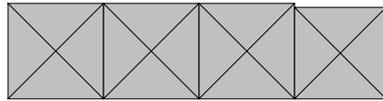
|                                                 |                                                                 |    |           |
|-------------------------------------------------|-----------------------------------------------------------------|----|-----------|
| Bitter Lake National Wildlife Refuge            | Repair Public Access Trail Route #303.                          | NM | \$164,000 |
| Hillside National Wildlife Refuge               | Repair Tipton Bayou Public Use Trail Culverts.                  | MS | \$67,000  |
| Great Dismal Swamp National Wildlife Refuge     | Repair Public Access Trail.                                     | VA | \$647,000 |
| Kenai National Wildlife Refuge                  | Rehabilitate Salamatof Public Access Boardwalk.                 | AK | \$950,000 |
| Little River National Wildlife Refuge           | Repair Black Creek Public Access Road and Parking.              | OK | \$173,000 |
| Flint Hills National Wildlife Refuge            | Repair Public Parking Areas and Kiosk.                          | KS | \$105,000 |
| Wapato Lake National Wildlife Refuge            | Replace Gaston Public Access Bridge.                            | OR | \$577,000 |
| Tishomingo National Wildlife Refuge             | Repair Public Access Parking and Observation Tower, Route #103. | OK | \$125,000 |
| Deep Fork National Wildlife Refuge              | Replace Public Access Boardwalk, Cussetah Bottoms.              | OK | \$282,000 |
| Big Oaks National Wildlife Refuge               | Replace Falling Timber Public Access Bridge, Shape Charge Road. | IN | \$673,000 |
| Bowdoin National Wildlife Refuge                | Replace Public Use Boat Dock and Repair Public Use Boat Launch. | MT | \$114,000 |
| Kodiak National Wildlife Refuge                 | Rehabilitate Deadman Bay Public Use Cabin.                      | AK | \$148,000 |
| Rocky Mountain Arsenal National Wildlife Refuge | Replace Lake Ladora Public Restroom at Fishing Access Point.    | CO | \$70,000  |
| Kenai National Wildlife Refuge                  | Rehabilitate Bear Creek Public Access Trail.                    | AK | \$77,000  |
| Wichita Mountains Wildlife Refuge               | Rehabilitate Public Access Road, Route #011.                    | OK | \$282,000 |
| St Catherine Creek National Wildlife Refuge     | Replace Armstrong Ditch Public Access Bridge.                   | MS | \$447,000 |
| Lake Andes National Wildlife Refuge             | Rehabilitate Outdoor Recreational Infrastructure.               | SD | \$98,000  |
| Kenai National Wildlife Refuge                  | Rehabilitate Salamatof Public Use Boat Ramp.                    | AK | \$230,000 |
| Parker River National Wildlife Refuge           | Replace Public Access Boardwalk Trail.                          | MA | \$382,000 |
| Red Rock Lakes National Wildlife Refuge         | Replace Public Use Toilet at River March Campground.            | MT | \$87,000  |

|                                                 |                                                                             |    |           |
|-------------------------------------------------|-----------------------------------------------------------------------------|----|-----------|
| Waubay National Wildlife Refuge                 | Rehabilitate Public Use Shelter.                                            | SD | \$75,000  |
| Bowdoin National Wildlife Refuge                | Repair Public Use Accessible Trail.                                         | MT | \$56,000  |
| Kenai National Wildlife Refuge                  | Rehabilitate Pollard Loop Public Access Trail.                              | AK | \$75,000  |
| San Luis National Wildlife Refuge               | Replace Sousa Marsh Public Observation Platform.                            | CA | \$163,000 |
| Laguna Cartagena National Wildlife Refuge       | Replace Northeast Canal Public Access Bridge.                               | PR | \$550,000 |
| Kenai National Wildlife Refuge                  | Rehabilitate Doroshin Bay Public Use Cabin.                                 | AK | \$50,000  |
| Tijuana Slough National Wildlife Refuge         | Repair Imperial Beach Blvd Public Use Observation Platform.                 | CA | \$91,000  |
| Medicine Lake National Wildlife Refuge          | Repair Public Use Observation Tower.                                        | MT | \$61,000  |
| Bear Lake National Wildlife Refuge              | Repair Bear Lake Public Use Road.                                           | ID | \$95,000  |
| Savannah National Wildlife Refuge               | Rehabilitate Route #300 Public Access Road.                                 | GA | \$168,000 |
| Salt Plains National Wildlife Refuge            | Rehabilitate Sand Creek Fishing Access Road.                                | OK | \$245,000 |
| Lee Metcalf National Wildlife Refuge            | Replace Irrigation Laterals.                                                | MT | \$179,000 |
| Deep Fork National Wildlife Refuge              | Rehabilitate Montezuma Creek Public Access Road and Construct Parking Area. | OK | \$64,000  |
| Fergus Falls Wetlands Management District       | Replace Stony Brook Waterfowl Production Area Water Control Structure.      | MN | \$77,000  |
| Rocky Mountain Arsenal National Wildlife Refuge | Replace Lake Mary Public Access Floating Boardwalk.                         | CO | \$16,000  |
| Deep Fork National Wildlife Refuge              | Repair Public Access Road.                                                  | OK | \$192,000 |
| Felsenthal National Wildlife Refuge             | Repair Woodland Pond Public Access Trail.                                   | AR | \$195,000 |
| Rocky Mountain Arsenal National Wildlife Refuge | Replace Mary Lake Fishing Pier.                                             | CO | \$65,000  |
| John Heinz National Wildlife Refuge at Tinicum  | Rehabilitate Public Access Trail.                                           | PA | \$160,000 |
| J Clark Salyer National                         | Rehabilitate Public Picnic Area                                             | ND | \$40,000  |

|                                            |                                                                                                                                   |    |           |
|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|----|-----------|
| Wildlife Refuge                            | and Access Trail.                                                                                                                 |    |           |
| Kenai National Wildlife Refuge             | Repair Drake Lake Public Access Trail.                                                                                            | AK | \$75,000  |
| Togiak National Wildlife Refuge            | Rehabilitate Togiak Public Use Cabin.                                                                                             | AK | \$127,000 |
| Port Louisa National Wildlife Refuge       | Repair Keithsburg Boat Landing Parking Lot.                                                                                       | IA | \$126,000 |
| Kodiak National Wildlife Refuge            | Rehabilitate North Frazer Public Use Cabin.                                                                                       | AK | \$52,000  |
| Rachel Carson National Wildlife Refuge     | Replace Spurwink Public Fishing Pier.                                                                                             | ME | \$294,000 |
| Kenai National Wildlife Refuge             | Rehabilitate Moose Creek Public Use Trail.                                                                                        | AK | \$77,000  |
| Stillwater National Wildlife Refuge        | Repair Stillwater Point Reservoir Public Use Observation Platform.                                                                | NV | \$160,000 |
| Humboldt Bay National Wildlife Refuge      | Replace Hookton Slough Vault Toilet at Hunting Parking Lot.                                                                       | CA | \$125,000 |
| Gavins Point National Fish Hatchery        | Replace Fish Pond Liners (2 of 35 Ponds).                                                                                         | SD | \$424,000 |
| Bears Bluff National Fish Hatchery         | Rehabilitate Drainage Canal, Rehabilitate Pond #3.                                                                                | SC | \$317,000 |
| Carson National Fish Hatchery              | Repair Adult Fish Holding Pond Surface.                                                                                           | WA | \$395,000 |
| Dwight D Eisenhower National Fish Hatchery | Rehabilitate Water Treatment System.                                                                                              | VT | \$513,000 |
| Eagle Creek National Fish Hatchery         | Replace Sand Filter, Remove Pollution Abatement Pond Sediment Load.                                                               | OR | \$176,000 |
| Norfolk National Fish Hatchery             | Repair Raceway Drain Areas.                                                                                                       | AR | \$650,000 |
| North Attleboro National Fish Hatchery     | Replace Flow Meters.                                                                                                              | MA | \$31,000  |
| Tishomingo National Fish Hatchery          | Rehabilitate Oklahoma Fish and Wildlife Conservation Office Building.                                                             | OK | \$191,000 |
| Uvalde National Fish Hatchery              | Repair Spurgeon Well.                                                                                                             | TX | \$30,000  |
| Alchesay National Fish Hatchery            | Rehabilitate Water Supply Pipelines: Install a Bank of Radial Flow Settlers for B-Bank Raceways, Rehabilitate Service Building 2. | AZ | \$25,000  |
| Garrison Dam National                      | Replace Sturgeon Building.                                                                                                        | ND | \$100,000 |

|                                                           |                                                                                            |    |           |
|-----------------------------------------------------------|--------------------------------------------------------------------------------------------|----|-----------|
| Fish Hatchery                                             |                                                                                            |    |           |
| Southwestern Native Aquatic Resources and Recovery Center | Repair Well 3 and Generator.                                                               | NM | \$18,000  |
| Quilcene National Fish Hatchery                           | Repair Raceway Decks C and D with Epoxy, Rehabilitate Production Raceway Covers on D Deck. | WA | \$422,000 |
| Abernathy Fish Technology Center                          | Replace Inclined Screens.                                                                  | WA | \$61,000  |
| Edenton National Fish Hatchery                            | Replace Cement Catch Basins, Rehabilitate Shad Spawning Building.                          | NC | \$956,000 |

###



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This email was sent to Email Address by: U.S. Department of the Interior · 1849 C Street, N.W. · Washington DC 20240 · 202 208 3100

**To:** karen\_clark@fws.gov[karen\_clark@fws.gov]  
**From:** Greg Siekaniec  
**Sent:** 2018-06-11T09:24:54-04:00  
**Importance:** Normal  
**Subject:** Fwd: Project Needing Approval  
**Received:** 2018-06-11T09:25:04-04:00

Seems we expected this result unless we articulated a reason we could not accomplish the work or will lose the window of available time for field work if it is not initiated by a date certain. We must have others that may very well be hung up due to the contracting date. Awkward way to navigate a means of getting field work accomplished and partner relations.

Thanks for sending these forward and we now have some additional insight into the willingness of reviewers.

Greg

Sent from my iPhone

Begin forwarded message:

**From:** "Rauch, Paul" <paul\_rauch@fws.gov>  
**Date:** June 11, 2018 at 5:02:57 AM AKDT  
**To:** "Clark, Karen" <karen\_clark@fws.gov>, Gregory Siekaniec <greg\_siekaniec@fws.gov>  
**Cc:** "Kvasnicka, Jean" <jean\_kvasnicka@fws.gov>, "Knight, Scott" <scott\_knight@fws.gov>, "Hansen, Rachel" <rachel\_hansen@fws.gov>  
**Subject:** Re: Project Needing Approval

Greg/Karen,

I looked at your underlying request a little closer this morning, and it appears the urgency is being driven by the R7 contracting deadlines. That issue will be arising across the Service as we close in on the end of the FY, and we will not be able to accommodate expedited review requests based solely on internal processing deadlines. Pulling a grant out of standard process for expedited review takes significant extra effort on the part of our staff and the reviewers. We are more than happy to do it, but the agreement we have with Greg, Susan Combs and Steve Howke is that we will reserve these requests for those awards that have a compelling, resource or partner-based dropped dead date that must be met. If there is such a reason on this grant, please let us know, and we will gladly request an expedited review.

Thanks

Paul

On Mon, Jun 11, 2018 at 8:38 AM, Hansen, Rachel <rachel\_hansen@fws.gov> wrote:

Good morning, confirming what Jean sent last week that this award, FWS181655, was submitted in the May Senior Adviser package which is with me for follow-up. It still has to go through FWP and Mr. Howke. Please let me know if we need to pull this award out for an expedited review. We will need a drop-dead date and a justification for the expedited review to put that package together.  
- Rachel

---

Rachel R. Hansen  
Policy Branch, Division of Financial Assistance Support and Oversight  
Wildlife and Sportfish Restoration Program  
U.S. Fish and Wildlife Service, HQ  
[FASO-Policy Branch homepage](#)  
[FWS FY18 FA Reviews Google site](#)

On Fri, Jun 8, 2018 at 11:29 AM, Clark, Karen <[karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)> wrote:

Thanks to you all! Appreciate your help!  
Karen

Karen P. Clark  
Deputy Regional Director  
U.S. Fish & Wildlife Service- Alaska Region  
1011 E Tudor Rd, MS 374  
Anchorage, AK 99503  
[karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)  
907.786.3542 office  
907.786.3493 direct  
907.786.3306 fax

On Fri, Jun 8, 2018 at 4:54 AM, Rauch, Paul <[paul\\_rauch@fws.gov](mailto:paul_rauch@fws.gov)> wrote:

Sounds good. Thanks Jean.

On Fri, Jun 8, 2018 at 8:41 AM, Kvasnicka, Jean <[jean\\_kvasnicka@fws.gov](mailto:jean_kvasnicka@fws.gov)> wrote:

Rachel is out of the office and I think that package came back to us for reformatting at the same time Rachel was preparing June packages, so not sure where it is in the process. She will get back to you on this one on Monday.  
Thanks, J

Jean Kvasnicka  
Chief, Branch of Policy  
Financial Assistance Support and Oversight

U.S. Fish and Wildlife Service  
T: 703-358-1738  
[InsideFWS Policy Branch Home Page](#)  
[FWS FA Reviews Google Site](#)

On Fri, Jun 8, 2018 at 8:10 AM, Rauch, Paul <[paul\\_rauch@fws.gov](mailto:paul_rauch@fws.gov)> wrote:

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On Fri, Jun 8, 2018 at 7:57 AM, Rauch, Paul <[paul\\_rauch@fws.gov](mailto:paul_rauch@fws.gov)> wrote:

Karen,  
Do you have the FWS ID# from the review submission form? This will help us check on the status of this award.

Thanks

Paul

On Thu, Jun 7, 2018 at 2:17 PM, Clark, Karen <[karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)> wrote:

Hey Paul,  
This project is related to our efforts to implement the Oil and Gas Leasing Program on the Arctic Coastal Plain as directed by the Tax Act.

**Line item 1637: Updated National Hydrography Data (DTS # 068085; new agreement)**

Timeline: We need to submit the paperwork to our regional CGS office by June 29<sup>th</sup> in order to issue the agreement in FY18.

The agreement would be with St. Mary's University in Winona, MN, who is the primary organization doing NWI and NHD In Alaska.

This project is part to of the approved Region 7 operations plan and would provide information necessary for Oil and Gas Leasing Program in the Coastal

Plain (1002 area) of the Arctic National Wildlife Refuge. Obtaining updated National Hydrology and National Wetlands Inventory maps will help FWS, BLM and the Army Corps of Engineers expeditiously process applications for exploration and development.

Thanks for your help, please let me know if you need more information!

Karen

Karen P. Clark  
Deputy Regional Director  
U.S. Fish & Wildlife Service- Alaska Region  
1011 E Tudor Rd, MS 374  
Anchorage, AK 99503  
karen\_clark@fws.gov  
907.786.3542 office  
907.786.3493 direct  
907.786.3306 fax

**To:** Clark, Karen[karen\_clark@fws.gov]  
**Cc:** Rauch, Paul[paul\_rauch@fws.gov]; Gregory Siekaniec[greg\_siekaniec@fws.gov]; Knight, Scott[scott\_knight@fws.gov]; Hansen, Rachel[rachel\_hansen@fws.gov]  
**From:** Kvasnicka, Jean  
**Sent:** 2018-06-12T08:02:26-04:00  
**Importance:** Normal  
**Subject:** Re: Project Needing Approval  
**Received:** 2018-06-12T08:02:33-04:00

It would be very helpful if you would send all those needing expedited review forward to us at one time so might combine them by review levels and reduce the total # of packages required. thank you, Jean

Jean Kvasnicka  
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U.S. Fish and Wildlife Service  
T: 703-358-1738  
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[FWS FA Reviews Google Site](#)

On Mon, Jun 11, 2018 at 4:09 PM, Clark, Karen <[karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)> wrote:

Thanks Paul, I understand the challenge of prioritizing everything in the queue. I think we feel the urgency here due to our very short window for a field season which has come upon us quickly and is already passing us by. I appreciate your help in navigating the process. I do have a few others that meet those criteria that I will send forward shortly.

Karen

Karen P. Clark  
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[karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)  
907.786.3542 office  
907.786.3493 direct  
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**To:** Clark, Karen[karen\_clark@fws.gov]; Gregory Siekaniec[greg\_siekaniec@fws.gov]  
**Cc:** Thomas Irwin[thomas\_irwin@fws.gov]  
**From:** Roslyn Sellars  
**Sent:** 2018-06-12T14:54:33-04:00  
**Importance:** Normal  
**Subject:** Re: Friday BLM Scoping Meeting for Arctic Refuge  
**Received:** 2018-06-12T14:55:18-04:00

After reviewing, Greg Sheehan thought this looked more like something FWS program staff should attend. He asks if someone from R7 or Refuges is attending.

Roslyn

On Tue, Jun 12, 2018 at 12:40 PM Greg Siekaniec <[greg\\_siekaniec@fws.gov](mailto:greg_siekaniec@fws.gov)> wrote:

We'll send the info. I have requested that he be invited but it doesn't seem to be happening by BLM who is charged with the meeting logistics and management.  
The Public Scoping Meeting in Washington DC is at the National Housing Center (Auditorium). 1201 15th Street NW, Washington, DC

Schedule is as follows:

At 2:30 there is a BLM safety briefing at the National Housing Center.

3:00 PM open house in Atrium  
4:00-4:20 press brief with Q&A held in room D  
4:30 BLM presentation followed by public comment period  
9:00 pm anticipated end of meeting  
9:30 venue security ends duty.

The FWS has no active role in the scoping meeting. We are a cooperating agency listening to the public interests so we have an understanding of issues that need to be addressed in the development of EIS alternatives.

The above is the most current provided by BLM to our Anchorage office.

Greg

Sent from my iPhone

On Jun 12, 2018, at 8:25 AM, Roslyn Sellars <[roslyn\\_sellars@fws.gov](mailto:roslyn_sellars@fws.gov)> wrote:

Greg is interested in attending. Can someone send us info or ask he be added to the invite.

Roslyn Sellars

0000012578

Executive Assistant | Office of the Director | U.S. Fish and Wildlife Service  
1849 C Street NW | Room 3356 | Washington, DC | (202) 208-  
4545|[roslyn\\_sellars@fws.gov](mailto:roslyn_sellars@fws.gov)

Please copy Thomas Irwin ([thomas\\_irwin@fws.gov](mailto:thomas_irwin@fws.gov)) on future emails related to scheduling.

On Mon, Jun 11, 2018 at 12:13 PM Greg Siekaniec <[greg\\_siekaniec@fws.gov](mailto:greg_siekaniec@fws.gov)> wrote:

Hi Ros/Thomas,

There is a scoping meeting this Friday in DC for the Arctic Refuge coastal plain oil and gas EIS. I asked BLM to reach out and invite Greg Sheehan. I'm not sure that has happened after my discussion with BLM this morning. I'm headed to Venetie for scoping and will be out of communications for a couple of days.

If Greg has interest in attending the Friday evening meeting Karen Clark will have the information.

I plan to attend.

Greg  
Sent from my iPhone