U.S. FISH AND WILDLIFE SERVICE - SPOTLIGHT SPECIES ACTION PLAN

Common Name: Polar bear

Scientific Name: ***Ursus maritimus***

Lead Region: 7

Lead Field Office: Marine Mammals Management, Anchorage, Alaska

Species Information:

Status: Threatened

Recovery Priority Number or Listing Priority Number: RPN = 5C

Recovery Plan or Candidate Assessment Form: A Conservation Plan for Polar Bears is currently under development and is expected to be available for draft review in 2010. The proposed rule to designate critical habitat for the polar bear was published in the Federal Register on October 29, 2009 (74 FR 56058). A final critical habitat determination is due to the Federal Register by June 30, 2010.

Most Recent 5-year Review: The species was listed in 2008; therefore, a 5-year review has not been undertaken for this species.

Other: A world-wide status assessment of polar bears was completed in 2007; this led to the listing action in May 2008.

Threats: The primary threat to polar bears is the loss of sea ice habitat due to climate change. As a result of on-going and predicted future habitat loss, polar bears are expected to spend longer periods of time on land where they are susceptible to human disturbance. Interactions with humans may threaten polar bears by: 1) displacement from preferred habitats, such as denning, feeding and resting areas; 2) ingestion of or exposure to contaminants or toxic substances; 3) association of humans with food (food-conditioning) resulting in nuisance bears that must be killed due to safety concerns for local residents/workers.

Target: The 5-year conservation goal for Alaska's two populations of polar bears is to maintain their current status and prevent further decline. While the issue of sea ice loss will need to be addressed at a global scale, FWS can help maintain the current status of Alaska's polar bear populations by reducing lethal take of polar bears during polar bear-human interactions. Coastal residents and workers in Alaska have reported increasing bear use of the coastline; at the same time, human activity, e.g. oil and gas exploration, in coastal areas is increasing. To prevent escalating conflicts between polar bears and humans, bear-human interaction plans need to be developed and implemented.

Actions:

1. Support development and implementation of community-based bear-human interaction programs in coastal villages based on: 1) minimizing attractants; 2) development of a polar bear patrol (deterrence) program; and 3) education and outreach (see Attachment 1).

- Identify village partners (tribal and city government leaders/councils, hunters, Alaska Nanuuq Commission representatives, taggers)
- Identify village-specific needs e.g. to minimize attractants, most effective outreach strategy, equipment needed to start patrols
- Identify funding partners
- Implement polar bear patrols (includes funding, training, monitoring results)
- Develop bear awareness/safety education materials for coastal residents of and visitors to coastal areas (fact sheets, posters, brochures, viewing guidelines, signage, etc.).

2. Reduce take of polar bears during oil and gas-related activities through FWS' Incidental Take Program.

- Require and review bear-human interaction plans when issuing Letters of Authorization (LOA) for oil and gas projects
- Require bear awareness and safety training for all employees of oil and gas projects
- Require den detection surveys (when applicable)
- Require one-mile buffers around known maternity dens
- Require minimum above-ground altitude for aircraft activity around known dens
- Provide deterrence guidance, authorization and training for North Slope security personnel
- Develop passive deterrence guidelines for anyone operating within polar bear habitat, as required by the legal settlement between Department of the Interior and the Center for Biological Diversity.

3. Reduce take of polar bears during non-oil and gas related activities occurring in polar bear habitat.

- Develop safety guidelines for visitors (e.g. guides, recreational users, photographers, science camps) operating on the Arctic National Wildlife Refuge
- Consult with parties conducting activities on Federal or State lands and waters (Bureau of Land Management, Corps of Engineers, Environmental Protection Agency, Federal Aviation Administration, U.S. Coast Guard, State of Alaska) on ways to reduce bear-human interactions
- Develop and distribute protocols to reduce disturbance to polar bears specifically for barge operators (to avoid wimming bears) and winter overland travelers (to avoid denning bears) operating on non-federal lands.

Responsible Parties:

1. Community based bear-human interaction plans: Marine Mammals Management (FWS) in coordination with community leaders, Alaska Nanuuq Commission, North Slope Borough, Arctic National Wildlife Refuge, non-profit organizations.

2. Incidental Take Program: Marine Mammals Management in coordination with Fairbanks Fish and Wildlife Field Office, oil and gas operators requesting incidental take authorization.

3. Non-oil and gas-related activities: Marine Mammals Management, Fairbanks Fish and Wildlife Field Office, and Arctic National Wildlife Refuge in coordination with affected parties.

Estimated costs of the actions:

Village based community programs: $253,000 per year
Incidental take program: $30,000 per year
Non-oil and gas-related activities: $ 5,000 per year

Role of other agencies: If funding is obtained, community leaders, Alaska Nanuuq Commission and the North Slope Borough will have responsibility for implementing bear-human interaction programs in coastal villages; FWS will be responsible for planning, technical assistance, and monitoring results. Non-profit organizations may assist with funding and implementation. On federal lands and waters, the managing agency will have responsibility for ensuring their activities are conducted in a way that minimizes conflicts with bears and meets the requirements of both the Endangered Species Act and the Marine Mammal Protection Act.

Role of other ESA programs: Marine Mammals Management will lead efforts to implement the Polar Bear Spotlight Species Action Plan. Fairbanks Fish and Wildlife Field Office will take lead on section 7 consultations. During section 7 consultations on projects that may affect polar bears, we work with the Federal action agency to minimize potential adverse effects to the species, and incorporate protective measures into proposed projects as appropriate. The Regional Endangered Species Coordinator will provide oversight and guidance on development of the Polar Bear Spotlight Species Action Plan.

Role of other FWS programs: Arctic National Wildlife Refuge will help implement actions within its jurisdictional boundaries, including those affecting the Native village of Kaktovik. Selawik National Wildlife Refuge will provide guidance on community-based initiatives undertaken in the Chukchi Sea region.

Additional funding analysis: At present, FWS provides no funding to its partners to support polar bear patrols, despite their importance in preventing polar bear-human conflicts. Attachment 1 is a proposal to fund a community-based bear patrol program for five villages for one year with an estimated cost of $253,000. If additional funding beyond this were available, FWS could assist in expanding deterrence programs from five villages to additional coastal villages (e.g. Kivalina, Kotzebue, Shishmaref, Wales, Little Diomede, Gambell, and Savoonga) that exist within polar bear habitat. Establishment of a patrol program requires equipment purchase (truck, firearms, ammunition, radios, spotlights), bear awareness and hazing training, and monitoring/reporting results; funding needs vary and are specific to individual communities. Additional funding would be provided to the Alaska Nanuuq Commission and North Slope

Borough to work with village entities to establish a polar bear patrol/deterrence program, with FWS assistance and oversight.

If permanent, long-term funding were available, polar bear deterrence programs could become an effective, reliable method of helping to maintain the status of polar bears by deterring bears from entering villages and preventing the lethal take of bears that enter communities, as well as engaging local residents in long-term polar bear conservation by providing them employment opportunity. Consistent, long-term funding would also allow FWS to take the lead on creating a database that houses the results of bear-human interactions which, in turn, could be used to improve safety procedures during future bear-human interactions world-wide.

Approved: _____

Regional Director, Alaska Region
U.S. Fish and Wildlife Service

Date: 11/23/05

Attachment 1: Minimizing Polar Bear-Human Conflicts in Alaskan Communities
Project Proposal
February 2009

Summary: The objective of this project is to conserve polar bears by minimizing conflicts between polar bears and humans through development of effective community-based safety plans for residents of coastal Alaskan villages.

Background and Description: Polar bears spend the majority of their time traveling, hunting, feeding and resting on Arctic pack ice but may also be found on land in Alaska during any time of year. Polar bears primarily feed on seals but are also opportunistic feeders and will readily investigate smells or sights as a potential food source, which can attract them to human settlements. Polar bears may become a threat to people if they become used to obtaining food near villages, or they are injured or starving. Sub-adult bears have a greater tendency of becoming problem animals (Fleck and Herrero 1995, Gjertz and Scheie 1998).

Scientific data (USFWS) as well as observations by local residents and workers indicate that polar bear use of coastal habitat along the Beaufort Sea has been increasing since the early 1990s during the fall open water period (Craig Perham, unpublished data; Monnett et al. 2005; Gleason et al. 2006, Schliebe et al. 2008). The highest densities of polar bears occur around Kaktovik, Cross Island and Barrow. In the Chukchi Sea region, increased use of inland areas has been reported by residents of Kotzebue, Noorvik, and Noatak (USFWS unpublished data). Furthermore, some communities (e.g. Barrow, Kaktovik) are also experiencing an increase in tourism for polar bear viewing. Simultaneously, oil and gas activity has been steadily increasing in both the Beaufort and Chukchi Sea regions. The increasing trend of both polar bear and human use of coastal areas in Alaska has the potential to result in increasing polar bear-human interactions. Harvest data indicates that defense of life kills have been increasing (USFWS unpublished data). To date, polar bear attacks have been rare but when they do occur, they evoke strong public reaction, especially for residents of communities within the range of polar bears. Polar bears were listed as a threatened species under the Endangered Species Act in May 2008; one of USFWS' primary goals for future conservation of polar bears is to minimize bear-human conflicts where possible, and replace unnecessary lethal take with methods such as early detection and deterrence where feasible.

The purpose of this project is to minimize loss of life to both polar bears and humans through: 1) reduction and proper disposal of bear attractants; 2) development of early detection, deterrence, and monitoring programs in coastal villages; and 3) development of conservation and educational materials addressing polar bear-human interactions and polar bear conservation. The U.S. Fish and Wildlife Service (USFWS) believes that community involvement in polar bear conservation and management programs is the most effective means for conserving polar bears over the long-term. Community-based conservation has a demonstrated history of success along the Beaufort Sea coast of Alaska. For example, in 1992/93, the North Slope Borough (NSB) initiated a patrol program to ensure early detection of polar bears in and around North Slope villages. The program was successful in keeping bears out of villages with minimal loss of polar bears and no loss of human life. Due to budget cuts the program was eliminated in the late

1990s, despite its success in minimizing bear-human conflicts. Since 2002 the Alaska Nanuuq Commission (ANC) has supported polar bear-human conflict avoidance initiatives, and individual tribal governments such as the Native Village of Kaktovik (NVK) have been successful in obtaining short-term grants (2007-2010) for developing bear-human interaction plans. However, a long-term sustainable source of funding is needed to re-institute polar bear patrols in all Alaskan communities.

The USFWS proposes to work with NSB, ANC and tribal and non-governmental partners to establish community-based bear safety programs in Alaska's villages. A good model is available from the NVK who, after obtaining adequate funding, hired a coordinator to oversee development of a bear-human interaction plan. The coordinator formed a Polar Bear Committee, consisting of local residents who volunteer to work together to address polar bear issues in their community. Their plan involves identifying actions to:
1) minimize attractants; 2) conduct deterrence and monitoring (polar bear patrols); and
3) develop outreach materials for both residents and visitors that promote polar bear awareness and safety. Their approach could be used or modified as appropriate in other communities and result in saving bear and human lives, as well as increased citizen participation in polar bear conservation initiatives.

Methods: The USFWS' Marine Mammals Management Office seeks funding to work with its partners to re-vitalize the polar bear patrol program and work with communities to develop bear-human interaction plans. Monies would be provided to NSB who would implement this program through their Department of Wildlife Management. The USFWS Marine Mammals Management Office would provide technical assistance. In the Chukchi Sea region, the USFWS and/or ANC would work with tribal governments of individual villages to implement a polar bear safety program, based on three components:

1. Minimizing bear attraction: Improved methods for handling and storing food attractants such as marine mammal subsistence foods (e.g. bowhead whale) would be discussed in consultation with community leaders to ensure that the potential for bear-human interactions is minimized. Measures would be developed to minimize bear attraction within residential areas, such as purchase and use of bear-proof garbage containers, individual house-hold meat storage containers, and community meat storage containers. Emphasis will also be placed on adequately fencing garbage dumps. Guidance on proper disposal of waste and storage of wild foods by residents would also be developed. For villages that place unused portions of whale remains in a "bone pile" away from their community, a review will be initiated with community leaders to determine whether bone piles can and should be re-located or removed altogether, with full regard to the complex safety and ecological concerns regarding this issue.

2. Patrol and Monitoring Program: On the North Slope, a Village Coordinator located in Barrow would schedule polar bear patrols in five villages (Barrow, Kaktovik, Wainwright, Point Hope, Point Lay). Bear patrols consist of dedicated individuals in each village who conduct routine patrols from a vehicle looking for polar bears, hazing "problem" bears as appropriate, and responding to bear observations by village residents. The Village Coordinator would organize, train, and oversee bear patrols, monitor and

synthesize data on bear observations, and provide annual reports on the results of the patrols. USFWS would assist with training of patrol staff, responding to problem events, and compiling/distributing data. In the Chukchi Sea, USFWS and ANC will work with local entities to identify a village coordinator and the components (e.g. vehicle, staff, training, funding) necessary for implementation of a successful bear-human safety program.

3. Public outreach, conservation and education: Residents of and visitors to local communities are the target audience. The Village Coordinator would also be responsible for interacting with community leaders such as village mayors, Alaska Eskimo Whaling Commission, village boat captains associations, and subsistence hunters. The USFWS would be responsible for contracting for or developing information and outreach materials to explain the various elements and benefits of the plan for public safety and the conservation of polar bears. The *Inupiat-Inuvialuit Management Agreement for Polar Bears in the Southern Beaufort Sea* (Beaufort Sea region) and the *Bilateral Treaty with Russia* (Chukchi region) would also be explained. Various media would be used, including television, radio, public meetings, public service announcements, direct personal communication, posters, brochures, and signs.

The project will be considered successful if: 1) active deterrence/hazing results in no loss of life to polar bears and humans; 2) subsistence foods and other source attractants are disposed of and stored in a manner that minimizes attraction of polar bears; and 3) brochures, posters, or signs addressing bear-human safety are developed.

Funding Needs: Funding needs will vary by community. The following budget is based on needs identified by NSB for operating a program for one year in five coastal villages in Alaska (Barrow, Kaktovik, Wainwright, Point Hope, Point Lay).

Item	**Description**		**Cost**
Minimizing attractants	Front-end loader use; fencing, barricades, etc.	$1000.00 per village (5 villages)	5,000
Patrol program coordinator (Barrow)	responsible for organizing actions to reduce attractants; organizing patrols, data collection and synthesis, and providing annual summary reports	Salary @ $25.00 per hour; 40 hours per week; 24 weeks; 12.5% benefits	27,000
Patrolmen	2 patrolmen per village minimum, 2-3 additional for Barrow (operate on 8-12 hour shifts as needed for up to 5 months per year	12 people at $16.00 per hour; 40 hours/week; 20 weeks; benefits at 12.5%	172,800
Deterrents	Shotguns/rifles (1 each per village), crackershells, beanbags, flood lights, clothing	Shotgun/rifle: 5 each at $500.00; deterrents/shipping: 1 each at $500.00	9,900

		Clothing: 200.00 per person	
Vehicle/Fuel	Needed: one pick up truck and one snow-machine per village; maintenance **This budget assumes that vehicles are contributed and will not need to be purchased new**	Vehicles: in-kind contribution by NSB Maintenance: $1000.00 per year x 5 vehicles Fuel: $1000.00 per month x 5 villages x 5 months	30,000
Outreach/education	Posters, brochures, signs, personal visits (airline tickets)	$1500.00 per village (5 villages)	7,500
Total Costs			**252,200**

Justification for Funding: Funds would be used for: 1) heavy equipment operation to properly dispose of bowhead whale remains, trash removal, etc.; 2) pay for implementing the patrol program (salaries, fuel, bear deterrents, equipment); and 3) development of educational materials such as brochures, posters, signs, and public service announcements. These activities have a successful record of increasing safety in coastal villages in previous years. Absence of an equivalent replacement translates into increased risk to personal safety for village residents, and increased risk to polar bears. The end result will be that more problem polar bears will be killed and potential for serious injury or death to individual residents will increase.

The USFWS, NSB, and ANC have worked cooperatively for years to manage and conserve polar bears. Other cooperative projects include: harvest monitoring, contaminants monitoring, collection of traditional ecological knowledge regarding polar bear habitat use, and development of bilateral agreements for polar bear conservation among the governments and Native residents of Alaska, Canada, and Russia.

Final Products: Final products include: 1) annual reports summarizing polar bear patrol/monitoring activities; and 2) brochures, posters, signs, and/or radio announcements regarding polar bear-human interactions.

Research/Management Implications: Avoiding polar bear-human conflicts is a "win-win" program because it will result in increased safety to humans, increase citizen involvement in polar bear conservation, and in a reduction in "problem" bears. The project also has application to activities within oil and gas industrial areas and other regions where polar bears occur (Russia, Greenland). Instituting community-based polar bear conservation programs is a goal identified in the USFWS' Conservation Plan for Polar Bears, currently in development as a result of polar bears' recent designation as a threatened species under the Endangered Species Act. Implementation of a polar bear-human safety program will also further the goals of the polar bear conservation agreement in the southern Beaufort Sea between the Inupiat of the North Slope and their Canadian counterparts, the Inuvialuit, which calls for maintaining polar bear harvest within sustainable levels. Similarly, it will help meet the conservation goals set forth under the

Bilateral Agreement with Russia, and the *1973 Agreement on the Conservation of Polar Bears.* Furthermore, the actions set forth in this proposal will help polar bears adapt to a changing climate, which is a goal identified under the USFWS Climate Change Strategy.

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