

Red Dog Operations Wildlife Interaction Management Plan

1 Purpose and Scope

Red Dog Operations strives to provide a safe work environment, one way we accomplish this is by providing guidance to prevent or reduce the occurrence of human/wildlife interactions and ensure compliance with applicable permits, agreements and state/ federal regulations. Proper food waste management is the highest priority to discourage nuisance animals, and hazing is performed (under permit) to deter animals away from certain areas as necessary (e.g., mine & port work areas, airport, PAC areas and DMTS road) when needed. The following plan describes the requirements and procedures intended to achieve this goal.

2 Wildlife Emergency Response Notification

2.1 Emergency Wildlife Interactions:

A wildlife incident that involves physical interactions between an animal and a person is considered a health and safety risk. If a person is threatened or physically attacked by any kind of wildlife, the immediate first response shall be:

Notify Emergency Response – phone 911 at the Mine or Port. Or, from the Mine site, radio the Mill Control Room on channel 4. From the Port Road or at the Port, radio the Port Hopper on channel 3. NOTE: When calling the Mill Control Room from a mobile device it will be necessary to dial 1-907-754-5222.

- Provide a description of the emergency and Mill Control Operator or the Port Hopper Operator will activate emergency response procedures.
- When a contract helicopter(s) is onsite – If working or recreating outdoors in a remote location and there is imminent danger from a bear or other wild animal, radio Mill Control Room or the Port Hopper to request an immediate helicopter evacuation.

The Mill Control Operator and the Port Hopper Operator will follow emergency procedures and contact the Response Chief or his designee who will assume the Incident Command role and allocate the necessary resources to respond.

Examples of incidents that require the immediate notification of the Emergency Response Team could be:

- An actual physical interaction or attack by an animal.
- The presence of a fox, wolverine, moose, or bear (or other animal) in threatening proximity to a person, or
- A possible rabid fox (or other animal) that may pose an ongoing threat, even if not currently within close or threatening proximity to anyone. Unusual fox behavior that may indicate rabies includes any of the following:
 - Demonstrating no fear of humans.
 - Staggering, tremors or uncoordinated movements.
 - Nipping or biting at themselves or random objects.
 - Acting seemingly unaware or blind

- Acting lethargic or reluctant to move

2.2 Non-Emergency Wildlife Interactions:

If the interaction does not threaten the immediate safety of a person, then the Environmental Team is primarily responsible for responding to the situation and hazing wildlife if necessary.

If a non-threatening wildlife issue / incident occurs during dayshift, the Environmental Technical Supervisor or a Technician can be notified directly. Examples of situations Environmental may respond to are:

- A bear, moose or caribou wondering into a work area, but no person is in immediate danger.
- Ptarmigan gathered on or near the airport runway, or any other animals on or near the airstrip.
- Waterfowl or other wildlife near, or in, the tailings pond or pit lake.
- Wildlife entering shipping containers, dumpsters, or wandering through camp, but pose no immediate threat to people.
- Wildlife showing signs of injury or ill health.
- Wildlife accidentally injured or killed.

If the presence of wildlife becomes a hazard to work performed during nightshift, work shall stop and not be restarted until the wildlife has vacated the area or hazing can be performed. The supervisor responsible for the area shall notify the Environmental group via email environmental.reddog@teck.com or leave a phone message for the Environmental Technical Supervisor (ext. 45152) of the incident. The area will be checked the following day for any continuing wildlife activity.

In the event that the Environmental Team is unavailable for hazing, a select portion of the S&H team is trained to provide this support to the property if deemed necessary.

3 Wildlife Interaction Prevention

3.1 Food Waste Management

All employees and contractors are responsible for proper food waste management. In remote locations pack any food wrappers, containers, and left-over food back to the mine for disposal. Use indoor disposal locations if possible. Proper dumpster identification is required before disposing of food waste outdoors. Only covered dumpsters with functional covers (not in disrepair or held open by snow or ice) may be used for food waste disposal outdoors. Covered dumpsters are the only outdoor waste containers that go to the incinerator for proper food waste disposal. If food or drink is spilled onto the ground, staining the soil, ice, or snow, clean up the material and dispose of it along with other food wastes. Food stains and smells attract nuisance wildlife, especially foxes and ravens, and have the potential to attract large animals (e.g., bears and wolves). Be aware that a vehicle or equipment containing food should always have the doors and windows closed to discourage wildlife from entering.

Improper food waste management inadvertently creates a source of food for wildlife, which in turn creates people-habituated animals. Wildlife will return consistently to any source of food; food waste greatly increases the chance of negative human / wildlife interactions. This has been a problem for the site in the past and led to human wildlife interactions, including exposure to rabies due to a fox attack.

Improper food wastes have also led to the unnecessary dispatchment of wildlife due to their normalized behavior of finding food around the site. “A fed fox is a dead fox”, is unfortunately true, and this applies to all people-habituated wild animals. Not following Teck’s waste management program, and approved food waste management procedures (for example, deliberately feeding foxes or ravens), could lead to discipline and removal from the property.

3.1.1 Waste in Designated Smoking Areas

Cigarette butts attract foxes and possibly other wildlife and must be disposed of in an approved cigarette disposal container. Food, drink, and any empty food-waste containers are prohibited in the smoking areas. Be alert and aware of any wildlife activity in a designated smoking area and notify environmental when it occurs.

3.2 Wildlife Activity Notice Board at Personnel Accommodation Camps (PACs)

The *Wildlife Activity Notice Board* is located near the double doors at the PAC. There are similar monitors at the CCPAC and the Port PAC. These boards are updated daily to show any wildlife activity in the area. The information is based on helicopter surveys (during the summer) as well as any other reported animal sightings.

The *Wildlife Activity Notice Board* is also available on Rover, linked directly to the home page, for easy daily reference while planning remote field activities. The Rover web page displays the current wildlife status at all three locations, PAC, CCPAC, and the Port PAC. An automated email is sent to everyone onsite whenever the wildlife status is updated at any of the locations. Monitors by the main entrances, the Rover website, and smart phone notifications allow convenient access to wildlife information for everyone onsite, before they go outdoors.

The Environmental Department is responsible for coordinating helicopter wildlife surveys, sightings called in by phone or radio, and posting the information on the *Wildlife Activity Notice Board* in a timely manner. The Port *Wildlife Activity Notice Board* may also be updated by the Port Medic when wildlife is seen on the Port Road or near the Port itself. While every effort is made to keep the *Wildlife Activity Notice Board* up-to-date, wildlife are unpredictable, and the situation can change suddenly and dramatically. Keep this in mind when utilizing the information on the activity board; be aware, and prepared, for animal encounters always.

Review the *Wildlife Activity Notice Board* near the main entrance before working or recreating outside, this includes leaving the building to smoke. Alternately, look at the Rover website. Any of these options provide the current wildlife status and a description of where and what triggered any status change.

Additional recreational information, including PPE requirements, safety information, recreation map, two-way radios and a sign-out/sign-in sheet are posted and available in the same general area. These must be adhered to through individual responsibility for safe recreation.

The *Wildlife Activity Notice Board* describes the actions and precautions needed for outdoor work or recreation depending on the level of animal activity in different areas. The risk mitigation listed on Table 1 focuses on location and single or group activities, to provide the best risk management for wildlife encounters. Table 1 also assumes the proper PPE and communication equipment is present during these situations. Everyone, employees, contractors, and any other visitors, must be prepared with the proper PPE and communication equipment, as well as follow the instructions listed on the board, to ensure their own personal safety.

Below is **Table 1 - Wildlife Activity Risk Level Definitions** showing the Risk Color Codes used on the activity board and what actions must be followed at each level of risk.

Table 1: Wildlife Activity Risk Level Definitions

Risk Mitigation Response	Risk Color Indicator
Normal Wildlife Risk	
1. Working outdoors alone. 2. Recreating outdoors alone. 3. Access to Designated Smoking Areas.	GREEN
Moderate Wildlife Risk - Increased Wildlife Activity in Area	
1. Working outdoors in pairs/groups, if working in the vicinity of the PAC and Service Complex, and Mill or near a vehicle or building. 2. Working remotely in pairs/groups, with due attention and planning for areas that are known to be problematic with wildlife activities 3. Recreating outdoors in pairs/groups with due attention planning for areas that are known to be problematic with wildlife activities 4. Access to Designated Smoking Areas.	YELLOW
Increased Wildlife Risk – High Wildlife Activity in Area	
1. Working outdoors must be done in pairs/groups and near a vehicle or other building with due attention and planning for areas with problematic wildlife activity. 2. Working remotely in pairs/ groups, except in areas where wildlife high activity is currently located. 3. No recreating outdoors. 4. Access to Designated Smoking Area except in areas where high wildlife activity is currently located.	RED
High Wildlife Risk – Animal Control Operations in Progress	
1. No working alone outdoors around the PAC, Service Complex, and Mill. 2. No working in the field, unless it is at a remote distance from high-risk wildlife activity area. 3. No recreating outdoors. 4. No access to Designated Smoking Areas.	Black

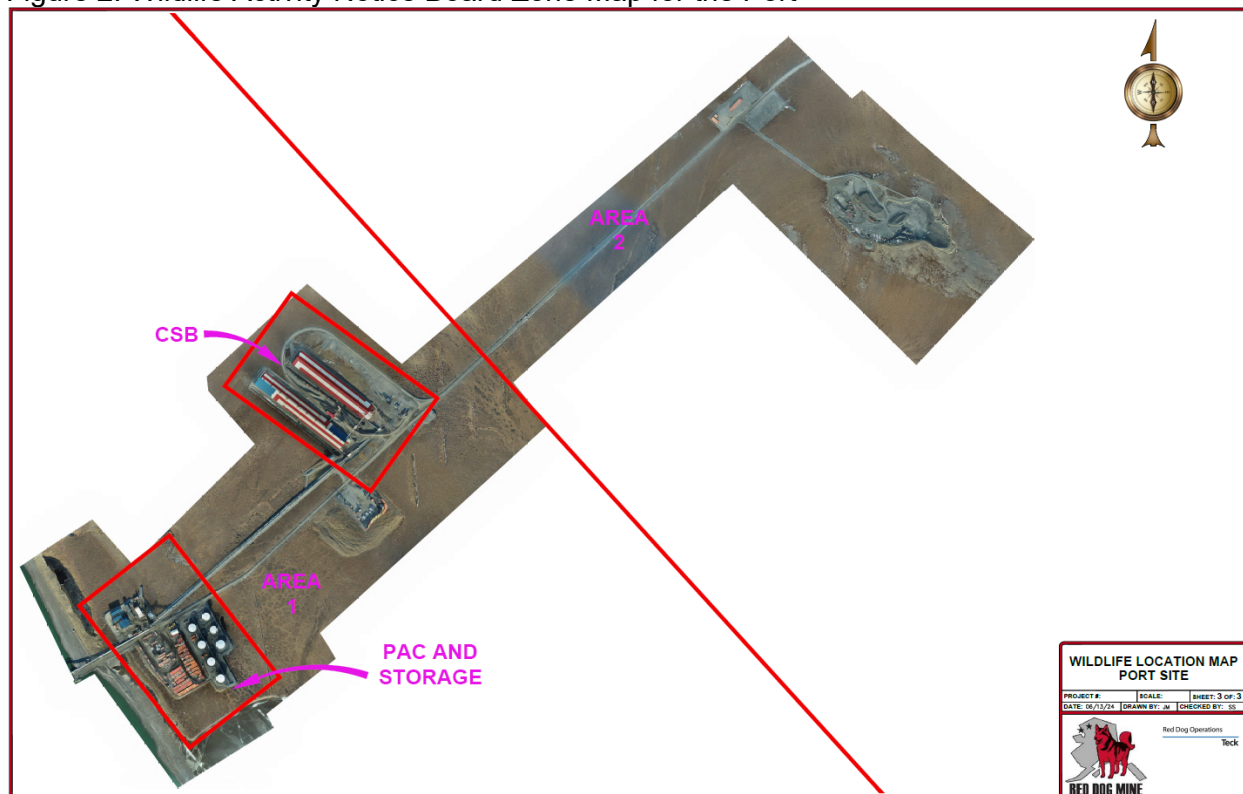
3.2.1 Wildlife Activity Notice Board Zones

The *Wildlife Activity Notice Board* is based on a map of the mine facility and the Port that is divided into zones, with a color rating assigned to each zone. Four main quadrants will each have their own risk level rating. At the mine site there are smaller zones around the PAC and Mill, CCPAC, and PAA River, the critical areas where people are often walking outdoors. With this system the fish weir may remain at a green risk level, when a bear is sighted at the airstrip and that area has a risk level of red. The smaller, critical zones, could show a black risk level if a bear is seen near the PAC, without necessarily shutting work down at the RO plant, which could remain at a red risk level. The Port would work on a similar system, with critical zones around the PAC/shops and the CSB. Figures 1 and 2 show the wildlife activity zones for the Mine and the Port respectively.

Figure 1: Wildlife Activity Notice Board Zone Map for the Mine Site

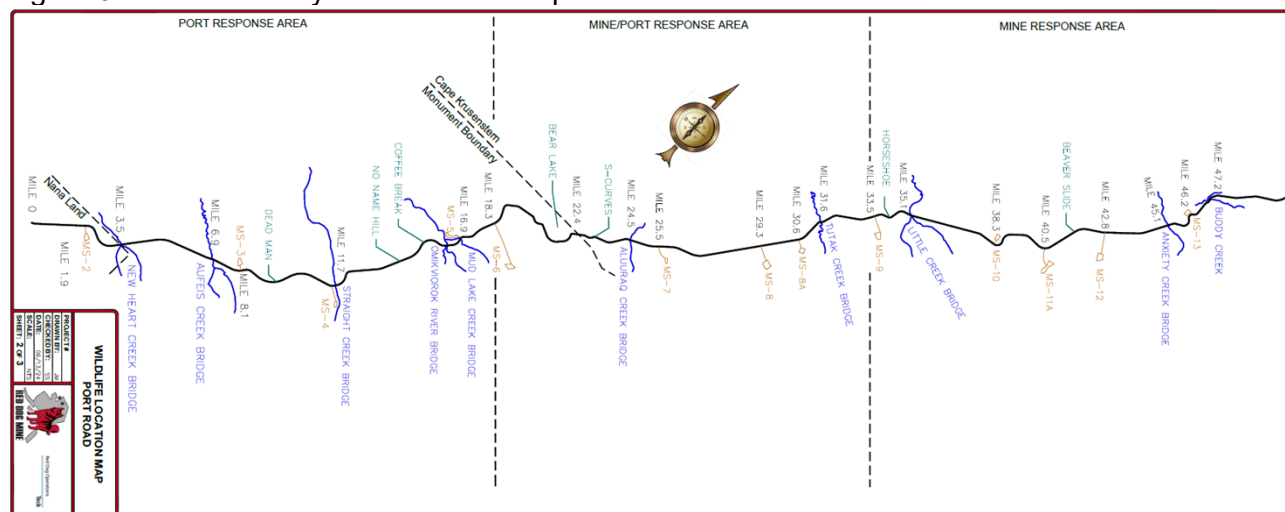


Figure 2: Wildlife Activity Notice Board Zone Map for the Port



The Delong Mountain Transportation System (DMTS) also has a risk rating system, but the zone would be a relocating circular yellow/red area that moves to whatever location wildlife is reported along the road. Figure 3 shows a drawing of the DMTS, including major landmarks and milepost markers that is used to display wildlife locations.

Figure 3: Wildlife Activity Notice Board Map for the DMTS.



4 Wildlife Interaction Preparedness

All employees and contractors who work outside, or recreate outside, are responsible for taking the proper precautions and following the procedures and guidance outlined in this document to protect their personal safety.

4.1.1 Working in the Mine Area

Before engaging in outdoor work activities check the *Wildlife Activity Notice Board* for the current status and applicable information. A discussion of possible wildlife issues during the Work Place Exam or when completing the Field Level Hazard Assessment (FLHA) Card shall take place prior to the work beginning, including a plan for continuous wildlife watch, or at least periodic wildlife checks during the project to minimize ongoing wildlife risks. Working in pairs or groups is preferred, anyone working alone in the area must have plan for extra vigilance. Good communication must be provided for, usually a handheld radio or vehicle radio, when working outdoors.

While working in the Pit, the Mill, around the Tailings Storage Facility (TSF)/Cold Storage, the Kivalina Over Burden (KOB), the Red Dog Airport, or other areas where there is generally regular traffic and activity, it is still required to check for wildlife activity before exiting a vehicle. If the area provides possible hiding places for bears (for instance, between shipping containers), a drive around the area prior to beginning work is advised. Because vehicles, equipment, and buildings are usually close at hand to provide safety, firearms are not required. However, bear spray must be carried or worn on a belt, and should not be left in a vehicle or carried in a backpack. Bear spray is useless if inaccessible during an emergency.

If any hazing activities occur in a work area, notification will be made to workers by radio of wildlife presence and movement pathways or direction.

4.1.2 Working Remotely

Working remotely includes all the requirements described above, however, more preparation is required. Due to changeable weather, and mechanical maintenance or breakdowns in helicopters, teams in the field must be prepared to walk out if necessary. Working remotely shall not be done alone, at least two people are needed for remote work. Working remotely must also include carrying bear spray, but preferably, a member of the team will have the required training and approval to carry a firearm (see section 4.3). If during remote work members of the team are not in close proximity, additional bear spray must be available for each team member.

The satellite communication and/or GPS tracking system, InReach, shall be used by all remote work crews including those in Environmental, Safety & Health, Emergency Response Team, Survey, Exploration, and other departments when remote work is undertaken. Departments should verify they have all the necessary equipment to perform remote work. All helicopters onsite also have GPS onboard to plan/track flights and locations.

The Garmin InReach allows online tracking through the “EverywhereApp” that generates an aerial map view showing the location of the travelers. Instructions for using the [Everywhere App \(Doc ID 6918\)](#) are located in Qualtrax.

During planned winter remote travel requires more communication and notification. Before travel begins, Environmental, Safety & Health, Emergency Response Team, and Survey are required to create a remote travel notification email and distribute to the Mill Control Room Operator via the group email “DL-Winter Remote Travel Notification RDOG”. This email group includes the Mill Control Room, Environmental, S&H, and Emergency Response at the mine and the port and various others. This email should describe:

- Nature or type of work to be performed.
- Location of travel route and worksite.
- Anticipated departure and return times.
- Method of travel (i.e. helicopter, snowmachine etc.)
- Names of travelers.

The [Environmental Field Travel/Work Preparation SOP \(Doc ID 513\)](#) gives a more detailed explanation of requirements for remote fieldwork during summer and winter.

4.1.3 Contractors Working Remotely

Contractors working remotely are required to follow all the conditions described above in section 4.1.2 for working remotely. However, Red Dog does not provide bear guards, or personnel trained in the use of firearms for remote work. Contractors may provide their own firearms or hire their own bear guards upon receiving proper authorization/ approval through Safety & Health and Human Resources (see section 4.3). Contractors are responsible for following all Teck firearm policies.

All contractors working remotely outside of radio communication range are required to take an InReach GPS and send out travel notification and return emails. If they do not have their own InReach devices, borrowing a tracker can be arranged directly with Environmental or through the contractor's project manager.

4.1.4 Exploration

Exploration shall adhere to their current system for tracking remote workers described in the [AAEP, DeLong & Lik Emergency Response Plan \(Doc 7252\)](#) under the Traversing Guidelines section.

4.1.5 Outdoor Recreation in the PAC, CCPAC, and Port PAC Areas

Recreating outdoors must be approached with safety as a priority. Individuals are responsible for procuring the correct equipment and following procedures to reduce risk and protect their own well-being. Before engaging in outdoor recreation, even when staying close to the buildings, review the *Wildlife Activity Notice Board*. Wildlife has been present in and around buildings in the past. Maintain situational awareness, check for movement under the building where possible, stay in pairs / groups, make noise, and retreat into the building if foxes or other wildlife are seen in the area, then notify Environmental. Anyone recreating outdoors must wear a hi-vis vest, as well as carry a radio and bear spray. These items are available to check-out from Safety & Health. Checking in and out on the sign-out sheet, near the *Wildlife Activity Notice Board*, and notify someone of the intended destination and time of return.

4.1.6 Remote Outdoor Recreation

Remote area recreation has the same requirements as walking around any of the PACs (review section 4.1.5 above). Be familiar with areas allowed for outdoor recreation shown on the [Red Dog Recreation Map \(Doc ID 6073\)](#). Know how to make an emergency notification for help on the radio (see section 2.0) including accurate descriptions of the location in case an emergency response or evacuation is needed. Frequently scan the area for movement and the presence of wildlife while outdoors.

It is highly recommended recreational hikers carry a personal GPS. A GPS provides the helicopter and rescue team a quick fix on exact location if needed.

In addition, traveling in pairs/ groups is required if the wildlife activity status is yellow or higher in any area of the mine. Making noise is even more important to avoid startling wildlife

unexpectedly in remote areas. Take bear spray for at least two people in the group, more for large groups, the same is recommended for radios. Be sure everyone is familiar with emergency notification procedures. Hiking/recreating with a shotgun is permitted for employees approved for firearm use onsite.

If the wildlife activity status is red or black no outdoor recreation is allowed in that area. Other mine site work-related reasons may also close outdoor recreation, those activities and projects will provide appropriate notice of restrictions and durations.

4.1.7 Designated Smoking Areas

Before going outdoors to a designated smoking, the *Wildlife Activity Notice Board* must be reviewed to confirm that there has been no recent bear, or rabid fox, sightings in that area. A wildlife activity status of yellow or red requires extra vigilance and information about areas to avoid. If there is a “High Risk - Black” alert activated, then no activity is allowed outdoors, including smoking. It indicates there is an active wildlife animal control incident in progress. However, that type of situation is usually of short duration and the risk level will be reduced as soon as it is safe to do so.

4.2 Wildlife Awareness and Incident Training

4.2.1 Wildlife Awareness Training

Wildlife Awareness Training is required by all employees who work or recreate outside, including anyone who goes outdoors to designated smoking areas. This computer-based training (CBT), through People Central, covers requirements for employees and contractors as described in this plan as well as additional, more detailed, information applicable during wildlife encounters. A PDF version of this training will also be available for contractors coming to site. A shorter wildlife review class will be required annually for all employees.

4.2.2 Animal Control Training

Animal Control Training is required for S&H, the Emergency Response Team, Environmental, and for all personnel who may be responding to a wildlife incident. In addition, the Emergency Response Team will also undergo internal training including possible scenarios and drills to ensure preparedness for various types of potential human/wildlife physical interactions. This training will include the Mill Control Room Operators as dispatch during wildlife emergencies.

4.2.3 Wildlife Hazard Management Training

Wildlife Hazing Training (provided by the USDA APHIS Wildlife Services), is required by the Public Safety Permit every two years for Environmental and Safety & Health personnel who may be involved with animal hazing. Hazing can only be performed by these trained individuals. Shotgun training is offered for individuals who meet the requirements of Red Dog Operations Firearm Policy 3.03.

4.3 Firearm Training and Gun Management

Refer to the [Red Dog Operations 3.03 Firearms Policy \(Doc ID 1464\)](#) for complete information regarding firearm use on the mine site. This policy applies to all employees and contractors. Contractors are encouraged to hire bear guards through NANA Management Services (NMS). NMS performs the required in-depth background checks and firearm training certifications to meet Teck standards.

4.4 Hazing of Wildlife

Red Dog has a [Public Safety Permit \(Doc ID 2464\)](#) issued by Alaska Department of Fish & Game (ADFG) outlining the conditions under which hazing wildlife is allowed. Only persons who have completed the Wildlife Hazard Management training can perform hazing activities. These individuals are listed in the [Public Safety Permit Hazing List \(Doc ID 7254\)](#).

The requirement to prevent animals from entering the tailings facility and minimizing contact with possible contaminated water is described in [RDM Facilities Wildlife Access Control SOP \(Doc ID 7026\)](#) and may trigger a hazing event.

Detailed procedures for different methods and processes developed for animal control at Red Dog are detailed in a separate SOP, [Wildlife Animal Control Procedures. \(Doc ID 7333\)](#). This will include the use and maintenance of animal control equipment that may be needed in an animal control situation. This equipment will be placed in strategic areas around the mine site and the port for quick response. The equipment will be inventoried, inspected and maintained monthly to ensure readiness for duty by the area owners to whom they have been assigned.

4.5 Protecting Life and Property

During an emergency, such as a physical attack on a person from a bear or a rabid fox, measures to prevent loss of life, or damage to property, are allowed by any person regardless as to whether they have taken the training required by the hazing permit. There are regulatory requirements for dealing with the animal carcass and notifications that must be made after the fact. Review section 4.6 below if an animal mortality occurs while protecting life and property.

4.6 Wildlife Incident Notifications

A wildlife incident may require a number of notifications to governmental agencies and other stakeholders. The Environmental Department is responsible for making all the required notifications to regulatory bodies.

5 Records

All wildlife events shall be documented in SiteLine as Wildlife Incidents. Supervisors are responsible for ensuring an SIR is created for any wildlife incidents occurring in their area of operation.

6 Key Responsibilities

All Red Dog Employees and Contractors: must fulfill all the requirements of this plan to ensure their own, personal, safety. This includes reporting wildlife sightings to Environmental and calling for Emergency Response Team if a person's safety is at risk.

Supervisors: Responsible for ensuring personnel working under their supervision have reviewed the required documents, received the proper training to perform safe work. Initiate incident reports if a wildlife incident has taken place within their area of operation.

Incident Commander: Responsible for overseeing emergency response for human/wildlife physical interactions.

Emergency Response Team: Responsible for responding to wildlife incidents involving human/animal physical interactions.

Mill Control: Dispatch Emergency Response Team if a physical interaction with wildlife is or has occurred.

Hopper Crew: Dispatch Emergency Response Team if a physical interaction with wildlife is or has occurred.

Safety & Health: Responsible for necessary and approved Firearms Training and providing backup for hazing incidents, emergency response incidents and for managing all contractor locked storage of firearms when not being used in the field.

Environmental Technical Supervisor: Responsible for managing the Public Safety Permit and hazing activities as well as required wildlife training. Responsible for updating the Wildlife Activity Notice Board.

Environmental Technicians: Responsible for hazing and animal control **not** involving human/animal physical interactions.

Environmental Coordinator-EMS: Responsible for managing and updating the CBT Wildlife Awareness Training.

Human Resources: Responsible for performing background checks to approve the use of a firearms onsite.

7 Departure from Procedure

This SOP was written to comply with applicable laws and regulations pertaining to wildlife incidents and hazing. Failure to follow these procedures could result in personal harm and improper food waste management could create food-habituated animals that generally have to be destroyed. Whenever an animal death occurs at a mining operation it is reported to state agencies and becomes public record. Departure from procedures, in some cases, could lead to criminal or civil penalties for individuals and the Company as well as adverse effects on corporate performance and reputation. Departure from this procedure could also lead to disciplinary action and removal from the property.

8 Definitions

ADF&G: Alaska Department of Fish & Game

CBT: Computer Based Training

DMTS: Delong Mountain Transportation System

HR: Human Resources

PAC: Personnel Accommodation Center

S&H: Safety & Health

SIR: Supervisor Incident Report

SOP: Standard Operational Procedure

SRO: Spill Reporting Officer

USDA APHIS: US Department of Agriculture Animal & Plant Health Inspection Service

9 General Requirements

5 AAC 92: Alaska Administrative Code Title 5 – Fish and Game Statewide Provisions
NANA Agreement

10 Key Documents/Tools/References

[3.06 Smoking Policy \(Doc ID 2476\)](#)

[Environmental Field Travel/Work Preparation SOP \(Doc ID 513\)](#)

[AAEP, DeLong & Lik Emergency Response Plan \(Doc ID 7252\)](#)

[Alaska Department of Public Safety, Statewide Services](#)

[Everywhere App \(Doc ID 6918\)](#)

[Public Safety Permit \(Doc ID 2464\)](#)

[Public Safety Permit Hazing List \(Doc ID 7254\).](#)

[RDM Facilities Wildlife Access Control SOP \(Doc ID 7026\)](#)

[Red Dog Operations 3.03 Firearms Policy \(Doc ID 1464\)](#)

[Red Dog Recreation Map \(Doc 6073\)](#)

[Wildlife Animal Control Procedures. \(Doc 7333\)](#)

Wildlife Awareness Training (People Central - CBT)