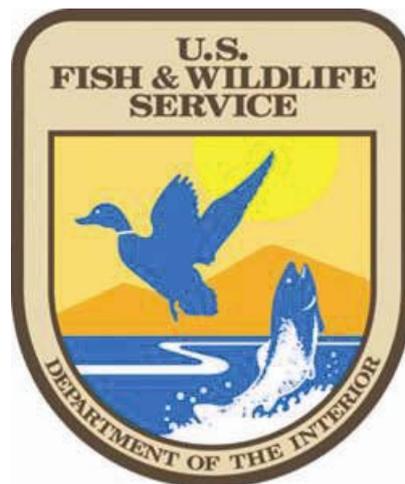


POLAR BEAR CONSERVATION/RECOVERY PLANNING MEETING

October 29, 2010 8:30am-5:00pm

Hotel Captain Cook

Endeavor Room



**U.S. Fish & Wildlife Service
1011 E. Tudor Road
Anchorage, AK 99503**

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Agenda

Polar Bear Conservation/Recovery Planning Agenda

October 29, 2010 8:30am-5:00pm

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Meeting Objectives

1. Describe the background and process of the development of the Plan.
2. Refine our collective understanding of the threats to polar bears and develop strategies to mitigate those threats.
3. Solicit input and collaboration from our partners in polar bear conservation in the early stages of the development of the Plan.
 - a. Collect information about our partners' concerns and/or goals regarding the Plan.
 - b. What aspects of the planning and implementation process are of interest to our partners, and what can we do to facilitate their involvement?

Morning Session – Managers' Briefing

8:30-8:35	Facilitator Ground Rules	Colleen Matt
8:35-9:05	Welcome and Introductions	Geoff Haskett
9:05-9:20	Comments on the Meeting Agenda	LaVerne Smith
9:20- 9:35 DeBruyn	Introduce Federal Polar Bear Mangers/Researchers	Rosa Meehan/Terry
9:35- 9:50	The Role of USGS in Polar Bear Research/Management	Leslie Holland-Bartels
9:50- 10:05	Conservation Planning Overview/Discussion	Jim Wilder
10:05-10:20	<i>Break</i>	
10:20-11:30	Conservation Planning Discussion (continued)	All
11:30-12:00	Presentations on some existing partnerships	ANC, NSB, Defenders
12:00-1:00	<i>Lunch, provided by Defenders of Wildlife</i>	

Afternoon Session – Identifying and Mitigating Threats

1:00-2:00	Modification or Curtailment of habitat or range	Jim Wilder/All
2:00-2:55	Human-caused Removals	Jim Wilder/All
2:55-3:10	<i>Break</i>	
3:10-4:05	Other Natural or Manmade Factors	Jim Wilder/All
4:05-4:50	Cumulative Effects/Research Coordination	Jim Wilder/All
4:50-5:00	Wrap-up	Colleen Matt

Facilitator Ground Rules

Colleen Matt, Facilitator

Opened the meeting and provided meeting ground rules:

- Please turn off cell phones
- Sessions will start and end on time, but please move around when you need to
- The morning session will be mostly informational, but there will be time in the late morning and afternoon for discussions and information sharing
- Please speak up and state your name and affiliation for the recorder
- Please encourage mutual respect for all ideas
- Lunch, provided by Defenders of Wildlife, will be provided in the Adventure Room
- Please register at the front table

Welcome and Introductions

Geoff Hasket, USFWS Alaska Regional Director

Welcomed attendees and spoke to the purpose of today's meeting as an opportunity to describe the background and process of the Polar Bear Conservation/Recovery Plan, to refine the collective understanding of the threats to polar bears, to begin development of strategies for mitigation of threats, and to solicit collaborative ideas and information. Today's meeting is intended to provide a forum to hear from many diverse viewpoints, not necessarily as a forum for debate or to arrive at a conclusion or even agreement but to collect ideas and information.

Many diverse groups are represented by the range of folks in attendance. It is important to solicit input from all sides of the issue. The goal is to use all partners and interested parties to expedite the conservation of the species. Eventually, in the long term, the group will arrive at the point where there is more agreement and we hope to capitalize on the strengths of the groups represented here. The conservation efforts are not limited to just Alaska, but are international as well. This planning process will be used as part of the larger, international, efforts involving the Range States (Canada, Greenland, Russia, United States, and Norway).

Today is a threat-based planning effort. There is a desire and need to have a collective understanding of the threats to polar bears. There is recognition that greenhouse gases are a huge part of what is happening to polar bears but this process is not intended to deal with that subject directly.

The goal is that the final Polar Bear Conservation/Recovery Plan reflects the input and interests of all. We realize cooperative and collaborative efforts with conservation partners is necessary to the success of this topic and look forward to working with the various groups interested in and committed to polar bear conservation.

Cooperative and collaborative efforts with conservation partners are vital to the success of polar bear conservation.

Comments on the Meeting Agenda

LaVerne Smith, Deputy Regional Director, USFWS

Welcomed attendees and thanked them for their willingness to assist the U.S. Fish and Wildlife Service with the large task ahead and recognized that the task will require working together. Many in the room were acknowledged for their contributions to polar bear conservation. There is a desire to tap the collective experience and knowledge of those interested in polar bear conservation today and over the next many months in order to develop a Conservation and Recovery Plan and, more importantly, to implement and leverage efforts across agencies and organizations with expertise and resources.

The U.S. Fish and Wildlife Service (USFWS) wants an open planning approach to design and implementation of the plan. Open planning means USFWS would like to keep all the organizations represented here today, and others, informed and involved in the development of the plan. We would like to see actions in the plan that various organizations may take responsibility for, and have something that can be endorsed by stakeholders and partners. We have used recovery teams for listed species in the past. Sometimes we have assigned a biologist in-house to write the plan. Sometimes other agencies or contractors have written plans for species. We want to broaden this process out and involve all the different partners that have a stake in polar bear conservation. We had a 1994 polar bear conservation plan developed under the Marine Mammal Protection Act and there may be pieces that are still valid. We also have other items to build on including the listing and the USFWS/USGS preliminary conservation plan. There is a foundation of information and efforts that are underway currently, i.e. those with our native partners, oil and gas industry through the incidental take program, management and research with the state, USGS, NGO's and other federal agencies.

A good plan will help us to leverage the efforts of others, identify funding needs, facilitate Section 7 consultations and ultimately benefit polar bear conservation.

Introduction of Federal Polar Bear Managers/Researchers

Rosa Meehan, Chief, Marine Mammals Management, USFWS

Welcomed the group, thanked everyone for participating in what amounts to a large task set before us all, and highlighted a few key partnerships:

- USGS: long term program in polar bear research and polar bear ecology
- Alaska Nanuuq Commission: an exemplary partner; ANC's leadership helped pull together the bilateral treaty with Russia
- State of Alaska: includes a formal agreement that identifies areas of responsibility such as: human-bear interactions and an outreach and education component as well as research and monitoring; the State is part of the international delegation
- World Wildlife Fund
- Oil and Gas Industry Partners
- And others

These existing networks and partnerships will help us to accomplish the task at hand and develop creative conservation ideas.

The Role of USGS in Polar Bear Research/Management

Leslie Holland-Bartels, Regional Executive Officer, USGS

Provided an overview of polar bear research to set a framework for future discussions. In order to be out in the forefront, there is a need to engage closely in dialogue with interested stakeholders to ensure the provision of tools to help inform future actions.

The Department of Interior has invested efforts in polar bear research since the late 1960's. There were harvest issues in the late 1960's/early 1970's that led to changes in management strategies, followed by a quiet period in the 1980's that was laced with interactions with industry to help inform decisions on the North Slope, to efforts now on research in changing habitat and distribution. There have been efforts in the areas of collaring, satellite telemetry, offshore denning habitats, and now efforts are moving in to a modeling framework. In 2010 there has been more active engagement by vested parties and these efforts can be incorporated into a transparent and engaging framework.

The Polar Bear Action Plan process was expanded by the administration into an Arctic strategy and polar bear actions. The USGS role within the action plan was to conduct research to reduce uncertainties within forecast models for sea ice, habitat and polar bear responses. The Changing Arctic Ecosystem Initiative is looking at how landscape changes are affecting a whole sweep of species in the arctic and subarctic, of which polar bears are a part. The USGS science strategy has been to understand and project changes in arctic marine and terrestrial ecosystems and includes topics such as:

- assess and project habitat quality
- assess and forecast population status
- assess health and condition
- assess responses to changing food webs
- synthesize new knowledge in a forecasting framework

USGS research provides the science to inform decision making, including evaluating the consequences of behavioral responses to changing environment, understanding the mechanism driving population trends and reducing the uncertainty of population projections.

Conservation Planning Overview and Discussion

Jim Wilder, USFWS

Discussed the conservation planning process as a threats-based process. It is a strategic planning exercise based on the threats polar bears face used to develop mitigation measures to address the threats identified. This process is one that is a standard recovery planning process that both NMFS and USFW follow.

There are two populations of polar bears in Alaska: the southern Beaufort Sea and the Chukchi/Bering Sea populations. The main threat to polar bears is the loss of sea ice habitat.

The federal authorities under which polar bears are managed are the Marine Mammal Protection Act (MMPA) and the Endangered Species

The Polar Bear
Conservation Plan goal is:

“To ensure that polar bears remain a healthy, functioning, and resilient component of the Bering-Chukchi and Beaufort Sea ecosystems.”

Act (ESA). There exists a broad foundation of domestic and international authorities/plans ranging from 1973 to 2009 from which to base this planning effort. The MMPA requires conservation plans for any species designated as 'depleted.' Species listed as endangered or threatened under the ESA are automatically considered depleted. Under the ESA, USFWS is under statutory obligations to produce a plan.

The goal of the plan is to restore a listed species to a point where they are a secure, self-sustaining component of their ecosystem so that the protections of the ESA are no longer required. The Polar Bear Plan goal is "to ensure that polar bears remain a healthy, functioning, and resilient component of the Bering-Chukchi and Beaufort Sea ecosystems."

Plans provide a road map to recovery. They structure and organize recovery efforts, and identify research and management tasks and their priorities necessary to implement the recovery strategy. The role of recovery plans is to: provide context and guidance for Section 7 consultations, serve as an outreach tool, guide monitoring (species, threats, and implementation) and obtain funding.

Elements of the conservation plan include:

- A description of such site specific management actions as may be necessary to achieve the plan's goal.
- Objective, measureable criteria to determine whether the goals of the plan are being met.
- Estimates of the time and cost required to carry out the measures incorporated in the plan.

The planning process includes the following steps:



Step one is the threats assessment. The threats assessment is a central part of the recovery plan and is organized by threats associated with each ESA listing factor and then ranked according to their immediacy, severity and potential impact to the species and link recovery actions. In June 2010, the USFWS Polar Bear

Program held a workshop to develop a draft foundation for the threats assessment. In the afternoon portion of this meeting, that draft threats assessment foundation will be reviewed to help generate discussion and collect additional ideas and information. The threats assessment objectives are:

- Provide an overview of the causes of the species decline
- Identify continuing, new or anticipated threats and the source of the threats
- Address the magnitude, likelihood and potential impact

Recovery actions will include monitoring the population, monitoring the threats (i.e. determine intensity and level), and monitoring actions to ensure actions are having the desired affect). The implementation schedule will draw all actions together, estimate costs, prioritize recovery actions, identify responsible parties, and establish timelines. Priority levels will be assigned to actions as follows:

Priority 1 – actions that must be taken to prevent extinction or irreversible decline

Priority 2 – actions that must be taken to prevent significant decline/adverse impact short of extinction

Priority 3 – all other actions needed for full recovery

Assigning priorities does not imply that some recovery actions are of low importance; rather it implies that they may be deferred while higher priority actions are implemented.

The schedule for the Polar Bear Conservation/Recovery Plan will run parallel to and compliment the process of the Range States' Action Plans. The USFWS has taken the lead for collating and combining the individual plans into one comprehensive document. This plan, the U.S. Polar Bear Conservation/Recovery Plan, will feed into the larger international plan. The goal is to have a thorough plan by December, 2011. In January, 2012, the U.S. portion will be published in the federal register for broader public review.

The process will include:

- 10/29/10 conservation partners meeting – develop strategies to mitigate, explore feasibility, identify implementing organizations.
- Science coordination with USGS throughout process
- Science/technical committee meetings running parallel to the above meetings/workshops
- Science Symposium: Climate Change Threats Workshop – 01/21/2011
- Alaska Forum on the Environment: Human Caused Removal threats workshop 02/08/2011 (subsequent workshops if needed)
- Joint Meeting – partners and science/technical committee (05/2011)
- Draft plan for review 08/11
- Draft plan for review in Federal Register (01/2012)

Just a few of the successes from the 1994 Conservation Plan to consider as we move forward:

- Co-management with Nanuuq Commission
- Incidental Take Program
- USGS – quantifying habitat use
- Research to quantify the size of the populations in Beaufort and Bering/Chukchi
- Harvest monitoring program
- Bilateral treaty with Russia

This is a tangible conservation process that bears fruit in the end. It is long and involved, but worthwhile. The USFWS is looking forward to the involvement of stakeholders and partners in this process.

DISCUSSION

Question: Margaret Williams, WWF: I would like to clarify the structure of the recovery “team” and the smaller group that will be named as a scientific committee. How will the scientific/technical committee be selected and who will it be made up of?

Answer: Jim Wilder, USFWS: At this time we are open to suggestions. USGS and USFWS will be a part. We would like the State, Nanuuq, BOEMRE, and some others to participate as well.

Comment: Rosa Meehan, USFWS: There is a traditional image of a recovery team as a set group of people. What we would like to do here is not a traditional recovery team, but instead reach out and work with all parties interested in polar bears and the conservation challenge we face. We want to underscore an open planning process.

Question: Rebecca Noblin, Center for Biological Diversity: Will USFWS have the responsibility for the writing of the plan?

Answer: Jim Wilder, USFWS: Yes, for efficiencies sake. We will take comments and input, but USFWS will take the lead in the writing.

Comment: Rose Meehan, USFWS: One of the things that we want is to demonstrate what we are collectively doing for polar bears now. We want to make this collaborative, and while we have set up some specific events interested partners and collaborators can put on their calendars, we are also looking for other venues for people to provide input, using electronic means to solicit input, and other ways for people to be involved throughout the process.

Presentations on Existing Partnerships

Jack Omelak, Alaska Nanuuq Commission

Thanks and congratulates the USFWS and the polar bear team because their efforts on polar bear conservation have really been exhaustive, and more importantly, sincere. MMPA contains specific language for the continuation of subsistence use of marine mammals by Alaska Natives. In 1994 the Nanuuq Commission was formed. It represents coastal villages in issues regarding polar bear management. The commission works closely with villages and essentially each village, through the IRA tribal governing body, appoints an individual to serve on the commission. Meetings are held at various locations. The Commission takes pride in representing those villages that have given the authority to represent them in polar bear management. Since the creation of the commission, we have played a significant role in the U.S. - Russia treaty. We've had some significant events take place in regards to that. In 2001 a cooperative agreement was signed with USFWS to co-manage polar bears. One thing the commission strives in continuing to do is 1) not only be involved in polar bear research but take an active role in research and management strategies, and 2) strive to involve the communities that are represented. We also have several other working relationships, the UWFWS and the North Slope Borough and the villages it represents, World Wildlife Fund,

National park Service, and others. We would like to develop relationships with the State of Alaska and others. We have been active in decisions with USFWS and have participated in several studies. It is imminent that polar bear-human interaction is most likely to increase. This past year we started developing a polar bear deterrent program. Information received from the villages is that there is an increase in the polar bear population coming in to the villages. We are also in the preliminary stages of developing a new ecological knowledge study about the historic and contemporary uses of polar bears. Regarding some of the issues raised thus far: how do we integrate this in to outreach? One of the things I am passionate about is curriculum development. We need to increase the prestige of polar bear conservation. If we continue these types of meetings and “gather heads” we will work towards developing a polar bear management plan that will be effective and useful.

North Slope Borough Polar Bear Deterrence Program

Jason Herreman

Provided an overview of the North Slope Borough’s (NSB) Polar Bear Deterrence Program. The program was started because of issues arising when bears come in to the villages and communities. The program includes:

- On call patrol 24 hours per day, 365 days a year, in Barrow, and as needed in other villages
- Collaborative effort with North Slope Borough Departments and Native Villages of Barrow and Kaktovik
- Letter of Authorization from the USFWS to haze bears
- USFWS has entered into cooperative agreement with the Borough to fund patrols for the next two years

Primary objectives are to:

1. Deter bears away from town without endangering the bear or public
2. Provide opportunity for exhausted polar bears to rest when no sea ice is around

Deterrence methods include:

- Noise, e.g., horn from a car
- Car lights, spotlights
- Cracker shells (pyrotechnics) or bean bags
- Use of vehicles (truck/snow mobile/ATVs) to direct bear away from town and/or people

Deterrence is a win-win strategy for residents and for bears!

Program Basics:

- Most patrollers are Inuit or departmental staff, and are experienced hunters
- Inexperienced patrollers are always paired with an experienced individual
- In-field experience is required – after three months they are approved by Deputy Director with a letter to USFWS stating patrollers are trained
- Bears harvested in defense of life and property are used for subsistence purposes

Training:

- USFWS has started a training module on behavior and appropriate use of deterrence tools
- Gun safety training – all patrollers go through gun safety training
 - Safe handling
 - Maintenance and cleaning
 - Storage
 - Inventory and tracking
 - Ammunition types, cracker shells, bean bags, slugs

Much of the training to date has been on-scene; classroom training is beginning but on-scene training is a must.

Key aspects of the program:

- Experienced patrollers are good trainers and new patrollers can learn from those with past experience
- People who are knowledgeable about polar bears and who live in the Arctic are often more easily trained
- Instructors who know about firearms and ammo are valuable resource
- Biologists are important for understanding bear behavior and possible future interaction issues
- Minimizing attractants in our communities is vital to the success of the program
- Viewing requirements are being established in our communities in conjunction with the USFWS

DISCUSSION

Question: Pam Miller, Northern Alaska Environmental Center: Are you keeping a record of where the interactions and events are occurring in the GIS database in the borough?

Answer: Jason Herreman, NSB Polar Bear Deterrence Program: Yes, every time we have a polar bear call we do a report and it does go in to the database. We also make a report to Craig's program to help identify areas where interactions occur and it helps us to understand how often the events are occurring. Depending on the year, we may have two bears or 200 bears. This year we've had essentially no bears. It varies a lot. It is important to have trained individuals in place to deal with high bear years.

Question: Diane Sanzone, BP: Do you have a written plan with a decision tree?

Answer: Jason Herreman, NSB Polar Bear Deterrence Program: We do not have a written plan at this point. Hopefully we will have one in conjunction with Craig's and apply it across the North Slope Borough.

Question: (unidentified): Of late, what is the enforcement like for behaviors that promote polar bears? Are the borough police giving citations or worse?

Answer: Jason Herreman, NSB Polar Bear Deterrence Program: We don't enforce in that manner. Coming down with a heavy handed approach in these communities is not effective. The best enforcement is

education and providing opportunities to do things properly, and advocating safety for community members. Fines have not proven to be effective.

Question: Diane Sanzone, BP: Are there letters of authorization for incidental take for bear viewing?

Answer: Susi Miller, USFWS: Polar bear viewing should be done in a way that does not result in any form of take. We will not do letters of authorization for viewing. There is a permit in place for commercial activities. There is a requirement for obtaining a commercial activities permit from the Refuge if the activity is taking place on Refuge lands and in Kaktovik there is a resolution in progress for the requirement of a city permit if the activity is occurring on city land. The resolution has not yet been finalized.

Answer: Jason Herreman, NSB Polar Bear Deterrence Program: The North Slope Borough requires a permit. The permitting process requires that a plan be provided to address incidents that could occur between humans and bears.

Question: Pam Miller, Northern Alaska Environmental Center: Polar bears wander into Fort Yukon and the Kobuk. Alaska native peoples and other residents may be covered differently. Has there been any thought to do an educational effort on how to deal with random bears?

Answer: Susi Miller, USFWS: In cases such as Kotzebue or summer camps or within Fort Yukon, we are often in touch with villagers about the laws and inform them of options other than shooting the bears. Historically these contacts have been pretty random. We are looking at developing conservation messages and speaking to communities.

Comment: Rosa Meehan, UFWFS: These are the types of issues that we are looking to articulate with this type of discussion. We have, as Susi mentioned, a network within the rural communities. We have a harvest monitoring program, individuals in coastal communities, direct contacts in the villages, contacts through the Alaska Nanuq Commission, not necessarily in all villages though. Clearly we need to look ahead at how we can be more effective.

Defenders of Wildlife

Karla Dutton

Defenders is a national, nonprofit organization with approximately 3,000 members. Defenders has an Anchorage office staffed by two people. The organization participates in engaging the public in the polar bear ESA process. Its purpose is to reduce human-bear conflict through partnerships, and provides support for programs such as bear resistant food lockers and remote cameras for the walrus project on the North Slope. Defenders is preparing to launch a polar bear report on the status of Alaska's polar bear and is hosting a polar bear diversionary and supplementing feeding science workshop in May or June to bring expertise together on the feeding of carnivores (purposefully or accidentally), the pros and cons and lessons that have been learned. The report can be found on the Defender's website: www.defenders.org.

DISCUSSION

Question: Colleen Matt, Facilitator: Is the status report coming out before the workshop?

Answer: Karla Dutton, Defenders of Wildlife: The status report is in production and should come out in December; the workshop is being planned in conjunction with other workshops to maximize attendance.

World Wildlife Fund

Margaret Williams

The World Wildlife Fund is an international conservation organization with an office in Anchorage and a large program in Russia. Its objectives with polar bears are to improve and support resilient functioning and healthy populations of polar bears.

Some key activities include:

- Engaging scientists – WWF has funded quite a bit of work in supporting equipment on Wrangell island, provided modest support to USGS in the past, and has a scientist on staff who is an active participant.
- Assessing threats, work with climate change, and look at shipping and oil and gas offshore development.
- A workshop is scheduled next week at the Alaska Sealife Center on marine mammal husbandry in the event of an oil spill.
- National oil spill commission involvement.
- Engaging people in critical solutions in the efforts to recover and maintain polar bear populations in the face of rapid habitat changes.
- Collaborative relationships on approach and conservation efforts within Russia.
- Recent work with Defenders and USFWS on a food storage project to reduce human bear interactions and support of the North Slope Borough's education program and polar bear patrols.
- We contribute extensively in the United States/Russia relations on the subject.

There are a lot of challenges but we've had quite a few successes and continue to work hard in this area.

DISCUSSION

Question: Karla Dutton, Defenders of Wildlife: Can you speak more to the exchanges between Russia and Alaska on polar bear conflicts?

Answer: Margaret Williams, WWF: With support from USFWS, WWF brought some of the Russian leaders in polar bear patrols in to meet with Alaska villages (Point Hope, Point Lay, Wainwright and Barrow) on controlling visitations, protecting haul outs, etc. When the Alaska villages were talking about polar bears were coming ashore this summer they discussed the messages heard from the Russians. One message shared was that in hard times the polar bears have helped the villagers and now the villagers, in turn, need to help the polar bears.

"In hard times the polar bear has helped villagers ... now it is our turn to help the polar bear"

Comment: Jason Herreman, NSB Polar Bear Deterrent Program: This was a very successful program and the information that came out of that visit was truly taken to heart by the Alaskan villages and they remember and utilize that information.

Threats Assessment

James Wilder, USFWS

Polar Bear Program staff at the USFWS had a week long workshop in June 2010 to develop an initial draft Threats Assessment document. The Threats Assessment is a central part of the recovery plan. The draft is organized by threats associated with each ESA listing factor and then ranked according to the potential impact to the species. The five ESA listing factors are:

- (A) The present or threatened destruction, modification, or curtailment of its habitat or range;
- (B) Overutilization for commercial, recreational, scientific, or educational purposes;
- (C) Disease or predation;
- (D) The inadequacy of existing regulatory mechanisms;
- (E) Other natural or manmade factors affecting its continued existence.

The Threats Assessment provides an overview of the causes of the species decline; identifies continuing, new, or anticipated threats and the source of threats; addresses the magnitude (scope, intensity, immediacy), likelihood, and potential impact of identified threats and helps develop site specific actions to mitigate identified threats.

- Goals can be subdivided into discrete objectives which describe the conditions necessary for achieving the goal.
- The objectives are broad statements about the recovery needs for polar bears, linked directly to the priority concerns identified in the threats assessment.
- The criteria are the *objective and measurable* metrics by which you identify whether the objectives to address threats have been met

Threat A: Modification or Curtailment of Habitat or Range

Climate change has been more rapid and uniform than past warming events, and projected rates of future change are much greater, particularly in the Beaufort and Bering/Chukchi Seas. There are multiple stressors acting synergistically on bears, which results in declining body conditions, lowered reproductive rates, and reduced cub survival. Identified threats were prioritized as follows:

High	Medium	Low
<ul style="list-style-type: none"> ▪ Loss of access to prey ▪ Increased movements, energy expenditure (more dangerous travel, reduced body weight/condition, drowning events) ▪ Redistribution of polar bears to where they are more vulnerable to impacts (substandard habitat, more bears on shore during open water periods, increased bear-human interactions, unnatural concentrations may be more vulnerable to spread of disease, oil spills, etc.) 	<ul style="list-style-type: none"> ▪ Impacts to prey species (seal productivity, long term health of ice seal populations) ▪ Inadequate conditions for successful denning; loss of access to denning areas (reduced reproduction) 	<ul style="list-style-type: none"> ▪ <i>Loss of mating platform (bears mate in the spring on the ice, ice serves as the sub strait where males can track females and if ice breaks up earlier it is more difficult for the males to find females)</i>

DISCUSSION

Comment: Jason Herreman, NSB Polar Bear Deterrent Program: Interbreeding wasn't listed as one of the threats, i.e. the hybridization aspect of grizzlies mating with polar bears.

Question: Diane Sanzone, BP: Did the list contain anything on pollutants, i.e. pollutants winding up in the Arctic?

Answer: Jim Wilder, USFWS: It is included in a separate category as per the ESA listing, i.e. Other and Manmade Factors, which we'll go over this afternoon. This category covered only "Modification or Curtailment of Habitat or Range."

Question: Grant Hilderbrand, NPS: Regarding loss of mating platform and redistribution, is there a concern with breeding populations getting smaller and diversity?

Answer: Jim Wilder, USFWS: Loss of genetic diversity wasn't initially identified as a threat, but that's the type of information we're interested in.

Comment: Eric Regehr, USFWS: One of the reasons we considered the loss of the mating platform as a low threat is that if you look at sea ice projections, there is projected to be ice available in April and May, so the loss of mating platform is less of an issue than the demographic effects that Jim has been talking about.

Question: Diane Sanzone, BP: On the threats listing, was frequency versus severity considered and a Boston Square or some other type of filter applied?

Answer: Jim Wilder, USFWS: Yes, as you can see in this table (displayed on screen), magnitude was considered including the scope, intensity, and immediacy; the likelihood of occurrence; the species exposure and response; etc. These were all considered in the determination of priority levels.

Question: Pam Miller, Northern Alaska Environmental Center: One thing to consider in dealing with the avoidance of threat issue and decisions relating to cautionary avoidance of having a threat, i.e. land use decisions in the Arctic Refuge, etc. - I don't see that detail in the looking at the levels of avoidance of a threat. For example, under denning areas the threat was climate change and perhaps you considered other threats to denning areas but by reducing the risk to denning areas by eliminating activity in the area, as opposed to just regulating activity, would be an avoidance of the threat altogether.

Answer: Jim Wilder, USFWS: An objective, if I understand you, might then be to work with ANWR through a planning process to protect denning habitats.

Comment: Tom Evans, USFWS: There is a section on mitigation and perhaps that falls under that section.

Comment: Larry Bell, USFWS: When we are looking at threats to habitat we identified climate change but we didn't identify the concern for the loss of habitat from other developments outside of climate change.

Question: Rebecca Noblin, Center for Biological Diversity: Are we going to discuss greenhouse gas emissions in the plan in the context of background changes in habitat and threats to polar bears and then suggest a way forward in terms of recommendations? Given that the main threat is loss of sea ice due to climate change, perhaps it would be useful to mitigating those impacts given the loss of sea ice habitat, i.e. setting suggested levels of atmospheric carbons.

Answer: Jim Wilder, USFWS: We certainly intend to discuss the broader context of impacts to polar bears as a result of climate change and what is the best scientific understanding of the drivers of that climate change. It is an important context and a lot of what we are going to be doing is addressing the symptoms of climate change, rather than addressing the issue of greenhouse gas emission sources or levels.

Answer: Rosa Meehan, USFWS: We want to focus on the things we can do within our authority levels and we want to recognize the scientific understanding of the drivers of climate change. It isn't our mandated role to regulate greenhouse gases; however, we can at least find ways where we can provide important information to others that can inform their decision making processes on issues outside our authority such as climate change. Basically, our focus is specifically on actions that can be taken that directly affect polar bears. We do not have the authority to regulate greenhouse gases but can provide information as appropriate to agencies and/or processes whose responsibility is regulation of GHGs. Furthermore, we recognize our carbon footprint and both our Department and Agency have policies in place to reduce our contribution to GHGs.

Question: Mike Gosliner, Marine Mammal Commission: Elements of a recovery plan include identifying delisting criteria. Since polar bears are a different type of listing than the agency usually deals with, having a fairly robust population at the moment, has any thought be given to perhaps using reduced carbon levels (to a certain level) as a delisting criteria?

Answer: Jim Wilder, USFWS: Developing those criteria is a task for the Science and Technical Committee. It is a complicated process. I am hopeful the Marine Mammal Commission will have an interest in being a part of the Science and Technical Committee.

Comment: Eric Regehr, USFWS: In response to Rebecca's question/statement, there has been research done in forecasting and linking demographical information to polar bear survival and their environment, and forecasting the future status of the population based on greenhouse gas emission scenarios. There is a continued effort to look at forecasting under other emission scenarios besides the status quo or 'business as usual' scenario.

Comment: George Durner, USGS: The work Eric is referring to is online.

Comment: Charlie Hamilton, USFWS: There are many experts in this room. Let's get a better understanding of what other planning processes are going on, where the intersects are, and help each other expand on this work and bring folks together to address the issues.

Comment: Margaret Williams, WWF: (?) has worked with number of scientists to identify key drivers and how they might change under various climate scenarios to forecast from. Forecast where there are going to be resilient places for biodiversity and hopefully there will be more contributed to this discussion. NGO's are trying to get their heads around this.

Comment: Pam Miller, Northern Alaska Environmental Center: There is a need for objective collaboration on interdisciplinary research. The research is fundamental to management decisions on the Arctic Ocean and polar bear habitat. Integrated research that is interdisciplinary has not been done within the current climate conditions. I would suggest another element for the plan as required collaborating interdisciplinary research for assessing impacts of oil and gas development offshore and for management decisions. It is critical to have information to assess the threat and the impact, as well as for making the decisions as to places where there is a need to avoid serious impacts.

The group discussed additional threats to add to the "Modification or Curtailment of Habitat" and commented on the prioritization levels currently assigned. Comments included:

Comment: Rebecca Noblin, Center for Biological Diversity: As more bears are starting to den on land, development could potentially modify or curtail denning habitat.

Comment: Jim Wilder, USFWS: This is identified under the "Other Natural or Manmade Factors" as disturbance from industrial development.

Comment: Karyn Rode, USFWS: Interactive affects with other threats, between how polar bears are going to respond to modification/curtailment of habitat, i.e. more bears harvested, oil and gas development, etc.

Comment: Jim Wilder, USFWS: Redistribution of polar bears to areas where they are more vulnerable.

Comment: Unidentified Speaker: There is a need to capture cumulative effects.

Comment: Pam Miller, Northern Alaska Environmental Center: I'm uncomfortable with the denning habitat issue being less important than the others, i.e. conserving denning, feeding, migration. Prioritization of habitat as a primary factor is more important than redistribution of polar bears. This should be more in agreement with the international agreement on the protection of habitats.

Comment: Jim Wilder, USFWS: I want to point out there is an entire section on cumulative effects and research this afternoon.

Comment: Judy Alderson, NPS: How did the inadequate access to denning get ranked? There is some feeling amongst our table that it may not be ranked high enough in this situation.

Comment: Larry Dugan, AECOM: The number one concern with winter construction up north is the proximity to denning; this should be a higher priority.

Comment: Charlie Hamilton, USFWS: Remember the idea that none of the activities identified are NOT important, just that some are higher in importance.

Comment: Jim Wilder, USFWS: Let me explain why denning ranked medium rather than high. We've not really demonstrated through the science that impacts to denning are having that big of an effect at the moment, but instead there is a projection into the future about this potential and so that ranked as a medium level threat in this prioritization area. It is a big part of the 1973 agreement and is a critical part of the recovery plan. Eventually action items will be developed to address the threat. The prioritization ranking is thought of as a triage process: they are all important, but our ability to actually accomplish them has to be considered. We do recognize that industry feels this is important, and we do not disagree.

Comment: Matt Huggler, USFWS: How were the two items that didn't have identified objectives with them prioritized as priority, i.e. loss of access to prey and increased movements/energy expenditure?

Comment: Jim Wilder, USFWS: Those two were in the final rule and according to the ranking system were ranked higher because of the impact to large numbers of the population. However, these are difficult issues for us to directly manage.

Comment: Diane Sanzone, BP: One idea for ranking may be to split out threats by impact to subgroups, i.e. maternal females, young males, etc. It might lend more weight to some areas and using that idea, the priority level

Comment: (unidentified speaker): The fact that differing prioritization levels were assigned to "loss of access to prey" and "impacts to prey species" seems strange.

Comment: Jim Wilder, USFWS: The difference is loss of access to prey has been shown scientifically in certain populations to actually already be manifesting as a result of sea ice loss; impacts to prey species is not as well known, but indications are they seem to be healthy populations. Projections of potential future impacts are a concern, however.

Threat B: Human-Caused Removals

High	Medium	Low
<ul style="list-style-type: none"> ▪ Illegal harvests: collaborative efforts are needed to quantify and control illegal harvest in Russia. There is not a lot of information available but indications from Russia in the early 90's was that illegal harvests were fairly significant (hundreds of animals). We believe that has moderated somewhat but it is still a concern. 	<ul style="list-style-type: none"> ▪ Subsistence harvests: can be managed effectively; there are conservation benefits to the harvest; continued efforts are needed to improve harvest monitoring, ensure sustainable harvest of females, and to continue to establish sustainable harvest limits with our co-management partners. ▪ Defense of Life: longer ice-free season = more potential for bear-human conflicts 	<ul style="list-style-type: none"> ▪ Other removals: research and industry. There have only been two fatalities over the last 30 years within industry. In research we are continually trying to improve methods.

DISCUSSION

Question: Jason Herreman, NSB Polar Bear Deterrent Program: “Defense of life” was ranked as medium. In the last ten years we haven’t had much defense of life so I’m not sure if this is ranked based on potential for impact? Subsistence harvest is ranked medium. My question is: should they be ranked lower?

Answer: Jim Wilder, USFWS: Defense of life, I agree that the magnitude in the past was fairly low. This ranking reflects the potential for increased severity in the future. If our co-management with partners was not as effective, the potential for bears to be killed would be higher. With the projections for diminishing sea ice, and if we don’t remain proactive, this has the potential to be a significant threat. The same could be said for subsistence harvest. We are pleased with the current co-management agreements and collaborative relationships as far as managing subsistence harvest. There is always room for improvement on reporting harvest and taking samples, but this reflects going forward that if we aren’t diligent with management relationships and implementation, there is a potential for great impacts.

Question: Michael Macrander, Shell: My question is: does anything in this grouping rise to the level of red? Was the process to look at all the groupings independently, or if it is red in one place it represents a similar risk? In other words, are all reds equal?

Answer: Jim Wilder, USFWS: Red delineates a need to immediately draw our focus as an area needing to be addressed sooner, rather than later. If we move forward with the suggestion to further refine the rankings based on a determination of variables that is satisfactory to everyone, then we can make the determination as to whether or not all reds are equal. These prioritizations are very broad and represent our first pass at attempting to identify a priority.

Question: Larry Bell, USFWS: I have a contextual question. Is this a U.S. plan only? Is it fair, in that context, to look at the illegal harvest in Russia?

Answer: Rosa Meehan, USFWS: Clearly both polar bear populations in Alaska are shared with Canada and/or Russia. There are cooperation agreements. It is incumbent to identify threats that the populations face. The way we get at addressing a particular factor, would be, I expect, through bilateral agreements for cross-border affect.

Question: Larry Bell, USFWS: Should sport hunting be considered?

Answer: Eric Regehr, USFWS: The biological answer is that it is a shared population. There are long and successful harvest management systems in Canada. They determine what a sustainable harvest level is and how that level is allocated between subsistence and sport. Sport hunting is only a concern in Canada.

Comment: Chuck Monnett, BOEMRE: The threat level or priority may change. There will be loss of sea ice and there are diverse estimates as to how long ice will be around. If sea ice is around for a long time, some things become more important than others. But if sea ice is a short term thing, then you have to weigh the fact that there are 80% of the bears out on that ice and we could lose a large portion of our population, habitat and genetic diversity. This would drastically change the triage of your response.

Comment: Mike Gosliner, MMC: Regarding the geographic scope of the plan, there is nothing in the statute or implementing regulations that limits the scope of this. There are instances when recovery plans have gone beyond just the area subject to U.S. jurisdiction, i.e. ocelots with Mexico, grey whales with Canada. My agency would be interested to pursuing this further. An important threshold issue is that there are probably some threats that aren't restricted to the shared U.S. populations that may be on/off the list depending on how you resolve the geographic scope of the plan. Canada sport hunts could be considered a subset of subsistence harvest, but it might also be broken out. You might also want to include public display requirements.

Comment: Karla Dutton, Defenders of Wildlife: Ice shrinkage and stressors on polar bears are issues around ice breakers. As more ships come in to the Arctic there is an increased potential for loss of ice, etc. Also, if fish are removed in great numbers with fishing opening up, will that impact the prey of the polar bears thereby impacting the polar bear?

Comment: Pam Miller, Northern Alaska Environmental Center: A specific objective to include in this section might be the implementation of the Nanuuq Commission's work and other entities' work with polar bear patrols. It shouldn't be lumped in with other priorities leading to inadvertent loss of bears. The "other removals" category lumps too many things together: industrial, zone, etc., is important.

Question: Karla Dutton, Defenders of Wildlife: My question is related to the fishing industry. If a bear is taken in international waters in the Arctic by a fishing fleet, how does that get resolved?

Answer: Mike Gosliner, MMC: If it is beyond the 200 mile limit, I'm not really aware that those types of takes are occurring. From a legal standpoint, if it is not a U.S. citizen involved it, it is outside our purview. The Range States may be interested in it if it impacts conservation.

Comment: Terry DeBruyn, USFWS: With regards to the ramifications of someone collecting a bear as a specimen in the high seas, it seems like it would fall in the jurisdiction of the country from which the voyage originated.

Comment: Charlie Hamilton, USFWS: If they took a bear and dumped it in the sea, no one would ever know. If they took a bear and wanted to bring it back in to the country, they would have to get an “introduction from the sea” authorization from the country it is coming in to. So, before any country could authorize, they would have to make a decision about the act and whether the taking of the bear was detrimental to the species or not.

Facilitator Question: What factors should be considered in ranking priorities? For example: cost, ability to implement/accomplish a mitigation measure, etc.

Comment: Mike Macrander, Shell: Severity and likelihood (these are the two that are usually started with).

Comment: Rachel Cox, Exxon Mobil: Consequence and probability.

Question: Judy Alderson, NPS: The three that were used were ...?

Answer: Jim Wilder, USFWS: The factors that were used in the original prioritization presented today were:

1. **Magnitude:**
 - a. **Scope-** geographic and temporal extent (entire range or only portion, intermittent or constant, year-round or seasonal?), life stages affected (adult females, COY?)
 - b. **Intensity-** strength of threat (e.g., level of human-caused mortality)
 - c. **Immediacy-** is the threat ongoing, imminent, or distant future?
2. **Likelihood-** certainty of occurrence
3. **Impact:**
 - a. **Exposure-** overlap of threat and species in space and time
 - b. **Response-** effect on species

Comment: Pam Miller, Northern Alaska Environmental Center: The recent history and experience with the Gulf spill begs the question as to the effectiveness of utilizing a low probability/high impact criteria. None of us wants to see a repeat of that.

Question: Eric Regehr, USFWS: I have a clarification request. Are we considering variables for ranking threats? The variables could be/would be different if ranking action items.

Answer: Jim Wilder, USFWS: That is a good point. We are ranking threats. When we rank action items, we should consider such things as cost, ability to accomplish/implement, and ability of action items to mitigate identified threats.

Threat C & D: Disease & Predation / Other Natural or Manmade Factors

High	Medium	Low
	<ul style="list-style-type: none"> ▪ Large oil spills ▪ Disturbance (habitat/behavioral) – industrial development <ul style="list-style-type: none"> ○ Denning/feeding areas ○ Bear-human interactions 	<ul style="list-style-type: none"> ▪ Disturbance (habitat/behavioral)-tourism, shipping and transport, ecotourism, contaminants, research impacts <ul style="list-style-type: none"> ○ Denning/feeding areas ○ Bear-human interactions ○ Small oil spills ▪ Contaminants ▪ Expansion of new pathogens into polar bear range ▪ Inter-specific competition ▪ Research impacts

DISCUSSION

Comment: Cheryl Rosa, Arctic Research Comm would suggest looking at expansion of new pathogens a bit differently than just “new,” i.e. expanded range of pathogens, pathogens crossing human-animal boundaries (i.e. giardia), and new threats from old pathogens that may be able to establish in immunocompromised/stressed individuals.

Comment: Mike Gosliner, MMC: One thing that isn’t captured up there is cannibalism. In the Canadian population it is growing. Another question whether research impacts means research on polar bears and, assuming that it does, is there a need to add other types of research that may disturb the species, i.e. industry research, etc. NSF, coast guard cutters, etc.

Comment: Mary Cody, BLM: May merit inclusion of a subset of ice breakers. We generally think of seismic as open water seismic, but there is one company now that uses ice breakers to do seismic.

Comment: Craig Perhan, USFWS: Currently within the open water programs there is not that much of a nexus between polar bears and those operations (there are mitigation measures in place). It mainly has to do with the season (open water) and where the bears are at that time.

Comment: Cheryl Rosa, Arctic Research Comm: What about on-ice seismic? Perhaps consider looking at threats from old pathogens. One additional thing that relates to disease is bone piles, as they serve as an artificial point of congregation where certain types of infectious disease may be more likely to be passed.

Comment: Margaret Williams, WWF: It might be helpful to split out some of the tourism from shipping and transport because those activities will be differing in time, severity and location. Tourism and ecotourism, I’m not sure, but it is something to consider.

Comment: Jason Herreman, NSB: In regards to expansion of pathogens, the listing doesn’t appear to look at expansion of pathogens of prey species and that might be something to add.

Comment: Mary Cody, BLM: Another impact is from polar bear research itself. As more money becomes available for research, it could have an impact in terms of disturbance.

Comment: Eric Regehr, USFWS: I second Mary's statement. As researchers, we are more aware of this as more attention is put on the species and it becomes more vulnerable to impacts.

Comment: Diane Sanzone, BP: Department of Defense and other governmental agencies might need to consider that under disturbance and consider what is taking up space in the Arctic.

Comment: Michael Macrander, Shell: In terms of oil spills and the focus on measures to be considered that we would encourage a focus on spill prevention. We have a tendency to focus on spill response, but spill prevention is more important. Things like inspections, maintenance, etc. is the first line of defense.

Comment: Jim Wilder, USFWS: One thing the group talked about in the June workshop was the need to coordinate with MMS, industry and ecological services branch in Fairbanks on reviewing proposed industry activities early in the process, with that in mind.

Question: Cheryl Rosa, Arctic Research Comm: At one point Polar Bear International was looking at an on-slope treatment facility for bears that were oiled. Has that gone anywhere?

Answer: Susi Miller, USFWS: The idea is still in the works. There has been some progress in upgrading treatment options in Prudhoe Bay,

Comment: Pam Miller, Northern Alaska Environmental Center: The objective to reduce risk to polar bears from oil spills is broad and vague and should be fleshed out quite a bit. One key thing that would advance it would be for the Service to take responsibility to develop trajectory modeling of where oil would go over polar bear habitat for offshore activities that are occurring. There is a huge information gap in the oceanographic information, but there has been work done in this area before by USGS.

Cumulative Effects/Research Coordination

Jim Wilder, USFWS

As we think about cumulative effects and research coordination, consider that we:

- Develop techniques to improve our understanding and analysis of cumulative effects (e.g., possibly work with partners to refine existing Bayesian model (Amstrup et al. 2007)).
- Conduct research and monitoring to determine the health, distribution, status and trends of Alaska's polar bear populations.

This is not a threat category under the ESA. It has been added because research and cumulative effects feeds into all the threat factors and action items we develop to mitigate the threat. From your perspective, what is the most critical aspect of research for you to be able to do your work in and around polar bears? Are there other things we should be looking at, or other ways we could/should be looking at things, so we see the bigger picture? How can we pull things together and begin to address cumulative effects?

DISCUSSION

Question: Mandy Miguera, NMFS: I have a clarifying question: Section 7 and NEPA have differing definitions of "cumulative effects." In those areas it refers to "future effects." Is this different?

Answer: Jim Wilder, USFWS: The Bayesian model includes past, present and future effects.

Comment: George Durner, USGS: I believe the Bayesian model to be an effective tool and we plan to move forward with it because it works.

Comment: Grant Hilderbrand, NPS: Ultimately, whether it is USFWS, industry, etc., we need a representative list of what are the kinds of decisions each agency faces and what information are we collecting that should inform those decisions. What are the questions that will be in front of folks and do we have the information necessary to make those decisions.

Comment: Larry Bell, USFWS: The question then is:

- 1) Is the Bayesian model the right model to use and should we modify it?
- 2) What other techniques would you suggest for measuring cumulative effects?
- 3) What additional research might be needed to study cumulative effects?

Comment: Rosa Meehan, USFWS: Another way to look at cumulative effects is to look at a polar bear as an integrator, i.e. determine where the polar bear go (time and place line) and put together all the activities that the bear would have walked in to during the course of a year.

Comment: Larry Bell, USFWS: Is the current model (Bayesian) adequate to address all those points? If not, we need to add them.

Comment: Chuck Monnett, BOEMRE: If you are looking at an environment that is changing, it may be harder to quantify as the bear moves through a changing environment.

Comment: Pam Miller, Northern Alaska Environmental Center: in order to know what the bear was going to encounter, compiling that dataset of geographically defined stuff that is happening is something that should be done, i.e. stressors, industrial, ecotourism, etc.

Comment: Chuck Monnett, BOEMRE: in order to study cumulative effects you have to know all the impacts and working together. Finding an entity to take responsibility for doing it is the hard part.

Comment: Eric Regehr, USFWS: There is a potential for positive or buffering effects as well. It is easy to focus on losers, but there is often a flip side.

Comment: Charlie Hamilton, USFWS: The Bayesian model usually has a number of experts. Improving it by identifying what kinds of expertise can be brought in such as oil and gas, Alaska native communities, etc. is needed. In improving the model we would be looking at what kinds of expertise needs to be brought in to incorporate a more holistic approach and analysis.

Comment: Diane Sanzone, BP: Regarding the bear movements, this would need to be multi-generational and correlate throughout the generations and become a long term look.

Comment: Jim Wilder, USFWS: There is a published 2007 paper on the Bayesian model that can be sent to folks or you can go to the USGS website and download those reports at www.usgs.gov/newsroom/special/polar_bears.

Comment: Jim Ducher, BLM: There is a lot of research going on in the circumpolar world on polar bears and that research may be increasing dramatically in the future. Is there a mechanism in place, such as a clearinghouse or repository, where all the information is stored? It would help to identify what research is going on and provide better inputs to the model for assessment purposes. Is there a need to discuss a mechanism for doing that?

Wrap Up

Colleen Matt, Facilitator

Next steps include:

- Background: population, habitat, ongoing conservation efforts, threats
- Conservation Strategy: conservation actions, goals, objectives, criteria
- Implementation Strategy:
 - PBC/R Plan Schedule
 - Upcoming Conservation Partner Workshops:
 - Alaska Marine Science Symposium, January 21, 2011, Hotel Captain Cook or Egan Center all day
 - Alaska Forum for the Environment, February 8, 2011, Dena'ina convention Center
- Science/Technical Committee will run parallel to other activities
- The Range States Plan will run parallel to other activities.
- U.S. draft Range States plan, USFWS, August 2011
- First draft of the combined Range States Plan March 2011
- Final combined Range State plan in December 2011

Rosa Meehan, USFWS, provided closing comments thanking participants for spending the day and taking an active part in providing input into the process. Effective polar bear conservation is important to us and we believe it is important to others as well. As we go through this process, we look forward to continued conversations with partners during the next steps. Refining and identifying tangible actions is the next step and I know a lot of us are looking forward to that.

We recognize that greenhouse gas is the 'gorilla in the room' and we recognize it is a primary driver of the system. We are not the folks that are going to get our hands around that and make change in that area. It is out of our scope. However, we do recognize it is a driver and we want to look at it and consider it and look at ways we can provide input to other agencies that do have a responsibility for it. We are also mindful of our own carbon footprint and our Department and Agency have policies in place to reduce our greenhouse gas contributions.

We appreciate your energy and time today.

Appendix A: Meeting Attendees

Name	Organization	Email	Phone	Copy of Minutes
John Hellen	Prancer Nat. Res.	john.hellen@pxd.com	343.2102	Y
Justin Blank	Weston/ConocoPhillips	justin.blank@westonsolutions.com	252.7826	Y
Jim Winegarner	Brooks Range	wingarner@brpcak.com	865.5084	Y
Mike Gosliner	MMC	mgosliner@mmc.gov	301.504.0087	
Lisa Toussant	USFWS	lisa_toussant@fws.gov	786.3459	Y
Lisanne Aerts	OASIS Enviro	l.aerts@oasisenviro.com	268.1970	Y
Rachel Cox	Exxon Mobil	rachel.r.cox@exxonmobil.com	564.3737	Y
Karla Dutton	Defenders	kdutton@defender.com	276.9420	Y
Jim Ducher	BLM	jdoucher@blm.gov	271.3130	Y
Craig Perhan	USFWS		786.3810	
Cheryl Rosa	Arctic Research Comm.	crosa@arctic.gov	271.4577	Y
Matt Huggler	USFWS	matthew_huggler@fws.gov	703.358.2243	N
Rebecca Noblin	CBD	rnoblin@biologicaldiversity.org	274.1110	Y
Hank Baij	Corps of Engineers	harry.a.baij@usace.army.mil	753.2784	Y
Diane Sanzone	BP	diane.sanzone@bp.com	242.6459	Y
Ken Lord	DOI Solicitors	ken.lord@solidoi.gov	271.4184	Y
Michael Baffrey	OS/DOI	michael_baffrey@ios.doi.gov	271.4399	
Chuck Monnett	BOEMRE	charles.monnett@mms.gov	334.5242	
Rachael Donaldson	USFWS	rachel_donaldson@fws.gov		
Tom Evans	USFWS	thomas_evans@fws.gov	786.3814	
Karyn Rode	USFWS	karyn_rode@fws.gov		
Jim Wilder	USFWS	james_wilder@fws.gov	786.3800	
Rosa Meehan	USFWS	rosa_meehan@fws.gov	786.3800	
Dave Yokel	BLM	dave.yokel@blm.gov	474.2314	Y
Cara Staab	BLM-SO	cstaab@blm.gov	271.3128	
Judy Alderson	NPS	judy_alderson@nps.gov	644.3442	

Pamela A. Miller	N. Alaska Env. Center	pam@northern.org	452.5021	
Julia Dougan	BLM	jdougan@blm.gov	271.5080	
Michael Macrander	Shell	a.macrander@shell.com	646.7123	
Mandy Miguera	NMFS	mandy.migura@noaa.gov	271.1332	Y
Katrina Mueller	USFWS	mueller.katrina@gmail.com	517.256.0914	
Susi Miller	USFWS	susanne_miller@fws.gov	786.3828	
Mary Cody	BOEMRE	mary.cody@boem.gov	334.5286	
Grant Hilderbrand	NPS	grant.hilderbrand@nps.gov	644.3576	
Margaret Williams	WWF	margaret.williams@wwfus.org	279.5504	
Doug Vincent Lang	ADF&G/State of Alaska			Y
Kate Williams	AOGA	williamss@aoga.org	222.9604	Y
George Durner	USGS	gdurner@usgs.gov	786.7082	
Jack Omelak	ANC		443.5044	
Matt Moran	USAF	matthew.moran@elmendorf.af.mil	552.0788	Y
Charlie Hamilton	USFWS	charles_hamilton@fws.gov	786.3804	
Lee Majers	ACS	acsplanninganddevelopmentmanager@alaskacleanseas.org	659.3207	Y
Terry DeBruyn	USFWS	terry_debruyn@fws.gov	786.3812	
Sarah Conn	USFWS	sarah.conn@fws.gov	456.0499	Y
Jim Lima	BOEMRE	james.lima@boemre.gov	334.5266	Y
Erve Regehr	USFWS	eric_regehr@fws.gov		
Lawrence Dugan	AECOM	lawrence.dugan@aecom	748.0324	Y
Patricia Lampi	Alaska Zoo	plampi@alaskazoo.org	244.0416	Y
Jason Herreman	NSB	jason.herreman@northslope.org	852.0350	Y
Leslie Holland-Bartels	USGS	lholland-bartels@usgs.gov	786.7055	Y

Ted Swem	USFWS	ted_swem@fws.gov	456.0441	N
Larry Bell	USFWS	larry.bell@fws.gov	786-3431	N
Dave Howell	BLM	dhowell@blm.gov		Y
Heather Bayer	USACE	heather.l.boyer@usace.army.mil	753.2877	Y
Amy Kearns	AECOM	amy.kearns@aecom.com	273.4570	Y
Jenifer Kohout	USFWS	jenifer.kohout@fws.gov	786.3687	Y
Blake Romero	USACE	blake.a.romero@usace.army.mil	753.2735	N
Trent Liebich	USFWS		532.2445	N
Jeff Bromaghin	USGS	jbromaghin@usgs.gov	786.7086	Y
Anneliese Tschannen	Professional Administrative Services, Inc.	exec@pas-ak.com	727.3931	N

Appendix B: Participant Survey

1. What role can your organization play in helping to mitigate threats to polar bears?

- Mitigate impacts of authorized activities within the NPR-A.
- Utilize Zoo Education staff to help inform the public; assist in response to oil spill and human interaction; provide a facility to share information from government agencies with the public. The Zoo is working on plans for exhibit expansion and an Arctic Education Center.
- Take polar bears into consideration with site design and operation. Strive to minimize human/bear interactions in industry. Provide information to USFWS about bears we observe. Investigate new technology, i.e., High Def FLIR
- Through Section 7 consultations.
- Regulate construction projects to avoid and mitigate for polar bear adverse impacts. Provide for mitigation projects such as habitat mitigation banks for critical habitat areas.
- Through my work with the ConocoPhillips Permits & Sciences, I have the opportunity to help improve detection, deterrence, interaction and avoidance.

2. Can you provide any additional information on threats to polar bears that were not discussed today?

- No
- Related to public support/engagement, public perception about climate change—polarizing issue, complicated to fix/understand. People are not willing to give up current standard of living or seeing immediacy of need, too big to tackle, etc.
- Threats to habitat (sub-threat). Lack of information about threats and/or enhanced need for collaboration.
- Misinformation and lack of interest from the general population is the only detrimental attribute I think was not discussed in this forum.
- Public perception of problem(s) influenced by media and emotion instead of science and real trends.

3. What is the most effective way that your organization can be involved in the Conservation/Recovery process?

- Participate, as needed and available, in plan development especially those components related to terrestrial environments and impacts from the oil and gas industry.
- Educational programs put on by the Zoo Education Department; assisting with treatment of oiled animals and provide transition facilities for any COY removed from the wild.
- Work with USFWS on design of facilities, ice road routes, etc., for Point Thompson. FLIR surveys, ice road operations and closures for bears; good hazer training; slope worker awareness of polar bears and habitat; practical, usable polar bear interaction plans; provide USFWS with as much information as possible regarding our polar bear observations/interactions on-site.
- Becoming educated in how all the different types of activities we regulated effect polar bears and what can be done to minimize those effects. It would also be really helpful to work with FWS to develop specific conditions for our permits that would be effective AND enforceable.
- Distribution of the latest information, communication and professional courtesy with statistics.

- Information exchange, agency presentations, working relationships and through Section 7 consultation to assist in recovery.
- Through the efforts listed in #1 above, I can help minimize certain aspects of disturbance of polar bears. I am also familiar with many of the North Slope staff who are great resources for truthing proposed policies or actions.

4. What other suggestions do you have for the Conservation/Recovery planning process?

- With such a diverse group of stakeholders, any meeting has to have a well defined scope and set of objectives, a good facilitator to keep the group within those bounds and good advance notice on all the above so participants can arrive appropriately prepared.
- I would like to offer facilities at the Alaska Zoo to hold future meetings/conferences, when feasible and logistically appropriate. 150 is the max occupancy in the lecture hall. Funds can be put towards other aspects (907) 244-0496.
- Continuing to be proactive about generating buy-in from stakeholders—public. Buy-in from the beginning makes it easier to engage in process over time/participate in recovery in ways relevant to diverse groups/public.
- Nothing of significance to say here, just keep up the good work and collaborative process!
- Keep up the fight.
- Don't think so hard on cumulative impacts. Just get started identifying sources and types of impacts.
- Planned rollout of final to villages and other stakeholders so they can see the results of their collaboration.

5. What other polar bear conservation efforts are you aware of (that we haven't already accounted for)?

6. List any experts that you'd like to hear from during the upcoming workshops?

Appendix C: Polar Bear Conservation/Recovery Plan Draft Schedule

October 29, 2010	Facilitated conservation partners' meeting to solicit input and collaboration
November – December 2010	Science/Technical coordination meetings with USGS
TBD:	Science/Technical coordination meetings with other interested parties
December 2010	Draft Conservation Plan Outline to PBSG
January 21, 2011 (8 hrs)	Facilitated open public meeting at Alaska Science Symposium to solicit further input/collaboration on developing strategies/actions to address Threat Factor A: Modification or Curtailment of Habitat or Range
February 8, 2011 (4 hrs)	Alaska Forum on the Environment facilitated open public meeting to solicit further input/collaboration on developing strategies/actions to address Threat Factor B: Human-Caused Removals
March 1-15, 2011	Partner review and comment on progress to date
March 31, 2011	Draft combined Range States' Action Plan submitted
May 2011 (2 days)	Science/Technical committee and conservation partners roll-out synthesis of previous suggestions; prioritize objectives/action items, identify responsible parties, timeframes, and budgets
May – September 2011	Complete writing of draft Polar Bear Conservation Plan; work with external affairs to have polar bear website updated
August 2-13, 2011	Review by conservation partners who have expressed interest
August 16-September 6, 2011	Brief Washington Office
September 2011	Submit Draft Conservation Plan to Range States
October 2011	Additional partner comment period
December 2011	Submission of Plan to Range States
January 2012	Solicit broad public comment on Plan in <i>Federal Register</i>

Appendix D: Polar Bear Conservation/Recovery Plan Outline

The U.S. Fish and Wildlife Service (USFWS) is developing a Polar Bear Conservation/Recovery Plan that will outline both USFWS's and our conservation partners' vision for polar bear research and management into the future. The Plan will identify the research and management priorities that our partners and we believe will have a genuine conservation benefit for polar bears.

The following is a brief outline and description of the parts of the Conservation/Recovery Plan.

Cover

Title Page

Preface

Disclaimer

Acknowledgements

Executive Summary

Table of Contents

I. Background

(Sets the stage to understand the conservation strategy, goals, objectives and criteria, and conservation program. This section must adequately build the case for the conservation criteria and the necessary conservation actions.)

- **Brief Overview/Species Status**
- **Description and Taxonomy**
- **Population Trends**
- **Distribution**
- **Life history/ecology**
- **Habitat characteristics and needs**
- **Critical habitat**
- **Reasons for listing/threats assessment**
- **Ongoing conservation efforts**
- **Biological constraints and needs**

II. Conservation Strategy

(Presents and justifies the recommended Conservation Program based on the facts and assumptions presented in the Background section. Include key facts and assumptions underlying concerns for the species, the primary focus/objectives of the conservation effort and the relative timing/priority of each.)

- **Overview**
- **Conservation Goal**
- **Objectives**
- **Criteria**

(Criteria are objective and measurable, biologically appropriate, framed in terms of the 5 listing factors, as well as demographic criteria (e.g., abundance or minimum population size, adequate survival and recruitment rates, stable or increasing trends for x amount of time, defined distribution pattern, sufficient habitat (type, amount, and quality, reduction or elimination of threats, if appropriate.)

- **Conservation Program**

(Presents goals of the plan and the actions needed to conserve bears; identifies appropriate conservation actions that can be implemented via ESA consultations.)

- **Conservation Action Outline**

(In general, conservation actions fall within certain categories such as protection of key habitats from development or other threats, limitations on take, research, surveys and monitoring, outreach, regulatory compliance, implementation of new regulations to address threats. Every conservation

action should have two accompanying actions: a) monitor the effectiveness of the action, and b). adjust the action based on effectiveness, if necessary.

- **Conservation Action Narrative**

(Describes the conservation actions necessary to achieve the plan's goals and objectives and the monitoring actions necessary to track the effectiveness of these actions and the status of the species.)

III. Implementation Schedule

- Lays out conservation plan actions in a systematic manner, requires tracking the progress of conservation actions to determine when objectives are met.
- Draws all plan actions into a succinct table which prioritizes and describes actions, anticipated duration, assigns responsible parties, provides cost estimates for each action, and includes appropriate comments (e.g., if an action is already underway, if an action relates to another action, or if it is dependent on another action being completed first).
- Prioritization: 1= action must be taken to prevent extinction or irreversible decline; 2= action that would prevent a significant decline in population/habitat quality or in some other significant negative impact short of extinction; 3= all other actions necessary to provide for conservation of species.
- Assigning priorities does not imply that some conservation actions are of low importance; rather, it implies that they may be deferred while higher priority actions are being implemented.

IV. Lit Cited

V. Appendices (e.g., Oil Spill Response Plan)

Report Produced by:

Professional Administrative Services, Inc.

2161 Lake George Drive

Anchorage, AK 99504-3514

www.PAS-AK.com

907.727.3931

exec@pas-ak.com