



Bear Interaction Plan

Port MacKenzie Rail Extension Project

1.0 Purpose

Construction and operation of the Port MacKenzie Rail Extension (PMRE) Project will occur in areas populated by both black bears (*Ursus americanus*) and brown bears (*U. arctos*). Considering this, the Surface Transportation Board's Office of Environmental Analysis included the following mitigation measures in the November 21, 2011 PMRE final decision (Docket No. FD 35095) authorizing the Alaska Railroad Corporation (ARRC) to construct and operate the new rail line:

Mitigation Measure 48: *The Applicant shall prepare and implement a bear interaction plan to minimize conflicts between bears and humans. In consultation with the Alaska Department of Fish and Game, the Applicant shall develop appropriate educational programs and management plans when project-related construction and operation plans are being prepared.*

Mitigation Measure No. 32: *The Applicant shall restrict its project-related workers from (1) hunting or fishing while stationed at work camps; (2) harassing wildlife, including winter or calving concentrations of moose (cows with yearling calves can be particularly defensive); (3) approaching known occupied bear dens; and (4) feeding wildlife.*

The purpose of this plan is to comply with these measures and minimize the potential for human/bear interactions. It provides guidance on educating employees about the hazards of working in bear country, proper waste management and site cleanliness to keep from attracting bears, and steps to take in the event of a bear/human incident. These recommendations were developed with input and technical guidance from the Alaska Department of Fish and Game (ADF&G) and are intended to advise ARRC and its contractors during the construction and operation phases of the PMRE Project. This plan should be readily available to ARRC and contractor employees working in the PMRE project area.

2.0 Site Description

The PMRE Project will connect Port MacKenzie to the existing ARRC main line near Houston, Alaska. The route is sparsely populated and provides natural habitat for both black and brown bears. Several streams supporting anadromous fish populations will be crossed; these streams provide food for bears and may support higher bear densities during active spawning periods (typically July through October) than surrounding areas. Areas of dense brush and vegetation also provide abundant cover opportunities for bears along the route, making it easier for humans to startle bears and increasing the risk of a dangerous encounter. These habitat features contribute to the presence of a thriving bear population; PMRE Project staff in the area need to be aware of and prepared for possible interactions.

3.0 Plan Overview

This plan addresses:

- Awareness and Education
- Work Site Cleanliness/Waste Management
- Incident Response Planning

Together, these components are intended to minimize interactions between bears and humans, and should an interaction occur, keep it from escalating into a dangerous situation for either the humans or bears involved. Site supervisors are responsible for the implementing this plan. This plan may not address every possible hazardous bear interaction scenario, and may be revised and refined should situations arise that are outside the realm of those presented.

4.0 Awareness and Education

Bear awareness and safety in bear country training is recommended for all ARRC personnel and contractors upon their first arrival on the work site. Personnel need a good understanding of basic principles and practices to properly respond to interactions. The video *Staying Safe in Bear Country* (Safety in Bear Country Society, 2004) is available as a commonly used, industry standard orientation aid. This and any other commercially available material may be supplemented by site specific procedures, especially employee awareness of specific high bear-use areas. Regardless of the materials used, the following subjects are important to cover during training:

- General bear behavior relevant to human safety
- Identification and avoidance of high bear use areas in and around the project corridor (e.g. anadromous streams, areas of dense brush, known den locations)
- Each employee's responsibility to take steps to prevent bear encounters (see work-site cleanliness/waste management)
- Emphasis on the processes of human-habituation and food-conditioning and the detrimental effects of directly or indirectly feeding wildlife
- Discussion of how equipment noise won't necessarily keep bears away; and may occasionally attract curious individuals
- Recognizing signs of bear dens and activity in the work area
- How to deal with a bear/human interaction including recognizing a bear's intent based on their body language and behavior
- Details on the project's bear conflict response procedures
- Procedures for reporting and responding to bear conflicts
- Sources for further information and suggested reading

In addition to this initial orientation session, work crews may need to regularly address site-specific bear awareness issues, especially when moving to a new area or working around anadromous fish streams. Employees should be aware of the following considerations as they may apply to specific work sites:

- Take extra caution when working around active fish spawning streams, as they are known feeding areas for bears.
- Avoid dense brush, especially near streams, berry patches, and other areas frequented by bears.

- Do not approach known occupied bear dens, and take extra caution in areas with bears dens.
- Do not feed bears (or other wildlife).
- Make lots of noise and carry bear spray when working in these areas to warn bears of your presence if going into these areas.
- If deemed necessary by site safety personnel, designate a worker to watch for bears when working around known habitat areas.
- Request a bear watch if you feel it is necessary for your safety.

5.0 Work Site Cleanliness/Waste Management

Work site cleanliness/waste management is an important step in worksite bear safety, as human food and garbage can be strong attractants to bears, leading to habituation and increasing the possibility of dangerous interactions with humans. Bears that obtain food or garbage associated with human activities usually learn to seek these out again, repeatedly bringing them into contact with humans. This can lead to dangerous confrontations, and often ends with the destruction of the bear. In addition, construction site wastes and garbage may contain noxious substances, such as toxic chemicals (e.g. antifreeze, petroleum lubricants, and diesel fuel), plastic bags, glass, or metal fragments that could impair the bear's health (ADF&G 2011). The availability of these and other potential bear attractants is a major safety concern; and keeping these items secure is the responsibility of everyone on the work site. Site supervisors should educate workers about the connections between proper waste containment and minimizing the potential for bear/human conflicts.

The following recommendations are intended to reduce confrontations between bears and humans by reducing bears' access to garbage and food on and around the worksite:

- Dispose of food and non-food wastes in bear-proof garbage cans. (Non-food wastes include antifreeze, petroleum wastes, and any toxic chemicals that may be attractants to bears or other wildlife.)
- Schedule regular garbage collection, or as often as needed, to prevent accumulation of bear attractants on-site.
- Place garbage cans in habitats least used by bears, and avoid placing disposal sites in traditional movement routes, seasonal concentration areas (such as fish spawning areas, productive berry patches) and areas of dense cover preferred by bears.
- Store food (including lunches) indoors or in vehicles. Do not leave food outside unattended.
- Keep work sites clean of potential physical hazards to bears such as wire, cable, tubing, plastic, or other materials that they could become entangled in.
- Store petroleum products and all toxic chemicals in bear-proof containment areas.
- Clean up spills of petroleum products and other potentially toxic bear attractants immediately.

6.0 Incident Response Planning

Despite proper implementation of the recommendations in this plan, a bear/human interaction may occur. A bear may wander through the work site, take food from a lunch left unattended, or physically attack a human. The human response is critical, as it can affect the safety of others working in the bear-affected area. A poorly-chosen response could escalate the situation into something extremely dangerous to humans and bears. For this reason, the project must have a protocol for dealing with these various levels of bear encounters. The protocol recommendations given here draw on the work of previous industry

plans (ConocoPhillips, 2006; ExxonMobil, 2009) as well as bear experts at the ADF&G (Shideler, Manning, 2011).

A site safety supervisor will be designated. This individual will be responsible for final implementation of this plan and will be available to direct the handling of bear/human interactions. Should this supervisor be unavailable, an alternate should be on-site to take over this responsibility. This person(s) should have advanced training and the necessary tools to perform bear hazing duties that other employees are not trained to handle. These duties could range from using bear-spray or even a vehicle to scare away a problem bear to, in defense of human life, shooting and destroying a bear (see Alaska regulation 5 AAC 92.410).

For ARRC personnel, having weapons of any kind in the workplace, or on any ARRC owned or leased property violates the ARRC Code of Conduct. Only the ARRC Chief Special Agent may authorize employees to have weapons for the performance of their duties. Should it be decided that safety personnel need advanced training in hazing techniques and other bear interaction scenarios, a professional trainer may be employed with consultation from the ADF&G (See Appendix for ADF&G contacts).

The following recommendations apply to the possible event of a bear/human interaction. They may be built upon or adjusted at the discretion of site safety personnel and according to the needs of the specific worksite.

- Report bear sightings, encounters and interactions of any other kind to the site safety personnel immediately. If the designated safety personnel are not available, employees should notify their supervisor immediately.
- If bears come into the immediate vicinity of the work site, stop work and notify site safety personnel. Safety personnel should monitor the situation and decide on the best course of action.
- Conduct bear hazing activities using only trained personnel following proper procedures.
- Notify ADF&G immediately of any bear attack, close interactions, or problem bears (e.g., bears showing unusual or aggressive behavior). Also notify ADF&G immediately if a bear is killed by vehicle collision or under any other scenario (See Appendix for contact information).
- Follow safe speed limits with vehicles and equipment and yield the right-of-way to bears and other wildlife to minimize the possibility of collisions with animals (ConocoPhillips Canada, 2006).
- Hold bear awareness meetings scheduled by site safety personnel on an as-needed basis to inform workers about previous or potential interactions and any changes to the bear safety plan.
- In the event of a bear attack on human(s), implement emergency procedures to deal with the situation quickly and efficiently. Know the location of and have access to first-aid supplies, and know how to reach professional emergency personnel at all times (see Appendix for nearby emergency medical facilities).
- All bear interactions should be recorded by site safety personnel with as much detail on the bears involved and the incident chain-of-events as possible. This information may assist ADF&G in tracking down and dealing with problem bears and may be used to further refine bear/human interaction practices within the project.

7.0 Conclusions

Site supervisors and managers should implement the recommendations, and look for ways to improve the plan and adapt it to their work environment. All workers have a role in keeping the work site safe and

minimizing the potential for bear/human interactions. Supervisors should remain receptive to employee concerns about bear interactions, and bear safety should be treated with the same seriousness as other safety issues. Employees should provide feedback about bear safety policies and procedures without fear of negative repercussions. Should situations arise that are outside the scope of this plan, revisions may be made to keep the plan applicable and effective at minimizing the potential for bear/human interactions.

Additional educational resources, local ADF&G contacts and bear safety professional contacts can be found in the appendix.

8.0 References

Alaska Administrative Code. 5 AAC 92.410. Taking game in defense of life or property.

ConocoPhillips Canada. 2006. Grizzly Bear and Wolverine Protection Plan for the Parsons Lake Field Development.

ExxonMobil Corporation. 2009. Polar Bear and Wildlife Interaction Plan, Point Thomson Project, North Slope, Alaska.

Manning, E. Personal Communication. Education Specialist, Alaska Department of Fish and Game, Anchorage, Alaska. Telephone: 907-267-2168. Email: elizabeth.manning@alaska.gov

Peltier, T. Personal Communication. Wildlife Biologist, Alaska Department of Fish and Game, Palmer, Alaska. Telephone: 907-746-6327. Email: tim.peltier@alaska.gov

Safety in Bear Country Society. 2001. Staying Safe in Bear Country DVD. Prepared by the Safety in Bear Country Society in cooperation with the International Association for Bear Research and Management. Distributed by Kodiak Wildlife Products (macecanada.com)

Shideler, R. Personal Communication. Wildlife Biologist, Alaska Department of Fish and Game, Fairbanks, Alaska. Telephone: 907-459-7283. Email: richard.shideler@alaska.gov

Appendix – Further Information

ARRC Contacts

ARRC Special Agent

907-265-2462

Local Emergency Medical Centers

Call 911 for all emergency medical situations.

Urgent Care at Lake Lucille

185 E Parks Hwy
Wasilla, AK 99654
907-373-4200

Mat-Su Regional Urgent Care

950 E Bogard Rd Ste 103
Wasilla, AK 99654
907-352-2880

Mat-Su Regional Medical Center

2500 S. Woodworth Loop
Palmer, AK 99645
907-861-6000

ADF&G Contacts

Alaska Department of Fish and Game – Main Palmer Office

1800 Glenn Highway, Suite 2
Palmer, AK 99645
907-746-6300

Tim Peltier, Wildlife Biologist - Bear Incident Reporting, Bear Safety Training

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Additional Bear Safety Resources

Kodiak Wildlife Products: Online suppliers of the educational bear safety videos, *Staying Safe in Bear Country* (P51414-004 PPR-U) and *Working in Bear Country* (P51414-005 PPR-U). Both videos are available in Public Performance Rights versions for use by business, industry and government as an employee training aid. Online at <http://www.macecanada.com/unitedstates/video.htm>

Alaska Department of Fish and Game: *Policy on Human Food and Solid Waste Management and Bears in Alaska.* Online at <https://secure.wildlife.alaska.gov/index.cfm?adfg=bears.bearpolicy>

Environment Yukon: *How you can stay safe in bear country.*

Online at <http://www.env.gov.yk.ca/pdf/howyoucanstaysafe.pdf>