

**From:** Rick Trupp  
**Location:** MMM Conference Room  
**Importance:** Normal  
**Subject:** Accepted: FW: Invitation: ANWR SAE Seismic Survey ITR Update @ Wed 2018-09-19 11:00 - 12:00 (AKDT) (ssimonds@saexploration.com)  
**Start Date/Time:** 2018-09-19T15:00:00-04:00  
**End Date/Time:** 2018-09-19T16:00:00-04:00

**To:** 'Craig Perham (office)'[craig.perham@boem.gov]  
**From:** Shideler, Richard T (DFG)  
**Sent:** 2018-09-19T20:58:36-04:00  
**Importance:** Normal  
**Subject:** More repts  
**Received:** 2018-09-19T20:59:20-04:00  
Emailing: GB Report 9-13-2018 1035  
PB Report 09-13-18 0325  
PB Report 09-13-18 1140  
09-13-18 Polar Bear 2018-008 observed in ocean west of STP Causeway  
9-13-18 Polar Bear Report  
2017/2018 Exploration and Construction Polar Bear Report  
Polar Bear 2018-009  
9-14-18 Polar Bear Report  
Polar Bear Report  
Polar Bear Report 9-15-18 (1)  
09-15-18 Polar Bear PB 2018-010 near East Dock Sighting Report.  
Polar Bear PB 2018-011 near East Dock Sighting Report  
09-15-18 Polar Bear PB 2018-013 near DSL-5  
9-15-18 Polar Bear Report  
Polar Bear Reporting Form 9-16-2018.docx

**To:** 'Craig Perham (office)'[craig.perham@boem.gov]  
**From:** Shideler, Richard T (DFG)  
**Sent:** 2018-09-19T21:00:20-04:00  
**Importance:** Normal  
**Subject:** And more  
**Received:** 2018-09-19T21:01:01-04:00  
RE: Bears of the World - Ch 16 Conflicts  
Emailing: PB Report 09-16-18 0903  
Polar Bear Report 9-15-18 (2)  
Emailing: PB Report 9-16-2018 1057  
09-16-18 Polar Bear 2018-014 sighted on causeway south of STP  
Eni Polar Bear Reports for 9-16-17  
PB Report 9-17-2018 0635  
Stump Island Polar Bear  
Polar Bear Report  
Polar Bear Report  
Polar Bear Report  
Polar Bear Report  
Polar Bear Report  
PB Report 09-18-2018 0433  
STP Polar Bear  
Polar Bear and three cubs at Staging/ PM 1  
Sow and three cubs  
Pictures of Sow and three cubs  
Polar Bear at L5  
PB Report 9-19-2018 0610  
Polar Bear Reports

**To:** Perham, Craig[craig.perham@boem.gov]  
**Cc:** Dick Schideler[dick.shideler@alaska.gov]; Lemons, Patrick[patrick\_lemons@fws.gov]  
**From:** Putnam, Christopher  
**Sent:** 2018-09-20T13:45:52-04:00  
**Importance:** Normal  
**Subject:** Re: Polar Bear Den Detection Methods Information Request  
**Received:** 2018-09-20T13:47:10-04:00

Thanks, that will help.

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

On Wed, Sep 19, 2018 at 5:45 PM Perham, Craig <[craig.perham@boem.gov](mailto:craig.perham@boem.gov)> wrote:

Hey Christopher,

There was a section 6 final report that Dick completed for Federal Aid regarding our project that is not on my finger tips at the moment. Dick may be able to send it to you today, but I could send it to you tomorrow. We are actually working on a new, improved analysis of this data with more info included, but unfortunately it won't be ready for the Coastal Plain Analysis.

I'll kick it to you tomorrow if Dick doesn't send it to you before then. Let me know if there is anything else you need.

Craig

On Wed, Sep 19, 2018 at 2:14 PM, Putnam, Christopher <[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)> wrote:

Hi Craig and Dick,

Our program here at MMM been asked to provide an evaluation of the efficacy of handheld infrared cameras, vehicle mounted IR cameras, and scent trained dogs for the detection of polar bear dens as part of our analysis for MMPA incidental take for the proposed 3D seismic survey on the coastal plain of the Arctic National Wildlife Refuge.

I'm writing to ask if anything is available from the project you conducted a few years ago. Are there any reports or data available for us to use? We haven't been able to locate anything here locally in the MMM office, so hopefully one or both of you can provide something. Thanks.

Christopher Putnam  
Supervisory Fish and Wildlife Biologist  
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--  
Craig Perham  
Wildlife Biologist, Office of Environment  
Bureau of Ocean and Energy Management  
Alaska OCS Regional Office  
3801 Centerpoint Drive, Suite 500  
Anchorage, Alaska 99503  
(907) 334-5283 office

Current phone (July through September 2018): (907) 271-2847

**To:** Putnam, Christopher[christopher\_putnam@fws.gov]  
**Cc:** Dick Schideler[dick.shideler@alaska.gov]; Lemons, Patrick[patrick\_lemons@fws.gov]  
**From:** Perham, Craig  
**Sent:** 2018-09-20T14:44:58-04:00  
**Importance:** Normal  
**Subject:** Re: Polar Bear Den Detection Methods Information Request  
**Received:** 2018-09-20T14:52:37-04:00  
E-16 Polar Bear Den Detection Final Rpt FY13.pdf

Christopher,  
Here it is.

Craig

On Wed, Sep 19, 2018 at 2:14 PM, Putnam, Christopher <[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)> wrote:

Hi Craig and Dick,  
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Thanks.

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Craig Perham  
Wildlife Biologist, Office of Environment  
Bureau of Ocean and Energy Management

Alaska OCS Regional Office  
3801 Centerpoint Drive, Suite 500  
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Current phone (July through September 2018): (907) 271-2847

**To:** Perham, Craig[craig.perham@boem.gov]  
**Cc:** Putnam, Christopher[christopher\_putnam@fws.gov]; Dick Schideler[dick.shideler@alaska.gov]  
**From:** Lemons, Patrick  
**Sent:** 2018-09-20T18:30:59-04:00  
**Importance:** Normal  
**Subject:** Re: Polar Bear Den Detection Methods Information Request  
**Received:** 2018-09-20T18:31:06-04:00

Thanks Dick and Craig. We appreciate the help on this and I look forward to seeing the technical report and Nils' work down the road.  
Patrick

On Thu, Sep 20, 2018 at 1:57 PM, Perham, Craig <[craig.perham@boem.gov](mailto:craig.perham@boem.gov)> wrote:

Hey Patrick,  
Dick sums it up in regards to the technical report. That is the document we've been working on. Nils' work with UAVs won't be available until late 2019 at the earliest. At this time, the Federal Aid report is the only "official" document available.

Craig

On Thu, Sep 20, 2018 at 12:20 PM, Lemons, Patrick <[patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)> wrote:

Thanks Craig. Appreciate the help on this. Do you know if the technical report referenced in this document was ever produced, even in a draft form? If so it would be good to have that information as well so we're aware of everything that's out there.  
Thanks again,  
Patrick

On Thu, Sep 20, 2018 at 10:48 AM, Putnam, Christopher <[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)> wrote:

Great! Thanks.

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  
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"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



On Thu, Sep 20, 2018 at 10:45 AM Perham, Craig <[craig.perham@boem.gov](mailto:craig.perham@boem.gov)> wrote:

Christopher,  
Here it is.

Craig

On Wed, Sep 19, 2018 at 2:14 PM, Putnam, Christopher <[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)> wrote:

Hi Craig and Dick,  
Our program here at MMM been asked to provide an evaluation of the efficacy of handheld infrared cameras, vehicle mounted IR cameras, and scent trained dogs for the detection of polar bear dens as part of our analysis for MMPA incidental take for the proposed 3D seismic survey on the coastal plain of the Arctic National Wildlife Refuge.

I'm writing to ask if anything is available from the project you conducted a few years ago. Are there any reports or data available for us to use? We haven't been able to locate anything here locally in the MMM office, so hopefully one or both of you can provide something.  
Thanks.

Christopher Putnam  
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Craig Perham  
Wildlife Biologist, Office of Environment  
Bureau of Ocean and Energy Management  
Alaska OCS Regional Office  
3801 Centerpoint Drive, Suite 500  
Anchorage, Alaska 99503

(907) 334-5283 office

Current phone (July through September 2018): (907) 271-2847

--

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

--

Craig Perham  
Wildlife Biologist, Office of Environment  
Bureau of Ocean and Energy Management  
Alaska OCS Regional Office  
3801 Centerpoint Drive, Suite 500  
Anchorage, Alaska 99503  
(907) 334-5283 office

Current phone (July through September 2018): (907) 271-2847

--

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

**To:** ssimonds@contractor.saexploration.com[ssimonds@contractor.saexploration.com]  
**From:** Putnam, Christopher  
**Sent:** 2018-09-20T18:49:13-04:00  
**Importance:** Normal  
**Subject:** Re: [EXTERNAL] Re: To whom should I send the information?  
**Received:** 2018-09-20T18:49:38-04:00  
[E-16 Polar Bear Den Detection Final Rpt FY13.pdf](#)  
[seismic\\_grid.zip](#)  
[Methods to simulate seismic operations footprint.docx](#)

Sue,

Attached is a zip file and a word file for the spatial analysis of the seismic survey. There is also a pdf of the report for the den detection methods project we discussed. This report is the only thing available about that project at this time.

Christopher Putnam  
Supervisory Fish and Wildlife Biologist  
Marine Mammals Management  
U.S. Fish & Wildlife Service  
1011 East Tudor Rd, MS 341  
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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

On Thu, Sep 20, 2018 at 2:43 PM Suzan Simonds <[ssimonds@contractor.saexploration.com](mailto:ssimonds@contractor.saexploration.com)> wrote:

Christopher  
Send it to me please  
Sue

Sent via the Samsung Galaxy S9, an AT&T 4G LTE smartphone

----- Original message -----

From: "Putnam, Christopher" <[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)>  
Date: 9/20/18 2:35 PM (GMT-09:00)  
To: Suzan Simonds <[ssimonds@contractor.saexploration.com](mailto:ssimonds@contractor.saexploration.com)>  
Subject: To whom should I send the information?

Hi Sue,

We've assembled some of the information we said we would share with SAE regarding the ITR analysis. To whom should I send it? Thanks.

Christopher Putnam  
Supervisory Fish and Wildlife Biologist  
Marine Mammals Management  
U.S. Fish & Wildlife Service  
1011 East Tudor Rd, MS 341  
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-- J.R.R. Tolkien

**To:** 'Craig Perham (office)'[craig.perham@boem.gov]  
**From:** Shideler, Richard T (DFG)  
**Sent:** 2018-09-20T20:13:43-04:00  
**Importance:** Normal  
**Subject:** [EXTERNAL] PB repts  
**Received:** 2018-09-20T20:15:37-04:00  
PB Report 9-19-2018 0610 Continuation  
PBR 09-20-2018.pdf  
9-19-2018 second Polar Bear Observation  
9-19-2018 Polar Bear Report  
9-19-18 ENI Polar Bear Reports  
No Subject

**To:** 'Craig Perham (office)'[craig.perham@boem.gov]

**From:** Shideler, Richard T (DFG)

**Sent:** 2018-09-24T15:56:33-04:00

**Importance:** Normal

**Subject:** And more

**Received:** 2018-09-24T15:57:53-04:00

9-23-2018 Polar bear observation

9-23-2018 2 polar bear observation reports

9-22-18-3

9-22-18 #1 smallre Bear

Polar Bear Report

9-23-18 Polar Bear Report

PB Report 9-23-2018 0948

Attachment

Attachment

West Dock Polar Bear

9-21-18 Polar Bear Report

PB Report 9-20-2018 2140

9-20-2018 Polar Bear at E-Pit

**To:** 'Craig Perham (office)'[craig.perham@boem.gov]  
**From:** Shideler, Richard T (DFG)  
**Sent:** 2018-09-25T14:26:20-04:00  
**Importance:** Normal  
**Subject:** more  
**Received:** 2018-09-25T19:53:49-04:00  
[9-24-18-1-Dayshif Polar Bear](#)  
[9-24-18-Night Shift Polar bear](#)  
[Polar Bear report](#)  
[9-23-2018 Polar bear observation](#)

**To:** Putnam, Christopher[christopher\_putnam@fws.gov]  
**Cc:** Lemons, Patrick[patrick\_lemons@fws.gov]; Klein, Kimberly[kimberly\_klein@fws.gov]  
**From:** Suzan Simonds  
**Sent:** 2018-09-28T05:05:30-04:00  
**Importance:** Normal  
**Subject:** RE: Additional Mitigation Measures Discussion  
**Received:** 2018-09-28T05:05:50-04:00

Hi Christopher  
I will get with Rick and get back with you today.

Sue Simonds  
Permits and Regulatory Manager

**SAExploration, Inc.**  
**Safety – Acquisition - Experience**  
[ssimonds@saexploration.com](mailto:ssimonds@saexploration.com)  
8240 Sandlewood Place  
Anchorage, Alaska 99507  
907 331 8140 Cell  
907 522 4499 Main  
907 522 4498 Fax  
[saexploration.com](http://saexploration.com)

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**From:** Putnam, Christopher <christopher\_putnam@fws.gov>  
**Sent:** Thursday, September 27, 2018 3:42 PM  
**To:** Suzan Simonds <ssimonds@contractor.saexploration.com>  
**Cc:** Lemons, Patrick <patrick\_lemons@fws.gov>; Klein, Kimberly <kimberly\_klein@fws.gov>  
**Subject:** Additional Mitigation Measures Discussion

Hi Sue,

We have reviewed the document Rick Trupp dropped off at our office on Sept. 25. We would like to meet to discuss in detail the additional mitigation measures and data sources described in the document. Please me know who you think should be at the meeting and when is convenient for you. Thanks.

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  
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**From:** christopher\_putnam@fws.gov  
**Location:** MMM Conference Room  
**Importance:** Normal  
**Subject:** Invitation: SAE ANWR Seismic Mitigation Meeting @ Mon 2018-10-01 11:00 - 12:00 (AKDT)  
(ssimonds@saexploration.com)  
**Start Date/Time:** 2018-10-01T15:00:00-04:00  
**End Date/Time:** 2018-10-01T16:00:00-04:00  
[invite.ics](#)

[more details »](#)

### SAE ANWR Seismic Mitigation Meeting

**When** Mon 2018 10 01 11:00 12:00 Alaska Time Anchorage  
**Where** MMM Conference Room ([map](#))  
**Video call** [https://hangouts.google.com/hangouts/\\_/doi.gov/christopher\\_putnam](https://hangouts.google.com/hangouts/_/doi.gov/christopher_putnam)  
**Calendar** ssimonds@saexploration.com  
**Who**

- christopher\_putnam@fws.gov - organizer
- patrick\_lemons@fws.gov
- kimberly\_klein@fws.gov
- rtrupp@saexploration.com
- ssimonds@saexploration.com

Going? [Yes](#) [Maybe](#) [No](#) [more options »](#)

Invitation from [Google Calendar](#)

You are receiving this courtesy email at the account ssimonds@saexploration.com because you are an attendee of this event.

To stop receiving future updates for this event, decline this event. Alternatively you can sign up for a Google account at <https://www.google.com/calendar/> and control your notification settings for your entire calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. [Learn More.](#)

**From:** christopher\_putnam@fws.gov  
**Location:** MMM Conference Room  
**Importance:** Normal  
**Subject:** Invitation: SAE ANWR Seismic Mitigation Meeting @ Mon Oct 1, 2018 11am - 12pm (AKDT) (kimberly\_klein@fws.gov)  
**Start Date/Time:** 2018-10-01T15:00:00-04:00  
**End Date/Time:** 2018-10-01T16:00:00-04:00  
[invite.ics](#)

[more details »](#)

## SAE ANWR Seismic Mitigation Meeting

When	Mon Oct 1, 2018 11am - 12pm Alaska Time Anchorage
Where	MMM Conference Room ( <a href="#">map</a> )
Video call	<a href="https://hangouts.google.com/hangouts/_/doi.gov/christopher_putnam@fws.gov/kimberly_klein@fws.gov">https://hangouts.google.com/hangouts/_/doi.gov/christopher_putnam@fws.gov/kimberly_klein@fws.gov</a>
Calendar	kimberly_klein@fws.gov
Who	

- 
- 
- 
- 
- 

christopher\_putnam@fws.gov  
rtrupp@saexploration.fws.gov  
ssimonds@saexploration.fws.gov  
patrick\_lemons@fws.gov  
kimberly\_klein@fws.gov

Going? [Yes](#) [Maybe](#) [No](#) [more options »](#)  
Invitation from [Google Calendar](#)

You are receiving this email at the account kimberly\_klein@fws.gov because you are subscribed for invitations on calendar kimberly\_klein@fws.gov.

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**From:** christopher\_putnam@fws.gov  
**Location:** MMM Conference Room  
**Importance:** Normal  
**Subject:** Invitation: SAE ANWR Seismic Mitigation Meeting @ Mon Oct 1, 2018 11am - 12pm (AKDT) (patrick\_lemons@fws.gov)  
**Start Date/Time:** 2018-10-01T15:00:00-04:00  
**End Date/Time:** 2018-10-01T16:00:00-04:00  
[invite.ics](#)

[more details »](#)

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Where	MMM Conference Room ( <a href="#">map</a> )
Video call	<a href="https://hangouts.google.com/hangouts/_/doi.gov/christopher_putnam@fws.gov/patrick_lemons@fws.gov">https://hangouts.google.com/hangouts/_/doi.gov/christopher_putnam@fws.gov/patrick_lemons@fws.gov</a>
Calendar	
Who	

- 
- 
- 
- 
- 

christopher\_putnam@fws.gov  
patrick\_lemons@fws.gov  
rtrupp@saexploration.fws.gov  
ssimonds@saexploration.fws.gov  
kimberly\_klein@fws.gov

Going? [Yes](#) [Maybe](#) [No](#) [more options »](#)  
Invitation from [Google Calendar](#)

You are receiving this email at the account patrick\_lemons@fws.gov because you are subscribed for invitations on calendar patrick\_lemons@fws.gov.

To stop receiving these emails, please log in to <https://www.google.com/calendar/> and change your notification settings for this calendar.

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[invite.ics](#)

[more details »](#)

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**Where** MMM Conference Room ([map](#))  
**Video call** [https://hangouts.google.com/hangouts/\\_/doi.gov/christopher\\_putnam@saexploration.com](https://hangouts.google.com/hangouts/_/doi.gov/christopher_putnam@saexploration.com)  
**Calendar** rtrupp@saexploration.com  
**Who**

- christopher\_putnam@fws.gov - organizer
- patrick\_lemons@fws.gov
- kimberly\_klein@fws.gov
- rtrupp@saexploration.com
- ssimonds@saexploration.com

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**Location:** MMM Conference Room  
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**End Date/Time:** 2018-10-01T16:00:00-04:00

**To:** Rick Trupp[rtrupp@saexploration.com]  
**From:** Putnam, Christopher  
**Sent:** 2018-09-28T18:13:09-04:00  
**Importance:** Normal  
**Subject:** Re: [EXTERNAL] RE: Invitation: SAE ANWR Seismic Mitigation Meeting @ Mon 2018-10-01 11:00 - 12:00 (AKDT) (rtrupp@saexploration.com)  
**Received:** 2018-09-28T18:13:31-04:00

Rick,  
Sure, use this number.

1-866-730-2536  
passcode 8757864

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

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-- J.R.R. Tolkien

On Fri, Sep 28, 2018 at 1:48 PM Rick Trupp <rtrupp@saexploration.com> wrote:

Chris,

Do you have a call in number?

Rick

-----Original Appointment-----

**From:** christopher\_putnam@fws.gov <christopher\_putnam@fws.gov>

**Sent:** Friday, September 28, 2018 9:29 AM

**To:** christopher\_putnam@fws.gov; patrick\_lemons@fws.gov; kimberly\_klein@fws.gov; Rick Trupp; Suzan Simonds

**Subject:** Invitation: SAE ANWR Seismic Mitigation Meeting @ Mon 2018-10-01 11:00 - 12:00 (AKDT) (rtrupp@saexploration.com)

**When:** Monday, October 1, 2018 11:00 AM-12:00 PM (UTC-09:00) Alaska.



**Where:** MMM Conference Room

[more details »](#)

**SAE ANWR Seismic Mitigation Meeting**

When Mon 2018-10-01 11:00 – 12:00 Alaska Time - Anchorage

Where MMM Conference Room ([map](#))

Video call [https://hangouts.google.com/hangouts/\\_/doi.gov/christopher-putnam](https://hangouts.google.com/hangouts/_/doi.gov/christopher-putnam)

Calendar [rtrupp@saexploration.com](mailto:rtrupp@saexploration.com)

Who

- [christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov) - organizer
- [patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)
- [kimberly\\_klein@fws.gov](mailto:kimberly_klein@fws.gov)
- [rtrupp@saexploration.com](mailto:rtrupp@saexploration.com)
- [ssimonds@saexploration.com](mailto:ssimonds@saexploration.com)

Going? **[Yes](#)** - **[Maybe](#)** - **[No](#)** [more options »](#)

Invitation from [Google Calendar](#)

You are receiving this courtesy email at the account [rtrupp@saexploration.com](mailto:rtrupp@saexploration.com) because you are an attendee of this event.

To stop receiving future updates for this event, decline this event. Alternatively you can sign up for a Google account at <https://www.google.com/calendar/> and control your notification settings for your entire calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. [Learn More](#).

**From:** christopher\_putnam@fws.gov  
**Location:** MMM Conference Room  
**Importance:** Normal  
**Subject:** Invitation: SAE ANWR Seismic Mitigation Meeting @ Mon Oct 1, 2018 11am - 12pm (AKDT) (mary\_colligan@fws.gov)  
**Start Date/Time:** 2018-10-01T15:00:00-04:00  
**End Date/Time:** 2018-10-01T16:00:00-04:00  
[invite.ics](#)

[more details »](#)

## SAE ANWR Seismic Mitigation Meeting

When

Mon Oct 1, 2018 11am - 12pm Alaska Time Anchorage

Where

MMM Conference Room ([map](#))

Video call

[https://hangouts.google.com/hangouts/\\_/doi.gov/christop](https://hangouts.google.com/hangouts/_/doi.gov/christop)

Calendar

[her put](#)

mary\_colligan@fws.gov

Who

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christopher\_putnam@  
kimberly\_klein@fws.g  
mary\_colligan@fws.g  
ssimonds@saexplora  
patrick\_lemons@fws.  
rtrupp@saexploration

Going? [Yes](#) [Maybe](#) [No](#) [more options »](#)

Invitation from [Google Calendar](#)

You are receiving this email at the account mary\_colligan@fws.gov because you are subscribed for invitations on calendar mary\_colligan@fws.gov.

To stop receiving these emails, please log in to <https://www.google.com/calendar/> and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. [Learn More.](#)

**From:** Imm, Teresa  
**Location:** MMM Conference Room  
**Importance:** Normal  
**Subject:** Accepted: FW: Invitation: SAE ANWR Seismic Mitigation Meeting @ Mon 2018-10-01 11:00 - 12:00 (AKDT) (rtrupp@saexploration.com)  
**Start Date/Time:** 2018-10-01T15:00:00-04:00  
**End Date/Time:** 2018-10-01T16:00:00-04:00

**To:** 'Craig Perham (office)'[craig.perham@boem.gov]

**From:** Shideler, Richard T (DFG)

**Sent:** 2018-10-03T11:52:22-04:00

**Importance:** Normal

**Subject:** more

**Received:** 2018-10-03T11:59:47-04:00

[polar bear sighting 10-2-18-1](#)

[Polar Bear\(s\): Milne Point 10-01-2018](#)

[PB Report 9-30-2018 0524 Continuation](#)

[Polar Bear Reported near Z Pad](#)

[10-01-18 Polar Bear Report Sow and cubs](#)

[polar bear sighting 10-1-18-1](#)

[Polar bear sighting 9-30-18-2](#)

[polar bear sighting 9-30-18-1](#)

[PB Report 9-29-2018 1449](#)

[polar bear report](#)

[PB Report 9-28-2018 1105, PB Report 9-28-2018 1125](#)

[Polar Bear Report - Northstar](#)

**To:** Christopher Putnam (christopher\_putnam@fws.gov)[christopher\_putnam@fws.gov]  
**From:** Rick Trupp  
**Sent:** 2018-10-03T18:31:31-04:00  
**Importance:** Normal  
**Subject:** DEM  
**Received:** 2018-10-03T18:31:36-04:00

Christopher,  
Were you able to send to me the DEM file that you mentioned to us in the meeting.  
Thanks

**Rick Trupp**  
General Manager

**SAExploration**  
**Safety. Acquisition. Experience.**  
8240 Sandlewood Pl., Suite 102  
Anchorage, Alaska 99507

Office: 1-907-522-4499  
Fax: 1-907-522-4498  
Mobile: 1-907-280-9442

[rtrupp@saexploration.com](mailto:rtrupp@saexploration.com)

**To:** Putnam, Christopher[christopher\_putnam@fws.gov]  
**From:** Rick Trupp  
**Sent:** 2018-10-03T20:48:43-04:00  
**Importance:** Normal  
**Subject:** RE: [R7gis] Fwd: [EXTERNAL] ArcticDEM Release 7  
**Received:** 2018-10-03T20:48:48-04:00

Thank you.  
Rick

**From:** Putnam, Christopher <christopher\_putnam@fws.gov>  
**Sent:** Wednesday, October 3, 2018 4:39 PM  
**To:** Rick Trupp <rtrupp@saexploration.com>  
**Subject:** Fwd: [R7gis] Fwd: [EXTERNAL] ArcticDEM Release 7

Hi Rick,

I've forwarded a message with information on the Arctic DEM.

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

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

**From:** Dufford, Sheila <[sheila\\_dufford@fws.gov](mailto:sheila_dufford@fws.gov)>  
**Date:** Fri, Sep 28, 2018 at 11:11 AM  
**Subject:** [R7gis] Fwd: [EXTERNAL] ArcticDEM Release 7  
**To:** Region 7 GIS list serve <[r7gis@lists.fws.gov](mailto:r7gis@lists.fws.gov)>

Keep in mind that these are surface elevation models that includes buildings and other structures, vegetation and tree canopy. For most of Alaska, if you want a Terrain Model, IfSAR and LiDAR are better tools.

Sheila  
Sheila J. Dufford

Biologist / GIS Specialist  
Yukon Flats National Wildlife Refuge  
101 12th Avenue, Room 264  
Fairbanks, AK 99701  
907-456-0307  
[sheila\\_dufford@fws.gov](mailto:sheila_dufford@fws.gov)  
[http://www.fws.gov/refuge/Yukon\\_Flats/](http://www.fws.gov/refuge/Yukon_Flats/)

*There are only two ways to live your life. One is as though nothing is a miracle. The other is as though everything is a miracle. - Albert Einstein*

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

From: **Polar Geospatial Center** <[pgc@umn.edu](mailto:pgc@umn.edu)>  
Date: Fri, Sep 28, 2018 at 7:21 AM  
Subject: [EXTERNAL] ArcticDEM Release 7  
To: <[sheila\\_dufford@fws.gov](mailto:sheila_dufford@fws.gov)>

Latest News from ArcticDEM

[View this email in your browser](#)

**We did it.**

Seventh release adds, repeats and covers the entire geographic regions of the ArcticDEM production domain:  
all land area north of 60° latitude including all territory of Greenland, Alaska and Russia's Kamchatka Peninsula

The **ArcticDEM** team is pleased to announce **Release 7**. This completes our commitment to produce a high-resolution, time-dependent, publicly available Digital Elevation Model of the Arctic over the two-year term of the US chairmanship of the Arctic Council.

The entire ArcticDEM domain was re-mosaicked to **2-meter** resolution and covers just over **10%** of the planet. There are now over **260,000** total **2-meter** time-stamped DEMs that amount to nearly **160 million km<sup>2</sup>** and **200 TB**. The Arctic is now covered an average of **8** times by **2-meter** elevation data. All strips underwent significant improvements in filtering to preserve coastlines, fill holes, and better enhance densely-forested areas. The mosaic is now available at **5** times higher resolution than previous releases. Reduced-resolution versions of the mosaic are also available at **10, 32, 100, 500** and **1000 meters**.

-

## ArcticDEM Maps

Download these self-contained visualizations for a pan-Arctic look at the high resolution mosaic.

Cartographic Version

Hillshade Version

-



## Explore Data

ArcticDEM data are available for online browsing and download. Visit [ArcticDEM.org](https://ArcticDEM.org) to connect to the [ArcticDEM Explorer](#) or to download bulk data. Esri's online web mapping application provides tools to measure elevation, change and distances; to identify source imagery and DEMs; to view hillshade, slope and aspect; to download data directly and more.

[View ArcticDEM Explorer](#)

Fairbanks, Alaska, United States

Barnes Ice Cap, Nunavut, Canada

Homer Spit, Alaska, United States

Greenland

Logging activities, Siberia, Russia

Iceland

Nuuk Fjord, Greenland

## Overview

ArcticDEM is an NGA-NSF public-private initiative to produce a high-resolution, high quality, digital surface model (DSM) of the Arctic using optical stereo imagery, high-performance computing, and open source photogrammetry software.

The project began with a release of data over Alaska in September 2016 and continued to other regions over the past two years. The objective of the ArcticDEM initiative was to create a comprehensive elevation model of the Arctic within the two-year term of the U.S. Chairmanship of the Arctic Council, which began in April 2015.

**For more information regarding the project overview, methodology, web**

services, and download options please visit the PGC website at <https://www.pgc.umn.edu/data/arcticdem/>. User Documentation can be found [here](#).

*The ArcticDEM Team would like to thank the National Geospatial-Intelligence Agency, the National Science Foundation, the Arctic Council, the White House Office of Science and Technology Policy, Arctic SDI, Fabien Laurier, Ambassador Mark Brzezinski, Admiral Robert Papp, Ambassador Kåre Aas, Tracy Fuller and the many, many people who contributed to this project.*

## Release History

### **Sep. 28, 2018 (Current):**

Release 7 [v3.0: Pan-Arctic]

### **Sep. 6, 2017:**

Release 6 [v3.0: Far Eastern Federal Districts, European (Russia), and Scandinavia (north of 60° latitude)]

### **Jun. 2, 2017:**

Release 5 [v2.0: Yukon Territory, Northwest Territories, Nunavut (Canada), Northern Siberia (Russia), and central and southeastern regions of Greenland]

### **Feb. 13, 2017:**

Release 4 [v2.0: Kamchatka Peninsula (Russia), Canadian archipelago Islands within Nunavut and the Northwest Territories (Canada), Faroe Islands, and northern and western regions of Greenland]

### **Dec. 12, 2016:**

Release 3 [v2.0 of: Alaska, Novaya Zemlya (Russia), Franz Josef Land (Russia), Baffin Island (Canada), Svalbard, (Norway), and Iceland]

**Sept. 29, 2016:**

Release 2 [v1.0 of: Novaya Zemlya (Russia) and Franz Josef Land (Russia)]

**Sept. 1, 2016:**

Alaska 1.0

-

## Stay Updated

Click [here](#) to subscribe to occasional PGC Elevation updates via email.

-

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**Our mailing address is:**

Polar Geospatial Center

1954 Buford Ave

R280 Learning & Environmental Sciences Building

Saint Paul, Minnesota 55108

[Add us to your address book](#)

[unsubscribe from this list](#) [update subscription preferences](#)



-



**To:** 'Craig Perham (office)'[craig.perham@boem.gov]  
**From:** Shideler, Richard T (DFG)  
**Sent:** 2018-10-10T18:30:24-04:00  
**Importance:** Normal  
**Subject:** more  
**Received:** 2018-10-10T19:34:07-04:00  
Emailing: PB Report 10102018 0848  
Emailing: PB Report 10082018 1053  
Emailing: PB Report 10072018 1616  
STP Polar Bear  
10-07-18 PB 2018-038 near WDSP, PM1, and Stump Island.  
Niakuk Sow and two cubs 10-7-2018  
POLAR BEAR SIGHTING 10-7-18-1  
West Dock Sow and cubs

**From:** christopher\_putnam@fws.gov  
**Location:** MMM Conference Room  
**Importance:** Normal  
**Subject:** Invitation: SAE Seismic Survey Meeting @ Wed Oct 17, 2018 10am - 11am (AKDT)  
(patrick\_lemons@fws.gov)  
**Start Date/Time:** 2018-10-17T14:00:00-04:00  
**End Date/Time:** 2018-10-17T15:00:00-04:00  
[invite.ics](#)

[more details »](#)

## SAE Seismic Survey Meeting

When	Wed Oct 17, 2018 10am - 11am Alaska Time
Where	Anchorage
Video call	MMM Conference Room ( <a href="#">map</a> )
Calendar	<a href="https://hangouts.google.com/hangouts/_/doi.gov/christopher_putnam@fws.gov">https://hangouts.google.com/hangouts/_/doi.gov/christopher_putnam@fws.gov</a>
Who	patrick_lemons@fws.gov

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christopher\_putnam@fws.gov  
patrick\_lemons@fws.gov  
ryan\_r\_wilson@fws.gov  
ssimonds@saexploration.gov  
rtrupp@saexploration.gov  
kimberly\_klein@fws.gov

Going (patrick\_lemons@fws.gov)? [Yes](#) [Maybe](#) [No](#) [more options »](#)  
Invitation from [Google Calendar](#)

You are receiving this email at the account patrick\_lemons@fws.gov because you are subscribed for invitations on calendar patrick\_lemons@fws.gov.

To stop receiving these emails, please log in to <https://www.google.com/calendar/> and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. [Learn More](#).

**From:** christopher\_putnam@fws.gov  
**Location:** MMM Conference Room  
**Importance:** Normal  
**Subject:** Invitation: SAE Seismic Survey Meeting @ Wed 2018-10-17 10:00 - 11:00 (AKDT)  
(ssimonds@saexploration.com)  
**Start Date/Time:** 2018-10-17T14:00:00-04:00  
**End Date/Time:** 2018-10-17T15:00:00-04:00  
[invite.ics](#)

[more details »](#)

### SAE Seismic Survey Meeting

**When** Wed 2018 10 17 10:00 11:00 Alaska Time Anchorage  
**Where** MMM Conference Room ([map](#))  
**Video call** [https://hangouts.google.com/hangouts/\\_/doi.gov/christopher\\_putnam@saexploration.com](https://hangouts.google.com/hangouts/_/doi.gov/christopher_putnam@saexploration.com)  
**Calendar** ssimonds@saexploration.com  
**Who**

- christopher\_putnam@fws.gov - organizer
- kimberly\_klein@fws.gov
- ryan\_r\_wilson@fws.gov
- patrick\_lemons@fws.gov
- rtrupp@saexploration.com
- ssimonds@saexploration.com

Going (ssimonds@saexploration.com)? **Yes** **Maybe** **No** [more options »](#)  
Invitation from [Google Calendar](#)

You are receiving this courtesy email at the account ssimonds@saexploration.com because you are an attendee of this event.

To stop receiving future updates for this event, decline this event. Alternatively you can sign up for a Google account at <https://www.google.com/calendar/> and control your notification settings for your entire calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. [Learn More](#).



**From:** christopher\_putnam@fws.gov  
**Location:** MMM Conference Room  
**Importance:** Normal  
**Subject:** Invitation: SAE Seismic Survey Meeting @ Wed 2018-10-17 10:00 - 11:00 (AKDT)  
(rtrupp@saexploration.com)  
**Start Date/Time:** 2018-10-17T14:00:00-04:00  
**End Date/Time:** 2018-10-17T15:00:00-04:00  
[invite.ics](#)

[more details »](#)

### SAE Seismic Survey Meeting

**When** Wed 2018 10 17 10:00 11:00 Alaska Time Anchorage  
**Where** MMM Conference Room ([map](#))  
**Video call** [https://hangouts.google.com/hangouts/\\_/doi.gov/christopher\\_putnam@saexploration.com](https://hangouts.google.com/hangouts/_/doi.gov/christopher_putnam@saexploration.com)  
**Calendar** rtrupp@saexploration.com  
**Who**

- christopher\_putnam@fws.gov - organizer
- kimberly\_klein@fws.gov
- ryan\_r\_wilson@fws.gov
- patrick\_lemons@fws.gov
- rtrupp@saexploration.com
- ssimonds@saexploration.com

Going (rtrupp@saexploration.com)? [Yes](#) [Maybe](#) [No](#) [more options »](#)  
Invitation from [Google Calendar](#)

You are receiving this courtesy email at the account rtrupp@saexploration.com because you are an attendee of this event.

To stop receiving future updates for this event, decline this event. Alternatively you can sign up for a Google account at <https://www.google.com/calendar/> and control your notification settings for your entire calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. [Learn More](#).

**From:** christopher\_putnam@fws.gov  
**Location:** MMM Conference Room  
**Importance:** Normal  
**Subject:** Invitation: SAE Seismic Survey Meeting @ Wed Oct 17, 2018 10am - 11am (AKDT)  
(ryan\_r\_wilson@fws.gov)  
**Start Date/Time:** 2018-10-17T14:00:00-04:00  
**End Date/Time:** 2018-10-17T15:00:00-04:00  
[invite.ics](#)

[more details »](#)

## SAE Seismic Survey Meeting

When

Wed Oct 17, 2018 10am - 11am Alaska Time

Where

Anchorage

MMM Conference Room ([map](#))

Video call

[https://hangouts.google.com/hangouts/\\_/doi.gov/christopher\\_putnam](https://hangouts.google.com/hangouts/_/doi.gov/christopher_putnam)

Calendar

[her putnam](#)

ryan\_r\_wilson@fws.gov

Who

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christopher\_putnam@fws.gov  
rtrupp@saexploration.fws.gov  
patrick\_lemons@fws.gov  
ryan\_r\_wilson@fws.gov  
ssimonds@saexploration.fws.gov  
kimberly\_klein@fws.gov

Going (ryan\_r\_wilson@fws.gov)? [Yes](#) [Maybe](#) [No](#) [more options »](#)

Invitation from [Google Calendar](#)

You are receiving this email at the account ryan\_r\_wilson@fws.gov because you are subscribed for invitations on calendar ryan\_r\_wilson@fws.gov.

To stop receiving these emails, please log in to <https://www.google.com/calendar/> and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. [Learn More](#).

**From:** christopher\_putnam@fws.gov  
**Location:** MMM Conference Room  
**Importance:** Normal  
**Subject:** Invitation: SAE Seismic Survey Meeting @ Wed Oct 17, 2018 10am - 11am (AKDT)  
(kimberly\_klein@fws.gov)  
**Start Date/Time:** 2018-10-17T14:00:00-04:00  
**End Date/Time:** 2018-10-17T15:00:00-04:00  
[invite.ics](#)

[more details »](#)

## SAE Seismic Survey Meeting

When	Wed Oct 17, 2018 10am - 11am Alaska Time
Where	Anchorage
Video call	MMM Conference Room ( <a href="#">map</a> )
Calendar	<a href="https://hangouts.google.com/hangouts/_/doi.gov/christopher_putnam">https://hangouts.google.com/hangouts/_/doi.gov/christopher_putnam</a>
Who	<a href="#">kimberly_klein@fws.gov</a>
	<ul style="list-style-type: none"><li>•</li><li>•</li><li>•</li><li>•</li><li>•</li><li>•</li></ul>

christopher\_putnam@fws.gov  
patrick\_lemons@fws.gov  
rtrupp@saexploration.gov  
ssimonds@saexploration.gov  
ryan\_r\_wilson@fws.gov  
kimberly\_klein@fws.gov

Going (kimberly\_klein@fws.gov)? [Yes](#) [Maybe](#) [No](#) [more options »](#)  
Invitation from [Google Calendar](#)

You are receiving this email at the account kimberly\_klein@fws.gov because you are subscribed for invitations on calendar kimberly\_klein@fws.gov.

To stop receiving these emails, please log in to <https://www.google.com/calendar/> and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. [Learn More](#).

**From:** Rick Trupp  
**Location:** MMM Conference Room  
**Importance:** Normal  
**Subject:** Accepted: Invitation: SAE Seismic Survey Meeting @ Wed 2018-10-17 10:00 - 11:00 (AKDT)  
(rtrupp@saexploration.com)  
**Start Date/Time:** 2018-10-17T14:00:00-04:00  
**End Date/Time:** 2018-10-17T15:00:00-04:00

**From:** Rick Trupp  
**Location:** MMM Conference Room  
**Importance:** Normal  
**Subject:** [EXTERNAL] Accepted: Invitation: SAE Seismic Survey Meeting @ Wed 2018-10-17 10:00 - 11:00 (AKDT) (rtrupp@saexploration.com)  
**Start Date/Time:** 2018-10-17T14:00:00-04:00  
**End Date/Time:** 2018-10-17T15:00:00-04:00

**From:** christopher\_putnam@fws.gov  
**Location:** MMM Conference Room  
**Importance:** Normal  
**Subject:** Updated invitation with note: SAE Seismic Survey Meeting @ Wed 2018-10-17 10:30 - 11:30 (AKDT) (rtrupp@saexploration.com)  
**Start Date/Time:** 2018-10-17T14:30:00-04:00  
**End Date/Time:** 2018-10-17T15:30:00-04:00  
[invite.ics](#)

This event has been changed with this note:  
"The meeting time has changed to 10:30 to accommodate a scheduling conflict."  
[more details »](#)

### SAE Seismic Survey Meeting

**When** **Changed:** Wed 2018 10 17 10:30 11:30 Alaska Time Anchorage  
**Where** MMM Conference Room ([map](#))  
**Video call** [https://hangouts.google.com/hangouts/\\_/doi.gov/christopher\\_putnam@saexploration.com](https://hangouts.google.com/hangouts/_/doi.gov/christopher_putnam@saexploration.com)  
**Calendar** rtrupp@saexploration.com  
**Who**

- christopher\_putnam@fws.gov - organizer
- kimberly\_klein@fws.gov
- ryan\_r\_wilson@fws.gov
- patrick\_lemons@fws.gov
- rtrupp@saexploration.com
- ssimonds@saexploration.com

Going (rtrupp@saexploration.com)? [Yes](#) [Maybe](#) [No](#) [more options »](#)  
Invitation from [Google Calendar](#)

You are receiving this courtesy email at the account rtrupp@saexploration.com because you are an attendee of this event.

To stop receiving future updates for this event, decline this event. Alternatively you can sign up for a Google account at <https://www.google.com/calendar/> and control your notification settings for your entire calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. [Learn More.](#)

**From:** christopher\_putnam@fws.gov  
**Location:** MMM Conference Room  
**Importance:** Normal  
**Subject:** Updated invitation with note: SAE Seismic Survey Meeting @ Wed Oct 17, 2018 10:30am - 11:30am (AKDT) (kimberly\_klein@fws.gov)  
**Start Date/Time:** 2018-10-17T14:30:00-04:00  
**End Date/Time:** 2018-10-17T15:30:00-04:00  
[invite.ics](#)

**This event has been changed with this note:**

"The meeting time has changed to 10:30 to accommodate a scheduling conflict."

[more details »](#)

## SAE Seismic Survey Meeting

When

**Changed:** Wed Oct 17, 2018 10:30am 11:30am Alaska

Time Anchorage

Where

MMM Conference Room ([map](#))

Video call

[https://hangouts.google.com/hangouts/\\_/doi.gov/christopher\\_putnam](https://hangouts.google.com/hangouts/_/doi.gov/christopher_putnam)

Calendar

[her putnam](#)

kimberly\_klein@fws.gov

Who

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christopher\_putnam@fws.gov

rttrupp@saexploration.gov

kimberly\_klein@fws.gov

ryan\_r\_wilson@fws.gov

patrick\_lemons@fws.gov

ssimonds@saexploration.gov

Going (kimberly\_klein@fws.gov)? **Yes** **Maybe** **No** [more options »](#)

Invitation from [Google Calendar](#)

You are receiving this email at the account kimberly\_klein@fws.gov because you are subscribed for updated invitations on calendar kimberly\_klein@fws.gov.

To stop receiving these emails, please log in to <https://www.google.com/calendar/> and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. [Learn More](#).

**From:** christopher\_putnam@fws.gov  
**Location:** MMM Conference Room  
**Importance:** Normal  
**Subject:** Updated invitation with note: SAE Seismic Survey Meeting @ Wed Oct 17, 2018 10:30am - 11:30am (AKDT) (ryan\_r\_wilson@fws.gov)  
**Start Date/Time:** 2018-10-17T14:30:00-04:00  
**End Date/Time:** 2018-10-17T15:30:00-04:00  
[invite.ics](#)

This event has been changed with this note:

"The meeting time has changed to 10:30 to accommodate a scheduling conflict."

[more details »](#)

## SAE Seismic Survey Meeting

When

**Changed:** Wed Oct 17, 2018 10:30am 11:30am Alaska

Time Anchorage

Where

MMM Conference Room ([map](#))

Video call

[https://hangouts.google.com/hangouts/\\_/doi.gov/christopher\\_putnam](https://hangouts.google.com/hangouts/_/doi.gov/christopher_putnam)

Calendar

[her put](#)

Who

ryan\_r\_wilson@fws.gov

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•

christopher\_putnam@fws.gov  
patrick\_lemons@fws.gov  
ryan\_r\_wilson@fws.gov  
ssimonds@saexploration.gov  
rtrupp@saexploration.gov  
kimberly\_klein@fws.gov

Going (ryan\_r\_wilson@fws.gov)? [Yes](#) [Maybe](#) [No](#) [more options »](#)

Invitation from [Google Calendar](#)

You are receiving this email at the account ryan\_r\_wilson@fws.gov because you are subscribed for updated invitations on calendar ryan\_r\_wilson@fws.gov.

To stop receiving these emails, please log in to <https://www.google.com/calendar/> and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. [Learn More.](#)



**To:** (b) (6);  
kimberly\_klein@fws.gov[kimberly\_klein@fws.gov]; ryan\_r\_wilson@fws.gov[ryan\_r\_wilson@fws.gov];  
patrick\_lemons@fws.gov[patrick\_lemons@fws.gov];  
rtrupp@saexploration.com[rtrupp@saexploration.com];  
ssimonds@saexploration.com[ssimonds@saexploration.com]  
**From:** Google Calendar  
**Sent:** 2018-10-16T13:51:53-04:00  
**Importance:** Normal  
**Subject:** Updated invitation with note: SAE Seismic Survey Meeting @ Wed 2018-10-17 10:30 - 11:30 (AKDT) (christopher\_putnam@fws.gov)  
**Received:** 2018-10-16T13:51:53-04:00

**This event has been changed with this note:**

"The meeting time has changed to 10:30 to accommodate a scheduling conflict."

[more details »](#)

### SAE Seismic Survey Meeting

**When** Changed: Wed 2018-10-17 10:30 – 11:30 Alaska Time - Anchorage

**Where** MMM Conference Room ([map](#))

**Video call** [https://hangouts.google.com/hangouts/\\_/doi.gov/christopher-putnam](https://hangouts.google.com/hangouts/_/doi.gov/christopher-putnam)

**Calendar** christopher\_putnam@fws.gov

**Who**

- christopher\_putnam@fws.gov organizer
- kimberly\_klein@fws.gov
- ryan\_r\_wilson@fws.gov
- patrick\_lemons@fws.gov
- rtrupp@saexploration.com
- ssimonds@saexploration.com

Invitation from [Google Calendar](#)

You are receiving this email at the account (b) (6) because you are subscribed for updated invitations on calendar christopher\_putnam@fws.gov.

To stop receiving these emails, please log in to <https://www.google.com/calendar/> and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. [Learn More](#).

**From:** christopher\_putnam@fws.gov  
**Location:** MMM Conference Room  
**Importance:** Normal  
**Subject:** Updated invitation with note: SAE Seismic Survey Meeting @ Wed 2018-10-17 10:30 - 11:30 (AKDT) (ssimonds@saexploration.com)  
**Start Date/Time:** 2018-10-17T14:30:00-04:00  
**End Date/Time:** 2018-10-17T15:30:00-04:00  
[invite.ics](#)

This event has been changed with this note:  
"The meeting time has changed to 10:30 to accommodate a scheduling conflict."  
[more details »](#)

### SAE Seismic Survey Meeting

When **Changed: Wed 2018 10 17 10:30 11:30 Alaska Time Anchorage**  
Where **MMM Conference Room ([map](#))**  
Video call [https://hangouts.google.com/hangouts/\\_/doi.gov/christopher\\_putnam@fws.gov](https://hangouts.google.com/hangouts/_/doi.gov/christopher_putnam@fws.gov)  
Calendar [ssimonds@saexploration.com](#)  
Who

- christopher\_putnam@fws.gov - organizer
- kimberly\_klein@fws.gov
- ryan\_r\_wilson@fws.gov
- patrick\_lemons@fws.gov
- rtrupp@saexploration.com
- ssimonds@saexploration.com

Going (ssimonds@saexploration.com)? [Yes](#) [Maybe](#) [No](#) [more options »](#)  
Invitation from [Google Calendar](#)

You are receiving this courtesy email at the account ssimonds@saexploration.com because you are an attendee of this event.

To stop receiving future updates for this event, decline this event. Alternatively you can sign up for a Google account at <https://www.google.com/calendar/> and control your notification settings for your entire calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. [Learn More.](#)

**From:** christopher\_putnam@fws.gov  
**Location:** MMM Conference Room  
**Importance:** Normal  
**Subject:** Updated invitation with note: SAE Seismic Survey Meeting @ Wed Oct 17, 2018 10:30am - 11:30am (AKDT) (patrick\_lemons@fws.gov)  
**Start Date/Time:** 2018-10-17T14:30:00-04:00  
**End Date/Time:** 2018-10-17T15:30:00-04:00  
[invite.ics](#)

This event has been changed with this note:

"The meeting time has changed to 10:30 to accommodate a scheduling conflict."

[more details »](#)

## SAE Seismic Survey Meeting

When

**Changed:** Wed Oct 17, 2018 10:30am 11:30am Alaska

Time Anchorage

Where

MMM Conference Room ([map](#))

Video call

[https://hangouts.google.com/hangouts/\\_/doi.gov/christopher\\_putnam](https://hangouts.google.com/hangouts/_/doi.gov/christopher_putnam)

Calendar

[her put](#)

patrick\_lemons@fws.gov

Who

•  
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•

christopher\_putnam@

ssimonds@saexplora

patrick\_lemons@fws.

kimberly\_klein@fws.g

rtrupp@saexploration

ryan\_r\_wilson@fws.g

Going (patrick\_lemons@fws.gov)? **Yes** **Maybe** **No** [more options »](#)

Invitation from [Google Calendar](#)

You are receiving this email at the account patrick\_lemons@fws.gov because you are subscribed for updated invitations on calendar patrick\_lemons@fws.gov.

To stop receiving these emails, please log in to <https://www.google.com/calendar/> and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. [Learn More](#).

**From:** Rick Trupp  
**Location:** MMM Conference Room  
**Importance:** Normal  
**Subject:** Accepted: Updated invitation with note: SAE Seismic Survey Meeting @ Wed 2018-10-17  
10:30 - 11:30 (AKDT) (rtrupp@saexploration.com)  
**Start Date/Time:** 2018-10-17T14:30:00-04:00  
**End Date/Time:** 2018-10-17T15:30:00-04:00

**To:** Christopher Putnam[christopher\_putnam@fws.gov]  
**From:** Kimberly Klein  
**Sent:** 2018-08-09T17:43:10-04:00  
**Importance:** Normal  
**Subject:** Re: Seismic Timelines  
**Received:** 2018-08-09T17:43:40-04:00

Thanks Christopher.

**Kimberly Klein**  
Incidental Take Coordinator  
US Fish and Wildlife Service  
907 786 3621  
[Kimberly\\_Klein@fws.gov](mailto:Kimberly_Klein@fws.gov)

On Thu, Aug 9, 2018 at 1:19 PM Christopher Putnam <[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)> wrote:

Thanks Kim,  
One minor correction, next Friday is August 17. Please let Kim or I know if there are any questions.

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

On Thu, Aug 9, 2018 at 1:03 PM Kimberly Klein <[kimberly\\_klein@fws.gov](mailto:kimberly_klein@fws.gov)> wrote:

I have attached the updated timeline. We expect to have a draft ITR ready for internal review by next Friday, August 13.

**Kimberly Klein**  
Incidental Take Coordinator  
US Fish and Wildlife Service  
907 786 3621  
[Kimberly\\_Klein@fws.gov](mailto:Kimberly_Klein@fws.gov)

On Thu, Aug 9, 2018 at 11:12 AM Lemons, Patrick <[patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)> wrote:

Hi Kim and Christopher,

Can you two provide me an update on where we're at with the 1002 Seismic ITR and an associated timeline moving forward. Mary needs something to provide to Greg before he meets with DOI tomorrow.. She needs this today if at all possible.

Thanks,  
Patrick

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

From: **Colligan, Mary** <[mary\\_colligan@fws.gov](mailto:mary_colligan@fws.gov)>

Date: Thu, Aug 9, 2018 at 11:03 AM

Subject: Seismic Timelines

To: Sarah Conn <[sarah\\_conn@fws.gov](mailto:sarah_conn@fws.gov)>, Patrick Lemons <[patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)>, Drew Crane <[drew\\_crane@fws.gov](mailto:drew_crane@fws.gov)>

Greg just stopped by to say he has a meeting with Steve W, Joe Balash, etc tomorrow afternoon at 3 to discuss the seismic proposal and associated timing. Could you guys give me an update today on where things stand for the S7 and MMPA process?

Thank you

--

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

--

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:** Christopher Putnam[christopher\_putnam@fws.gov]  
**Cc:** Klein, Kimberly[kimberly\_klein@fws.gov]; Drew Crane[drew\_crane@fws.gov]; Ted Swem[ted\_swem@fws.gov]  
**From:** Conn, Sarah  
**Sent:** 2018-08-09T20:44:15-04:00  
**Importance:** Normal  
**Subject:** Re: Seismic Timelines  
**Received:** 2018-08-09T20:44:18-04:00

Thanks. Your estimates should help us a lot in our analysis. I'm sure we'll have some questions once we get underway.

Cheers,

Sarah

On Thu, Aug 9, 2018 at 4:23 PM, Christopher Putnam <[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)> wrote:

Sarah,

Kim is currently finalizing the take analysis and we're working on getting the draft ITR into a reasonable condition for review. The analysis does enumerate MMPA take, and we consider the take estimate to be cumulative with the take estimate for the current Beaufort Sea ITR.

Only level B take will be authorized in the draft ITR. The applicant didn't ask for level A takes, so any activity that could lead to level A take is mitigated in a manner that precludes it, or ensures only level B take.

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

On Thu, Aug 9, 2018 at 4:14 PM Conn, Sarah <[sarah\\_conn@fws.gov](mailto:sarah_conn@fws.gov)> wrote:

Hi There,

Thanks for sending the timeline, it was a good reminder that we are going to have to get busy with the section 7 consultation very soon! With that in mind we were wondering will you be enumerating MMPA take? If so, will this take be divided into level A and level B



takes?

Thanks,

Sarah

On Thu, Aug 9, 2018 at 1:02 PM, Kimberly Klein <[kimberly\\_klein@fws.gov](mailto:kimberly_klein@fws.gov)> wrote:

I have attached the updated timeline. We expect to have a draft ITR ready for internal review by next Friday, August 13.

**Kimberly Klein**

Incidental Take Coordinator  
US Fish and Wildlife Service  
907 786 3621

**[Kimberly\\_Klein@fws.gov](mailto:Kimberly_Klein@fws.gov)**

On Thu, Aug 9, 2018 at 11:12 AM Lemons, Patrick <[patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)> wrote:

Hi Kim and Christopher,

Can you two provide me an update on where we're at with the 1002 Seismic ITR and an associated timeline moving forward. Mary needs something to provide to Greg before he meets with DOI tomorrow.. She needs this today if at all possible.

Thanks,

Patrick

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

From: **Colligan, Mary** <[mary\\_colligan@fws.gov](mailto:mary_colligan@fws.gov)>

Date: Thu, Aug 9, 2018 at 11:03 AM

Subject: Seismic Timelines

To: Sarah Conn <[sarah\\_conn@fws.gov](mailto:sarah_conn@fws.gov)>, Patrick Lemons <[patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)>, Drew Crane <[drew\\_crane@fws.gov](mailto:drew_crane@fws.gov)>

Greg just stopped by to say he has a meeting with Steve W, Joe Balash, etc tomorrow afternoon at 3 to discuss the seismic proposal and associated timing. Could you guys give me an update today on where things stand for the S7 and MMPA process?

Thank you

--

Mary Colligan  
Assistant Regional Director  
Fisheries and Ecological Services  
U.S. Fish and Wildlife Service, Alaska Region

0000013960

1011 E. Tudor Road, MS-361  
Anchorage, AK 99503  
907-786-3505  
cell: 907-223-5945

--

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:** Madonna Baucum[[madonna\\_baucum@fws.gov](mailto:madonna_baucum@fws.gov)]  
**Cc:** Christopher Putnam[[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)]  
**From:** Kimberly Klein  
**Sent:** 2018-08-14T16:22:55-04:00  
**Importance:** Normal  
**Subject:** 1018-0070 Supporting Statement A for Upcoming Rulemaking  
**Received:** 2018-08-14T16:23:25-04:00  
[1018-0070 SSA proposed rule revision draft 14Aug2018.docx](#)  
[Info collection ITR 14Aug2018.docx](#)

Madonna,

Thank you again for your guidance and assistance in preparing the revision to the IC. I have attached the updated draft SSA for your review. I updated the highlighted text and the burden hours table. Not much really changes because the Chukchi Sea ITRs have expired and are not being renewed, so operators who request coverage in that area are basically being replaced by those that intend to operate in the Arctic Refuge. I tried to make sure the numbers reflect that as well as possible.

I have also attached a condensed version of the draft proposed Incidental Take Regulation that will request comments on the IC. The sections relevant to the IC are in blue text. Please take a look and let me know if changes are needed. Thank you so very much.

**Kimberly Klein**  
Incidental Take Coordinator  
US Fish and Wildlife Service  
907 786 3621  
[Kimberly\\_Klein@fws.gov](mailto:Kimberly_Klein@fws.gov)

**To:** Madonna Baucum[[madonna\\_baucum@fws.gov](mailto:madonna_baucum@fws.gov)]  
**Cc:** Christopher Putnam[[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)]  
**From:** Kimberly Klein  
**Sent:** 2018-08-17T17:35:28-04:00  
**Importance:** Normal  
**Subject:** Re: 1018-0070 Supporting Statement A for Upcoming Rulemaking  
**Received:** 2018-08-17T17:35:56-04:00

Thanks, Madonna. I will incorporate the pieces you have sent and resend a clean version. Thanks again!

**Kimberly Klein**

Incidental Take Coordinator  
US Fish and Wildlife Service  
907 786 3621  
[Kimberly\\_Klein@fws.gov](mailto:Kimberly_Klein@fws.gov)

On Fri, Aug 17, 2018 at 12:01 PM Baucum, Madonna <[madonna\\_baucum@fws.gov](mailto:madonna_baucum@fws.gov)> wrote:

Hi again - So I was able to make my first pass through both your rule and the draft Supporting Statement. The SSA looks good. There's not much more I can do with it until the rule document is firmed up. I've attached the latest version of the Supporting Statement for you to use going forward in case you need to make any additional edits as you finalize your rule doc.

Working on a long rule document like this with so many existing track changes is difficult. The PRA changes to be carried to your current version are:

- "Dates" and "Comments" section (pgs. 2-4),
- New PRA paragraph (pgs. 94-97), and
- A couple of minor revisions at the bottom of page 6 and top of page 7.

Once you have a version that's closer to final, please resend it to me to review again/compare against the Supporting Statement. It shouldn't take me too long to re-review it for you.

Thanks!

**Madonna L. Baucum**

**Information Collection Clearance Officer**

Alternate Departmental Information Collection Clearance Officer

**Division of Policy, Performance, and Management Programs**

**U.S. Fish and Wildlife Service**

5275 Leesburg Pike, MS: BPHC

Falls Church, VA 22041-3803

Telephone: (703) 358-2503

Cell: (202) 480-0723

On Fri, Aug 17, 2018 at 2:31 PM, Baucum, Madonna <[madonna\\_baucum@fws.gov](mailto:madonna_baucum@fws.gov)> wrote:

OK - Great. I'm hoping to finish going through it today. But since it's a proposed rule, I will

say it's looking good so far. I'll get back to you by Tuesday if I have any minor changes. The nice thing about PRA submissions to OMB at the proposed rule stage is they're much less formal/time sensitive. I'll send the published rule and associated Supporting Statement (SSA) to OMB on the day the rule publishes. They will let us know if they have questions or if want anything tweaked before we resubmit the package at the final rule stage. Then, all we have to do is refine the SSA and wait until you're closer to having the FR doc ready for me to review.

**Madonna L. Baucum**

**Information Collection Clearance Officer**

Alternate Departmental Information Collection Clearance Officer

**Division of Policy, Performance, and Management Programs**

**U.S. Fish and Wildlife Service**

5275 Leesburg Pike, MS: BPHC

Falls Church, VA 22041-3803

Telephone: (703) 358-2503

Cell: (202) 480-0723

On Fri, Aug 17, 2018 at 2:16 PM, Kimberly Klein <[kimberly\\_klein@fws.gov](mailto:kimberly_klein@fws.gov)> wrote:

Great! Thanks for taking a look. I especially wanted to make sure I included all the appropriate contact information.

We are planning to publish the proposed ITR by Oct. 12.

**Kimberly Klein**

Incidental Take Coordinator

US Fish and Wildlife Service

907 786 3621

**[Kimberly\\_Klein@fws.gov](mailto:Kimberly_Klein@fws.gov)**

On Fri, Aug 17, 2018 at 10:04 AM Baucum, Madonna <[madonna\\_baucum@fws.gov](mailto:madonna_baucum@fws.gov)> wrote:

Hi, Kimberly - I think this looks good; relatively simple change which is good. What is your time frame to publish the rule?

**Madonna L. Baucum**

**Information Collection Clearance Officer**

Alternate Departmental Information Collection Clearance Officer

**Division of Policy, Performance, and Management Programs**

**U.S. Fish and Wildlife Service**

5275 Leesburg Pike, MS: BPHC

Falls Church, VA 22041-3803

Telephone: (703) 358-2503

Cell: (202) 480-0723

On Fri, Aug 17, 2018 at 9:25 AM, Baucum, Madonna <[madonna\\_baucum@fws.gov](mailto:madonna_baucum@fws.gov)> wrote:

Great - I just got back into the office after being out for a few days. I'll try to take a look at this later today or early next week.

**Madonna L. Baucum**  
**Information Collection Clearance Officer**  
Alternate Departmental Information Collection Clearance Officer  
**Division of Policy, Performance, and Management Programs**  
**U.S. Fish and Wildlife Service**  
5275 Leesburg Pike, MS: BPHC  
Falls Church, VA 22041-3803  
Telephone: (703) 358-2503  
Cell: (202) 480-0723

On Tue, Aug 14, 2018 at 4:22 PM, Kimberly Klein <[kimberly\\_klein@fws.gov](mailto:kimberly_klein@fws.gov)> wrote:

Madonna,  
Thank you again for your guidance and assistance in preparing the revision to the IC. I have attached the updated draft SSA for your review. I updated the highlighted text and the burden hours table. Not much really changes because the Chukchi Sea ITRs have expired and are not being renewed, so operators who request coverage in that area are basically being replaced by those that intend to operate in the Arctic Refuge. I tried to make sure the numbers reflect that as well as possible.

I have also attached a condensed version of the draft proposed Incidental Take Regulation that will request comments on the IC. The sections relevant to the IC are in blue text. Please take a look and let me know if changes are needed. Thank you so very much.

**Kimberly Klein**  
Incidental Take Coordinator  
US Fish and Wildlife Service  
907 786 3621  
**[Kimberly\\_Klein@fws.gov](mailto:Kimberly_Klein@fws.gov)**

**To:** Charles Hamilton[[charles\\_hamilton@fws.gov](mailto:charles_hamilton@fws.gov)]; Klein, Kimberly[[kimberly\\_klein@fws.gov](mailto:kimberly_klein@fws.gov)]  
**From:** Christopher Putnam  
**Sent:** 2018-08-17T20:18:02-04:00  
**Importance:** Normal  
**Subject:** Arctic Refuge SAE Seismic Survey Draft Proposed ITR  
**Received:** 2018-08-17T20:18:02-04:00  
[Arctic Refuge Draft Proposed ITR 17Aug2018.docx](#)

Hi Charlie,

Attached is the draft proposed ITR. We look forward to your comments. If you want to see any of the supporting documents, they are here, M:\Regulatory\_Program\Incidental\_Intentional take\ITRs\Arctic Refuge 2019\ITR\Proposed ITR. Let us know if you have any questions. Thanks.

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

**To:** Ryan Wilson[ryan\_r\_wilson@fws.gov]  
**Cc:** James Wilder[James\_Wilder@fws.gov]; Christopher Putnam[Christopher\_Putnam@fws.gov]  
**From:** Lemons, Patrick  
**Sent:** 2018-08-21T20:01:13-04:00  
**Importance:** Normal  
**Subject:** Fwd: NGO Letter Commenting on the BLM ANWR Seismic EA Shared from BLM  
**Received:** 2018-08-21T20:01:19-04:00  
Trustees for Alaska Seismic EA Comment Letter.pdf

Hi Ryan,

Would you mind taking a look at the attached letter when you have some time? This is a close hold so please don't share it but Mary and I interested in it's findings relative to what was done for the ITR. Mary and I aren't scheduled to review the ITR until this weekend so if you can take a look before Friday and let us know what you think, that would be great. If we need to setup a time to discuss, please let me know.

Thanks,  
Patrick

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

**From:** **Christopher Putnam** <[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)>  
**Date:** Mon, Aug 20, 2018 at 12:57 PM  
**Subject:** NGO Letter Commenting on the BLM ANWR Seismic EA Shared from BLM  
**To:** "Lemons, Patrick" <[patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)>, "Colligan, Mary" <[mary\\_colligan@fws.gov](mailto:mary_colligan@fws.gov)>

Patrick and Mary,

Attached is the letter BLM shared with me today from Trustees for Alaska and the Sierra Club that provides comments on the BLM EA for the seismic survey in the Arctic Refuge. They also shared 22 pdf documents submitted with the letter. Let me know what you think. Thanks.

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  
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"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:** Christopher Putnam[christopher\_putnam@fws.gov]  
**Cc:** Klein, Kimberly[kimberly\_klein@fws.gov]; Patrick Lemons[Patrick\_Lemons@fws.gov]  
**From:** Hamilton, Charles  
**Sent:** 2018-08-21T21:42:12-04:00  
**Importance:** Normal  
**Subject:** Re: Arctic Refuge SAE Seismic Survey Draft Proposed ITR  
**Received:** 2018-08-21T21:42:57-04:00  
Arctic Refuge Draft Proposed ITR 17Aug2018 CSH.docx

Hi Christopher and Kim,

Attached are my comments. It certainly is different from past proposed ITRs, in some places I had trouble following your methods, please let me know if you have any questions. I do wonder if moving to this quantitative style proposed rule will result in significant comment on your analysis approach but assume that is what you want the public to understand and if appropriate provide feedback on.

On Fri, Aug 17, 2018 at 4:18 PM, Christopher Putnam <[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)> wrote:

Hi Charlie,  
Attached is the draft proposed ITR. We look forward to your comments. If you want to see any of the supporting documents, they are here,  
M:\Regulatory\_Program\Incidental\_Intentional take\ITRs\Arctic Refuge 2019\ITR\Proposed ITR. Let us know if you have any questions. Thanks.

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

--

Regards,

Charles S. Hamilton

Special Assistant  
Marine Mammals Management  
U.S. Fish and Wildlife Service  
1011 East Tudor Rd., MS-341  
Anchorage, AK 99503  
Voice: (907) 786-3804  
FAX: (907) 786 - 3816

**To:** Kimberly Klein[kimberly\_klein@fws.gov]  
**Cc:** Christopher Putnam[christopher\_putnam@fws.gov]  
**From:** Conn, Sarah  
**Sent:** 2018-08-22T14:34:00-04:00  
**Importance:** Normal  
**Subject:** Re: Super quick question  
**Received:** 2018-08-22T14:34:03-04:00

Thanks Kim,  
The text was in relation to a "free ranging bear" rather than a den (those potential impacts are described elsewhere).

I really appreciate the quick response.

Cheers,

Sarah

On Wed, Aug 22, 2018 at 10:31 AM, Kimberly Klein <[kimberly\\_klein@fws.gov](mailto:kimberly_klein@fws.gov)> wrote:

I'm not aware of any industry activities that have involved collisions with polar bears. There was a rumor of a polar bear being hit by a car in Barrow last year...  
There is a small chance that a den could be overrun. This is a small chance given the relatively small footprint of a den and the vast expanse of the 1002, but the seismic work will have a lot of ground impact.

**Kimberly Klein**  
Incidental Take Coordinator  
US Fish and Wildlife Service  
907 786 3621  
[Kimberly\\_Klein@fws.gov](mailto:Kimberly_Klein@fws.gov)

On Wed, Aug 22, 2018 at 10:07 AM Conn, Sarah <[sarah\\_conn@fws.gov](mailto:sarah_conn@fws.gov)> wrote:

Hi There,  
I'm just reviewing BLM's Draft 1002 seismic EA. In the polar bear impact section it suggests bears could be killed "by collisions". Seems like a stretch to me, but before I say that I wanted to confirm you guys haven't heard of that happening with other North Slope Oil and Gas activities have you?

Thanks,

Sarah

**To:** Charles Hamilton[[charles\\_hamilton@fws.gov](mailto:charles_hamilton@fws.gov)]  
**Cc:** Christopher Putnam[[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)]; Patrick Lemons[[Patrick\\_Lemons@fws.gov](mailto:Patrick_Lemons@fws.gov)]  
**From:** Kimberly Klein  
**Sent:** 2018-08-22T14:34:32-04:00  
**Importance:** Normal  
**Subject:** Re: Arctic Refuge SAE Seismic Survey Draft Proposed ITR  
**Received:** 2018-08-22T14:35:01-04:00

Thanks for the feedback Charlie.

**Kimberly Klein**  
Incidental Take Coordinator  
US Fish and Wildlife Service  
907 786 3621  
[Kimberly\\_Klein@fws.gov](mailto:Kimberly_Klein@fws.gov)

On Tue, Aug 21, 2018 at 5:42 PM Hamilton, Charles <[charles\\_hamilton@fws.gov](mailto:charles_hamilton@fws.gov)> wrote:

Hi Christopher and Kim,

Attached are my comments. It certainly is different from past proposed ITRs, in some places I had trouble following your methods, please let me know if you have any questions. I do wonder if moving to this quantitative style proposed rule will result in significant comment on your analysis approach but assume that is what you want the public to understand and if appropriate provide feedback on.

On Fri, Aug 17, 2018 at 4:18 PM, Christopher Putnam <[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)> wrote:

Hi Charlie,  
Attached is the draft proposed ITR. We look forward to your comments. If you want to see any of the supporting documents, they are here,  
M:\Regulatory\_Program\Incidental\_Intentional take\ITRs\Arctic Refuge 2019\ITR\Proposed ITR. Let us know if you have any questions. Thanks.

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  
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Regards,

Charles S. Hamilton  
Special Assistant  
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U.S. Fish and Wildlife Service  
1011 East Tudor Rd., MS-341  
Anchorage, AK 99503  
Voice: (907) 786-3804  
FAX: (907) 786 - 3816

**To:** Klein, Kimberly[kimberly\_klein@fws.gov]  
**From:** Christopher Putnam  
**Sent:** 2018-08-22T14:58:13-04:00  
**Importance:** Normal  
**Subject:** Fwd: NGO Letter Commenting on the BLM ANWR Seismic EA Shared from BLM  
**Received:** 2018-08-22T14:58:13-04:00  
Trustees for Alaska Seismic EA Comment Letter.pdf

Hi Kim,

Attached is the Letter with Amstrup's analysis of the risks to polar bears from the SAE seismic survey. This is what we'll be discussing at the meeting this afternoon, in the context of the analysis for the ITR.

Christopher Putnam  
Supervisory Fish and Wildlife Biologist  
Marine Mammals Management  
U.S. Fish & Wildlife Service  
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----- Forwarded message -----

**From:** Christopher Putnam <[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)>  
**Date:** Mon, Aug 20, 2018 at 12:57 PM  
**Subject:** NGO Letter Commenting on the BLM ANWR Seismic EA Shared from BLM  
**To:** Lemons, Patrick <[patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)>, Colligan, Mary <[mary\\_colligan@fws.gov](mailto:mary_colligan@fws.gov)>

Patrick and Mary,

Attached is the letter BLM shared with me today from Trustees for Alaska and the Sierra Club that provides comments on the BLM EA for the seismic survey in the Arctic Refuge. They also shared 22 pdf documents submitted with the letter. Let me know what you think. Thanks.

Christopher Putnam  
Supervisory Fish and Wildlife Biologist  
Marine Mammals Management  
U.S. Fish & Wildlife Service  
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**To:** Klein, Kimberly[kimberly\_klein@fws.gov]  
**From:** Christopher Putnam  
**Sent:** 2018-08-22T15:09:58-04:00  
**Importance:** Normal  
**Subject:** Re: NGO Letter Commenting on the BLM ANWR Seismic EA Shared from BLM  
**Received:** 2018-08-22T15:09:58-04:00

Yup, I'm fine with 3. Thanks.

Christopher Putnam  
Supervisory Fish and Wildlife Biologist  
Marine Mammals Management  
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-- J.R.R. Tolkien

On Wed, Aug 22, 2018 at 11:03 AM Kimberly Klein <[kimberly\\_klein@fws.gov](mailto:kimberly_klein@fws.gov)> wrote:

Got it. Patrick just now stopped by and suggested we take a little more time to digest. Can you meet at 3pm?

**Kimberly Klein**  
Incidental Take Coordinator  
US Fish and Wildlife Service  
907 786 3621  
[Kimberly\\_Klein@fws.gov](mailto:Kimberly_Klein@fws.gov)

On Wed, Aug 22, 2018 at 10:58 AM Christopher Putnam <[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)> wrote:

Hi Kim,

Attached is the Letter with Amstrup's analysis of the risks to polar bears from the SAE seismic survey. This is what we'll be discussing at the meeting this afternoon, in the context of the analysis for the ITR.

Christopher Putnam  
Supervisory Fish and Wildlife Biologist  
Marine Mammals Management

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

From: **Christopher Putnam** <[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)>  
Date: Mon, Aug 20, 2018 at 12:57 PM  
Subject: NGO Letter Commenting on the BLM ANWR Seismic EA Shared from BLM  
To: Lemons, Patrick <[patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)>, Colligan, Mary <[mary\\_colligan@fws.gov](mailto:mary_colligan@fws.gov)>

Patrick and Mary,  
Attached is the letter BLM shared with me today from Trustees for Alaska and the Sierra Club  
that provides comments on the BLM EA for the seismic survey in the Arctic Refuge. They  
also shared 22 pdf documents submitted with the letter. Let me know what you think.  
Thanks.

Christopher Putnam  
Supervisory Fish and Wildlife Biologist  
Marine Mammals Management  
U.S. Fish & Wildlife Service  
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**To:** Klein, Kimberly[kimberly\_klein@fws.gov]; Bridget Crokus[bridget\_crokus@fws.gov]  
**From:** Christopher Putnam  
**Sent:** 2018-08-22T18:26:50-04:00  
**Importance:** Normal  
**Subject:** BLM Seismic EA  
**Received:** 2018-08-22T18:26:50-04:00  
[DRAFT Appendix E Specialist Reports for USFWS Review line# 082018.pdf](#)  
[Appendix B Maps.pdf](#)  
[Preliminary Draft Coastal Plain Seismic EA 8.21.2018 for USFWS Review line#.pdf](#)

Kim & Bridget,

Attached is a preliminary draft of the BLM Seismic EA. This is a close hold document, so please don't share it with anyone else. I've shared it with you to see if there's anything in it we can use in our EA. Let me know if you have any questions. Thanks.

Christopher Putnam  
Supervisory Fish and Wildlife Biologist  
Marine Mammals Management  
U.S. Fish & Wildlife Service  
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**To:** Bridget Crokus[bridget\_crokus@fws.gov]; Christopher Putnam[christopher\_putnam@fws.gov]  
**From:** Kimberly Klein  
**Sent:** 2018-08-22T21:24:49-04:00  
**Importance:** Normal  
**Subject:** Re: BLM Seismic EA  
**Received:** 2018-08-22T21:24:49-04:00

Thank you. FYI, Forrest is looking at the EA today to help with subsistence parts.

**Kimberly Klein**  
Incidental Take Coordinator  
US Fish and Wildlife Service  
907 786 3621  
[Kimberly\\_Klein@fws.gov](mailto:Kimberly_Klein@fws.gov)

On Wed, Aug 22, 2018 at 2:30 PM Bridget Crokus <[bridget\\_crokus@fws.gov](mailto:bridget_crokus@fws.gov)> wrote:

Thank you, Christopher. Will be sure to keep it close!

Bridget Crokus

Marine Mammals Management

U.S. Fish and Wildlife Service

Phone: 907-786-3378

**From:** Christopher Putnam <[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)>  
**Sent:** Wednesday, August 22, 2018 2:27 PM  
**To:** Klein, Kimberly <[kimberly\\_klein@fws.gov](mailto:kimberly_klein@fws.gov)>; Bridget Crokus <[bridget\\_crokus@fws.gov](mailto:bridget_crokus@fws.gov)>  
**Subject:** BLM Seismic EA

Kim & Bridget,

Attached is a preliminary draft of the BLM Seismic EA. This is a close hold document, so please don't share it with anyone else. I've shared it with you to see if there's anything in it we can use in our EA. Let me know if you have any questions. Thanks.

Christopher Putnam

Supervisory Fish and Wildlife Biologist

Marine Mammals Management

U.S. Fish & Wildlife Service

1011 East Tudor Rd, MS 341

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907-786-3844 office

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-- J.R.R. Tolkien

**To:** Lemons, Patrick[patrick\_lemons@fws.gov]; Colligan, Mary[mary\_colligan@fws.gov]; Klein, Kimberly[kimberly\_klein@fws.gov]  
**From:** Christopher Putnam  
**Sent:** 2018-08-23T20:03:40-04:00  
**Importance:** Normal  
**Subject:** Arctic Refuge Seismic Draft Proposed ITR for Review  
**Received:** 2018-08-23T20:03:40-04:00  
Arctic Refuge Draft Proposed ITR 23Aug2018.docx

Patrick and Mary,  
Attached is the draft proposed ITR. Charlie has reviewed the document, and I've included his editorial comments and left in place his other comments and questions that are not yet addressed. We look forward to your input.

Christopher Putnam  
Supervisory Fish and Wildlife Biologist  
Marine Mammals Management  
U.S. Fish & Wildlife Service  
1011 East Tudor Rd, MS 341  
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**To:** Frerich, Lucille[lucille\_frerich@fws.gov]; Christopher Putnam[christopher\_putnam@fws.gov]; Patrick Lemons[patrick\_lemons@fws.gov]  
**From:** Klein, Kimberly  
**Sent:** 2018-08-27T13:58:16-04:00  
**Importance:** Normal  
**Subject:** Re: [EXTERNAL] Email  
**Received:** 2018-08-27T13:58:44-04:00

FYI, my response to a request from Suzan Simonds, point of contact for SAExploration, 1002 seismic applicant, for Greg Siekaniec's email address.

**Kimberly Klein**

Incidental Take Coordinator  
US Fish and Wildlife Service  
907 786 3621  
[Kimberly\\_Klein@fws.gov](mailto:Kimberly_Klein@fws.gov)

On Mon, Aug 27, 2018 at 7:50 AM Suzan Simonds <[ssimonds@contractor.saexploration.com](mailto:ssimonds@contractor.saexploration.com)> wrote:

Hi Kim

Do you have Greg Siekaniec email address? USFW GUY.

Sue

Sent via the Samsung Galaxy S9, an AT&T 4G LTE smartphone

**To:** Kimberly Klein[kimberly\_klein@fws.gov]; Christopher Putnam[christopher\_putnam@fws.gov]  
**Cc:** Patrick Lemons[pattick\_lemons@fws.gov]; Ryan Wilson[ryan\_r\_wilson@fws.gov]; Colligan, Mary[mary\_colligan@fws.gov]  
**From:** Wilder, James  
**Sent:** 2018-08-27T19:23:13-04:00  
**Importance:** Normal  
**Subject:** Re: Summary of PB Den findings  
**Received:** 2018-08-27T19:23:25-04:00  
[2018 Rode et al. Den phenology and reproductive success of polar bears in a changing climate.pdf](#)  
[2007 Smith et al. Post-Den Emergence Behavior of Polar Bears Ursus m \(1\).pdf](#)

As discussed, and see attached:

From 2018 Rode et al. Den phenology and reproductive success of polar bears in a changing climate:

1. During 1985–2013, den phenology was investigated using temperature data collected on satellite collars deployed on adult female polar bears in the southern Beaufort Sea (SB) and Chukchi Sea (CS).
2. Females observed with cubs emerged later and remained in dens on average  $15.0 \pm 7.6$  (SE) days longer than females seen without cubs.
3. All of the females that denned through the end of March (12 of 65) were later observed with cubs, whereas approximately one-half of females that emerged prior to the end of February either never produced cubs or produced cubs that did not survive.
4. However, 2 of the 71 females in this study produced cubs after an estimated denning duration of 42 and 59 days, suggesting some flexibility in the den duration required to produce cubs.
5. The SB subpopulation currently has some of the lowest cub survival rates in the Arctic (Regehr et al. 2017).
6. Although reproductive success varied across a wide range of dates of emergence from dens, polar bears emerging later had much higher likelihoods of reproductive success.
7. Mean date of entrance into dens was 15 November  $\pm 1.9$  days ( $n = 215$ ) and mean date of emergence from dens was 1 March  $\pm 2.1$  days ( $n = 179$ ). Denning duration also did not differ between subpopulations ( $\chi^2 = 0.14$ ,  $P = 0.71$ ;  $n = 179$ ) or among years ( $\chi^2 = 0.94$ ,  $P = 0.33$ ;  $n = 179$ ) and averaged  $104.5 \pm 2.8$  days ( $n = 179$ ).
8. Mean denning duration for females that produced cubs that survived until observation post-emergence was  $113.8 \pm 3.8$  days (range: 42–157;  $n = 48$ ), with post-emergence observations occurring within a mean of 37.4 days postemergence.
9. The earliest estimated date of emergence from a den for a female later observed with cubs was 8 January, with a duration of 61 days.

From 2007 Smith et al. Post-Den Emergence Behavior of Polar Bears (I take anything he writes with large granules of salt):

1. we observed 8 adults and 14 dependent cubs outside dens in 2002–2003
2. Den emergence : 2002 (mean = 15 Mar  $\pm 4.1$  d) and 2003 (mean = 21 Mar  $\pm 2.1$  d)
3. Following initial den breakout, polar bears remained at their den sites for 1.5 to 14 days (mean = 8.1  $\pm 5.1$  d)

On Fri, Aug 24, 2018 at 3:06 PM, Ryan Wilson <[ryan\\_r\\_wilson@fws.gov](mailto:ryan_r_wilson@fws.gov)> wrote:



Using the Durner et al. (2010) den catalog, refined to only include those dens that were found based on GPS collars, there were 17 that occurred within the 1002 area. Of those 17, 15 occurred within 5 miles of the coastline, leading to 88% of dens occurring within 5 miles of the coast in the 1002 area.

I called Karyn to double check that there were data presented in her paper to break down litter survival into a rate (i.e., increased survival per day in den). She said that was not in the paper, the closest thing was the result that mean den duration for bears later observed without cubs was 98.9 (+/-7.4) days and that females with den durations <100 days, 43.8% were later observed with cubs compared to 78.2% for those with durations >100days

From Amstrup 1993 (Arctic 46:246-250), 10 denning bears were observed that had some disturbance during spring (Table 2). Of those, 2 had evidence of females leaving dens with 0 cubs. All the rest left with cubs and did not abandon dens. He also stated that there were 22 bears that were not exposed to disturbance that left dens without cubs, but it's unclear how many others did not or what seasons the abandonments occurred; they'd need to be in the spring to be consistent or informative for us.

Smith et al. (2007) found that bears remained at den sites an average of 8 days (+/-5.1 d; range 1.5-14) post emergence, coming in and out of dens with cubs. But this didn't talk anything about coming in/out of dens prior to cubs coming out, so probably not what we were looking for.

Belikov (1974) provided an observation of a female coming in and out of her den in spring occasionally to clean herself, and quickly returning when disturbed by their observations. Conversely, he also observed another den where the female never emerged. So, maybe some indication of that females will occasionally come out of dens in spring not due to disturbance.

Overall, there's not a lot of quantitative data available in the literature to inform our discussion on how frequently females come in/out of dens prior to emergence or the number of females that emerge from dens (without disturbance) without any cubs in spring.

--

Ryan Wilson, Ph.D., Certified Wildlife Biologist ®  
Marine Mammals Management, Polar Bears  
U.S. Fish and Wildlife Service  
1011 E. Tudor Rd., MS341  
Anchorage, AK 99503

Phone: (907) 786-3830  
Email: [ryan\\_r\\_wilson@fws.gov](mailto:ryan_r_wilson@fws.gov)  
Fax: (907) 786-3816

--

James M. Wilder

Marine Mammals Management, Polar Bear Program Leader  
U.S. Fish and Wildlife Service  
1011 E. Tudor Rd., MS341  
Anchorage, AK 99503

Office Phone: (907) 786 3913  
Email: james\_wilder@fws.gov  
Fax: (907) 786 3816

**To:** Christopher Putnam[christopher\_putnam@fws.gov]  
**Cc:** Colligan, Mary[mary\_colligan@fws.gov]; Klein, Kimberly[kimberly\_klein@fws.gov]  
**From:** Lemons, Patrick  
**Sent:** 2018-08-27T19:55:39-04:00  
**Importance:** Normal  
**Subject:** Re: Arctic Refuge Seismic Draft Proposed ITR for Review  
**Received:** 2018-08-27T19:55:44-04:00  
Arctic Refuge Draft Proposed ITR 23Aug2018 -MC and PL Comments.docx

Hi Christopher and Kim,  
Attached are Mary's and I's comments on the draft ITR. Let me know if you have questions.

Patrick

On Thu, Aug 23, 2018 at 4:03 PM, Christopher Putnam <[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)> wrote:

Patrick and Mary,  
Attached is the draft proposed ITR. Charlie has reviewed the document, and I've included his editorial comments and left in place his other comments and questions that are not yet addressed. We look forward to your input.

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--

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:** Kimberly Klein[kimberly\_klein@fws.gov]; Christopher Putnam[christopher\_putnam@fws.gov]  
**Cc:** Patrick Lemons[patrick\_lemons@fws.gov]; Ryan Wilson[ryan\_r\_wilson@fws.gov]; Colligan, Mary[mary\_colligan@fws.gov]  
**From:** Wilder, James  
**Sent:** 2018-08-27T20:07:44-04:00  
**Importance:** Normal  
**Subject:** Re: Summary of PB Den findings  
**Received:** 2018-08-27T20:07:50-04:00  
[1993 Amstrup DenningImpacts Arctic46-3-246.pdf](#)

One more, from 1993 Amstrup Human disturbances of denning polar bears in Alaska (attached):

1. However, during this study, 22 (of 44, or 50%) radiocollared bears not exposed to human disturbances abandoned their dens without cubs.
2. 10 of 12 polar bears were exposed to human activities while in dens between Jan-April. 2 (exposed to a snow machine and rollagon at less than 250m) were presumed to have left the den without cubs.

On Mon, Aug 27, 2018 at 3:23 PM, Wilder, James <[james\\_wilder@fws.gov](mailto:james_wilder@fws.gov)> wrote:

As discussed, and see attached:

From 2018 Rode et al. Den phenology and reproductive success of polar bears in a changing climate:

1. During 1985–2013, den phenology was investigated using temperature data collected on satellite collars deployed on adult female polar bears in the southern Beaufort Sea (SB) and Chukchi Sea (CS).
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1. we observed 8 adults and 14 dependent cubs outside dens in 2002-2003
2. Den emergence : 2002 (mean 15 Mar  $\pm$  4.1 d) and 2003 (mean 21 Mar  $\pm$  2.1 d)
3. Following initial den breakout, polar bears remained at their den sites for 1.5 to 14 days (mean 8.1  $\pm$  5.1 d)

On Fri, Aug 24, 2018 at 3:06 PM, Ryan Wilson <[ryan\\_r\\_wilson@fws.gov](mailto:ryan_r_wilson@fws.gov)> wrote:

Using the Durner et al. (2010) den catalog, refined to only include those dens that were found based on GPS collars, there were 17 that occurred within the 1002 area. Of those 17, 15 occurred within 5 miles of the coastline, leading to 88% of dens occurring within 5 miles of the coast in the 1002 area.

I called Karyn to double check that there were data presented in her paper to break down litter survival into a rate (i.e., increased survival per day in den). She said that was not in the paper, the closest thing was the result that mean den duration for bears later observed without cubs was 98.9 ( $\pm$ 7.4) days and that females with den durations <100 days, 43.8% were later observed with cubs compared to 78.2% for those with durations >100days

From Amstrup 1993 (Arctic 46:246-250), 10 denning bears were observed that had some disturbance during spring (Table 2). Of those, 2 had evidence of females leaving dens with 0 cubs. All the rest left with cubs and did not abandon dens. He also stated that there were 22 bears that were not exposed to disturbance that left dens without cubs, but it's unclear how many others did not or what seasons the abandonments occurred; they'd need to be in the spring to be consistent or informative for us.

Smith et al. (2007) found that bears remained at den sites an average of 8 days ( $\pm$ 5.1 d; range 1.5-14) post emergence, coming in and out of dens with cubs. But this didn't talk anything about coming in/out of dens prior to cubs coming out, so probably not what we were looking for.

Belikov (1974) provided an observation of a female coming in and out of her den in spring occasionally to clean herself, and quickly returning when disturbed by their observations. Conversely, he also observed another den where the female never emerged. So, maybe some indication of that females will occasionally come out of dens in spring not due to disturbance.

Overall, there's not a lot of quantitative data available in the literature to inform our discussion on how frequently females come in/out of dens prior to emergence or the number of females that emerge from dens (without disturbance) without any cubs in spring.

--

Ryan Wilson, Ph.D., Certified Wildlife Biologist ®  
Marine Mammals Management, Polar Bears  
U.S. Fish and Wildlife Service

1011 E. Tudor Rd., MS341  
Anchorage, AK 99503

Phone: (907) 786-3830  
Email: ryan\_r\_wilson@fws.gov  
Fax: (907) 786-3816

--

James M. Wilder  
Marine Mammals Management, Polar Bear Program Leader  
U.S. Fish and Wildlife Service  
1011 E. Tudor Rd., MS341  
Anchorage, AK 99503

Office Phone: (907) 786 3913  
Email: james\_wilder@fws.gov  
Fax: (907) 786 3816

--

James M. Wilder  
Marine Mammals Management, Polar Bear Program Leader  
U.S. Fish and Wildlife Service  
1011 E. Tudor Rd., MS341  
Anchorage, AK 99503

Office Phone: (907) 786 3913  
Email: james\_wilder@fws.gov  
Fax: (907) 786 3816

**To:** Kenneth Lord[ken.lord@sol.doi.gov]  
**Cc:** Lemons, Patrick[patrick\_lemons@fws.gov]; Jim Wilder[james\_wilder@fws.gov]; Klein, Kimberly[kimberly\_klein@fws.gov]; Colligan, Mary[mary\_colligan@fws.gov]; Charles Hamilton[charles\_hamilton@fws.gov]  
**From:** Putnam, Christopher  
**Sent:** 2018-08-28T14:40:29-04:00  
**Importance:** Normal  
**Subject:** ANWR Seismic MMPA ITR Questions  
**Received:** 2018-08-28T14:40:29-04:00

(b) (5) ACP

Hi Ken,

We're working on the MMPA ITR for the proposed seismic survey in the Arctic Refuge. (b) (5)

ACP

We've briefed Mary, and she has briefed Greg. (b) (5) ACP

We're waiting to hear back from Greg and Mary, so hopefully you'll be available to respond. Thanks.

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

**To:** Lord, Kenneth[ken.lord@sol.doi.gov]  
**Cc:** Putnam, Christopher[christopher\_putnam@fws.gov]; Lemons, Patrick[patrick\_lemons@fws.gov]; Jim Wilder[james\_wilder@fws.gov]; Klein, Kimberly[kimberly\_klein@fws.gov]; Charles Hamilton[charles\_hamilton@fws.gov]  
**From:** Colligan, Mary  
**Sent:** 2018-08-28T15:39:49-04:00  
**Importance:** Normal  
**Subject:** Re: ANWR Seismic MMPA ITR Questions  
**Received:** 2018-08-28T15:39:53-04:00

I would encourage you to talk about this verbally. Also, please keep the discussion regionally

On Tue, Aug 28, 2018 at 11:29 AM, Lord, Kenneth <ken.lord@sol.doi.gov> wrote:

(b) (5) ACP

*Kenneth M. Lord  
Assistant Regional Solicitor  
U.S. Dept. of the Interior  
Office of the Regional Solicitor -- Alaska Region  
907-271-4184*

On Tue, Aug 28, 2018 at 10:40 AM, Putnam, Christopher <christopher\_putnam@fws.gov> wrote:

Hi Ken,  
We're working on the MMPA ITR for the proposed seismic survey in the Arctic Refuge.

(b) (5) ACP

We've briefed Mary, and she has briefed Greg. (b) (5) ACP

We're waiting to hear back from Greg and Mary, so hopefully you'll be available to respond. Thanks.

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  
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"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

--

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:** Putnam, Christopher[christopher\_putnam@fws.gov]  
**From:** Ott, Kaithryn  
**Sent:** 2018-08-29T14:56:46-04:00  
**Importance:** Normal  
**Subject:** Re: Section 7 for 1002 seismic MMPA authorization  
**Received:** 2018-08-29T14:57:29-04:00

Sounds good, thanks.

On Wed, Aug 29, 2018 at 10:48 AM, Putnam, Christopher <[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)> wrote:

Hi Kaiti,  
The draft proposed ITR is currently in FES review. We're working to stay on track with our timeline to have the document ready to send to HQ and DOI on September 13. That's when we plan to send a copy to you.

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

On Wed, Aug 29, 2018 at 8:19 AM Ott, Kaithryn <[kaithryn\\_ott@fws.gov](mailto:kaithryn_ott@fws.gov)> wrote:

Hi Chris,  
Just wanted to touch base with you on the MMPA authorization for the upcoming 1002 seismic. We know of several consultations that haven't initiated yet, but could drop anytime, and we're just trying to keep track of what's headed our way. This is one of them, so we just wanted to check with you if you have a ballpark ETA on initiation.

Thanks,

Kaiti

--

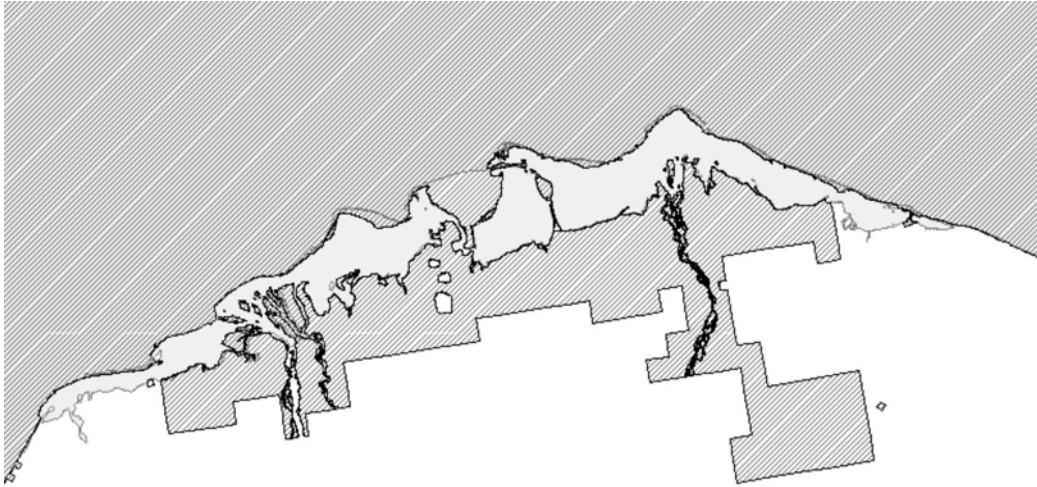
**Kaithryn Ott**  
Fish and Wildlife Biologist  
U.S. Fish & Wildlife Service  
Fairbanks Field Office  
101 12th Avenue, Room 110

Fairbanks, AK 99701  
Phone (907) 456-0277  
Fax (907) 456-0208

--

**Kaithryn Ott**  
Fish and Wildlife Biologist  
U.S. Fish & Wildlife Service  
Fairbanks Field Office  
101 12th Avenue, Room 110  
Fairbanks, AK 99701  
Phone (907) 456-0277  
Fax (907) 456-0208

**To:** Christopher Putnam[christopher\_putnam@fws.gov]  
**From:** Klein, Kimberly  
**Sent:** 2018-09-04T21:48:01-04:00  
**Importance:** Normal  
**Subject:** zoom  
**Received:** 2018-09-04T21:48:30-04:00



**Kimberly Klein**  
Incidental Take Coordinator  
US Fish and Wildlife Service  
907 786 3621  
[Kimberly\\_Klein@fws.gov](mailto:Kimberly_Klein@fws.gov)

**To:** Madonna Baucum[[madonna\\_baucum@fws.gov](mailto:madonna_baucum@fws.gov)]  
**Cc:** Christopher Putnam[[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)]  
**From:** Klein, Kimberly  
**Sent:** 2018-09-05T14:49:10-04:00  
**Importance:** Normal  
**Subject:** Re: Status of PR 1018-BD62, Marine Mammals; Incidental Take of Marine Mammals During Specified Activities: Arctic Coastal Plain;  
**Received:** 2018-09-05T14:49:42-04:00  
[1018-0070 SSA PR RIN 1018-BD62 draft 08172018.kjkdocx.docx](#)

Madonna, I sent the revised SS, I will resend. The draft rule is still in the works, but I will send it along ASAP. Thanks.

**Kimberly Klein**  
Incidental Take Coordinator  
US Fish and Wildlife Service  
907 786 3621  
[Kimberly\\_Klein@fws.gov](mailto:Kimberly_Klein@fws.gov)

On Wed, Sep 5, 2018 at 8:41 AM Baucum, Madonna <[madonna\\_baucum@fws.gov](mailto:madonna_baucum@fws.gov)> wrote:

OK - When will you send me your updated Supporting Statement and draft rule to review? It needs to go to my counterpart in the Department for review as well to ensure it's complete.

**Madonna L. Baucum**  
**Information Collection Clearance Officer**  
Alternate Departmental Information Collection Clearance Officer  
**Division of Policy, Performance, and Management Programs**  
**U.S. Fish and Wildlife Service**  
5275 Leesburg Pike, MS: BPHC  
Falls Church, VA 22041-3803  
Telephone: (703) 358-2503  
Cell: (202) 480-0723

On Wed, Sep 5, 2018 at 12:35 PM, Klein, Kimberly <[kimberly\\_klein@fws.gov](mailto:kimberly_klein@fws.gov)> wrote:

Hi Madonna, we hope to have a proposed ITR for publication by mid October.

**Kimberly Klein**  
Incidental Take Coordinator  
US Fish and Wildlife Service  
907 786 3621  
[Kimberly\\_Klein@fws.gov](mailto:Kimberly_Klein@fws.gov)

On Wed, Sep 5, 2018 at 8:16 AM Baucum, Madonna <[madonna\\_baucum@fws.gov](mailto:madonna_baucum@fws.gov)> wrote:

Good morning - Can I get an update on your PR 1018-BD62? When do you hope to publish the rule?

I have a meeting with the Departmental ICCO tomorrow and need to update him on all of the Service's rulemaking activities.

Thanks!

**Madonna L. Baucum**  
**Information Collection Clearance Officer**  
Alternate Departmental Information Collection Clearance Officer  
**Division of Policy, Performance, and Management Programs**  
**U.S. Fish and Wildlife Service**  
5275 Leesburg Pike, MS: BPHC  
Falls Church, VA 22041-3803  
Telephone: (703) 358-2503  
Cell: (202) 480-0723

**To:** Patrick Lemons[patrick\_lemons@fws.gov]; Christopher Putnam[christopher\_putnam@fws.gov]  
**From:** Colligan, Mary  
**Sent:** 2018-09-05T18:43:21-04:00  
**Importance:** Normal  
**Subject:** Briefing  
**Received:** 2018-09-05T18:43:25-04:00  
[1002 Coastal Plain ITR briefing.docx](#)

So, here is the "quick" high level briefing doc that we have to get to HQ no later than tomorrow. I keep getting interrupted so thought I should send it as is for you to take a look. It is way too long they want 2 pages. And I have not yet formatted it which will give me even less space.

So, edit away...please...

--

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:** Lemons, Patrick[patrick\_lemons@fws.gov]  
**Cc:** Christopher Putnam[christopher\_putnam@fws.gov]  
**From:** Colligan, Mary  
**Sent:** 2018-09-06T00:37:33-04:00  
**Importance:** Normal  
**Subject:** Re: Briefing  
**Received:** 2018-09-06T00:37:37-04:00  
1002 Coastal Plain ITR briefing - PL Comments MAC.docx

Thanks for your review. I accepted your edits, made some addition ones of my own and have a couple of areas to discuss briefly tomorrow. I will send this as is to Karen tonight in case she wants to review it and otherwise will finalize the content in the morning, beg someone to format it for me and get it sent to Kurth.

On Wed, Sep 5, 2018 at 5:20 PM, Lemons, Patrick <patrick\_lemons@fws.gov> wrote:

I need to get home but here is a very quick round of comments. I'll try to take another look at this later tonight or first thing tomorrow morning. I think it's 90% of the way there so we're close. Let me know what else I can do to get this to the finish line.

Patrick

On Wed, Sep 5, 2018 at 2:43 PM, Colligan, Mary <mary\_colligan@fws.gov> wrote:

So, here is the "quick" high level briefing doc that we have to get to HQ no later than tomorrow. I keep getting interrupted so thought I should send it as is for you to take a look. It is way too long they want 2 pages. And I have not yet formatted it which will give me even less space.

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--

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

--

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)

--

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:** Colligan, Mary[mary\_colligan@fws.gov]  
**Cc:** Christopher Putnam[christopher\_putnam@fws.gov]  
**From:** Lemons, Patrick  
**Sent:** 2018-09-06T01:14:34-04:00  
**Importance:** Normal  
**Subject:** Re: Briefing  
**Received:** 2018-09-06T01:14:38-04:00  
1002 Coastal Plain ITR briefing - PL Comments V2.docx

Backatcha.

On Wed, Sep 5, 2018 at 8:37 PM, Colligan, Mary <mary\_colligan@fws.gov> wrote:

Thanks for your review. I accepted your edits, made some addition ones of my own and have a couple of areas to discuss briefly tomorrow. I will send this as is to Karen tonight in case she wants to review it and otherwise will finalize the content in the morning, beg someone to format it for me and get it sent to Kurth.

On Wed, Sep 5, 2018 at 5:20 PM, Lemons, Patrick <patrick\_lemons@fws.gov> wrote:

I need to get home but here is a very quick round of comments. I'll try to take another look at this later tonight or first thing tomorrow morning. I think it's 90% of the way there so we're close. Let me know what else I can do to get this to the finish line.

Patrick

On Wed, Sep 5, 2018 at 2:43 PM, Colligan, Mary <mary\_colligan@fws.gov> wrote:

So, here is the "quick" high level briefing doc that we have to get to HQ no later than tomorrow. I keep getting interrupted so thought I should send it as is for you to take a look. It is way too long they want 2 pages. And I have not yet formatted it which will give me even less space.

So, edit away...please...

--

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

--

Patrick Lemons, Ph.D.  
Chief, Marine Mammals Management  
U.S. Fish and Wildlife Service  
1011 East Tudor Road

0000014001

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)

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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

--

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:** Colligan, Mary[mary\_colligan@fws.gov]  
**Cc:** Christopher Putnam[Christopher\_Putnam@fws.gov]  
**From:** Lemons, Patrick  
**Sent:** 2018-09-07T19:46:21-04:00  
**Importance:** Normal  
**Subject:** Re: DEADLINE Tuesday: OMB requests a briefing paper for your rulemaking action  
**Received:** 2018-09-07T19:46:25-04:00

Thanks

On Fri, Sep 7, 2018 at 3:45 PM, Colligan, Mary <mary\_colligan@fws.gov> wrote:

I think we submit a placeholder one in a more generic way

On Fri, Sep 7, 2018 at 3:02 PM, Lemons, Patrick <patrick\_lemons@fws.gov> wrote:

Christopher and I aren't entirely sure how to proceed here. I'm thinking we send forward a briefing paper as if everything is fine but wanted to get your opinion. Another option would be to call Susan to let her know we're on hold here and ask what her recommendation is. What do you think?

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

From: **Putnam, Christopher** <christopher\_putnam@fws.gov>  
Date: Fri, Sep 7, 2018 at 12:19 PM  
Subject: Fwd: DEADLINE Tuesday: OMB requests a briefing paper for your rulemaking action  
To: "Lemons, Patrick" <patrick\_lemons@fws.gov>

Patrick,

We can do what they are requesting, but given the current situation, I'm not sure how to approach the brief. Ideas?

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

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

From: **Wilkinson, Susan** <susan\_wilkinson@fws.gov>

Date: Fri, Sep 7, 2018 at 12:09 PM

Subject: DEADLINE Tuesday: OMB requests a briefing paper for your rulemaking action

To: Edward Grace <edward\_grace@fws.gov>, Sheila Einsweiler

<sheila\_einsweiler@fws.gov>, Mark Phillips <mark\_phillips@fws.gov>, Kershner, Eric  
<eric\_kershner@fws.gov>, Christopher Putnam <christopher\_putnam@fws.gov>, Hamilton,  
Charles <charles\_hamilton@fws.gov>, Diane Bowen <diane\_bowen@fws.gov>, A Alvarez  
<aeric\_alvarez@fws.gov>, Mike Johnson <mike\_j\_johnson@fws.gov>, Janet Bruner  
<Janet\_Bruner@fws.gov>

Cc: Anissa Craghead <anissa\_craghead@fws.gov>, Katherine Garrity  
<katherine\_garrity@fws.gov>, Sara Prigan <sara\_prigan@fws.gov>

Good afternoon.

Exec Sec just notified PPM that we need to submit briefing papers to OMB on the following  
four FWS rulemaking actions by 4 p.m. Tuesday (9/11):

1018-AZ71: IMPORTATION, EXPORTATION, AND TRANSPORTATION OF WILDLIFE

1018-BC75: MIGRATORY BIRD MANAGEMENT; EXTENDING THE TERM OF  
CERTAIN MIGRATORY BIRD PERMITS

1018-BD62: INCIDENTAL TAKE OF MARINE MAMMALS DURING SPECIFIED  
ACTIVITIES; ARCTIC COASTAL PLAIN

1018-BD78: STREAMLINING FWS PERMITTING OF RIGHTS OF WAY

There is no prescribed format for this request, so you may set up the briefing papers in any  
format that seems appropriate to you. I believe that some of you have produced briefing  
papers on these rules in the past. If so, please review them to see if they need to be updated  
before re-sending to PPM.

Please send them to me and Anissa Craghead by 2 p.m. Tuesday, so that we can meet Exec  
Sec's deadline.

Thank you!

Susan Wilkinson

Division of Policy, Performance, and Management Programs

U.S. Fish and Wildlife Service Headquarters

5275 Leesburg Pike, MS: BPHC  
Falls Church, VA 22041-3803  
703-358-2506

0000014004

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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)

--

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

--

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Chief, Marine Mammals Management  
U.S. Fish and Wildlife Service  
1011 East Tudor Road  
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e-mail: [patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)

**To:** Putnam, Christopher[christopher\_putnam@fws.gov]  
**Cc:** Klein, Kimberly[kimberly\_klein@fws.gov]; Colligan, Mary[mary\_colligan@fws.gov]  
**From:** Lemons, Patrick  
**Sent:** 2018-09-11T01:17:39-04:00  
**Importance:** Normal  
**Subject:** Re: Responses section  
**Received:** 2018-09-11T01:17:43-04:00  
Denning Bears 11Sept2018 - Next 11 pages .docx

Thanks Kim and Christopher,  
Mary and I wanted to say thanks for putting up with us over the last couple weeks and all the back and forth on this. We really appreciate all the hard work and couldn't have done it without you. I've received both of your sections and essentially accepted everything. One place that would be nice to clean up would be the tables. I made some edits to tables 2 and 3 but I can't figure out how to manipulate 4 and 5 to match so that the layout and language are the same. I've never worked with tables embedded in Word so could you help me out with getting this formatted correctly? If you can't get it done before our 10am meeting on Tuesday, could we get it done before the afternoon when I need to send it to Wackowski? I inserted a comment to draw your attention to Kim's section and note the major edits I made. Otherwise, I think we're good to go.

Let me know what you think and thanks again.  
Patrick

On Mon, Sep 10, 2018 at 5:37 PM, Putnam, Christopher <[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)> wrote:

Attached is my part.

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  
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"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

On Mon, Sep 10, 2018 at 5:35 PM Klein, Kimberly <[kimberly\\_klein@fws.gov](mailto:kimberly_klein@fws.gov)> wrote:

see attached

**Kimberly Klein**

Incidental Take Coordinator  
US Fish and Wildlife Service  
907 786 3621

**Kimberly\_Klein@fws.gov**

--

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



**To:** Patrick Lemons[patrick\_lemons@fws.gov]  
**Cc:** Mary Colligan[mary\_colligan@fws.gov]; Christopher Putnam[christopher\_putnam@fws.gov]  
**From:** Klein, Kimberly  
**Sent:** 2018-09-11T15:20:44-04:00  
**Importance:** Normal  
**Subject:** Re: Responses section  
**Received:** 2018-09-11T15:21:14-04:00  
Denning Bears Responses 11Sept2018.docx

Here is the section with the tables.

**Kimberly Klein**

Incidental Take Coordinator  
US Fish and Wildlife Service  
907 786 3621  
**Kimberly\_Klein@fws.gov**

On Mon, Sep 10, 2018 at 9:17 PM Lemons, Patrick <patrick\_lemons@fws.gov> wrote:

Thanks Kim and Christopher,  
Mary and I wanted to say thanks for putting up with us over the last couple weeks and all the back and forth on this. We really appreciate all the hard work and couldn't have done it without you. I've received both of your sections and essentially accepted everything. One place that would be nice to clean up would be the tables. I made some edits to tables 2 and 3 but I can't figure out how to manipulate 4 and 5 to match so that the layout and language are the same. I've never worked with tables embedded in Word so could you help me out with getting this formatted correctly? If you can't get it done before our 10am meeting on Tuesday, could we get it done before the afternoon when I need to send it to Wackowski? I inserted a comment to draw your attention to Kim's section and note the major edits I made. Otherwise, I think we're good to go.

Let me know what you think and thanks again.  
Patrick

On Mon, Sep 10, 2018 at 5:37 PM, Putnam, Christopher <christopher\_putnam@fws.gov> wrote:

Attached is my part.

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

On Mon, Sep 10, 2018 at 5:35 PM Klein, Kimberly <[kimberly\\_klein@fws.gov](mailto:kimberly_klein@fws.gov)> wrote:

see attached

**Kimberly Klein**

Incidental Take Coordinator

US Fish and Wildlife Service

907 786 3621

**[Kimberly\\_Klein@fws.gov](mailto:Kimberly_Klein@fws.gov)**

--

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:** Lemons, Patrick[Patrick\_Lemons@fws.gov]  
**From:** Putnam, Christopher  
**Sent:** 2018-09-11T17:50:05-04:00  
**Importance:** Normal  
**Subject:** Re: DEADLINE Tuesday: OMB requests a briefing paper for your rulemaking action  
**Received:** 2018-09-11T17:50:05-04:00  
1002 Coastal Plain ITR Briefing for OMB.docx

Patrick,  
Attached is a draft of the requested brief. I kept it pretty simple.

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  
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"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

On Tue, Sep 11, 2018 at 9:06 AM Wilkinson, Susan <[susan\\_wilkinson@fws.gov](mailto:susan_wilkinson@fws.gov)> wrote:

Please coordinate with Holly Herod, here in HQ, and included on this message. I think either she or someone else in HQ might be working on a BP. Don't want your two offices to be doing redundant work. Thanks!

On Tue, Sep 11, 2018 at 12:40 PM Hamilton, Charles <[charles\\_hamilton@fws.gov](mailto:charles_hamilton@fws.gov)> wrote:

Hi Sue,

I was out yesterday so sorry I didn't respond. Hopefully this message was forwarded by Diane, but I'll double check as 1018 -BD62 is an action being drafted here in Marine Mammals Management.

On Mon, Sep 10, 2018 at 11:01 AM, Wilkinson, Susan <[susan\\_wilkinson@fws.gov](mailto:susan_wilkinson@fws.gov)> wrote:

Greetings, Charlie! Do you know if anyone is working on this assignment? Thanks.

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

From: **Wilkinson, Susan** <[susan\\_wilkinson@fws.gov](mailto:susan_wilkinson@fws.gov)>

Date: Fri, Sep 7, 2018 at 4:09 PM

Subject: DEADLINE Tuesday: OMB requests a briefing paper for your rulemaking action

To: Edward Grace <[edward\\_grace@fws.gov](mailto:edward_grace@fws.gov)>, Sheila Einsweiler

<[sheila\\_einsweiler@fws.gov](mailto:sheila_einsweiler@fws.gov)>, Mark Phillips <[mark\\_phillips@fws.gov](mailto:mark_phillips@fws.gov)>, Kershner, Eric  
<[eric\\_kershner@fws.gov](mailto:eric_kershner@fws.gov)>, Christopher Putnam <[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)>,  
Hamilton, Charles <[charles\\_hamilton@fws.gov](mailto:charles_hamilton@fws.gov)>, Diane Bowen <[diane\\_bowen@fws.gov](mailto:diane_bowen@fws.gov)>,  
A Alvarez <[aeric\\_alvarez@fws.gov](mailto:aeric_alvarez@fws.gov)>, Mike Johnson <[mike\\_j\\_johnson@fws.gov](mailto:mike_j_johnson@fws.gov)>, Janet  
Bruner <[Janet\\_Bruner@fws.gov](mailto:Janet_Bruner@fws.gov)>

Cc: Anissa Craghead <[anissa\\_craghead@fws.gov](mailto:anissa_craghead@fws.gov)>, Katherine Garrity  
<[katherine\\_garrity@fws.gov](mailto:katherine_garrity@fws.gov)>, Sara Prigan <[sara\\_prigan@fws.gov](mailto:sara_prigan@fws.gov)>

Good afternoon.

Exec Sec just notified PPM that we need to submit briefing papers to OMB on the following  
four FWS rulemaking actions by 4 p.m. Tuesday (9/11):

1018-AZ71: IMPORTATION, EXPORTATION, AND TRANSPORTATION OF WILDLIFE

1018-BC75: MIGRATORY BIRD MANAGEMENT; EXTENDING THE TERM OF  
CERTAIN MIGRATORY BIRD PERMITS

1018-BD62: INCIDENTAL TAKE OF MARINE MAMMALS DURING SPECIFIED  
ACTIVITIES; ARCTIC COASTAL PLAIN

1018-BD78: STREAMLINING FWS PERMITTING OF RIGHTS OF WAY

There is no prescribed format for this request, so you may set up the briefing papers in any  
format that seems appropriate to you. I believe that some of you have produced briefing  
papers on these rules in the past. If so, please review them to see if they need to be updated  
before re-sending to PPM.

Please send them to me and Anissa Craghead by 2 p.m. Tuesday, so that we can meet Exec  
Sec's deadline.

Thank you!

Susan Wilkinson  
Division of Policy, Performance, and Management Programs  
U.S. Fish and Wildlife Service Headquarters

5275 Leesburg Pike, MS: BPHC  
Falls Church, VA 22041-3803  
703-358-2506

--

0000014011

Susan Wilkinson  
Division of Policy, Performance, and Management Programs  
U.S. Fish and Wildlife Service Headquarters

5275 Leesburg Pike, MS: BPHC  
Falls Church, VA 22041-3803  
703-358-2506

--

Regards,

Charles S. Hamilton  
Special Assistant  
Marine Mammals Management  
U.S. Fish and Wildlife Service  
1011 East Tudor Rd., MS-341  
Anchorage, AK 99503  
Voice: (907) 786-3804  
FAX: (907) 786 - 3816

--

Susan Wilkinson  
Division of Policy, Performance, and Management Programs  
U.S. Fish and Wildlife Service Headquarters

5275 Leesburg Pike, MS: BPHC  
Falls Church, VA 22041-3803  
703-358-2506

**To:** Colligan, Mary[mary\_colligan@fws.gov]  
**Cc:** Lemons, Patrick[patrick\_lemons@fws.gov]  
**From:** Putnam, Christopher  
**Sent:** 2018-09-13T20:11:25-04:00  
**Importance:** Normal  
**Subject:** Re: SAE ANWR Seismic ITR Meeting  
**Received:** 2018-09-13T20:11:25-04:00

Thank you.

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

On Thu, Sep 13, 2018 at 4:10 PM Colligan, Mary <[mary\\_colligan@fws.gov](mailto:mary_colligan@fws.gov)> wrote:

I suggest we not provide the analysis, but walk through the basics of it at the meeting. In asking for the meeting I think we could verbally convey that we are having some challenges with the analysis of potential impacts to denning bears and want to walk through our analytical approach with them and have a discussion on possible mitigation options to reduce the potential for exposure and/or consequences of that exposure.

On Thu, Sep 13, 2018 at 4:04 PM, Putnam, Christopher <[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)> wrote:

Mary & Patrick,

Now that we have the go ahead to contact SAE to discuss out take analysis and potential additional mitigation measures, I'll set up a meeting for next week Tues. or Wed. How much do we want to tell then prior to the meeting? That will factor into who they want to attend the meeting. And, are we prepared to provide them with a copy of our analysis at the meeting? If so, is it public at that point? I'm sure there will be follow meetings, so I'm just asking about this next one.

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  
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"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

--  
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:** Klein, Kimberly[kimberly\_klein@fws.gov]; Ryan Wilson[ryan\_r\_wilson@fws.gov]  
**From:** Putnam, Christopher  
**Sent:** 2018-09-17T15:04:38-04:00  
**Importance:** Normal  
**Subject:** Fwd: Estimate of Take of Denning Polar Bears During Seismic Activities in the 1002  
**Received:** 2018-09-17T15:04:57-04:00  
Denning Bears 11Sept2018 SOL-MG13Sep2018.docx

Hi Kim & Ryan,

I've forwarded a message from Mary with a copy of the take analysis document with the solicitor Josh Kindred's comments in track changes. Mary and Patrick will want to get together to discuss our response soon. Can we have some initial thoughts by the end of today? Thanks.

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  
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"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

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

**From:** Mary Colligan <mary\_colligan@fws.gov>  
**Date:** Sat, Sep 15, 2018 at 10:28 AM  
**Subject:** Fwd: Estimate of Take of Denning Polar Bears During Seismic Activities in the 1002  
**To:** Patrick Lemons <patrick\_lemons@fws.gov>, Christopher Putnam <christopher\_putnam@fws.gov>

Let's review and talk about this early next week

Sent from my iPhone

Begin forwarded message:

**From:** "Kindred, Joshua" <joshua.kindred@sol.doi.gov>  
**Date:** September 14, 2018 at 2:38:50 PM AKDT  
**To:** Greg Siekaniec <greg\_siekaniec@fws.gov>, Karen Clark <karen\_clark@fws.gov>, Mary Colligan <mary\_colligan@fws.gov>



**Subject: Fwd: Estimate of Take of Denning Polar Bears During Seismic Activities in the 1002**

(b) (5) ACP  
[Redacted text block containing approximately 18 lines of blacked-out content]

If you have any questions or concerns, please just let me know.

*Joshua M. Kindred*  
*Regional Solicitor*  
*U.S. Dept. of the Interior*  
*Alaska Region*  
*(907) 271-4118*  
*[joshua.kindred@sol.doi.gov](mailto:joshua.kindred@sol.doi.gov)*

**To:** kimberly\_klein[kimberly\_klein@fws.gov]  
**Cc:** Christopher Putnam[christopher\_putnam@fws.gov]  
**From:** Wilson, Ryan  
**Sent:** 2018-09-17T18:49:30-04:00  
**Importance:** Normal  
**Subject:** Re: Estimate of Take of Denning Polar Bears During Seismic Activities in the 1002  
**Received:** 2018-09-17T18:49:44-04:00  
Response To Sol Comments 17Sep18RRW.docx

Kim,

Here are my responses. Please take a look at them and let me know if you think I should include anything else. I kind of provided a lot of detail on the FLIR estimate because I feel like that needed to be better spelled out.

Ryan

On Mon, Sep 17, 2018 at 11:20 AM Klein, Kimberly <[kimberly\\_klein@fws.gov](mailto:kimberly_klein@fws.gov)> wrote:

Christopher, I got what you sent, thanks. I will look it over and coordinate with Ryan when he gets back around noon to tackle as much as we can by the end of the day.

**Kimberly Klein**

Incidental Take Coordinator  
US Fish and Wildlife Service  
907 786 3621  
[Kimberly\\_Klein@fws.gov](mailto:Kimberly_Klein@fws.gov)

On Mon, Sep 17, 2018 at 11:04 AM Putnam, Christopher <[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)> wrote:

Hi Kim & Ryan,

I've forwarded a message from Mary with a copy of the take analysis document with the solicitor Josh Kindred's comments in track changes. Mary and Patrick will want to get together to discuss our response soon. Can we have some initial thoughts by the end of today? Thanks.

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  
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"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

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

From: **Mary Colligan** <[mary\\_colligan@fws.gov](mailto:mary_colligan@fws.gov)>

Date: Sat, Sep 15, 2018 at 10:28 AM

Subject: Fwd: Estimate of Take of Denning Polar Bears During Seismic Activities in the 1002

To: Patrick Lemons <[patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)>, Christopher Putnam  
<[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)>

Let's review and talk about this early next week

Sent from my iPhone

Begin forwarded message:

**From:** "Kindred, Joshua" <[joshua.kindred@sol.doi.gov](mailto:joshua.kindred@sol.doi.gov)>

**Date:** September 14, 2018 at 2:38:50 PM AKDT

**To:** Greg Siekaniec <[greg\\_siekaniec@fws.gov](mailto:greg_siekaniec@fws.gov)>, Karen Clark <[karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)>, Mary Colligan <[mary\\_colligan@fws.gov](mailto:mary_colligan@fws.gov)>

**Subject:** Fwd: Estimate of Take of Denning Polar Bears During Seismic Activities in the 1002

(b) (5) ACP  
[Redacted content]

If you have any questions or concerns, please just let me know.

*Joshua M. Kindred*

*Regional Solicitor*  
*U.S. Dept. of the Interior*  
*Alaska Region*  
*(907) 271-4118*  
*[joshua.kindred@sol.doi.gov](mailto:joshua.kindred@sol.doi.gov)*

--

Ryan Wilson, Ph.D., Certified Wildlife Biologist ®  
Marine Mammals Management, Polar Bears  
U.S. Fish and Wildlife Service  
1011 E. Tudor Rd., MS341  
Anchorage, AK 99503

Phone: (907) 786-3830  
Email: [ryan\\_r\\_wilson@fws.gov](mailto:ryan_r_wilson@fws.gov)  
Fax: (907) 786-3816

**To:** ssimonds@contractor.saexploration.com[ssimonds@contractor.saexploration.com]  
**Cc:** Rick Trupp[rtrupp@saexploration.com]  
**From:** Putnam, Christopher  
**Sent:** 2018-09-17T20:02:38-04:00  
**Importance:** Normal  
**Subject:** Re: [EXTERNAL] Meeting  
**Received:** 2018-09-17T20:02:38-04:00

Okay, thanks.

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  
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wither, deep roots are not reached by the frost."  
-- J.R.R. Tolkien

On Mon, Sep 17, 2018 at 4:02 PM Suzan Simonds <[ssimonds@contractor.saexploration.com](mailto:ssimonds@contractor.saexploration.com)>  
wrote:

Hi Christopher  
Wednesday at 11 am will work for all.  
Sue

Sent via the Samsung Galaxy S9, an AT&T 4G LTE smartphone

**To:** Patrick Lemons[patrick\_lemons@fws.gov]; Mary Colligan[mary\_colligan@fws.gov]; Christopher Putnam[christopher\_putnam@fws.gov]  
**Cc:** Ryan Wilson[ryan\_r\_wilson@fws.gov]  
**From:** Klein, Kimberly  
**Sent:** 2018-09-17T20:22:27-04:00  
**Importance:** Normal  
**Subject:** Re: Estimate of Take of Denning Polar Bears During Seismic Activities in the 1002  
**Received:** 2018-09-17T20:22:27-04:00  
Evaluation and Response to Solicitor 17Sept2018.docx

Please see the attached response to solicitor's comments. Thank you.

**Kimberly Klein**

Incidental Take Coordinator  
US Fish and Wildlife Service  
907 786 3621  
[Kimberly\\_Klein@fws.gov](mailto:Kimberly_Klein@fws.gov)

On Mon, Sep 17, 2018 at 3:55 PM Wilson, Ryan <[ryan\\_r\\_wilson@fws.gov](mailto:ryan_r_wilson@fws.gov)> wrote:

Great, thanks!

On Mon, Sep 17, 2018 at 3:44 PM Klein, Kimberly <[kimberly\\_klein@fws.gov](mailto:kimberly_klein@fws.gov)> wrote:

Thanks Ryan, I will incorporate your responses and send with mine.

**Kimberly Klein**

Incidental Take Coordinator  
US Fish and Wildlife Service  
907 786 3621  
[Kimberly\\_Klein@fws.gov](mailto:Kimberly_Klein@fws.gov)

On Mon, Sep 17, 2018 at 3:04 PM Putnam, Christopher <[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)> wrote:

Thanks Ryan.

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  
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-- J.R.R. Tolkien

On Mon, Sep 17, 2018 at 2:49 PM Wilson, Ryan <[ryan\\_r\\_wilson@fws.gov](mailto:ryan_r_wilson@fws.gov)> wrote:

Kim,  
Here are my responses. Please take a look at them and let me know if you think I should include anything else. I kind of provided a lot of detail on the FLIR estimate because I feel like that needed to be better spelled out.  
Ryan

On Mon, Sep 17, 2018 at 11:20 AM Klein, Kimberly <[kimberly\\_klein@fws.gov](mailto:kimberly_klein@fws.gov)> wrote:

Christopher, I got what you sent, thanks. I will look it over and coordinate with Ryan when he gets back around noon to tackle as much as we can by the end of the day.

**Kimberly Klein**  
Incidental Take Coordinator  
US Fish and Wildlife Service  
907 786 3621  
[Kimberly\\_Klein@fws.gov](mailto:Kimberly_Klein@fws.gov)

On Mon, Sep 17, 2018 at 11:04 AM Putnam, Christopher <[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)> wrote:

Hi Kim & Ryan,  
I've forwarded a message from Mary with a copy of the take analysis document with the solicitor Josh Kindred's comments in track changes. Mary and Patrick will want to get together to discuss our response soon. Can we have some initial thoughts by the end of today? Thanks.

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

From: **Mary Colligan** <[mary\\_colligan@fws.gov](mailto:mary_colligan@fws.gov)>

Date: Sat, Sep 15, 2018 at 10:28 AM

Subject: Fwd: Estimate of Take of Denning Polar Bears During Seismic Activities in the 1002

To: Patrick Lemons <[patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)>, Christopher Putnam  
<[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)>

Let's review and talk about this early next week

Sent from my iPhone

Begin forwarded message:

**From:** "Kindred, Joshua" <[joshua.kindred@sol.doi.gov](mailto:joshua.kindred@sol.doi.gov)>

**Date:** September 14, 2018 at 2:38:50 PM AKDT

**To:** Greg Siekaniec <[greg\\_siekaniec@fws.gov](mailto:greg_siekaniec@fws.gov)>, Karen Clark <[karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)>,  
Mary Colligan <[mary\\_colligan@fws.gov](mailto:mary_colligan@fws.gov)>

**Subject:** Fwd: Estimate of Take of Denning Polar Bears During Seismic Activities in  
the 1002

(b) (5) ACP  
[Redacted content]

If you have any questions or concerns, please just let me know.

*Joshua M. Kindred*  
*Regional Solicitor*



*U.S. Dept. of the Interior*  
*Alaska Region*  
*(907) 271-4118*  
*[joshua.kindred@sol.doi.gov](mailto:joshua.kindred@sol.doi.gov)*

--

Ryan Wilson, Ph.D., Certified Wildlife Biologist ®  
Marine Mammals Management, Polar Bears  
U.S. Fish and Wildlife Service  
1011 E. Tudor Rd., MS341  
Anchorage, AK 99503

Phone: (907) 786-3830  
Email: [ryan\\_r\\_wilson@fws.gov](mailto:ryan_r_wilson@fws.gov)  
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--

Ryan Wilson, Ph.D., Certified Wildlife Biologist ®  
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Fax: (907) 786-3816

**To:** Putnam, Christopher[christopher\_putnam@fws.gov]  
**Cc:** Klein, Kimberly[kimberly\_klein@fws.gov]; Colligan, Mary[mary\_colligan@fws.gov]; Ryan Wilson[ryan\_r\_wilson@fws.gov]  
**From:** Lemons, Patrick  
**Sent:** 2018-09-19T14:14:32-04:00  
**Importance:** Normal  
**Subject:** Re: Estimate of Take of Denning Polar Bears During Seismic Activities in the 1002  
**Received:** 2018-09-19T14:14:35-04:00  
Evaluation and Response to Solicitor 19Sept2018 - V2.docx

Hi Everyone,  
Mary and I combined your responses into a single response and added some text of our own. Please take a close look at the new responses and make sure you are comfortable with them. Please don't hesitate to let me know if you have questions or concerns so that we can address them prior to sending them to Greg and Karen. This is a quick turnaround as I need to get this to Karen and Greg by noon today.

Thanks,

On Mon, Sep 17, 2018 at 4:31 PM, Putnam, Christopher <[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)> wrote:

Thanks Kim.

Christopher Putnam  
Supervisory Fish and Wildlife Biologist  
Marine Mammals Management  
U.S. Fish & Wildlife Service  
1011 East Tudor Rd, MS 341  
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-- J.R.R. Tolkien

On Mon, Sep 17, 2018 at 4:22 PM Klein, Kimberly <[kimberly\\_klein@fws.gov](mailto:kimberly_klein@fws.gov)> wrote:

Please see the attached response to solicitor's comments. Thank you.

**Kimberly Klein**  
Incidental Take Coordinator  
US Fish and Wildlife Service  
907 786 3621  
**[Kimberly\\_Klein@fws.gov](mailto:Kimberly_Klein@fws.gov)**

On Mon, Sep 17, 2018 at 3:55 PM Wilson, Ryan <[ryan\\_r\\_wilson@fws.gov](mailto:ryan_r_wilson@fws.gov)> wrote:

Great, thanks!

On Mon, Sep 17, 2018 at 3:44 PM Klein, Kimberly <[kimberly\\_klein@fws.gov](mailto:kimberly_klein@fws.gov)> wrote:

Thanks Ryan, I will incorporate your responses and send with mine.

**Kimberly Klein**

Incidental Take Coordinator  
US Fish and Wildlife Service  
907 786 3621  
[Kimberly\\_Klein@fws.gov](mailto:Kimberly_Klein@fws.gov)

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Thanks Ryan.

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."  
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US Fish and Wildlife Service  
907 786 3621  
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----- Forwarded message -----

From: **Mary Colligan** <[mary\\_colligan@fws.gov](mailto:mary_colligan@fws.gov)>  
Date: Sat, Sep 15, 2018 at 10:28 AM  
Subject: Fwd: Estimate of Take of Denning Polar Bears During Seismic Activities in the 1002  
To: Patrick Lemons <[patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)>, Christopher Putnam <[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)>

Let's review and talk about this early next week

Sent from my iPhone

Begin forwarded message:

**From:** "Kindred, Joshua" <[joshua.kindred@sol.doi.gov](mailto:joshua.kindred@sol.doi.gov)>

**Date:** September 14, 2018 at 2:38:50 PM AKDT

**To:** Greg Siekaniec <[greg\\_siekaniec@fws.gov](mailto:greg_siekaniec@fws.gov)>, Karen Clark <[karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)>, Mary Colligan <[mary\\_colligan@fws.gov](mailto:mary_colligan@fws.gov)>

**Subject:** Fwd: Estimate of Take of Denning Polar Bears During Seismic Activities in the 1002

(b) (5) ACP  
[Redacted content]

If you have any questions or concerns, please just let me know.

*Joshua M. Kindred*  
*Regional Solicitor*  
*U.S. Dept. of the Interior*  
*Alaska Region*  
*(907) 271-4118*  
[joshua.kindred@sol.doi.gov](mailto:joshua.kindred@sol.doi.gov)

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Ryan Wilson, Ph.D., Certified Wildlife Biologist ®  
Marine Mammals Management, Polar Bears  
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[1011 E. Tudor Rd.](#), MS341  
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Phone: (907) 786-3830  
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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:** Lemons, Patrick[patrick\_lemons@fws.gov]  
**Cc:** Klein, Kimberly[kimberly\_klein@fws.gov]; Colligan, Mary[mary\_colligan@fws.gov]; Ryan Wilson[ryan\_r\_wilson@fws.gov]  
**From:** Putnam, Christopher  
**Sent:** 2018-09-19T14:44:34-04:00  
**Importance:** Normal  
**Subject:** Re: Estimate of Take of Denning Polar Bears During Seismic Activities in the 1002  
**Received:** 2018-09-19T14:44:53-04:00  
Evaluation and Response to Solicitor 19Sept2018 - V2 crp.docx

Attached is my one comment and two minor editorial suggestions in track changes. I think the responses look good.

Christopher Putnam  
Supervisory Fish and Wildlife Biologist  
Marine Mammals Management  
U.S. Fish & Wildlife Service  
1011 East Tudor Rd, MS 341  
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On Wed, Sep 19, 2018 at 10:14 AM Lemons, Patrick <patrick\_lemons@fws.gov> wrote:

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Thanks,

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Christopher Putnam  
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**Kimberly Klein**  
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Date: Sat, Sep 15, 2018 at 10:28 AM

Subject: Fwd: Estimate of Take of Denning Polar Bears During Seismic Activities in the 1002

To: Patrick Lemons <[patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)>, Christopher Putnam

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(b) (5) ACP  
[Redacted content]

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**From:** Wilson, Ryan  
**Sent:** 2018-09-19T14:53:36-04:00  
**Importance:** Normal  
**Subject:** Re: Estimate of Take of Denning Polar Bears During Seismic Activities in the 1002  
**Received:** 2018-09-19T14:53:49-04:00  
Evaluation and Response to Solicitor 19Sept2018 - V2RRW.docx

Here are my comments as well. Mostly minor, although I added a couple of additional lines of text that respond to a portion of the FLIR comment that I hadn't addressed previously. Feel free to take/leave/edit it however you like. Otherwise I think it looks good.

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Date: Sat, Sep 15, 2018 at 10:28 AM  
Subject: Fwd: Estimate of Take of Denning Polar Bears During Seismic Activities in the 1002  
To: Patrick Lemons <[patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)>, Christopher Putnam  
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**Subject:** Fwd: Estimate of Take of Denning Polar Bears During Seismic Activities in the 1002

(b) (5) ACP  
[Redacted text block containing multiple lines of blacked-out content]



(b) (5) ACP  
[Redacted text block containing approximately 10 lines of blacked-out content]

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*Joshua M. Kindred*  
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**To:** Patrick Lemons[patrick\_lemons@fws.gov]; Christopher Putnam[christopher\_putnam@fws.gov]  
**From:** Wilson, Ryan  
**Sent:** 2018-09-19T18:29:55-04:00  
**Importance:** Normal  
**Subject:** Methods and files  
**Received:** 2018-09-19T18:30:09-04:00  
[seismic\\_grid.zip](#)  
[Methods to simulate seismic operations footprint.docx](#)

--

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**To:** Lemons, Patrick[patrick\_lemons@fws.gov]  
**From:** Putnam, Christopher  
**Sent:** 2018-09-19T19:39:03-04:00  
**Importance:** Normal  
**Subject:** Fwd: SAE Meeting Summary  
**Received:** 2018-09-19T19:39:03-04:00

Christopher Putnam  
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**From:** **Klein, Kimberly** <[kimberly\\_klein@fws.gov](mailto:kimberly_klein@fws.gov)>  
**Date:** Wed, Sep 19, 2018 at 3:35 PM  
**Subject:** Re: SAE Meeting Summary  
**To:** Christopher Putnam <[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)>

Looks good to me.

**Kimberly Klein**  
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On Wed, Sep 19, 2018 at 2:07 PM Putnam, Christopher <[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)> wrote:

Kim, is there anything you want to add to this?  
On Wednesday, September 19, 2018, from 11:00 pm to 1:00 pm, at the U.S. Fish and Wildlife Service Alaska Regional office, Patrick Lemons, Kimberley Klein, and Christopher Putnam met with Jeff Hastings, Rick Trupp, and Sue Simonds of SAExploration (SAE), and Sheyna Wisdom and Justin Blank of Fairweather Science, regarding the SAE application for a Marine Mammal Protection Act (MMPA) incidental take regulation (ITR) for the incidental

take of polar bears during the proposed 3D seismic survey on the coastal plain of the Arctic National Wildlife Refuge.

At the meeting we briefed the SAE and Fairweather Science representatives on our analysis for the evaluation of take for the ITR. We focused on the analysis for MMPA Level A take (injury and mortality) and described our analytical approach, methodology, data sources, assumptions, and conclusions. We explained the criteria that we must meet in order to make the required MMPA incidental take determinations of small numbers and negligible impacts. We discussed our understanding that authorized Level A takes must be considered in the context of the Potential Biological Removal (PBR) of animals from the Southern Beaufort Sea stock of polar bears. We further explained that our analysis in the context of PBR led us to conclude that we could not make the negligible impacts determination with the information we currently have from the SAE application.

We discussed a variety of potential additional mitigation measures and clarifications to the plan of operations for the proposed seismic survey. At the end of the meeting we agreed that SAE would provide us with additional information and clarifications on when, where, and how they intend conduct their activities, particularly regarding the avoidance of polar bear denning habitat. We agreed to locate some additional data regarding a project that attempted to evaluate the efficacy of scent trained dogs and handheld infrared camera for detecting polar bear dens and to evaluate the detection rate of locating unknown polar bear dens with additional aerial infrared survey attempts. SAE requested, and we agreed to provide, information on certain aspects of our analysis for them to verify and aid them in their evaluation of potential project options. We agreed to re-evaluate our analysis with the additional information and see how the take estimate is affected.

We agreed that SAE will contact us soon to arrange a follow-up meeting with their designated science personnel to discuss our analysis in more technical detail and to further discuss options and potential mitigation measures.

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

**To:** Patrick Lemons[patrick\_lemons@fws.gov]  
**Cc:** Christopher Putnam[christopher\_putnam@fws.gov]; Mary Colligan[mary\_colligan@fws.gov]; Ryan Wilson[ryan\_r\_wilson@fws.gov]  
**From:** Klein, Kimberly  
**Sent:** 2018-09-19T20:18:32-04:00  
**Importance:** Normal  
**Subject:** Re: Estimate of Take of Denning Polar Bears During Seismic Activities in the 1002  
**Received:** 2018-09-19T20:18:32-04:00  
Evaluation and Response to Solicitor 19Sept2018 - V2 crp.kjk.docx

I added a few little things to Christopher's version, but didn't really have much to add.

**Kimberly Klein**  
Incidental Take Coordinator  
US Fish and Wildlife Service  
907 786 3621  
[Kimberly\\_Klein@fws.gov](mailto:Kimberly_Klein@fws.gov)

On Wed, Sep 19, 2018 at 1:19 PM Klein, Kimberly <[kimberly\\_klein@fws.gov](mailto:kimberly_klein@fws.gov)> wrote:

Patrick, I'm sorry I wasn't able to review and comment prior to the noon deadline. I'm fine with Christopher and Ryan's suggestions.

**Kimberly Klein**  
Incidental Take Coordinator  
US Fish and Wildlife Service  
907 786 3621  
[Kimberly\\_Klein@fws.gov](mailto:Kimberly_Klein@fws.gov)

On Wed, Sep 19, 2018 at 10:14 AM Lemons, Patrick <[patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)> wrote:

Hi Everyone,  
Mary and I combined your responses into a single response and added some text of our own. Please take a close look at the new responses and make sure you are comfortable with them. Please don't hesitate to let me know if you have questions or concerns so that we can address them prior to sending them to Greg and Karen. This is a quick turnaround as I need to get this to Karen and Greg by noon today.

Thanks,

On Mon, Sep 17, 2018 at 4:31 PM, Putnam, Christopher <[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)> wrote:

Thanks Kim.

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

On Mon, Sep 17, 2018 at 4:22 PM Klein, Kimberly <[kimberly\\_klein@fws.gov](mailto:kimberly_klein@fws.gov)> wrote:

Please see the attached response to solicitor's comments. Thank you.

**Kimberly Klein**  
Incidental Take Coordinator  
US Fish and Wildlife Service  
907 786 3621  
[Kimberly\\_Klein@fws.gov](mailto:Kimberly_Klein@fws.gov)

On Mon, Sep 17, 2018 at 3:55 PM Wilson, Ryan <[ryan\\_r\\_wilson@fws.gov](mailto:ryan_r_wilson@fws.gov)> wrote:

Great, thanks!

On Mon, Sep 17, 2018 at 3:44 PM Klein, Kimberly <[kimberly\\_klein@fws.gov](mailto:kimberly_klein@fws.gov)> wrote:

Thanks Ryan, I will incorporate your responses and send with mine.

**Kimberly Klein**  
Incidental Take Coordinator  
US Fish and Wildlife Service  
907 786 3621  
[Kimberly\\_Klein@fws.gov](mailto:Kimberly_Klein@fws.gov)

On Mon, Sep 17, 2018 at 3:04 PM Putnam, Christopher <[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)>  
wrote:

Thanks Ryan.

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

On Mon, Sep 17, 2018 at 2:49 PM Wilson, Ryan <[ryan\\_r\\_wilson@fws.gov](mailto:ryan_r_wilson@fws.gov)> wrote:

Kim,  
Here are my responses. Please take a look at them and let me know if you think I  
should include anything else. I kind of provided a lot of detail on the FLIR estimate  
because I feel like that needed to be better spelled out.  
Ryan

On Mon, Sep 17, 2018 at 11:20 AM Klein, Kimberly <[kimberly\\_klein@fws.gov](mailto:kimberly_klein@fws.gov)> wrote:

Christopher, I got what you sent, thanks. I will look it over and coordinate with Ryan  
when he gets back around noon to tackle as much as we can by the end of the day.

**Kimberly Klein**  
Incidental Take Coordinator  
US Fish and Wildlife Service  
907 786 3621  
[Kimberly\\_Klein@fws.gov](mailto:Kimberly_Klein@fws.gov)

On Mon, Sep 17, 2018 at 11:04 AM Putnam, Christopher <[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)>  
wrote:

Hi Kim & Ryan,  
I've forwarded a message from Mary with a copy of the take analysis document with  
the solicitor Josh Kindred's comments in track changes. Mary and Patrick will want  
to get together to discuss our response soon. Can we have some initial thoughts by  
the end of today? Thanks.

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

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

From: **Mary Colligan** <[mary\\_colligan@fws.gov](mailto:mary_colligan@fws.gov)>

Date: Sat, Sep 15, 2018 at 10:28 AM

Subject: Fwd: Estimate of Take of Denning Polar Bears During Seismic Activities in the 1002

To: Patrick Lemons <[patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)>, Christopher Putnam  
<[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)>

Let's review and talk about this early next week

Sent from my iPhone

Begin forwarded message:

**From:** "Kindred, Joshua" <[joshua.kindred@sol.doi.gov](mailto:joshua.kindred@sol.doi.gov)>

**Date:** September 14, 2018 at 2:38:50 PM AKDT

**To:** Greg Siekaniec <[greg\\_siekaniec@fws.gov](mailto:greg_siekaniec@fws.gov)>, Karen Clark <[karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)>,  
Mary Colligan <[mary\\_colligan@fws.gov](mailto:mary_colligan@fws.gov)>

**Subject:** Fwd: Estimate of Take of Denning Polar Bears During Seismic Activities in  
the 1002

(b) (5) ACP  
[Redacted content]

(b) (5) ACP

If you have any questions or concerns, please just let me know.

*Joshua M. Kindred*  
*Regional Solicitor*  
*U.S. Dept. of the Interior*  
*Alaska Region*  
*(907) 271-4118*  
*[joshua.kindred@sol.doi.gov](mailto:joshua.kindred@sol.doi.gov)*

--

Ryan Wilson, Ph.D., Certified Wildlife Biologist ®  
Marine Mammals Management, Polar Bears  
U.S. Fish and Wildlife Service  
1011 E. Tudor Rd., MS341  
Anchorage, AK 99503

Phone: (907) 786-3830  
Email: [ryan\\_r\\_wilson@fws.gov](mailto:ryan_r_wilson@fws.gov)  
Fax: (907) 786-3816

--

Ryan Wilson, Ph.D., Certified Wildlife Biologist ®  
Marine Mammals Management, Polar Bears  
U.S. Fish and Wildlife Service  
1011 E. Tudor Rd., MS341  
Anchorage, AK 99503

Phone: (907) 786-3830  
Email: [ryan\\_r\\_wilson@fws.gov](mailto:ryan_r_wilson@fws.gov)  
Fax: (907) 786-3816

--

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:** Gregory Siekaniec[greg\_siekaniec@fws.gov]; Karen Clark[karen\_clark@fws.gov]  
**Cc:** Patrick Lemons[patrick\_lemons@fws.gov]; Christopher Putnam[christopher\_putnam@fws.gov]; James Wilder[james\_wilder@fws.gov]  
**From:** Colligan, Mary  
**Sent:** 2018-09-20T13:47:47-04:00  
**Importance:** Normal  
**Subject:** Response to comments sent by Josh Kindred  
**Received:** 2018-09-20T13:47:50-04:00  
[Evaluation and Response to Solicitor 20Sept2018.docx](#)

Greg and Karen Attached please find our response to the comments provided by Josh Kindred on the draft denning section of our analysis of SAE's seismic application.

Thanks

--

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:** Colligan, Mary[mary\_colligan@fws.gov]  
**From:** Putnam, Christopher  
**Sent:** 2018-09-20T13:56:00-04:00  
**Importance:** Normal  
**Subject:** Re: reference?  
**Received:** 2018-09-20T13:56:00-04:00  
Flaxman Island P642 Polar Bear Artificial Dens Final Report.pdf

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

On Thu, Sep 20, 2018 at 9:49 AM Colligan, Mary <mary\_colligan@fws.gov> wrote:

Christopher Do you have a copy of the following:

MacGillivray, A.O., D.E. Hannay, R.G. Racca, C.J. Perham, S.A. MacLean, M.T. Williams. 2002. Assessment of industrial sounds and vibrations received in artificial polar bear dens, Flaxman Island, Alaska. ExxonMobil Production Co. by LGL Alaska Research Associates, Inc., Anchorage, Alaska and JASCO Research Ltd., Victoria, British Columbia. 60 p.

--

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:** Google Calendar  
**Location:** FWS-FW7 Mary Smith Media Center/Regional Office  
**Importance:** Normal  
**Subject:** MMPA ITR denning analysis  
**Start Date/Time:** 2018-09-20T17:00:00-04:00  
**End Date/Time:** 2018-09-20T19:00:00-04:00  
[invite.ics](#)

[more details »](#)

### **MMPA ITR denning analysis**

**When** Thu 2018-09-20 13:00 – 15:00 Alaska Time - Anchorage

**Where** FWS-FW7 Mary Smith Media Center/Regional Office ([map](#))

**Video call** <https://hangouts.google.com/hangouts/ /doi.gov/mary-colligan>

**Calendar** christopher\_putnam@fws.gov

**Who**

- [mary\\_colligan@fws.gov](#) organizer
- [christopher\\_putnam@fws.gov](#)
- [patrick\\_lemons@fws.gov](#)

Going? **Yes - Maybe - No** [more options »](#)

Invitation from [Google Calendar](#)

You are receiving this email at the account christopher\_putnam@fws.gov because you are subscribed for invitations on calendar christopher\_putnam@fws.gov.

To stop receiving these emails, please log in to <https://www.google.com/calendar/> and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. [Learn More](#).

**From:** Google Calendar  
**Location:** MMM conference room  
**Importance:** Normal  
**Subject:** 1002 Seismic  
**Start Date/Time:** 2018-08-24T12:00:00-04:00  
**End Date/Time:** 2018-08-24T14:00:00-04:00  
[invite.ics](#)

[more details »](#)

## 1002 Seismic

**When** Fri Aug 24, 2018 8am – 10am Alaska Time - Anchorage

**Where** MMM conference room ([map](#))

**Video call** [https://hangouts.google.com/hangouts/\\_/doi.gov/james-wilder](https://hangouts.google.com/hangouts/_/doi.gov/james-wilder)

**Calendar** kimberly\_klein@fws.gov

**Who**

- james\_wilder@fws.gov - organizer
- mary\_colligan@fws.gov
- kimberly\_klein@fws.gov
- patrick\_lemons@fws.gov
- christopher\_putnam@fws.gov

**Going?** [Yes](#) - [Maybe](#) - [No](#) [more options »](#)

Invitation from [Google Calendar](#)

You are receiving this email at the account kimberly\_klein@fws.gov because you are subscribed for invitations on calendar kimberly\_klein@fws.gov.

To stop receiving these emails, please log in to <https://www.google.com/calendar/> and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. [Learn More](#).

**To:** Klein, Kimberly[kimberly\_klein@fws.gov]  
**From:** Christopher Putnam  
**Sent:** 2018-08-24T15:48:54-04:00  
**Importance:** Normal  
**Subject:** Fwd: Court Case  
**Received:** 2018-08-24T15:49:16-04:00  
MMPA-Hawaii-incidental take by Navy-adverse district court.pdf

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

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

**From:** Christopher Putnam <christopher\_putnam@fws.gov>  
**Date:** Fri, Aug 24, 2018 at 11:48 AM  
**Subject:** Court Case  
**To:** Klein, Kimberly <kimberly\_klein@fws.gov>

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  
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-- J.R.R. Tolkien



**From:** Google Calendar  
**Location:** MMM Conference  
**Importance:** Normal  
**Subject:** 1002 Seismic ITR Discussion  
**Start Date/Time:** 2018-08-27T14:00:00-04:00  
**End Date/Time:** 2018-08-27T16:00:00-04:00  
[invite.ics](#)

[more details »](#)

## 1002 Seismic ITR Discussion

**When** Mon Aug 27, 2018 10am – 12pm Alaska Time - Anchorage

**Where** MMM Conference ([map](#))

**Video call** [https://hangouts.google.com/hangouts/\\_/doi.gov/patrick-lemons](https://hangouts.google.com/hangouts/_/doi.gov/patrick-lemons)

**Calendar** kimberly\_klein@fws.gov

**Who**

- [patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov) - organizer
- [christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)
- [james\\_wilder@fws.gov](mailto:james_wilder@fws.gov)
- [kimberly\\_klein@fws.gov](mailto:kimberly_klein@fws.gov)
- [mary\\_colligan@fws.gov](mailto:mary_colligan@fws.gov)

**Going?** [Yes](#) - [Maybe](#) - [No](#) [more options »](#)

Invitation from [Google Calendar](#)

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To stop receiving these emails, please log in to <https://www.google.com/calendar/> and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. [Learn More](#).

**To:** Debora Nigro[dnigro@blm.gov]  
**From:** Christopher Putnam  
**Sent:** 2018-08-24T19:50:11-04:00  
**Importance:** Normal  
**Subject:** Re: Cumulative effects area for ESA section 7 consultation Coastal Plain Seismic  
**Received:** 2018-08-24T19:50:11-04:00

Hi Debbie,

I was hoping someone else would have responded to you. We are still working on developing our draft proposed ITR, our EA is in a very early draft stage and we haven't made that cumulative effects area decision yet. Besides us working on a different timeline than BLM, our EA only covers the issuance of the ITR and subsequent LOAs. When I reviewed the BLM seismic EA recently there was a cumulative effects area identified. That may be more useful for you that waiting on us. It isn't clear right now when we'll have our EA developed enough to share.

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

On Fri, Aug 24, 2018 at 1:48 PM Nigro, Debora <[dnigro@blm.gov](mailto:dnigro@blm.gov)> wrote:

Thanks for getting back to me. No one has gotten back to me so I still need to know what you are using for the cumulative effects analysis for the polar bear for the seismic EA.  
Many thanks,

Deb

On Fri, Aug 24, 2018 at 11:03 AM, Christopher Putnam <[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)> wrote:

Hi Debbie,  
Did you get the information you requested? I just realized that I didn't follow up with you.

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

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not wither, deep roots are not reached by the frost."

-- J.R.R. Tolkien

On Wed, Aug 22, 2018 at 1:55 PM Nigro, Debora <[dnigro@blm.gov](mailto:dnigro@blm.gov)> wrote:

Hi Christopher,

I am working on writing the bird sections for the ESA section 7 consultation for the Coastal  
Plain Seismic EA and I wanted to check with you regarding what you are considering to be  
the cumulative effects area for the polar bear portion of the consultation. I will match  
whatever area you are using if you can just let me know what it is.

Thank you,

Debbie

--

Debbie Nigro  
Bureau of Land Management  
222 University Ave.  
Fairbanks, AK 99709  
907-474-2324  
[dnigro@blm.gov](mailto:dnigro@blm.gov)

--

Debbie Nigro  
Bureau of Land Management  
222 University Ave.  
Fairbanks, AK 99709  
907-474-2324  
[dnigro@blm.gov](mailto:dnigro@blm.gov)

**To:** Patrick Lemons[patrick\_lemons@fws.gov]; Christopher Putnam[christopher\_putnam@fws.gov]; Ryan Wilson[ryan\_r\_wilson@fws.gov]  
**From:** Crane, Drew  
**Sent:** 2018-08-27T16:55:50-04:00  
**Importance:** Normal  
**Subject:** Fwd: FW: Trip Planning: Seismic equipment and operations review in Deadhorse (Prudhoe Bay); Thursday Aug 30  
**Received:** 2018-08-27T16:55:54-04:00

Hey there,  
Any interest in sending someone to this?

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: **Wendy Loya** <[wendy\\_loya@fws.gov](mailto:wendy_loya@fws.gov)>  
Date: Mon, Aug 27, 2018 at 12:53 PM  
Subject: FW: Trip Planning: Seismic equipment and operations review in Deadhorse (Prudhoe Bay); Thursday Aug 30  
To: Drew Crane <[drew\\_crane@fws.gov](mailto:drew_crane@fws.gov)>, Sarah Conn <[sarah\\_conn@fws.gov](mailto:sarah_conn@fws.gov)>  
Cc: Mary Colligan <[mary\\_colligan@fws.gov](mailto:mary_colligan@fws.gov)>, Steve Berendzen <[steve\\_berendzen@fws.gov](mailto:steve_berendzen@fws.gov)>

Hi Drew and Sarah,

Can you circle with your teams and let Steve B and I know if you have staff that should attend this equipment demonstration by SAE on Thursday, see below. It has very specific timelines, it looks like you could fly from Fairbanks early on Thursday through Anchorage, but the evening return would require an overnight in ANC or Deadhorse.

We hope to send at least Steve, Joanna and Paul Leonard.

The deadline to decide and book is today ☺

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:** Berendzen, Steve <[steve\\_berendzen@fws.gov](mailto:steve_berendzen@fws.gov)>  
**Sent:** Monday, August 27, 2018 12:36 PM  
**To:** Loya, Wendy <[wendy\\_loya@fws.gov](mailto:wendy_loya@fws.gov)>; Paul Leonard <[paul\\_leonard@fws.gov](mailto:paul_leonard@fws.gov)>; Joanna Fox <[joanna\\_fox@fws.gov](mailto:joanna_fox@fws.gov)>  
**Subject:** Fwd: Trip Planning: Seismic equipment and operations review in Deadhorse (Prudhoe Bay); Thursday Aug 30

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

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

**From:** Ellefson, Robert <[rellefso@blm.gov](mailto:rellefso@blm.gov)>  
**Date:** Mon, Aug 27, 2018 at 11:43 AM  
**Subject:** Trip Planning: Seismic equipment and operations review in Deadhorse (Prudhoe Bay); Thursday Aug 30  
**To:** Shelly W Jacobson <[njones@blm.gov](mailto:njones@blm.gov)>, Steve Berendzen <[steve\\_berendzen@fws.gov](mailto:steve_berendzen@fws.gov)>  
**Cc:** [rtrupp@saexploration.com](mailto:rtrupp@saexploration.com), "Murphy, Ted" <[t75murph@blm.gov](mailto:t75murph@blm.gov)>, [greg\\_siekaniec@fws.gov](mailto:greg_siekaniec@fws.gov), Sherman Hogue <[shogue@blm.gov](mailto:shogue@blm.gov)>

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

Bureau of Land Management

Office: 907-271-4194

Cell: 907-301-8362

[reliefso@blm.gov](mailto:reliefso@blm.gov)

**To:** Lemons, Patrick[patrick\_lemons@fws.gov]  
**From:** Putnam, Christopher  
**Sent:** 2018-08-27T17:51:55-04:00  
**Importance:** Normal  
**Subject:** Re: Trip Planning: Seismic equipment and operations review in Deadhorse (Prudhoe Bay); Thursday Aug 30  
**Received:** 2018-08-27T17:51:55-04:00

I agree, I don't see a need for any of my people to go.

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

On Mon, Aug 27, 2018 at 1:47 PM Lemons, Patrick <patrick\_lemons@fws.gov> wrote:

I see no reason to go but let me know if you disagree.

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

**From:** Mary Colligan <mary\_colligan@fws.gov>  
**Date:** Mon, Aug 27, 2018 at 1:42 PM  
**Subject:** Fwd: Trip Planning: Seismic equipment and operations review in Deadhorse (Prudhoe Bay); Thursday Aug 30  
**To:** Sarah Conn <sarah\_conn@fws.gov>, Patrick Lemons <patrick\_lemons@fws.gov>, david\_wigglesworth@fws.gov

Sent from my iPhone

Begin forwarded message:

**From:** Greg Siekaniec <greg\_siekaniec@fws.gov>  
**Date:** August 27, 2018 at 12:38:28 PM AKDT  
**To:** wendy\_loya@fws.gov, mary\_colligan@fws.gov



**Subject: Fwd: Trip Planning: Seismic equipment and operations review in Deadhorse (Prudhoe Bay); Thursday Aug 30**

FYI

Sent from my iPhone

Begin forwarded message:

**From:** "Ellefson, Robert" <[rellefso@blm.gov](mailto:rellefso@blm.gov)>  
**Date:** August 27, 2018 at 11:43:48 AM AKDT  
**To:** Shelly W Jacobson <[njones@blm.gov](mailto:njones@blm.gov)>, Steve Berendzen <[steve\\_berendzen@fws.gov](mailto:steve_berendzen@fws.gov)>  
**Cc:** [rtrupp@saexploration.com](mailto:rtrupp@saexploration.com), "Murphy, Ted" <[t75murph@blm.gov](mailto:t75murph@blm.gov)>, [greg\\_siekaniec@fws.gov](mailto:greg_siekaniec@fws.gov), Sherman Hogue <[shogue@blm.gov](mailto:shogue@blm.gov)>  
**Subject: Trip Planning: Seismic equipment and operations review in Deadhorse (Prudhoe Bay); Thursday Aug 30**

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  
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Rob Ellefson

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Office: 907-271-4194  
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[rellefso@blm.gov](mailto:rellefso@blm.gov)

--

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:** Colligan, Mary[mary\_colligan@fws.gov]; Christopher Putnam[Christopher\_Putnam@fws.gov]  
**From:** Lemons, Patrick  
**Sent:** 2018-08-28T14:27:33-04:00  
**Importance:** Normal  
**Subject:** 1002 ITR Update  
**Received:** 2018-08-28T14:27:40-04:00  
Conservation Council vs NMFS 2015 - using PBR for Level A.pdf

Hi Mary,

To update you on where we're at after this morning's meeting, we looked through the Conservation Council of Hawaii vs. NMFS 2015 decision this morning and it's pretty clear that authorizing Level A above PBR cannot be argued to have a non-negligible impact. If you want to catch, you should read pages 18-46 but if you're short on time, focus on 30-46 of the case, which I attached.

We ran some very preliminary and rough calculations and even if we mitigated the activity to outside of a 5 mile buffer of the coast, we're still looking at 1.2 dens of the 2 dens that would occur outside of the 5 mile buffer going undetected by AIR. Those 1 or 2 dens would then still have an approximate 12% chance of being directly run over, and then they'd have another 15.6% chance of being disturbed in a way that results in abandonment of the den and death of the cubs. So, even if we ignore non-lethal Level-A, there's still a 25%-30% chance that a lethal Level A would occur outside of the 5 mile coastal buffer. Does that all make sense?

So, we'd like to setup a call with Ken Lord to discuss this issue, and particularly the case I mentioned above. This is to get his legal interpretation of that case and verify that it hasn't been turned over on appeal. If I was you, I'd want to have a conversation internally first. Would you like us to hold off on calling Ken until you have a chance to discuss? We could certainly put it off a few hours, until this afternoon.

For an update on the timeline. Kim is working up a new section for the ITR on assessing take of denning bears. She asked if she could then send this around for review before addressing the rest of the ITR. I thought that was reasonable. She estimated that she could have this completed by COB Wednesday. I told her to send it to Putnam and I and we'd turn it around hopefully by Thursday morning. If we're on the right track we think we could have a new draft ITR by Tuesday September 4th. Under the existing timeline, the ITR is supposed to be moving past FES on that date so something is going to have to give. I suggest we squeeze a few days on the RD side but mostly rely on HQ and DOI to shorten the 29 days they're scheduled for review down to perhaps 22-25 days.

Let me know what you think and if you'd like to discuss. We'll move forward with calling Ken as soon as we hear from you. We're also still on hold with calling SAE until Greg gives us the green light.

Patrick

--

Patrick Lemons, Ph.D.

0000014066

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:** Hamilton, Charles[[charles\\_hamilton@fws.gov](mailto:charles_hamilton@fws.gov)]  
**Cc:** Wilder, James[[james\\_wilder@fws.gov](mailto:james_wilder@fws.gov)]; Christopher Putnam[[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)]; Kimberly Klein[[kimberly\\_klein@fws.gov](mailto:kimberly_klein@fws.gov)]  
**From:** Lemons, Patrick  
**Sent:** 2018-08-28T14:53:36-04:00  
**Importance:** Normal  
**Subject:** Re: Double check a fact on the draft SBS PB SAR  
**Received:** 2018-08-28T14:53:40-04:00

Thanks Charlie. It's an interesting point but I'm not sure I follow the logic that you can take double the number of males than females under a PBR framework. I see that theoretically that's possible but is there language in the MMPA that would allow us the flexibility to do this? If so that's great but I'm just not aware of any such language and given that sex isn't considered in our calculation of PBR, I'm not sure how we do this. Anyway, something to consider for sure but I think we'd need to flesh out the details.

Patrick

On Tue, Aug 28, 2018 at 9:59 AM, Hamilton, Charles <[charles\\_hamilton@fws.gov](mailto:charles_hamilton@fws.gov)> wrote:

Not sure if the below is helpful, but it was what I mentioned in the meeting....

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

From: **Regehr, Eric** <[eric\\_regehr@fws.gov](mailto:eric_regehr@fws.gov)>  
Date: Mon, Feb 22, 2016 at 2:25 PM  
Subject: Re: Double check a fact on the draft SBS PB SAR  
To: "Hamilton, Charles" <[charles\\_hamilton@fws.gov](mailto:charles_hamilton@fws.gov)>  
Cc: Hilary Cooley <[hilary\\_cooley@fws.gov](mailto:hilary_cooley@fws.gov)>, Craig Perham <[craig\\_perham@fws.gov](mailto:craig_perham@fws.gov)>

Hi Charlie,

The calculations that you provide are correct. Perhaps the following language might clarify things:

Therefore, the PBR level for the SBS stock using the default assumption of a 1:1 sex ratio is approximately 15 bears per year. If this number is modified to preserve the female level, due to the importance of females to population growth, and incorporate a sex-selective harvest of 2 males to every 1 female (Taylor et al. 2008), the resulting PBR level would be approximately 15 bears per year (i.e., 7.5 females and 7.5 males) plus an additional 7.5 males per year, resulting in a total PBR level of approximately 22 bears per year conditional on harvest being conducted at a 2:1 male-to-female ratio.

Charlie you're right that this is a bit confusing due to the fact that the 2009 SB SAR included a PBR level of 22 bears per year \*before\* modification for a 2:1 male-to-female ratio. However, that's just a coincidence due to the fact that different input parameters were used in

the 2009 SAR. Specifically,  $1397 (N_{min}) * 0.5 * .063 (r_{max}) * 0.5 (F_r) = 22$  bears. If a modified sex ratio had been used in the 2009 SAR, the resulting level would have been 33 bears.

Hope this helps.

Eric

On Sun, Feb 21, 2016 at 1:15 PM, Hamilton, Charles <[charles\\_hamilton@fws.gov](mailto:charles_hamilton@fws.gov)> wrote:

Hey Folks,

I just noticed a sentence we have in the draft SAR that struck me as odd. In the below final sentence of the PBR section we note that if the number is modified to preserve females the PBR rises to 22 bears per year. Just wanted to double check this is correct, as the PBR in the previous SARS was a flat 22 bears, so with the reduction in population is this potential 22 actually correct or is it a residual/typo from the old SAR? Given the decline it seems high to me that even with a female preference it could go up 7 bears, but my maths skills ain't what they used to be....

Under the 1994 reauthorized MMPA, the potential biological removal (PBR) level is defined as the product of the minimum population estimate, one-half the maximum theoretical net productivity rate, and a recovery factor:  $PBR = (N_{MIN})(\frac{1}{2} R_{MAX})(F_R)$ . Wade and Angliss (1997) recommend a default recovery factor ( $F_R$ ) of 0.5 for a threatened population or when the status of a population is unknown. In the following calculation:  $(N_{MIN})(\frac{1}{2} R_{MAX})(F_r) = PBR$  (Wade and Angliss 1997) the minimum population estimate,  $N_{MIN}$  was 782; the maximum rate of increase  $R_{MAX}$  was 7.5%; and the recovery factor  $F_R$  was 0.5. Therefore, the PBR level for the SBS stock using the default assumption of a 1:1 sex ratio is approximately 15 bears per year. If this number is modified to preserve the female level, due to the importance of females to population growth, and incorporate a sex-selective harvest of 2 males to every 1 female (Taylor et al. 2008), the resulting PBR level is approximately 22 bears per year.

--

Regards,

Charles S. Hamilton

Special Assistant  
Marine Mammals Management  
U.S. Fish and Wildlife Service  
1011 East Tudor Rd., MS-341  
Anchorage, AK 99503  
Voice: (907) 786-3804  
FAX: (907) 786 - 3816

"We will restore science to its rightful place..."  
President Barack Obama

--

Eric V. Regehr, Ph.D.  
Marine Mammals Management, Polar Bears  
U.S. Fish and Wildlife Service  
1011 E. Tudor Rd., MS341  
Anchorage, AK 99503

Office Phone: (907) 786-3913  
Cell Phone: (907) 250-5764  
Email: [Eric\\_Regehr@fws.gov](mailto:Eric_Regehr@fws.gov)  
Fax: (907) 786-3816  
Website: <http://alaska.fws.gov/fisheries/mmm/index.htm>

The findings and conclusions presented here are mine personally and do not necessarily represent the views of the FWS.

--

Regards,

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Patrick Lemons, Ph.D.

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



**To:** Howard, Amee[amee\_howard@fws.gov]; Christopher Putnam[Christopher\_Putnam@fws.gov]; James Wilder[James\_Wilder@fws.gov]; Colligan, Mary[mary\_colligan@fws.gov]  
**From:** Lemons, Patrick  
**Sent:** 2018-08-30T19:27:53-04:00  
**Importance:** Normal  
**Subject:** Re: Request for Briefing Paper update and ITR questions for 1002  
**Received:** 2018-08-30T19:27:57-04:00  
08.28.18 Polar Bear Science-Research Update - DRAFT.docx

Hi Amee,  
Here's the most recent version of the 1002 polar bear research briefing paper. I've incorporated comments from Christopher but Jim and Mary are out today. I think it's pretty good as is but if Mary and Jim have comments early next week, I'll incorporate them and get a new version to you on Tuesday.

Let me know if you need anything else.  
Patrick

On Thu, Aug 30, 2018 at 10:03 AM, Howard, Amee <[amee\\_howard@fws.gov](mailto:amee_howard@fws.gov)> wrote:

Thanks Patrick!  
That will be great.

Appreciate the assist!

On Thu, Aug 30, 2018 at 9:37 AM Lemons, Patrick <[patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)> wrote:

Yep. I worked on it last night and sent it to Mary and Jim for comment. I should have something for you later today, hopefully early afternoon. Will that work?

On Thu, Aug 30, 2018 at 8:43 AM, Howard, Amee <[amee\\_howard@fws.gov](mailto:amee_howard@fws.gov)> wrote:

Hi Patrick,  
Did you get a chance to take a look at the briefing paper for Polar Bear science-research? BP and attachment...the last version that I had was from February.

Thanks so much!  
Amee

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

From: **Howard, Amee** <[amee\\_howard@fws.gov](mailto:amee_howard@fws.gov)>  
Date: Tue, Aug 28, 2018 at 8:45 AM  
Subject: Request for Briefing Paper update and ITR questions for 1002  
To: Patrick Lemons <[Patrick\\_Lemons@fws.gov](mailto:Patrick_Lemons@fws.gov)>  
Cc: Mary Colligan <[mary\\_colligan@fws.gov](mailto:mary_colligan@fws.gov)>

Hi Patrick,

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Along with the Power Point presentation the ASFWP has also asked to be updated on all relevant Alaska issues. Along with the presentation, I have a Briefing Paper and attachment from February on Polar Bear research and science in Arctic Refuge. I have attached both below. Can you have your team take a look and let me know if there are updates. I have updated the format slightly.

Deadline is as soon as possible. The briefing is not scheduled yet, we are hoping for Thursday but it is dependent on Jim and the ASFWP's schedules. I will let you know when I hear more.

Let me know if you have any questions!

Thanks so much in advance!

Amee

--

*Amee Howard*

*Congressional and State Liaison*

U.S. Fish & Wildlife Service

Anchorage, Alaska

Office: (907)786-3509

Mobile: (907)229-8575

Get Inspired

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*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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--

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)

--

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U.S. Fish & Wildlife Service  
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e-mail: [patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)

**To:** Patrick Lemons[patrick\_lemons@fws.gov]  
**Cc:** Christopher Putnam[Christopher\_Putnam@fws.gov]; James Wilder[James\_Wilder@fws.gov]; Mary Colligan[mary\_colligan@fws.gov]  
**From:** Howard, Amee  
**Sent:** 2018-08-30T19:34:26-04:00  
**Importance:** Normal  
**Subject:** Re: Request for Briefing Paper update and ITR questions for 1002  
**Received:** 2018-08-30T19:34:40-04:00

Thank you!  
I really appreciate everyone's time and assistance on this.

On Thu, Aug 30, 2018 at 3:27 PM Lemons, Patrick <patrick\_lemons@fws.gov> wrote:

Hi Amee,  
Here's the most recent version of the 1002 polar bear research briefing paper. I've incorporated comments from Christopher but Jim and Mary are out today. I think it's pretty good as is but if Mary and Jim have comments early next week, I'll incorporate them and get a new version to you on Tuesday.

Let me know if you need anything else.  
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Thanks Patrick!  
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Appreciate the assist!

On Thu, Aug 30, 2018 at 9:37 AM Lemons, Patrick <patrick\_lemons@fws.gov> wrote:

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Thanks so much!  
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From: **Howard, Amee** <amee\_howard@fws.gov>

Date: Tue, Aug 28, 2018 at 8:45 AM  
Subject: Request for Briefing Paper update and ITR questions for 1002  
To: Patrick Lemons <[Patrick\\_Lemons@fws.gov](mailto:Patrick_Lemons@fws.gov)>  
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Let me know if you have any questions!

Thanks so much in advance!

Amee

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***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

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--

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  
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--

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*Congressional and State Liaison*  
U.S. Fish & Wildlife Service  
Anchorage, Alaska  
Office: (907)786-3509  
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Get Inspired

--

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*Congressional and State Liaison*  
U.S. Fish & Wildlife Service  
Anchorage, Alaska  
Office: (907)786-3509  
Mobile: (907)229-8575  
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**To:** Lemons, Patrick[patrick\_lemons@fws.gov]  
**Cc:** Christopher Putnam[Christopher\_Putnam@fws.gov]; James Wilder[James\_Wilder@fws.gov]  
**From:** Colligan, Mary  
**Sent:** 2018-08-31T11:54:18-04:00  
**Importance:** Normal  
**Subject:** Re: Request for Briefing Paper update and ITR questions for 1002  
**Received:** 2018-08-31T11:54:22-04:00  
08.28.18 Polar Bear Science-Research Update - DRAFT\_MAC.docx

I have attached some suggested edits and questions/comments for your consideration

Thanks

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

From: **Howard, Amee** <amee\_howard@fws.gov>

0000014078

Date: Tue, Aug 28, 2018 at 8:45 AM  
Subject: Request for Briefing Paper update and ITR questions for 1002  
To: Patrick Lemons <[Patrick\\_Lemons@fws.gov](mailto:Patrick_Lemons@fws.gov)>  
Cc: Mary Colligan <[mary\\_colligan@fws.gov](mailto:mary_colligan@fws.gov)>

Hi Patrick,

Yesterday afternoon Karen Clark let me and Wendy know that acting Director, Jim Kurth would like Greg to brief the incoming acting Assistant Secretary for Fish, Wildlife, and Parks (ASFWP) on relevant topics in Alaska. The bulk of the briefing will be on the 1002 area and associated NEPA processes and our role in those. Wendy is currently working on language for a power point presentation (new request from HQ). Karen mentioned that we may also need to describe the ITR process and current status for 1002 more in-depth. Wendy hopes to have the draft complete by mid-day today. She will be working from a current BP (attached for your reference) and EA will be adding final touches to make it look good (ie. add cool pictures and formatting).

Along with the Power Point presentation the ASFWP has also asked to be updated on all relevant Alaska issues. Along with the presentation, I have a Briefing Paper and attachment from February on Polar Bear research and science in Arctic Refuge. I have attached both below. Can you have your team take a look and let me know if there are updates. I have updated the format slightly.

Deadline is as soon as possible. The briefing is not scheduled yet, we are hoping for Thursday but it is dependent on Jim and the ASFWP's schedules. I will let you know when I hear more.

Let me know if you have any questions!

Thanks so much in advance!

Amee

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***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

--

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)

--

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*Congressional and State Liaison*  
U.S. Fish & Wildlife Service  
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Get Inspired

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Anchorage, AK 99503  
Work: 907-786-3668  
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--

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:** Colligan, Mary[mary\_colligan@fws.gov]  
**Cc:** Klein, Kimberly[kimberly\_klein@fws.gov]; Christopher Putnam[christopher\_putnam@fws.gov]  
**From:** Lemons, Patrick  
**Sent:** 2018-08-31T13:37:18-04:00  
**Importance:** Normal  
**Subject:** Re: Estimating take of denning bears  
**Received:** 2018-08-31T13:37:22-04:00  
Impacts on the Stock\_30Aug2018.docx

Here ya go Mary. Sorry I didn't get this to you last night.

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Can you please send me the outline?

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US Fish and Wildlife Service  
907-786-3621  
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**To:** Patrick Lemons[patrick\_lemons@fws.gov]  
**Cc:** Mary Colligan[mary\_colligan@fws.gov]; Christopher Putnam[christopher\_putnam@fws.gov]  
**From:** Klein, Kimberly  
**Sent:** 2018-08-31T16:10:44-04:00  
**Importance:** Normal  
**Subject:** Re: Estimating take of denning bears  
**Received:** 2018-08-31T16:11:14-04:00  
Impacts on the Stock\_31Aug2018.docx

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**Cc:** Mary Colligan[mary\_colligan@fws.gov]; Christopher Putnam[christopher\_putnam@fws.gov]  
**From:** Lemons, Patrick  
**Sent:** 2018-08-31T17:53:22-04:00  
**Importance:** Normal  
**Subject:** Re: Estimating take of denning bears  
**Received:** 2018-08-31T17:53:26-04:00  
Denning Bears 30Aug2018 - pl comments.docx

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**Kimberly\_Klein@fws.gov**

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Fisheries and Ecological Services  
U.S. Fish and Wildlife Service, Alaska Region  
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Anchorage, AK 99503  
907-786-3505  
cell: 907-223-5945

--

Patrick Lemons, Ph.D.  
Chief, Marine Mammals Management  
U.S. Fish and Wildlife Service  
1011 East Tudor Road  
Anchorage, AK 99503  
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**Cc:** Mary Colligan[mary\_colligan@fws.gov]; Christopher Putnam[christopher\_putnam@fws.gov]  
**From:** Lemons, Patrick  
**Sent:** 2018-09-01T16:08:59-04:00  
**Importance:** Normal  
**Subject:** Re: Estimating take of denning bears  
**Received:** 2018-09-01T16:09:03-04:00  
Denning Bears 30Aug2018 - pl comments.docx

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--

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**To:** Lemons, Patrick[patrick\_lemons@fws.gov]  
**Cc:** Klein, Kimberly[kimberly\_klein@fws.gov]; Christopher Putnam[christopher\_putnam@fws.gov]  
**From:** Colligan, Mary  
**Sent:** 2018-09-02T18:12:45-04:00  
**Importance:** Normal  
**Subject:** Re: Estimating take of denning bears  
**Received:** 2018-09-02T18:12:51-04:00  
Denning Bears 30Aug2018 - pl MAC comments.docx

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0000014091

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Mary Colligan  
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Fisheries and Ecological Services  
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cell: 907-223-5945

--

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--

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**Cc:** Patrick Lemons[patrick\_lemons@fws.gov]; Christopher Putnam[christopher\_putnam@fws.gov]  
**From:** Klein, Kimberly  
**Sent:** 2018-09-03T23:29:38-04:00  
**Importance:** Normal  
**Subject:** Re: Estimating take of denning bears  
**Received:** 2018-09-03T23:30:09-04:00

Thanks Mary,

I have reworked the estimate of probability of den collapse. I am sorry to throw this at everyone at this point and not earlier, but based on my new numbers, the chance of a den collapse due to being run over is remote. Amstrup argued that based on the size of the footprint, and the number of dens on the refuge, there would be a high probability of a den being run over. Earlier, I had questioned where Amstrup got his numbers, and reworked the size of the project footprint to get the new estimate, but I didn't question what he then did to calculate probability based on the number of dens. He argued that the likelihood of a den being run over is  $1-(1-P)^n$  where P is the probability of a den being run over and n is the number of dens. That argument is fine, but then he used the proportion of the ground covered by the seismic footprint as P. The 22% probability that he got for the answer is the probability that any piece of ground would be in a seismic footprint given n=11 surveys.

The actual probability is remote. Again, I'm sorry for the reassessment. The rest of the analysis stands.

**Kimberly Klein**

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On Sun, Sep 2, 2018 at 2:12 PM Colligan, Mary <mary\_colligan@fws.gov> wrote:

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**To:** Christopher Putnam[christopher\_putnam@fws.gov]  
**From:** Klein, Kimberly  
**Sent:** 2018-09-04T21:42:03-04:00  
**Importance:** Normal  
**Subject:** ROUTE  
**Received:** 2018-09-04T21:42:32-04:00

M:\Regulatory\_Program\Incidental\_Intentional take\ITRs\Beaufort Sea 2016 ITR\Proposed Rule\2016 BS ITR drafts and parts\Figures

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**From:** Klein, Kimberly  
**Sent:** 2018-09-04T21:45:06-04:00  
**Importance:** Normal  
**Subject:** map project  
**Received:** 2018-09-04T21:45:35-04:00

is here:

M:\GIS\Projects\Oil and Gas\SBITRboundary2015

**Kimberly Klein**

Incidental Take Coordinator  
US Fish and Wildlife Service  
907-786-3621

**Kimberly\_Klein@fws.gov**

**To:** Klein, Kimberly[kimberly\_klein@fws.gov]  
**Cc:** Christopher Putnam[christopher\_putnam@fws.gov]  
**From:** Baucum, Madonna  
**Sent:** 2018-09-05T15:12:54-04:00  
**Importance:** Normal  
**Subject:** Re: Status of PR 1018-BD62, Marine Mammals; Incidental Take of Marine Mammals During Specified Activities: Arctic Coastal Plain;  
**Received:** 2018-09-05T15:13:38-04:00

Great - thank you. Sorry, for some reason, I thought the version of the SSA you sent was still being updated. I can't finalize my review of the SSA until I get a copy of the rule, but I'll start looking at it to see if anything jumps out at me.

Thanks!

**Madonna L. Baucum**  
**Information Collection Clearance Officer**  
Alternate Departmental Information Collection Clearance Officer  
**Division of Policy, Performance, and Management Programs**  
**U.S. Fish and Wildlife Service**  
5275 Leesburg Pike, MS: BPHC  
Falls Church, VA 22041-3803  
Telephone: (703) 358-2503  
Cell: (202) 480-0723

On Wed, Sep 5, 2018 at 2:49 PM, Klein, Kimberly <[kimberly\\_klein@fws.gov](mailto:kimberly_klein@fws.gov)> wrote:

Madonna, I sent the revised SS, I will resend. The draft rule is still in the works, but I will send it along ASAP. Thanks.

**Kimberly Klein**  
Incidental Take Coordinator  
US Fish and Wildlife Service  
907-786-3621  
[Kimberly\\_Klein@fws.gov](mailto:Kimberly_Klein@fws.gov)

On Wed, Sep 5, 2018 at 8:41 AM Baucum, Madonna <[madonna\\_baucum@fws.gov](mailto:madonna_baucum@fws.gov)> wrote:

OK - When will you send me your updated Supporting Statement and draft rule to review?  
It needs to go to my counterpart in the Department for review as well to ensure it's complete.

**Madonna L. Baucum**  
**Information Collection Clearance Officer**  
Alternate Departmental Information Collection Clearance Officer  
**Division of Policy, Performance, and Management Programs**  
**U.S. Fish and Wildlife Service**  
5275 Leesburg Pike, MS: BPHC  
Falls Church, VA 22041-3803  
Telephone: (703) 358-2503  
Cell: (202) 480-0723

On Wed, Sep 5, 2018 at 12:35 PM, Klein, Kimberly <[kimberly\\_klein@fws.gov](mailto:kimberly_klein@fws.gov)> wrote:

Hi Madonna, we hope to have a proposed ITR for publication by mid October.

**Kimberly Klein**

Incidental Take Coordinator

US Fish and Wildlife Service

907-786-3621

**[Kimberly\\_Klein@fws.gov](mailto:Kimberly_Klein@fws.gov)**

On Wed, Sep 5, 2018 at 8:16 AM Baucum, Madonna <[madonna\\_baucum@fws.gov](mailto:madonna_baucum@fws.gov)> wrote:

Good morning - Can I get an update onr your PR 1018-BD62? When do you hope to publish the rule?

I have a meeting with the Departmental ICCO tomorrow and need to update him on all of the Service's rulemaking activities.

Thanks!

**Madonna L. Baucum**

**Information Collection Clearance Officer**

Alternate Departmental Information Collection Clearance Officer

**Division of Policy, Performance, and Management Programs**

**U.S. Fish and Wildlife Service**

5275 Leesburg Pike, MS: BPHC

Falls Church, VA 22041-3803

Telephone: (703) 358-2503

Cell: (202) 480-0723

**To:** Lemons, Patrick[patrick\_lemons@fws.gov]  
**Cc:** Colligan, Mary[mary\_colligan@fws.gov]; Christopher Putnam[Christopher\_Putnam@fws.gov]; Greg Siekaniec[greg\_siekaniec@fws.gov]  
**From:** Wackowski, Stephen  
**Sent:** 2018-09-05T20:36:57-04:00  
**Importance:** Normal  
**Subject:** Re: Polar Bear SARs  
**Received:** 2018-09-05T20:37:00-04:00

thanks. I'll see what I can find out.

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

On Wed, Sep 5, 2018 at 8:33 PM, Lemons, Patrick <patrick\_lemons@fws.gov> wrote:

Hi Steve,

The Package, which includes the Federal Register Notice and the two revised final polar bear SARs is in DTS, Number 3333. Our understanding is that it is currently with the DOI Solicitors office for a Legal Sufficiency finding. We previously responded to comments from the solicitor so they should be reviewing those comments and responses.

Please let me know if you need anything else.

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

**To:** Wackowski, Stephen[stephen\_wackowski@ios.doi.gov]; Colligan, Mary[mary\_colligan@fws.gov]  
**Cc:** Greg Siekaniec[greg\_siekaniec@fws.gov]; Frerich, Lucille[lucille\_frerich@fws.gov]; Christopher Putnam[Christopher\_Putnam@fws.gov]  
**From:** Lemons, Patrick  
**Sent:** 2018-09-05T20:43:10-04:00  
**Importance:** Normal  
**Subject:** 1002 Seismic ITR - Steve Wachowski and Solicitor Briefing  
**Received:** 2018-09-05T20:43:13-04:00

Hi Steve,  
I spoke with Lucy Frerich about setting up a briefing with you and the DOI Regional Solicitors on Thursday or Friday of next week. Greg is only available from 130pm to 330pm on Thursday the 13th. I've had Lucy reserve that time on our end and we've booked the Mary Smith Conference Room in our office for the meeting. Let me know if that works for you and the solicitors.

Also, as we discussed this morning, we're on track to send you a copy of the section of the ITR that deals with take of denning polar bears. My goal is to have that sent to you by mid afternoon Monday the 10th so that you have time to review it before our meeting on Thursday.

Let me know if that works for you or if you have questions.  
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)



**To:** Colligan, Mary[mary\_colligan@fws.gov]  
**Cc:** Christopher Putnam[christopher\_putnam@fws.gov]  
**From:** Lemons, Patrick  
**Sent:** 2018-09-05T21:20:02-04:00  
**Importance:** Normal  
**Subject:** Re: Briefing  
**Received:** 2018-09-05T21:20:05-04:00  
1002 Coastal Plain ITR briefing - PL Comments.docx

I need to get home but here is a very quick round of comments. I'll try to take another look at this later tonight or first thing tomorrow morning. I think it's 90% of the way there so we're close. Let me know what else I can do to get this to the finish line.

Patrick

On Wed, Sep 5, 2018 at 2:43 PM, Colligan, Mary <mary\_colligan@fws.gov> wrote:

So, here is the "quick" high level briefing doc that we have to get to HQ no later than tomorrow. I keep getting interrupted so thought I should send it as is for you to take a look. It is way too long - they want 2 pages. And I have not yet formatted it which will give me even less space.

So, edit away...please...

--

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

--

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:** Jim Wilder[james\_wilder@fws.gov]  
**From:** Putnam, Christopher  
**Sent:** 2018-09-06T19:32:15-04:00  
**Importance:** Normal  
**Subject:** Re: Weren't you gonna send us that NMFS lawsuit?  
**Received:** 2018-09-06T19:32:15-04:00  
[MMPA-Hawaii-incidental take by Navy-adverse district court.pdf](#)

Was I? I forgot, then. Here it is. The most relevant parts are on pages 18 to 30. Was there anything else I was supposed to do?

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

On Thu, Sep 6, 2018 at 3:30 PM Wilder, James <[james\\_wilder@fws.gov](mailto:james_wilder@fws.gov)> wrote:

--

James M. Wilder  
Marine Mammals Management, Polar Bear Program Leader  
U.S. Fish and Wildlife Service  
1011 E. Tudor Rd., MS341  
Anchorage, AK 99503

Office Phone: [\(907\) 786-3913](tel:(907)786-3913)  
Email: [james\\_wilder@fws.gov](mailto:james_wilder@fws.gov)  
Fax: [\(907\) 786-3816](tel:(907)786-3816)

**To:** Colligan, Mary[mary\_colligan@fws.gov]  
**Cc:** Tess Sprau[tess\_sprau@fws.gov]; Christopher Putnam[Christopher\_Putnam@fws.gov]  
**From:** Lemons, Patrick  
**Sent:** 2018-09-06T19:42:14-04:00  
**Importance:** Normal  
**Subject:** Briefing Paper for Director Kurth  
**Received:** 2018-09-06T19:42:17-04:00  
1002 Coastal Plain ITR Briefing - V4.docx

Hi Mary,

Attached is the draft briefing paper formatted for HQ. There are a couple small things to still add in and I've noted those. Take a look and let us know when you think it's ready. I'm happy to get it started through surname from our office for tracking purposes but if you want to expedite it, feel free.

If you can, please place a copy of the paper on our shared drive at the address below so we have a copy, or feel free to work off that doc rather than the attachment. I just wanted to make sure you didn't have problems accessing it.

M:\Regulatory\_Program\Incidental\_Intentional take\ITRs\Arctic Refuge 2019\Briefing Paper for UWFWS Director - 180906\1002 Coastal Plain ITR Briefing\1002 Coastal Plain ITR Briefing - V4.docx

Let me know if you have questions.

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

**To:** Klein, Kimberly[kimberly\_klein@fws.gov]  
**Cc:** Mary Colligan[mary\_colligan@fws.gov]; Christopher Putnam[christopher\_putnam@fws.gov]; Ryan Wilson[ryan\_r\_wilson@fws.gov]  
**From:** Lemons, Patrick  
**Sent:** 2018-09-10T14:03:33-04:00  
**Importance:** Normal  
**Subject:** Re: Impacts to Denning bears, mitigation measures  
**Received:** 2018-09-10T14:03:37-04:00  
Denning Bears 10Sept2018 - PL MC Comments .docx

Hi Kim,

Attached are Mary's and I's comments on the main document. Mary had some edits to the tables and she put them in a separate document as it was getting messy. I'll look at those comments this morning and get the the tables to you here shortly.

If possible, can we get this turned around by early afternoon so I can get things to folks before I brief them on Tuesday?

Thanks,  
Patrick

On Fri, Sep 7, 2018 at 5:00 PM, Klein, Kimberly <[kimberly\\_klein@fws.gov](mailto:kimberly_klein@fws.gov)> wrote:

See the attached sections. Let me know if you have questions, I will make any recommended edits ASAP on or before Monday. Thank you

**Kimberly Klein**  
Incidental Take Coordinator  
US Fish and Wildlife Service  
907-786-3621  
**[Kimberly\\_Klein@fws.gov](mailto:Kimberly_Klein@fws.gov)**

--

Patrick Lemons, Ph.D.  
Chief, Marine Mammals Management  
U.S. Fish and Wildlife Service  
1011 East Tudor Road  
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**To:** Klein, Kimberly[kimberly\_klein@fws.gov]  
**Cc:** Mary Colligan[mary\_colligan@fws.gov]; Christopher Putnam[christopher\_putnam@fws.gov]; Ryan Wilson[ryan\_r\_wilson@fws.gov]  
**From:** Lemons, Patrick  
**Sent:** 2018-09-10T16:06:06-04:00  
**Importance:** Normal  
**Subject:** Re: Impacts to Denning bears, mitigation measures  
**Received:** 2018-09-10T16:06:09-04:00  
[new tables.docx](#)

Hi Kim,  
I've been working on Mary's table but can't seem to get it where I think it makes intuitive sense. Instead of leaving you waiting, I thought I'd just send it to you so you're not waiting. I'll continue to rework the table but see what you think and perhaps the two of us can come up with a good idea.

Let me know if you have questions.  
Patrick

On Mon, Sep 10, 2018 at 10:16 AM, Klein, Kimberly <[kimberly\\_klein@fws.gov](mailto:kimberly_klein@fws.gov)> wrote:

Will do.

**Kimberly Klein**  
Incidental Take Coordinator  
US Fish and Wildlife Service  
907-786-3621  
[Kimberly\\_Klein@fws.gov](mailto:Kimberly_Klein@fws.gov)

On Mon, Sep 10, 2018 at 10:03 AM Lemons, Patrick <[patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)> wrote:

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Patrick

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See the attached sections. Let me know if you have questions, I will make any recommended edits ASAP on or before Monday. Thank you

**Kimberly Klein**

Incidental Take Coordinator  
US Fish and Wildlife Service  
907-786-3621

**Kimberly\_Klein@fws.gov**

--

Patrick Lemons, Ph.D.  
Chief, Marine Mammals Management  
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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

--

Patrick Lemons, Ph.D.  
Chief, Marine Mammals Management  
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**To:** Klein, Kimberly[kimberly\_klein@fws.gov]  
**Cc:** Mary Colligan[mary\_colligan@fws.gov]; Christopher Putnam[christopher\_putnam@fws.gov]; Ryan Wilson[ryan\_r\_wilson@fws.gov]  
**From:** Lemons, Patrick  
**Sent:** 2018-09-10T17:55:38-04:00  
**Importance:** Normal  
**Subject:** Re: Impacts to Denning bears, mitigation measures  
**Received:** 2018-09-10T17:55:41-04:00  
[new tables.docx](#)

Hi Kim,

I reworked the tables. In the end, the tables you had were by far the best so I apologize for all the back and forth. I reworked them a bit to provide some clarity. I hope it's helpful. The only thing I couldn't do was to create these exact tables but for the entire denning data set, and not just those for dens in the non-industrial areas. Could you also create a set of these tables that included the full sweep of dens to address Mary's comment? This would allow us to present this to the readers for transparency. I don't think it changes what you are doing as I think we can make the argument that the dens in the non-industrial areas more likely represent dens in the 1002. You'll likely need to beef up that justification in the text but otherwise it shouldn't change the outcome of your analysis.

Let me know what you think.  
Patrick

On Mon, Sep 10, 2018 at 12:06 PM, Lemons, Patrick <[patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)> wrote:

Hi Kim,

I've been working on Mary's table but can't seem to get it where I think it makes intuitive sense. Instead of leaving you waiting, I thought I'd just send it to you so you're not waiting. I'll continue to rework the table but see what you think and perhaps the two of us can come up with a good idea.

Let me know if you have questions.  
Patrick

On Mon, Sep 10, 2018 at 10:16 AM, Klein, Kimberly <[kimberly\\_klein@fws.gov](mailto:kimberly_klein@fws.gov)> wrote:

Will do.

**Kimberly Klein**  
Incidental Take Coordinator  
US Fish and Wildlife Service  
907-786-3621  
[Kimberly\\_Klein@fws.gov](mailto:Kimberly_Klein@fws.gov)

On Mon, Sep 10, 2018 at 10:03 AM Lemons, Patrick <[patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)> wrote:

Hi Kim,

Attached are Mary's and I's comments on the main document. Mary had some edits to the tables and she put them in a separate document as it was getting messy. I'll look at those comments this morning and get the the tables to you here shortly.

If possible, can we get this turned around by early afternoon so I can get things to folks before I brief them on Tuesday?

Thanks,  
Patrick

On Fri, Sep 7, 2018 at 5:00 PM, Klein, Kimberly <[kimberly\\_klein@fws.gov](mailto:kimberly_klein@fws.gov)> wrote:

See the attached sections. Let me know if you have questions, I will make any recommended edits ASAP on or before Monday. Thank you

**Kimberly Klein**

Incidental Take Coordinator  
US Fish and Wildlife Service  
907-786-3621

**[Kimberly\\_Klein@fws.gov](mailto:Kimberly_Klein@fws.gov)**

--

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)

--

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)

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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:** Greg Siekaniec[greg\_siekaniec@fws.gov]; Karen Clark[karen\_clark@fws.gov]; Colligan, Mary[mary\_colligan@fws.gov]; Sara Boario[sara\_boario@fws.gov]; Ryan Wilson[ryan\_r\_wilson@fws.gov]; Mitch Ellis[mitch\_ellis@fws.gov]; Christopher Putnam[Christopher\_Putnam@fws.gov]; Amee Howard[amee\_howard@fws.gov]; Drew Crane[drew\_crane@fws.gov]; Wigglesworth, David[david\_wigglesworth@fws.gov]  
**From:** Lemons, Patrick  
**Sent:** 2018-09-10T21:24:07-04:00  
**Importance:** Normal  
**Subject:** 1002 Seismic ITR Discussion Materials  
**Received:** 2018-09-10T21:24:11-04:00  
[1002 Coastal Plain ITR Briefing - V5.docx](#)

Hi Everyone,

Our office has been moving quickly to prepare for tomorrow's meeting on the 1002 Area Seismic ITR analysis. Mary and I put together a 4 page briefing document that was sent to HQ last week. Some of you may have already seen this document. If not, I've attached it here to give you some background for our discussion tomorrow. This document should be considered the overall summary document but it lacks the detail we'll discuss at tomorrow's meeting. Please do not distribute this document as the decisions have not been finalized and not everyone has been appropriately briefed on this issue.

If you have any questions, please let me know. Otherwise, we'll see you tomorrow morning.

Cheers,  
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)

**To:** Mary Colligan[mary\_colligan@fws.gov]  
**Cc:** Patrick Lemons[patrick\_lemons@fws.gov]; Christopher Putnam[christopher\_putnam@fws.gov]  
**From:** Klein, Kimberly  
**Sent:** 2018-09-11T13:37:36-04:00  
**Importance:** Normal  
**Subject:** Re: Responses section  
**Received:** 2018-09-11T13:38:05-04:00

Thanks Mary, Please don't hesitate with questions, etc.

**Kimberly Klein**

Incidental Take Coordinator  
US Fish and Wildlife Service  
907-786-3621  
[Kimberly\\_Klein@fws.gov](mailto:Kimberly_Klein@fws.gov)

On Mon, Sep 10, 2018 at 10:32 PM Colligan, Mary <[mary\\_colligan@fws.gov](mailto:mary_colligan@fws.gov)> wrote:

Just wanted to add my thanks and appreciation. This has been a challenging one and I apologize for making it more difficult with all of my questions and attempts to look at the issue from all angles. Thank you for your patience and tolerance!

On Mon, Sep 10, 2018 at 9:17 PM, Lemons, Patrick <[patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)> wrote:

Thanks Kim and Christopher,

Mary and I wanted to say thanks for putting up with us over the last couple weeks and all the back and forth on this. We really appreciate all the hard work and couldn't have done it without you. I've received both of your sections and essentially accepted everything. One place that would be nice to clean up would be the tables. I made some edits to tables 2 and 3 but I can't figure out how to manipulate 4 and 5 to match so that the layout and language are the same. I've never worked with tables embedded in Word so could you help me out with getting this formatted correctly? If you can't get it done before our 10am meeting on Tuesday, could we get it done before the afternoon when I need to send it to Wackowski? I inserted a comment to draw your attention to Kim's section and note the major edits I made. Otherwise, I think we're good to go.

Let me know what you think and thanks again.

Patrick

On Mon, Sep 10, 2018 at 5:37 PM, Putnam, Christopher <[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)> wrote:

Attached is my part.

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

On Mon, Sep 10, 2018 at 5:35 PM Klein, Kimberly <[kimberly\\_klein@fws.gov](mailto:kimberly_klein@fws.gov)> wrote:

see attached

**Kimberly Klein**  
Incidental Take Coordinator  
US Fish and Wildlife Service  
907-786-3621  
**[Kimberly\\_Klein@fws.gov](mailto:Kimberly_Klein@fws.gov)**

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1011 East Tudor Road  
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Work: 907-786-3668  
Cell: 907-717-6787  
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e-mail: [patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)

--

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:** Patrick Lemons[patrick\_lemons@fws.gov]; Christopher Putnam[christopher\_putnam@fws.gov]; Ryan Wilson[ryan\_r\_wilson@fws.gov]; kimberly\_klein[kimberly\_klein@fws.gov]  
**From:** Colligan, Mary  
**Sent:** 2018-09-11T16:28:04-04:00  
**Importance:** Normal  
**Subject:** Great job on the materials and the briefing!  
**Received:** 2018-09-11T16:28:07-04:00

Nice job today - lots to coordinate and respond to. You guys have done a great job thinking through everything and looking at this from every angle - which is obvious when the questions get thrown your way.

It is a pleasure to be part of your team.

--

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:** Colligan, Mary[mary\_colligan@fws.gov]  
**Cc:** Christopher Putnam[christopher\_putnam@fws.gov]  
**From:** Lemons, Patrick  
**Sent:** 2018-09-11T17:40:01-04:00  
**Importance:** Normal  
**Subject:** Re: [EXTERNAL] Re: I should remember this...  
**Received:** 2018-09-11T17:40:03-04:00

Interesting. I'm a bit confused what the rationale for using that as the baseline is but sounds like we should discuss. Thanks for sending this along.

On Tue, Sep 11, 2018 at 12:20 PM, Colligan, Mary <mary\_colligan@fws.gov> wrote:

This could provide precedent for only considering US subsistence take  
----- Forwarded message -----

**From:** David Gouveia - NOAA Federal <david.gouveia@noaa.gov>  
**Date:** Tue, Sep 11, 2018 at 12:18 PM  
**Subject:** [EXTERNAL] Re: I should remember this...  
**To:** "Colligan, Mary" <mary\_colligan@fws.gov>

Hi there stranger! I hope you are well. The answer is yes and no. In the right whale SARs we track:

Confirmed US Entanglements  
Unconfirmed first sighted in US  
Confirmed Canadian Entanglements  
Unconfirmed first sighted in Canada

We also track these same four categories for ship strikes. For entanglement against PBR we count all takes in the categories above except Confirmed Canadian Entanglements. Big source of contention when we count right whales with gear in Canadian waters that are informed Canadian gear. We count those toward our US PBR. So the only category that does not count against PBR is confirmed Canadian Entanglements.

For our section 7 consults we are a little more creative and tried to do a better job parsing out the Canadian takes but it's a reach (as you know).

I hope this helps! If you need anything further just give me a shout. Nice to hear from you!

- Dave

On Sep 11, 2018, at 3:54 PM, Colligan, Mary <mary\_colligan@fws.gov> wrote:

Hi! This is a strange out of context question and I should remember this, but did we include Canadian fisheries right whale takes against PBR? I remember trying to parse out US and Canadian origin and I think we were just trying to get US takes < PBR but I can't remember. I know we wanted to reduce

Canadian incidental takes but can't recall if that was because they were, when added to US takes, were tipping us above PBR, or if it was because of their impact on the population size (and therefore the calculation of PBR).

Believe it or not, this has some implications for some questions we are having on polar bears.

Thanks for your help - it is nice to have friends in NMFS!

--

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

--

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:** Christopher Putnam[christopher\_putnam@fws.gov]  
**From:** Hamilton, Charles  
**Sent:** 2018-09-11T19:51:34-04:00  
**Importance:** Normal  
**Subject:** Fwd: DEADLINE Tuesday: OMB requests a briefing paper for your rulemaking action  
**Received:** 2018-09-11T19:52:17-04:00

Sorry I should have included you on this....

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

From: **Hamilton, Charles** <[charles\\_hamilton@fws.gov](mailto:charles_hamilton@fws.gov)>  
Date: Tue, Sep 11, 2018 at 11:26 AM  
Subject: DEADLINE Tuesday: OMB requests a briefing paper for your rulemaking action  
To: Patrick Lemons <[Patrick\\_Lemons@fws.gov](mailto:Patrick_Lemons@fws.gov)>  
Cc: Holly Herod <[holly\\_herod@fws.gov](mailto:holly_herod@fws.gov)>, Mary Colligan <[mary\\_colligan@fws.gov](mailto:mary_colligan@fws.gov)>

Hi Patrick,

Holly Herod just gave me a call. She noted that she had received a BP from Gary regarding the ITR for seismic activity that was dated Sept 6 and it looked pretty good. But as the BP came in as a close hold she wanted clarification on using it. I let her know that I'd check with you about the content as I haven't seen it.

--

Regards,

Charles S. Hamilton  
Special Assistant  
Marine Mammals Management  
U.S. Fish and Wildlife Service  
1011 East Tudor Rd., MS-341  
Anchorage, AK 99503  
Voice: (907) 786-3804  
FAX: (907) 786 - 3816

--

Regards,

Charles S. Hamilton  
Special Assistant  
Marine Mammals Management  
U.S. Fish and Wildlife Service  
1011 East Tudor Rd., MS-341



Anchorage, AK 99503  
Voice: (907) 786-3804  
FAX: (907) 786 - 3816

**To:** Lord, Kenneth[ken.lord@sol.doi.gov]; Joshua Kindred[joshua.kindred@sol.doi.gov]  
**Cc:** Greg Siekaniec[greg\_siekaniec@fws.gov]; Colligan, Mary[mary\_colligan@fws.gov]; Christopher Putnam[Christopher\_Putnam@fws.gov]; Klein, Kimberly[kimberly\_klein@fws.gov]  
**From:** Lemons, Patrick  
**Sent:** 2018-09-11T19:53:08-04:00  
**Importance:** Normal  
**Subject:** Estimate of Take of Denning Polar Bears During Seismic Activities in the 1002  
**Received:** 2018-09-11T19:53:11-04:00  
[Denning Bears 11Sept2018 - All 26 pages .docx](#)

Hi Ken and Josh,

Attached you will find the draft "Denning Bears" section of the analysis that would be included if we promulgate Incidental Take Regulations. We wanted to give you some time to digest this information before our briefing later this week.

If you have any questions, please reach out to Mary Colligan or Greg Seikaniec as I will be out of touch starting tomorrow through the rest of the week.

Cheers,  
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)

**To:** Patrick Lemons[patrick\_lemons@fws.gov]  
**Cc:** Christopher Putnam[Christopher\_Putnam@fws.gov]; Mary Colligan[mary\_colligan@fws.gov]  
**From:** Hamilton, Charles  
**Sent:** 2018-09-12T12:28:34-04:00  
**Importance:** Normal  
**Subject:** Re: URGENT  
**Received:** 2018-09-12T12:29:18-04:00  
OMB briefing mmpa ITR\_CSH.docx

Hi Patrick,

Thanks I also received it with a request for review. I had one small suggested edit. Attached in track changes but if you can't read attachments my suggested edit is to final sentence in paragraph one. Original sentence closed with "in order for the action to potentially proceed."

These type of authorization requests require the Service to consider developing Incidental Take Regulations (ITR) pursuant to the Marine Mammal Protection Act of 1972, as amended, (MMPA) in order for any incidental take to polar bears that may result from the activities not to be in violation of the MMPA HCCI .

HCCIITRs do not per se permit or stop the activity they only cover incidental take should it occur.

On Wed, Sep 12, 2018 at 8:15 AM, Patrick Lemons <patrick\_lemons@fws.gov> wrote:

Hi Charlie,

Here's what Christopher put together for this. Just wanted to make sure there was no confusion given you and Christopher aren't all in the same emails.

Sent from my iPhone

Begin forwarded message:

**From:** "Herod, Holly" <holly\_herod@fws.gov>  
**Date:** September 12, 2018 at 10:03:43 AM MDT  
**To:** Charles Hamilton <charles\_hamilton@fws.gov>, Patrick Lemons <patrick\_lemons@fws.gov>  
**Subject:** URGENT

can you all review and see if you are OK with this?  
Holly Herod

0000014122

Chief, Branch of Environmental Response and Restoration (BERR)  
U.S. Fish and Wildlife Service Headquarters  
Ecological Services, MS: ES  
5275 Leesburg Pike  
Falls Church, VA 22041-3803  
703-358-2068 (direct)  
703-965-2278 (cell and 24 hour Spill Response Backup)

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

From: **Herod, Holly** <[holly\\_herod@fws.gov](mailto:holly_herod@fws.gov)>

Date: Wed, Sep 12, 2018 at 8:21 AM

Subject: Re: DEADLINE Tuesday: OMB requests a briefing paper for your rulemaking action

To: Shultz, Gina <[gina\\_shultz@fws.gov](mailto:gina_shultz@fws.gov)>

Cc: Jeff Newman <[jeff\\_newman@fws.gov](mailto:jeff_newman@fws.gov)>, Susan Wilkinson <[susan\\_wilkinson@fws.gov](mailto:susan_wilkinson@fws.gov)>, Mary Colligan <[mary\\_colligan@fws.gov](mailto:mary_colligan@fws.gov)>, Charles Hamilton <[charles\\_hamilton@fws.gov](mailto:charles_hamilton@fws.gov)>, Patrick Lemons <[patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)>

Gina - here is a rewrite to only address the items you indicated below.

Holly Herod

Chief, Branch of Environmental Response and Restoration (BERR)  
U.S. Fish and Wildlife Service Headquarters  
Ecological Services, MS: ES  
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On Wed, Sep 12, 2018 at 7:11 AM Shultz, Gina <[gina\\_shultz@fws.gov](mailto:gina_shultz@fws.gov)> wrote:

All,

Please do not provide the close hold briefing paper.to PPM in response to OMB and Exec Sec's request. OMB does not need a briefing paper on our preliminary analyses. They BP for OMB should just discuss the background overview of the purpose/need for the regulation (not our decision or analysis).

*Gina Shultz  
Deputy Assistant Director, Ecological Services  
U.S. Fish and Wildlife Service*

0000014123

MS: ES  
5275 Leesburg Pike  
Falls Church, VA 22041-3803  
703-358-1985

On Tue, Sep 11, 2018 at 3:45 PM, Herod, Holly <[holly\\_herod@fws.gov](mailto:holly_herod@fws.gov)> wrote:

FYI - update

Holly Herod

Chief, Branch of Environmental Response and Restoration (BERR)  
U.S. Fish and Wildlife Service Headquarters  
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From: **Hamilton, Charles** <[charles\\_hamilton@fws.gov](mailto:charles_hamilton@fws.gov)>

Date: Tue, Sep 11, 2018 at 3:27 PM

Subject: DEADLINE Tuesday: OMB requests a briefing paper for your rulemaking action

To: Patrick Lemons <[Patrick\\_Lemons@fws.gov](mailto:Patrick_Lemons@fws.gov)>

Cc: Holly Herod <[holly\\_herod@fws.gov](mailto:holly_herod@fws.gov)>, Mary Colligan <[mary\\_colligan@fws.gov](mailto:mary_colligan@fws.gov)>

Hi Patrick,

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Regards,

Charles S. Hamilton  
Special Assistant  
Marine Mammals Management  
U.S. Fish and Wildlife Service  
[1011 East Tudor Rd.](#), MS-341

0000014124

Anchorage, AK 99503  
Voice: (907) 786-3804  
FAX: (907) 786 - 3816

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Regards,

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**To:** Hamilton, Charles[[charles\\_hamilton@fws.gov](mailto:charles_hamilton@fws.gov)]  
**Cc:** Christopher Putnam[[Christopher\\_Putnam@fws.gov](mailto:Christopher_Putnam@fws.gov)]; Mary Colligan[[mary\\_colligan@fws.gov](mailto:mary_colligan@fws.gov)]  
**From:** Patrick Lemons  
**Sent:** 2018-09-12T12:43:19-04:00  
**Importance:** Normal  
**Subject:** Re: URGENT  
**Received:** 2018-09-12T12:43:22-04:00

Seems fine to me but let's have Christopher take a look as well. I didn't have time to review the original so whatever you two think is best is fine by me.

Sent from my iPhone

On Sep 12, 2018, at 10:28 AM, Hamilton, Charles <[charles\\_hamilton@fws.gov](mailto:charles_hamilton@fws.gov)> wrote:

Hi Patrick,

Thanks I also received it with a request for review. I had one small suggested edit. Attached in track changes but if you can't read attachments my suggested edit is to final sentence in paragraph one. Original sentence closed with "in order for the action to potentially proceed."

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---

<sup>[HCC1]</sup>ITRs do not per se permit or stop the activity they only cover incidental take should it occur.

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Sent from my iPhone

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**From:** "Herod, Holly" <[holly\\_herod@fws.gov](mailto:holly_herod@fws.gov)>  
**Date:** September 12, 2018 at 10:03:43 AM MDT  
**To:** Charles Hamilton <[charles\\_hamilton@fws.gov](mailto:charles_hamilton@fws.gov)>, Patrick Lemons  
<[patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)>  
**Subject:** URGENT

can you all review and see if you are OK with this?  
Holly Herod

Chief, Branch of Environmental Response and Restoration (BERR)  
U.S. Fish and Wildlife Service Headquarters  
Ecological Services, MS: ES  
5275 Leesburg Pike  
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**Date:** Wed, Sep 12, 2018 at 8:21 AM  
**Subject:** Re: DEADLINE Tuesday: OMB requests a briefing paper for your rulemaking action  
**To:** Shultz, Gina <[gina\\_shultz@fws.gov](mailto:gina_shultz@fws.gov)>  
**Cc:** Jeff Newman <[jeff\\_newman@fws.gov](mailto:jeff_newman@fws.gov)>, Susan Wilkinson <[susan\\_wilkinson@fws.gov](mailto:susan_wilkinson@fws.gov)>, Mary Colligan <[mary\\_colligan@fws.gov](mailto:mary_colligan@fws.gov)>, Charles Hamilton <[charles\\_hamilton@fws.gov](mailto:charles_hamilton@fws.gov)>, Patrick Lemons <[patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)>

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Holly Herod

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U.S. Fish and Wildlife Service Headquarters  
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*Gina Shultz  
Deputy Assistant Director, Ecological Services  
U.S. Fish and Wildlife Service  
MS: ES  
5275 Leesburg Pike  
Falls Church, VA 22041-3803  
703-358-1985*

On Tue, Sep 11, 2018 at 3:45 PM, Herod, Holly <[holly\\_herod@fws.gov](mailto:holly_herod@fws.gov)> wrote:

FYI - update

Holly Herod

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U.S. Fish and Wildlife Service Headquarters  
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From: **Hamilton, Charles** <[charles\\_hamilton@fws.gov](mailto:charles_hamilton@fws.gov)>

Date: Tue, Sep 11, 2018 at 3:27 PM

Subject: DEADLINE Tuesday: OMB requests a briefing paper for your rulemaking action

To: Patrick Lemons <[Patrick\\_Lemons@fws.gov](mailto:Patrick_Lemons@fws.gov)>

Cc: Holly Herod <[holly\\_herod@fws.gov](mailto:holly_herod@fws.gov)>, Mary Colligan <[mary\\_colligan@fws.gov](mailto:mary_colligan@fws.gov)>

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Regards,

Charles S. Hamilton  
Special Assistant  
Marine Mammals Management  
U.S. Fish and Wildlife Service  
1011 East Tudor Rd., MS-341  
Anchorage, AK 99503  
Voice: (907) 786-3804  
FAX: (907) 786 - 3816

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Regards,

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Voice: (907) 786-3804  
FAX: (907) 786 - 3816

<OMB briefing mmpa ITR\_CSH.docx>

**To:** Herod, Holly[holly\_herod@fws.gov]  
**Cc:** Patrick Lemons[patrick\_lemons@fws.gov]; Christopher Putnam[christopher\_putnam@fws.gov]  
**From:** Hamilton, Charles  
**Sent:** 2018-09-12T14:33:38-04:00  
**Importance:** Normal  
**Subject:** Re: URGENT  
**Received:** 2018-09-12T14:34:22-04:00  
OMB briefing mmpa ITR\_CSH.docx

Thanks Holly as mentioned suggest one edit to last sentence in paragraph one as per attached.

On Wed, Sep 12, 2018 at 8:03 AM, Herod, Holly <[holly\\_herod@fws.gov](mailto:holly_herod@fws.gov)> wrote:

can you all review and see if you are OK with this?  
Holly Herod

Chief, Branch of Environmental Response and Restoration (BERR)  
U.S. Fish and Wildlife Service Headquarters  
Ecological Services, MS: ES  
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**Date:** Wed, Sep 12, 2018 at 8:21 AM  
**Subject:** Re: DEADLINE Tuesday: OMB requests a briefing paper for your rulemaking action  
**To:** Shultz, Gina <[gina\\_shultz@fws.gov](mailto:gina_shultz@fws.gov)>  
**Cc:** Jeff Newman <[jeff\\_newman@fws.gov](mailto:jeff_newman@fws.gov)>, Susan Wilkinson <[susan\\_wilkinson@fws.gov](mailto:susan_wilkinson@fws.gov)>, Mary Colligan <[mary\\_colligan@fws.gov](mailto:mary_colligan@fws.gov)>, Charles Hamilton <[charles\\_hamilton@fws.gov](mailto:charles_hamilton@fws.gov)>, Patrick Lemons <[patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)>

Gina - here is a rewrite to only address the items you indicated below.

Holly Herod

Chief, Branch of Environmental Response and Restoration (BERR)  
U.S. Fish and Wildlife Service Headquarters  
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0000014130

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*Gina Shultz  
Deputy Assistant Director, Ecological Services  
U.S. Fish and Wildlife Service  
MS: ES  
5275 Leesburg Pike  
Falls Church, VA 22041-3803  
703-358-1985*

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FYI - update

Holly Herod

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Date: Tue, Sep 11, 2018 at 3:27 PM

Subject: DEADLINE Tuesday: OMB requests a briefing paper for your rulemaking action

To: Patrick Lemons <[Patrick\\_Lemons@fws.gov](mailto:Patrick_Lemons@fws.gov)>

Cc: Holly Herod <[holly\\_herod@fws.gov](mailto:holly_herod@fws.gov)>, Mary Colligan <[mary\\_colligan@fws.gov](mailto:mary_colligan@fws.gov)>

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Regards,

Charles S. Hamilton  
Special Assistant  
Marine Mammals Management  
U.S. Fish and Wildlife Service  
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Voice: (907) 786-3804  
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--

Regards,

Charles S. Hamilton  
Special Assistant  
Marine Mammals Management  
U.S. Fish and Wildlife Service  
1011 East Tudor Rd., MS-341  
Anchorage, AK 99503  
Voice: (907) 786-3804  
FAX: (907) 786 - 3816

**To:** Lemons, Patrick[patrick\_lemons@fws.gov]  
**Cc:** Joshua Kindred[joshua.kindred@sol.doi.gov]; Greg Siekaniec[greg\_siekaniec@fws.gov]; Colligan, Mary[mary\_colligan@fws.gov]; Christopher Putnam[Christopher\_Putnam@fws.gov]; Klein, Kimberly[kimberly\_klein@fws.gov]  
**From:** Lord, Kenneth  
**Sent:** 2018-09-12T19:54:23-04:00  
**Importance:** Normal  
**Subject:** Re: Estimate of Take of Denning Polar Bears During Seismic Activities in the 1002  
**Received:** 2018-09-12T19:54:27-04:00

Confirming that our meeting is tomorrow at 1:30 Alaska time, correct? I'm out of state and will need a call-in number.

*Kenneth M. Lord*  
*Assistant Regional Solicitor*  
*U.S. Dept. of the Interior*  
*Office of the Regional Solicitor -- Alaska Region*  
*907-271-4184*

On Tue, Sep 11, 2018 at 3:53 PM, Lemons, Patrick <[patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)> wrote:

Hi Ken and Josh,

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Cheers,  
Patrick

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Patrick Lemons, Ph.D.  
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Cell: 907-717-6787  
Fax: 907-786-3816  
e-mail: [patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)

**To:** Christopher Putnam[christopher\_putnam@fws.gov]  
**From:** Klein, Kimberly  
**Sent:** 2018-09-13T14:24:12-04:00  
**Importance:** Normal  
**Subject:** Re: Estimate of Take of Denning Polar Bears During Seismic Activities in the 1002  
**Received:** 2018-09-13T14:24:12-04:00

Hi Christopher. Can you forward the version that Patrick sent to USGS so if/when the time comes, I can make the suggested changes? Thanks

**Kimberly Klein**

Incidental Take Coordinator  
US Fish and Wildlife Service  
907-786-3621  
[Kimberly\\_Klein@fws.gov](mailto:Kimberly_Klein@fws.gov)

On Thu, Sep 13, 2018 at 9:19 AM Colligan, Mary <[mary\\_colligan@fws.gov](mailto:mary_colligan@fws.gov)> wrote:

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

From: **Hilderbrand, Grant** <[ghilderbrand@usgs.gov](mailto:ghilderbrand@usgs.gov)>  
Date: Thu, Sep 13, 2018 at 9:11 AM  
Subject: Re: Estimate of Take of Denning Polar Bears During Seismic Activities in the 1002  
To: "Lemons, Patrick" <[patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)>  
Cc: Greg Siekaniec <[greg\\_siekaniec@fws.gov](mailto:greg_siekaniec@fws.gov)>, "Colligan, Mary" <[mary\\_colligan@fws.gov](mailto:mary_colligan@fws.gov)>, Christopher Putnam <[Christopher\\_Putnam@fws.gov](mailto:Christopher_Putnam@fws.gov)>, Aimee Devaris <[adevaris@usgs.gov](mailto:adevaris@usgs.gov)>, Christian Zimmerman <[czimmerman@usgs.gov](mailto:czimmerman@usgs.gov)>

Hello Patrick,

Based on your request a sub-set of the USGS polar bear research team reviewed the attachment titled "Denning Bears 11Sept2018 – All 26 pages". Given your timeframe and your request for an "informal" review, we focused on the following three questions:

- 1) Does the document utilize the most appropriate and current available science?
- 2) Is the approach technically and logically sound?
- 3) Are the assumptions consistent with the current state of knowledge relative to polar bear ecology?

Relative to question 1, all relevant and current literature and available science is cited. We are not aware of other important available publications (though note our reference to Durner 2006 below).

Relative to question 2, the approach outlined in the document is generally clear, well described, and logical.

One suggestion would be to incorporate denning habitat and the likelihood of use of regions within the 1002 Area to improve the robustness of the simulation described on page 12. Relative to denning habitat, dens occur where wind-blown snow accumulates to a depth sufficient for the female to construct a den. The simulation could be improved by restricting dens to those near mapped denning habitat (i.e., within 145m; 32 of 38 dens reported in Durner et al. 2006). Relative

to the likelihood of use, USGS does have data that might allow the estimation of the likelihood that a particular area of the 1002 Area is used by a pregnant bear. The USGS database has records of 33 maternal dens that were discovered through VHF or satellite telemetry from 1984-2014. Assuming that those 33 den records are not biased by human search effort, then a distribution of maternal denning likelihood in the 1002 Area could be generated.

Relative to question 3, while we recognize that gaps exist in our collective scientific knowledge regarding the ecology of polar bears, the assumptions that form the foundation of the analyses in this document are consistent with our shared current knowledge of polar bears ecology. Further, the caveats associated with the parameters were adequately described.

Finally, some minor editorial notes:

- 1) We recommend using a point estimate of 907 bears rather than 900 which is the point estimate listed in the IUCN Polar Bear Specialists Group Population Status Table based on Bromaghin et al. (2015).
- 2) On page 10 at detection probability of 0.62 was identified and based on Amstrup et al. (2004). As this number was not explicitly reported in the paper we recommend its derivation/selection be described in more detail.
- 3) It would be helpful to describe the distribution of dens relative to SAE seismic tracks in more detail on page 14 instead of just "All dens not detected by AIR or collapsed by vehicles are likely to be within 101m (300 ft) or less of a seismic tract".
- 4) The first full sentence on the top of page 17 that reads: "We evaluated whether den disturbances near pre-existing or recurring Industry activities had different outcomes than den disturbances **near** industry" should read: "We evaluated whether den disturbances near pre-existing or recurring Industry activities had different outcomes than den disturbances **away from** industry".

All the best,

Grant

On Tue, Sep 11, 2018 at 4:24 PM, Lemons, Patrick <[patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)> wrote:

Hi Grant,

As discussed over the phone, we'd like to request an informal review of the enclosed document analyzing disturbance and take of polar bears incidental to proposed seismic activities in the 1002 Area. Specifically the attached 25 page document is a draft of the "Denning Bears" section of the analysis that would be included if we promulgate Incidental Take Regulations. We have a briefing on Thursday afternoon so ideally we'd like your comments by close of business Wednesday the 12th of September. I realize that is a very rapid turn around for a 25 page document. If that timeline is not possible, would it be possible to let us know if you see any red flags before Thursday morning? We also have a briefing with DOI Headquarters late next week so if you do decide you need more time, would it be possible to have your full comments back to us by Monday, September 17th?

I've also included a short 4 page briefing to help with understanding some of our determination under the MMPA. Hopefully this will be useful. If you have any questions, please reach out to Mary Colligan (907-786-3505) or Christopher Putnam (907-786-3844) as I will be out of touch starting tomorrow through the rest of the week.

Thanks for considering this request.

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

--

Grant V. Hilderbrand, Ph.D., C.W.B.  
Marine Ecosystems Office  
Alaska Science Center  
USGS  
4210 University Drive  
Anchorage, AK 99508  
(907) 786-7076  
ghilderbrand@usgs.gov

--

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:** Klein, Kimberly[kimberly\_klein@fws.gov]  
**From:** Putnam, Christopher  
**Sent:** 2018-09-13T14:51:58-04:00  
**Importance:** Normal  
**Subject:** Fwd: Edits to ITR  
**Received:** 2018-09-13T14:52:17-04:00

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

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

**From:** **Wilson, Ryan** <[ryan\\_r\\_wilson@fws.gov](mailto:ryan_r_wilson@fws.gov)>  
**Date:** Wed, Sep 12, 2018 at 1:00 PM  
**Subject:** Edits to ITR  
**To:** Patrick Lemons <[patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)>, Colligan, Mary <[mary\\_colligan@fws.gov](mailto:mary_colligan@fws.gov)>, Christopher Putnam <[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)>

I'm not sure who has control of the master copy of the longer ITR document, so I'll just send these updates with reference where they occurred in the version used for yesterday's briefing.

1) Updated text on how I arrived at the estimate of 0.62 probability of detection from AIR surveys based on Amstrup's data. I would suggest the following text replace the sentence above equation 6 on page 10 of the draft IRT.

"To estimate the probability that a den is detected by a single AIR survey, we obtained data from Figure 3 in Amstrup et al. (2004) detailing the number of detections of known dens during multiple AIR surveys. We then used these data to run a binomial statistical model. This resulted in an estimate of the probability of a (known) den being detected during a single AIR survey being 0.62 (95 percent credible interval: 0.51 to 0.73)."

2) Mary commented that it would be desirable to know how many dens were under the simulated seismic footprints, rather than just the probability that  $\geq 1$  den was run over. I looked into this, and there were very few times when multiple dens were run over, leading the mean number of

dens being run over to be something like 1.07. So we're really not missing anything or under representing how many dens might be run over. At least when we run it was only 8 undetected dens. If we were to bump up the number of dens beyond that, or change the distribution of dens to be more concentrated along the coast, we could see this change, but for now, I think it's okay as is.

--

Ryan Wilson, Ph.D., Certified Wildlife Biologist ®  
Marine Mammals Management, Polar Bears  
U.S. Fish and Wildlife Service  
1011 E. Tudor Rd., MS341  
Anchorage, AK 99503

Phone: (907) 786-3830  
Email: [ryan\\_r\\_wilson@fws.gov](mailto:ryan_r_wilson@fws.gov)  
Fax: (907) 786-3816

**To:** Christopher Putnam[Christopher\_Putnam@fws.gov]; Klein, Kimberly[kimberly\_klein@fws.gov]  
**From:** Lemons, Patrick  
**Sent:** 2018-09-19T13:37:54-04:00  
**Importance:** Normal  
**Subject:** Fwd: FWS comments  
**Received:** 2018-09-19T13:37:57-04:00  
2018\_0918\_FWS.PB.TakeAnalysis.BLM comments.edits.docx

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

From: **Siekaniec, Greg** <[greg\\_siekaniec@fws.gov](mailto:greg_siekaniec@fws.gov)>  
Date: Wed, Sep 19, 2018 at 8:06 AM  
Subject: Fwd: FWS comments  
To: Mary Colligan <[mary\\_colligan@fws.gov](mailto:mary_colligan@fws.gov)>, Patrick Lemons <[patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)>, Ryan Wilson <[ryan\\_r\\_wilson@fws.gov](mailto:ryan_r_wilson@fws.gov)>

fyi

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

From: **Murphy, Ted** <[t75murph@blm.gov](mailto:t75murph@blm.gov)>  
Date: Wed, Sep 19, 2018 at 7:25 AM  
Subject: Fwd: FWS comments  
To: Greg Siekaniec <[greg\\_siekaniec@fws.gov](mailto:greg_siekaniec@fws.gov)>, Karen Clark <[karen\\_clark@fws.gov](mailto:karen_clark@fws.gov)>, Mary Colligan <[mary\\_colligan@fws.gov](mailto:mary_colligan@fws.gov)>  
Cc: Ted Murphy <[t75murph@blm.gov](mailto:t75murph@blm.gov)>

Hi Greg,

Enclosed is our review of the FWS polar bear take analysis with comments and suggested edits.

Lets loop back, soon.

Thanks, Ted

--

Ted A Murphy  
Alaska-Acting State Director  
907-271-5076

--

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:** Kindred, Joshua[joshua.kindred@sol.doi.gov]  
**Cc:** mary\_colligan@fws.gov[mary\_colligan@fws.gov];  
patrick\_lemons@fws.gov[patrick\_lemons@fws.gov];  
christopher\_putnam@fws.gov[christopher\_putnam@fws.gov];  
karen\_clark@fws.gov[karen\_clark@fws.gov]  
**From:** Greg Siekaniec  
**Sent:** 2018-09-20T14:08:45-04:00  
**Importance:** Normal  
**Subject:** Re: meeting  
**Received:** 2018-09-20T14:08:48-04:00

We will make this work.  
Greg

Sent from my iPhone

On Sep 20, 2018, at 9:46 AM, Kindred, Joshua <joshua.kindred@sol.doi.gov> wrote:

Greg, unfortunately, the only thing that I have on my calendar that I cannot move is a 1:00-2:00 call. I could head over when that call concludes and be over to your office by 2:15 if that works?  
JMK

*Joshua M. Kindred*  
*Regional Solicitor*  
*U.S. Dept. of the Interior*  
*Alaska Region*  
*(907) 271-4118*  
*[joshua.kindred@sol.doi.gov](mailto:joshua.kindred@sol.doi.gov)*

On Thu, Sep 20, 2018 at 9:39 AM, Siekaniec, Greg <greg\_siekaniec@fws.gov> wrote:

Josh,  
How about 1:15 today here at our office?

Thanks,

greg

On Thu, Sep 20, 2018 at 9:02 AM Kindred, Joshua <joshua.kindred@sol.doi.gov> wrote:

Greg,  
I just wanted to check in and see if you had any time today or tomorrow to meet up and discuss the ITR. I have a few meeting here and there, but am happy to come to you if it makes things easier.

JMK

*Joshua M. Kindred*  
*Regional Solicitor*  
*U.S. Dept. of the Interior*  
*Alaska Region*  
*(907) 271-4118*  
*[joshua.kindred@sol.doi.gov](mailto:joshua.kindred@sol.doi.gov)*

**To:** Colligan, Mary[mary\_colligan@fws.gov]  
**Cc:** Christopher Putnam[christopher\_putnam@fws.gov]  
**From:** Lemons, Patrick  
**Sent:** 2018-09-20T15:14:55-04:00  
**Importance:** Normal  
**Subject:** Re: meeting with Kindred will be in your conference room  
**Received:** 2018-09-20T15:14:57-04:00

I'll put it on the door. Are we planning from 2-3pm or should I book it for 2hrs similar to your first invite?

On Thu, Sep 20, 2018 at 11:09 AM, Colligan, Mary <[mary\\_colligan@fws.gov](mailto:mary_colligan@fws.gov)> wrote:

--

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

--

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:** James Wilder[James\_Wilder@fws.gov]; Christopher Putnam[Christopher\_Putnam@fws.gov]  
**From:** Lemons, Patrick  
**Sent:** 2018-09-20T16:36:21-04:00  
**Importance:** Normal  
**Subject:** Meeting with Josh Kindred  
**Received:** 2018-09-20T16:36:23-04:00

Hey Jim and Christopher,  
The meeting with Josh Kindred that was scheduled for later today has been cancelled. He mentioned that he'd get back to us when he had a time that would later this week or next.

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)

**To:** Ryan Wilson[ryan\_r\_wilson@fws.gov]  
**Cc:** Lemons, Patrick[patrick\_lemons@fws.gov]  
**From:** Putnam, Christopher  
**Sent:** 2018-09-20T17:25:00-04:00  
**Importance:** Normal  
**Subject:** Re: Methods and files  
**Received:** 2018-09-20T17:25:00-04:00

Thanks Ryan, I'll forward this on to SAE.

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

On Wed, Sep 19, 2018 at 2:30 PM Wilson, Ryan <[ryan\\_r\\_wilson@fws.gov](mailto:ryan_r_wilson@fws.gov)> wrote:

--

Ryan Wilson, Ph.D., Certified Wildlife Biologist ®  
Marine Mammals Management, Polar Bears  
U.S. Fish and Wildlife Service  
1011 E. Tudor Rd., MS341  
Anchorage, AK 99503

Phone: (907) 786-3830  
Email: [ryan\\_r\\_wilson@fws.gov](mailto:ryan_r_wilson@fws.gov)  
Fax: (907) 786-3816

**To:** Christopher Putnam[christopher\_putnam@fws.gov]  
**From:** Klein, Kimberly  
**Sent:** 2018-09-21T21:33:51-04:00  
**Importance:** Normal  
**Subject:** Info for exposure buffers  
**Received:** 2018-09-21T21:34:20-04:00  
Note on Exposure of denning bears 21Sept2018.docx

This is a little more info from the disturbance dataset, stored in SAEgrid4.xls about the distances at which disturbances were realized. It does not differentiate between dens near and away from industry; sample sizes were too small for that.

**Kimberly Klein**  
Incidental Take Coordinator  
US Fish and Wildlife Service  
907-786-3621  
[Kimberly\\_Klein@fws.gov](mailto:Kimberly_Klein@fws.gov)

**To:** Lemons, Patrick[patrick\_lemons@fws.gov]  
**From:** Putnam, Christopher  
**Sent:** 2018-09-27T18:58:31-04:00  
**Importance:** Normal  
**Subject:** Re: Response to SAE Document  
**Received:** 2018-09-27T18:58:31-04:00

Shall I send the message, then?

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

On Thu, Sep 27, 2018 at 2:57 PM Lemons, Patrick <[patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)> wrote:

Looks fine to me.

On Thu, Sep 27, 2018 at 2:16 PM, Putnam, Christopher <[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)> wrote:

Patrick,

Attached is some draft text to consider to respond to SAE's Sept. 25 document.

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

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-- 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:** Klein, Kimberly[kimberly\_klein@fws.gov]  
**From:** Putnam, Christopher  
**Sent:** 2018-09-28T13:41:15-04:00  
**Importance:** Normal  
**Subject:** SAE Mitigation Document  
**Received:** 2018-09-28T13:41:33-04:00  
SAE mitigation letter 25 Sep 19.pdf

Hi Kim,

Attached is a scan of a document SAE dropped off to our office on Sep. 25. This is what we'll be talking with them about on Monday.

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

**To:** Klein, Kimberly[kimberly\_klein@fws.gov]  
**Cc:** Christopher Putnam[christopher\_putnam@fws.gov]; Patrick Lemons[pattick\_lemons@fws.gov]  
**From:** Colligan, Mary  
**Sent:** 2018-10-02T01:43:28-04:00  
**Importance:** Normal  
**Subject:** Re: BLM Comments on draft denning section of the analysis  
**Received:** 2018-10-02T01:43:30-04:00

Thanks Kim. It would be good if we could tie this up by the middle to end of next week. But, I will leave it to Christopher and Patrick to decide how it fits in with the other things on your plate.

On Mon, Oct 1, 2018 at 3:47 PM, Klein, Kimberly <[kimberly\\_klein@fws.gov](mailto:kimberly_klein@fws.gov)> wrote:

Thanks Mary, I will look it through, when would you like to have this back by?

**Kimberly Klein**

Incidental Take Coordinator  
US Fish and Wildlife Service  
907-786-3621  
[Kimberly\\_Klein@fws.gov](mailto:Kimberly_Klein@fws.gov)

On Mon, Oct 1, 2018 at 2:52 PM Colligan, Mary <[mary\\_colligan@fws.gov](mailto:mary_colligan@fws.gov)> wrote:

Christopher and Kim - Patrick and I have been chipping away at the comments provided by BLM on the draft denning analysis. I have attached our progress. We made it through the 186 comments, but there are a number of blanks where we think we need some help or would like to have a discussion before we draft a response. We also tried to highlight in yellow links to suggested changes in the analysis itself. I know this is a moving target and some of the suggested changes have already been made, but we thought it would be easier to help flag them.

Please take a look at the attached when you can and feel free to edit our suggested responses. Once you have been through it, we may want to sit down and discuss a few of the common themes.

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:** kimberly\_klein[kimberly\_klein@fws.gov]; Christopher Putnam[christopher\_putnam@fws.gov]  
**Cc:** Patrick Lemons[patrick\_lemons@fws.gov]  
**From:** Colligan, Mary  
**Sent:** 2018-10-02T12:23:10-04:00  
**Importance:** Normal  
**Subject:** updated denning analysis  
**Received:** 2018-10-02T12:23:11-04:00

Christopher and Kim - Patrick and I are trying to put together a briefing document for David Bernhart. We don't have a time set for the briefing, but it sounds like it could be as early as next week. We have a deadline of Thursday to get a briefing document to Greg. Obviously, we have done a lot of briefings lately so we have a lot of material to work from.

Can you please send me or verify the location of the most current denning analysis?

--

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:** Ryan Wilson[ryan\_r\_wilson@fws.gov]  
**From:** Putnam, Christopher  
**Sent:** 2018-10-02T16:12:50-04:00  
**Importance:** Normal  
**Subject:** Fwd: [EXTERNAL] Optimal conditions  
**Received:** 2018-10-02T16:12:50-04:00

Hi Ryan,  
Can you help with this question from Justin Blank?

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

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

From: **Putnam, Christopher** <[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)>  
Date: Tue, Oct 2, 2018 at 11:08 AM  
Subject: Re: [EXTERNAL] Optimal conditions  
To: Justin Blank <[justin.blank@fairweather.com](mailto:justin.blank@fairweather.com)>  
Cc: Klein, Kimberly <[kimberly\\_klein@fws.gov](mailto:kimberly_klein@fws.gov)>

Hi Justin,  
I'll need to get back with on this one. I need to check with another one of our polar bear biologists to make sure we're providing you with the correct parameters for the equation in Amstrup 2004.

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

On Mon, Oct 1, 2018 at 2:26 PM Justin Blank <[justin.blank@fairweather.com](mailto:justin.blank@fairweather.com)> wrote:

There is reference to those ideal conditions in Amstrup 2004 but I can't find what those values actually are. Can you help me with what those are the would get detection up into the 90%?

**Justin Blank**

Operations Supervisor/Senior Scientist

Fairweather Science, LLC.

[Justin.Blank@fairweather.com](mailto:Justin.Blank@fairweather.com)

(907) 252-7826-cell

(907) 267-4612-direct

**To:** Putnam, Christopher[christopher\_putnam@fws.gov]  
**From:** Justin Blank  
**Sent:** 2018-10-02T18:48:57-04:00  
**Importance:** Normal  
**Subject:** Re: [\*EXT\*] Re: [EXTERNAL] Optimal conditions  
**Received:** 2018-10-02T18:49:06-04:00

Roger that. Am I getting warm on my rationale below (pun intended)?

Justin Blank  
(907) 252-7826

On Oct 2, 2018, at 2:43 PM, Putnam, Christopher <[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)> wrote:

By the way, that's 3.1 Celsius. I didn't specify previously.

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

On Tue, Oct 2, 2018 at 1:16 PM Justin Blank <[justin.blank@fairweather.com](mailto:justin.blank@fairweather.com)> wrote:

Ok sounds good. So if surveys are conducted within these parameters we can expect better fidelity and an increase in detectability right? 3.1 degrees and moisture/precipitation absence are very attainable conditions based on the Wx data I looked at from the past few years. In 2016 I show 5-7 degrees in temp/dew point spread the whole time we flew.

Justin Blank  
(907) 252-7826

On Oct 2, 2018, at 12:51 PM, Putnam, Christopher <[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)> wrote:

Hi Justin,

I checked in with Ryan and he verified the following information. The optimal conditions for polar bear den detection as discussed in the Amstrup et al 2004 paper are a dew point spread of 3.1 degrees, an absence of airborne moisture (defined as fog, snow, blowing snow, etc.), and no sunlight. So, basically, dark, cold, calm, dry conditions are optimal.

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

On Mon, Oct 1, 2018 at 2:26 PM Justin Blank <[justin.blank@fairweather.com](mailto:justin.blank@fairweather.com)> wrote:

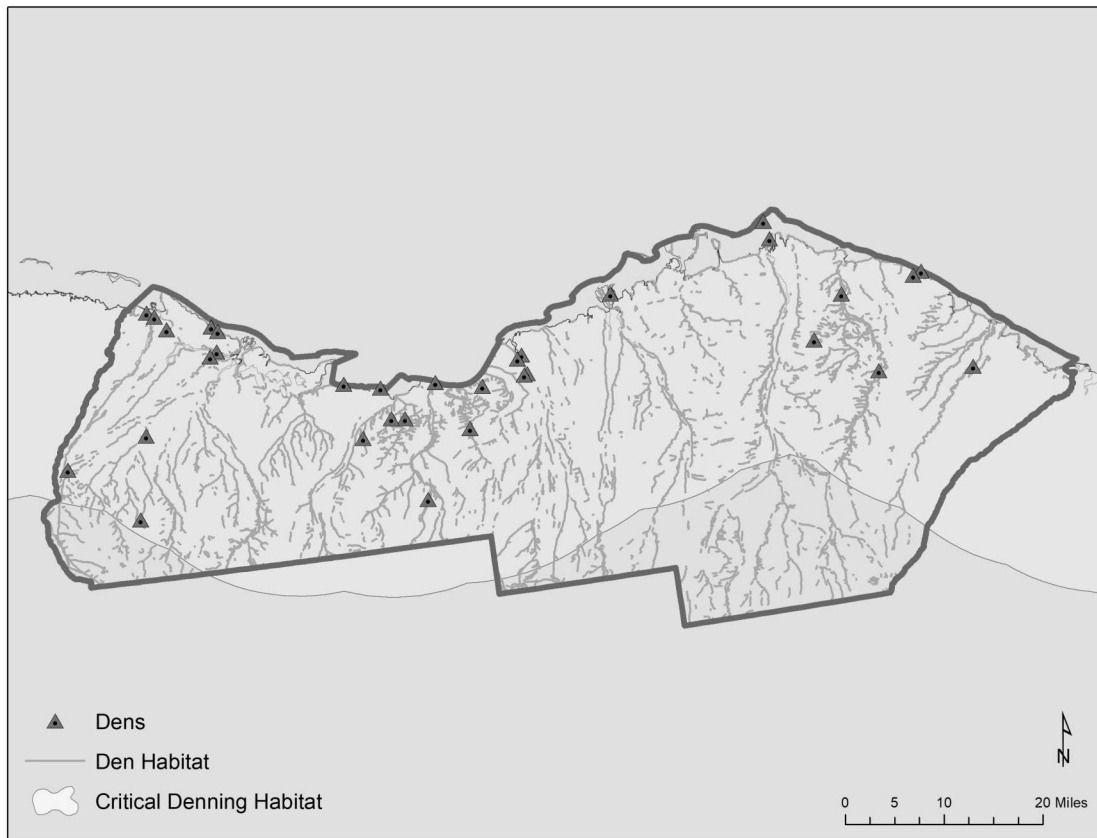
There is reference to those ideal conditions in Amstrup 2004 but I can't find what those values actually are. Can you help me with what those are the would get detection up into the 90%?

**Justin Blank**  
Operations Supervisor/Senior Scientist  
Fairweather Science, LLC.  
[Justin.Blank@fairweather.com](mailto:Justin.Blank@fairweather.com)  
(907) 252-7826-cell  
(907) 267-4612-direct

**To:** Patrick Lemons[patrick\_lemons@fws.gov]  
**Cc:** Colligan, Mary[mary\_colligan@fws.gov]; Christopher Putnam[christopher\_putnam@fws.gov]; James Wilder[james\_wilder@fws.gov]  
**From:** Wilson, Ryan  
**Sent:** 2018-10-04T16:32:26-04:00  
**Importance:** Normal  
**Subject:** Re: briefing document  
**Received:** 2018-10-04T16:32:41-04:00

And here's a figure for the denning data. Please let me know if you want any additional details or data provided.

Ryan



On Thu, Oct 4, 2018 at 12:04 PM Wilson, Ryan <[ryan\\_r\\_wilson@fws.gov](mailto:ryan_r_wilson@fws.gov)> wrote:

Here are my comments/edits

On Thu, Oct 4, 2018 at 8:04 AM Wilson, Ryan <[ryan\\_r\\_wilson@fws.gov](mailto:ryan_r_wilson@fws.gov)> wrote:

Sounds good. I'll get you my comments/edits by noon

On Wed, Oct 3, 2018 at 9:07 PM Patrick Lemons <[patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)> wrote:

Hi Ryan and Christopher,

My plans today didn't work out so I haven't touched this. I'm in CTL training until noon tomorrow and will jump on it then. If you do work on it, please send your edits to me by noon Thursday and then I'll pick it up from there.

Thanks,  
Patrick

Sent from my iPhone

On Oct 3, 2018, at 4:59 PM, Colligan, Mary <[mary\\_colligan@fws.gov](mailto:mary_colligan@fws.gov)> wrote:

Here is the status of the briefing paper - pretty rough and it has a deadline of COB tomorrow. Any assistance you guys can provide would be great. I have coped Patrick as I think he was going to try and make some progress during his travels today.

Based on the discussion today, other things I think we need to be prepared for are: comparison of subsistence takes to PBR (maybe both SBS and CS), Ready answer for what has changed since the most recent SBS ITRs, basis for the 62% (do we need to take some of the explanation in the response to the solicitors and paste it into the denning analysis?), Ready answer for what about the next set of ITRs for SBS (which will include the leasing program), how much can you reduce the anticipated Level A through mitigation measures? We should dust off the research proposal developed with USGS and think about what can be done in the next 2 years to provide information to help inform the next set of ITRs

Sorry to be abandoning you for the next few days

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

From: **Colligan, Mary** <[mary\\_colligan@fws.gov](mailto:mary_colligan@fws.gov)>

Date: Tue, Oct 2, 2018 at 4:36 PM

Subject: briefing document

To: Patrick Lemons <[patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)>

Well, I did not have much of an opportunity to work on this today. I have attached where it stands now.

--

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

0000014158

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

<Briefing Document October 2018 - v3.docx>

--

Ryan Wilson, Ph.D., Certified Wildlife Biologist ®  
Marine Mammals Management, Polar Bears  
U.S. Fish and Wildlife Service  
1011 E. Tudor Rd., MS341  
Anchorage, AK 99503

Phone: (907) 786-3830  
Email: [ryan\\_r\\_wilson@fws.gov](mailto:ryan_r_wilson@fws.gov)  
Fax: (907) 786-3816

--

Ryan Wilson, Ph.D., Certified Wildlife Biologist ®  
Marine Mammals Management, Polar Bears  
U.S. Fish and Wildlife Service  
1011 E. Tudor Rd., MS341  
Anchorage, AK 99503

Phone: (907) 786-3830  
Email: [ryan\\_r\\_wilson@fws.gov](mailto:ryan_r_wilson@fws.gov)  
Fax: (907) 786-3816

--

Ryan Wilson, Ph.D., Certified Wildlife Biologist ®  
Marine Mammals Management, Polar Bears  
U.S. Fish and Wildlife Service  
1011 E. Tudor Rd., MS341  
Anchorage, AK 99503

Phone: (907) 786-3830  
Email: [ryan\\_r\\_wilson@fws.gov](mailto:ryan_r_wilson@fws.gov)  
Fax: (907) 786-3816



**To:** Lemons, Patrick[patrick\_lemons@fws.gov]  
**From:** Putnam, Christopher  
**Sent:** 2018-10-05T13:34:16-04:00  
**Importance:** Normal  
**Subject:** Fwd: [EXTERNAL] short meeting this afternoon  
**Received:** 2018-10-05T13:34:16-04:00

Heads up.

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

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

From: **Putnam, Christopher** <[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)>  
Date: Fri, Oct 5, 2018 at 9:25 AM  
Subject: Re: [EXTERNAL] short meeting this afternoon  
To: <[ssimonds@contractor.saexploration.com](mailto:ssimonds@contractor.saexploration.com)>  
Cc: Rick Trupp <[rtrupp@saexploration.com](mailto:rtrupp@saexploration.com)>

Sure, I'm available pretty much all day.

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

On Fri, Oct 5, 2018 at 9:24 AM Suzan Simonds <[ssimonds@contractor.saexploration.com](mailto:ssimonds@contractor.saexploration.com)> wrote:

Christopher,

Do you have 15 to 30 minutes this afternoon for Rick and myself to come over.

Sue Simonds

Permits and Regulatory Manager

**SAExploration, Inc.**

**Safety – Acquisition - Experience**

[ssimonds@saexploration.com](mailto:ssimonds@saexploration.com)

8240 Sandlewood Place

Anchorage, Alaska 99507

907-331-8140 Cell

907-522-4499 Main

907-522-4498 Fax

[saexploration.com](http://saexploration.com)

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**To:** Putnam, Christopher[christopher\_putnam@fws.gov]  
**From:** Lemons, Patrick  
**Sent:** 2018-10-05T14:01:08-04:00  
**Importance:** Normal  
**Subject:** Re: [EXTERNAL] short meeting this afternoon  
**Received:** 2018-10-05T14:01:11-04:00

Can you shoot me a calendar invite? I'm going to try and make it but we have a vet appointment at 1230pm.

On Fri, Oct 5, 2018 at 9:35 AM, Putnam, Christopher <[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)> wrote:

They'll be here some time between 2 and 3 today.

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  
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-- J.R.R. Tolkien

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

From: **Putnam, Christopher** <[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)>  
Date: Fri, Oct 5, 2018 at 9:34 AM  
Subject: Re: [EXTERNAL] short meeting this afternoon  
To: <[ssimonds@contractor.saexploration.com](mailto:ssimonds@contractor.saexploration.com)>

Sounds good. See you then.

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

On Fri, Oct 5, 2018 at 9:28 AM Suzan Simonds <[ssimonds@contractor.saexploration.com](mailto:ssimonds@contractor.saexploration.com)> wrote:

Great,

We will be over at between 2 and 3.

Sue Simonds

Permits and Regulatory Manager

**SAExploration, Inc.**

**Safety – Acquisition - Experience**

[ssimonds@saexploration.com](mailto:ssimonds@saexploration.com)

[8240 Sandlewood Place](#)

[Anchorage, Alaska 99507](#)

907-331-8140 Cell

907-522-4499 Main

907-522-4498 Fax

[saexploration.com](http://saexploration.com)

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**From:** Putnam, Christopher <[christopher\\_putnam@fws.gov](mailto:christopher_putnam@fws.gov)>  
**Sent:** Friday, October 5, 2018 9:26 AM  
**To:** Suzan Simonds <[ssimonds@contractor.saexploration.com](mailto:ssimonds@contractor.saexploration.com)>  
**Cc:** Rick Trupp <[rtrupp@saexploration.com](mailto:rtrupp@saexploration.com)>  
**Subject:** Re: [EXTERNAL] short meeting this afternoon

Sure, I'm available pretty much all day.

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  
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-- J.R.R. Tolkien

On Fri, Oct 5, 2018 at 9:24 AM Suzan Simonds <[ssimonds@contractor.saexploration.com](mailto:ssimonds@contractor.saexploration.com)> wrote:

Christopher,

Do you have 15 to 30 minutes this afternoon for Rick and myself to come over.

Sue Simonds

Permits and Regulatory Manager

**SAExploration, Inc.**

**Safety – Acquisition - Experience**

[ssimonds@saexploration.com](mailto:ssimonds@saexploration.com)

8240 Sandlewood Place

Anchorage, Alaska 99507

907-331-8140 Cell

907-522-4499 Main

907-522-4498 Fax

[saexploration.com](http://saexploration.com)

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--

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:** Lemons, Patrick[patrick\_lemons@fws.gov]  
**From:** Putnam, Christopher  
**Sent:** 2018-10-09T14:17:26-04:00  
**Importance:** Normal  
**Subject:** Re: [EXTERNAL] Thank you and Request for Technical Information  
**Received:** 2018-10-09T14:17:26-04:00  
[Picture \(Device Independent Bitmap\) 1.jpg](#)  
[Picture \(Device Independent Bitmap\) 2.jpg](#)

I'll take care of it.

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  
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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

On Tue, Oct 9, 2018 at 9:56 AM Lemons, Patrick <[patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)> wrote:

Hi Christopher,

Is this something you can help respond to?

Thanks,  
Patrick

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

**From:** Jenny Keatinge <[JKeatinge@defenders.org](mailto:JKeatinge@defenders.org)>  
**Date:** Fri, Oct 5, 2018 at 1:05 PM  
**Subject:** [EXTERNAL] Thank you and Request for Technical Information  
**To:** "[patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)" <[patrick\\_lemons@fws.gov](mailto:patrick_lemons@fws.gov)>

Dear Dr. Lemons,

Thank you for your technical assistance during our phone conversation earlier today. I am hoping that your department can please provide copies of the annual monitoring reports for

holders of LOAs pursuant to the ITR for polar bear/walrus during oil and gas activities in the Beaufort Sea and adjacent coastal Alaska? Since the regulation was promulgated in August of 2016, I'm not expecting that there are very many of them. If the LOA incident reports for polar bears are available as well, I would be grateful if you could please send them too.

Many thanks for your assistance.

Jenny

**Jenny Keatinge**  
Senior Federal Lands  
Policy Analyst

Defenders of Wildlife  
1130 17th Street N.W. Washington D.C. 20036-  
4604

**Tel:** 202-772-0270 | **Fax:** 202-682-1331  
[jkeatinge@defenders.org](mailto:jkeatinge@defenders.org) | [www.defenders.org](http://www.defenders.org)

--

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:** James Wilder[James\_Wilder@fws.gov]; Christopher Putnam[Christopher\_Putnam@fws.gov]; Charles Hamilton[Charles\_Hamilton@fws.gov]  
**From:** Lemons, Patrick  
**Sent:** 2018-10-09T18:38:08-04:00  
**Importance:** Normal  
**Subject:** Fwd: Deputy Secretary Briefing and Supporting Docs - 1002 Seismic Analysis  
**Received:** 2018-10-09T18:38:29-04:00  
[Southern Beaufort Sea Polar Bears - Draft SAR - 22 June 2017.pdf](#)  
[Amstrup et al. 2004 - Bioscience.pdf](#)  
[Bromaghin et al. 2015 - Eco Apps.pdf](#)  
[Conservation Council for Hawaii v NMFS.pdf](#)  
[Denning Bears Analysis - 13Sept2018.docx](#)  
[Denning Map.pdf](#)  
[Durner et al. 2003 - Arctic.pdf](#)  
[Final Rule MMPA 101\(a\)\(5\).pdf](#)  
[MMPA Implementing Regulations on Incidental Take.pdf](#)  
[Natural Resources Defense Council v Evans.pdf](#)  
[Proposed Rule MMPA 101\(a\)\(5\).pdf](#)  
[Robinson et al. 2014 - Bioscience.pdf](#)  
[Rode et al. 2018 - JMamm.pdf](#)  
[Rode et al. 2018b - Global Change Biology.pdf](#)  
[Schiedler 2013 - Section 6 FLIR Report.pdf](#)  
[Briefing Document October 2018.docx](#)

Here is the briefing paper for the Deputy Secretary and the supporting materials. I know you all already understand this but again, please consider this close hold and do not distribute.

Let me know if you have questions.  
Patrick

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

**From:** Lemons, Patrick <patrick\_lemons@fws.gov>  
**Date:** Fri, Oct 5, 2018 at 2:30 PM  
**Subject:** Fwd: Deputy Secretary Briefing and Supporting Docs - 1002 Seismic Analysis  
**To:** Greg Siekaniec <greg\_siekaniec@fws.gov>, Karen Clark <karen\_clark@fws.gov>, "Colligan, Mary" <mary\_colligan@fws.gov>, "Frerich, Lucille" <lucille\_frerich@fws.gov>, Tess Sprau <tess\_sprau@fws.gov>

Hi Greg and Karen,

Attached is the updated version of the briefing paper as well as all the supporting documents. Please do not hesitate to let me know if you have questions or need anything else from my end.

Thanks for all the support and help on this.  
Patrick

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

**From:** Lemons, Patrick <patrick\_lemons@fws.gov>

Date: Thu, Oct 4, 2018 at 11:05 PM

Subject: Deputy Secretary Briefing and Supporting Docs - 1002 Seismic Analysis

To: Greg Siekaniec <[greg\\_siekaniec@fws.gov](mailto:greg_siekaniec@fws.gov)>, "Colligan, Mary" <[mary\\_colligan@fws.gov](mailto:mary_colligan@fws.gov)>

Hi Greg,

I tried several ways to zip this stuff into one file but at the end of the day, it was funky. It is a result of some issue with the new zip program, 7zip, so I didn't want to take any chances. Therefore, I've attached all files to this email (about 20MBs worth). There should be 16 files, 15 of which are supporting docs and 1 of which is the actual briefing paper. I've labelled them in what I hope is an obvious format so you can send them forward. I should be up for another hour or so in hopes that I'm not dreaming about FLIR, "negligible impact", or mismatched toppers. If you need anything or have questions, please let me know. Otherwise, I'll be in the office by 8am at the latest.

Cheers,

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)

--

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)

--

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)

**From:** Google Calendar  
**Location:** MMM  
**Importance:** Normal  
**Subject:** SAE Mitigation Mitigation Measures  
**Start Date/Time:** 2018-10-10T14:00:00-04:00  
**End Date/Time:** 2018-10-10T15:00:00-04:00  
[invite.ics](#)

[more details »](#)

## SAE Mitigation Mitigation Measures

**When** Wed Oct 10, 2018 10am – 11am Alaska Time - Anchorage

**Where** MMM ([map](#))

**Video call** [https://hangouts.google.com/hangouts/\\_/doi.gov/christopher-put](https://hangouts.google.com/hangouts/_/doi.gov/christopher-put)

**Calendar** kimberly\_klein@fws.gov

**Who**

- christopher\_putnam@fws.gov - organizer
- patrick\_lemons@fws.gov
- kimberly\_klein@fws.gov
- james\_wilder@fws.gov
- ryan\_r\_wilson@fws.gov

**Going?** [Yes](#) - [Maybe](#) - [No](#) [more options »](#)

Invitation from [Google Calendar](#)

You are receiving this email at the account kimberly\_klein@fws.gov because you are subscribed for invitations on calendar kimberly\_klein@fws.gov.

To stop receiving these emails, please log in to <https://www.google.com/calendar/> and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. [Learn More](#).

**To:** Putnam, Christopher[christopher\_putnam@fws.gov]  
**From:** Jenny Keatinge  
**Sent:** 2018-10-10T14:26:15-04:00  
**Importance:** Normal  
**Subject:** RE: [EXTERNAL] Thank you and Request for Technical Information  
**Received:** 2018-10-10T14:26:34-04:00  
[image001.gif](#)  
[image002.jpg](#)

Dear Mr. Putnam,

Thank you for getting back to me. Yes, please send me the final reports from LOA holders under the current Beaufort Sea incidental take regulation from August 2016 to the present. In addition, if you can send me a summary of the data from the observation reports, including the number of reports, the number of polar bears observed, dates, the number of "takes" that occurred (as defined by the Marine Mammal Protection Act and its regulations), and similar information, that would be fantastic.

In addition, I would be grateful if you can provide me with data on the annual number of removals from human caused mortality in 2016 and 2017 for the Southern Beaufort Sea stock, including how many from native subsistence harvest (U.S. separate from Canada) and the number from any other mortalities/removals. If you have any of that data collected for 2018 so far, that would be useful as well. I understand the draft 2017 SAR provides an average based on the 10-year period from 2006-2015, but it would be helpful to have the specifics for the recent years, if possible. (Also, it is my understanding that the SAR hasn't been finalized yet, but if I have that wrong, please let me know).

Many thanks for your technical assistance!

Jenny



Jenny Keatinge

Senior Federal Lands Policy Analyst



Defenders of Wildlife

1130 17th Street N.W. Washington D.C. 20036-4604

Tel: 202-772-0270 | Fax: 202-682-1331

[jkeatinge@defenders.org](mailto:jkeatinge@defenders.org) | [www.defenders.org](http://www.defenders.org)

**From:** Putnam, Christopher [mailto:christopher\_putnam@fws.gov]  
**Sent:** Tuesday, October 9, 2018 3:21 PM

0000014172

**To:** Jenny Keatinge <JKeatinge@defenders.org>  
**Cc:** Lemons, Patrick <patrick\_lemons@fws.gov>  
**Subject:** Re: [EXTERNAL] Thank you and Request for Technical Information

Ms. Keatinge,

Our program maintains the reports you are requesting and we'll be happy to provide what we have. To clarify, are you asking for the final reports from LOA holders under the current Beaufort Sea incidental take regulation? That would be from August 2016 to the present. Or, are you requesting another date range? Also, we generally do not release the polar bear observation reports since they contain personally identifiable information from the company personnel who made the observation and submitted the report. However, we can provide summary data from the reports if you wish. We can provide the number of reports, the number of polar bears observed, dates, the number of "takes" that occurred (as defined by the Marine Mammal Protection Act and its regulations), and similar information. If you are looking for something specific please let me know and we can produce a report for you. Please let me know if you have any other questions. Thank you.

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

On Tue, Oct 9, 2018 at 9:56 AM Lemons, Patrick <patrick\_lemons@fws.gov> wrote:  
Hi Christopher,

Is this something you can help respond to?

Thanks,  
Patrick

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

From: **Jenny Keatinge** <JKeatinge@defenders.org>  
Date: Fri, Oct 5, 2018 at 1:05 PM  
Subject: [EXTERNAL] Thank you and Request for Technical Information  
To: "patrick\_lemons@fws.gov" <patrick\_lemons@fws.gov>

Dear Dr. Lemons,

Thank you for your technical assistance during our phone conversation earlier today. I am hoping that your department can please provide copies of the annual monitoring reports for holders of LOAs pursuant to the ITR for polar bear/walrus during oil and gas activities in the Beaufort Sea and adjacent coastal Alaska? Since the regulation was promulgated in August of 2016, I'm not expecting that there are very many of them. If the LOA incident reports for polar bears are available as well, I would be grateful if you could please send them too.

Many thanks for your assistance.

Jenny



**Jenny Keatinge**

Senior Federal Lands Policy Analyst



Defenders of Wildlife

1130 17th Street N.W. Washington D.C. 20036-4604

**Tel:** 202-772-0270 | **Fax:** 202-682-1331

[jkeatinge@defenders.org](mailto:jkeatinge@defenders.org) | [www.defenders.org](http://www.defenders.org)

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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:** Christopher Putnam[Christopher\_Putnam@fws.gov]  
**From:** Benter, Brad  
**Sent:** 2018-10-10T19:30:56-04:00  
**Importance:** Normal  
**Subject:** All Bears removal since 1/1/16  
**Received:** 2018-10-10T19:31:09-04:00  
AllBearRemoval10\_10\_18.xlsx

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Brad Benter  
Wildlife Biologist  
U.S. Fish and Wildlife Service  
Marine Mammals Management  
1011 E. Tudor Road, MS341  
Anchorage, Alaska 99503  
(907) 786-3980  
(907) 786-3816 FAX