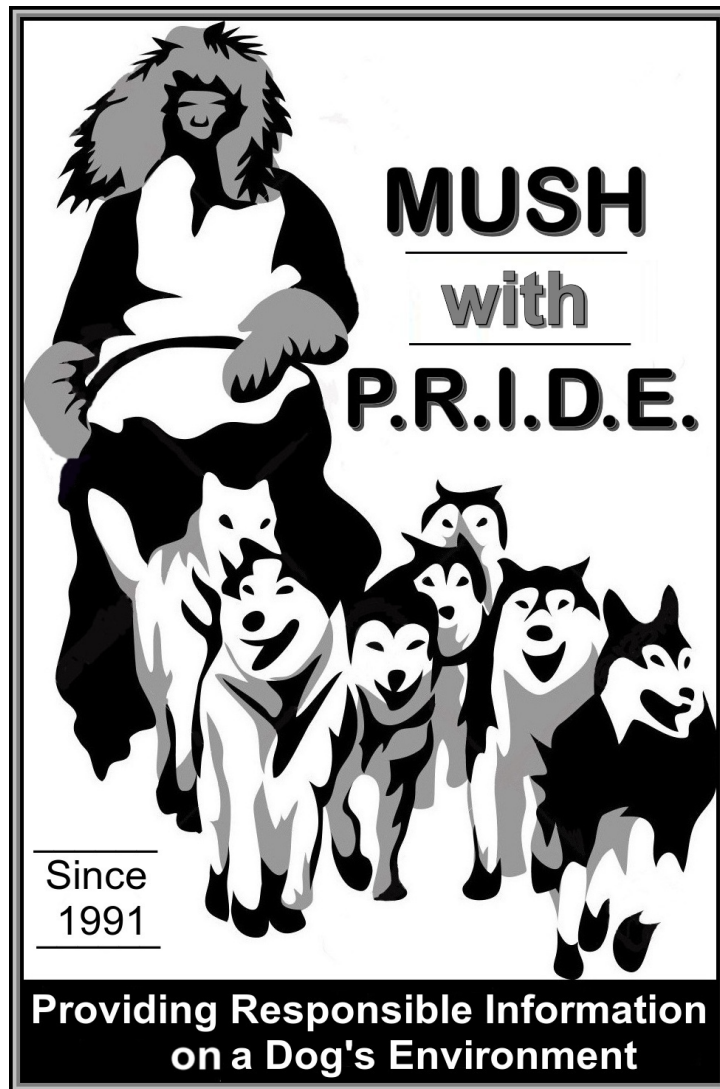




Mush with P.R.I.D.E. Sled Dog Care Guidelines

Revision 4-2, Adopted 1 November, 2021

Introduction to the 4th Revision

The Mush with P.R.I.D.E. Sled Dog Care Guidelines represent a standard of care that is consistent with the 5 Domains of Animal Welfare paradigm, prevents unnecessary harm and promotes the welfare of the dogs to which they apply. Our recommendations have a general level of acceptance among knowledgeable practitioners and experts in the field. Strong preference is given to peer-reviewed scientific literature. Where scientific evidence is lacking we recommend practices that have robust experiential foundations, are based on logic and reason and are practical in the multiple-dog setting of a sled dog kennel.

Since its foundation in 1991 the role of Mush with P.R.I.D.E. has been defined by our name - to **Provide Responsible Information on a Dog's Environment**. Experience has shown that the Mush with P.R.I.D.E. Sled Dog Care Guidelines must be updated regularly to keep pace with advances in science and communications as well as the ever-changing social perceptions of the many dog-powered activities that enhance not just our own lives, but the lives of our dogs as well.

The current Mush with P.R.I.D.E. Board of Directors strongly feel that it is our job to research and provide responsible information and evidence based recommendations that give mushers and kennel operators a range of options from which to choose. It is the job of the musher or kennel operator to use this information to prevent unnecessary harm and promote the welfare of your own dogs.

According to the American Veterinary Medical Association (AVMA), "Ensuring animal welfare is a human responsibility that includes consideration for all aspects of animal well-being, including proper housing, management, nutrition, disease prevention and treatment, responsible care, humane handling, and, when necessary, humane euthanasia."^[1]

The recommendations in these Guidelines are based on the Five Responsibilities of Mushers and Sled Dog Kennel Operators, namely, to take practical steps to achieve the goals of all Five Domains of Animal Welfare, as described by David J. Mellor, PhD, in order to meet our human and humane responsibility to ensure that our animals are well cared for.^[2] Prior to publication each revised guideline is reviewed by objective subject matter experts, including Dr. Candace Croney, Director of the Purdue University Center for Animal Welfare Science.

The Five Responsibilities of Mushers and Sled Dog Kennel Operators, and their Animal Welfare Objectives

Responsibility	Sled Dog Welfare Goals
1. <i>Good nutrition:</i> It is the responsibility of the musher or kennel operator to provide ready access to fresh water and an adequate diet to maintain full health and vigor	Minimize thirst and hunger and enable eating to be a pleasurable experience
2. <i>Good environment:</i> It is the responsibility of the musher or kennel operator to provide every dog within the kennel with suitable housing, good air quality and comfortable resting areas	Minimize discomfort and exposure and promote thermal, physical and other comforts
3. <i>Good health:</i> It is the responsibility of the musher or kennel operator to prevent or rapidly provide appropriate treatment of disease and injury, and to foster good muscle tone, posture and cardiorespiratory function	Minimize breathlessness, nausea, pain and other aversive experiences and promote the pleasures of robustness, vigor, strength and well coordinated physical activity
4. <i>Appropriate behavior:</i> It is the responsibility of the musher or kennel operator to provide sufficient space, proper facilities, congenial company and appropriately varied conditions	Minimize threats and unpleasant restrictions on behavior and promote engagement in rewarding activities
5. <i>Positive mental experiences:</i> It is the responsibility of the musher or kennel operator to provide safe, congenial and species-appropriate opportunities to have pleasurable experiences	Promote various forms of comfort, pleasure, interest, confidence and a sense of control

While the responsibilities for our dogs are always in the forefront during our daily routines, we also need to be cognizant of our responsibilities to our fellow humans. It is the responsibility of the musher or sled dog operator to understand and follow the laws and regulations that govern each individual area.

The Mush with P.R.I.D.E. Sled Dog Care Guidelines should not be confused with the term "best practices." The word "best" implies that all other practices are inferior and neither the scientific nor experiential evidence on which these Guidelines are based indicates that any one practice or method, or even any particular combination of practices and methods is superior to all of the others. These Guidelines are presented as responsible information that mushers and kennel operators can use to help determine what is best for their own dogs.

The Mush with P.R.I.D.E. Sled Dog Care Guidelines are based on the philosophy that it is the responsibility of every musher or kennel operator to have a reason for everything you do with and for your dogs, and be able to explain that reason to others when it's necessary to do so.

References:

[1] AVMA statement -
<https://www.avma.org/KB/Resources/Reference/AnimalWelfare/Pages/what-is-animal-welfare.aspx>

[2] Mellor, D. "*Moving beyond the "Five Freedoms" by Updating the Five Provisions and introducing Aligned "Animal Welfare Aims"*": *Animals - Open Access Journal*: 2016: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5082305/> accessed 5-5-2019.

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Chapter 1. Managing the Physical Environment of Sled Dogs

Locating Your Kennel

If you have not yet established your kennel or are considering relocating, there are some general things worthy of your consideration. Perhaps the most important is the realization that even though every musher or sled dog kennel operator has a mental vision of an 'ideal' location for a sled dog kennel, the 'perfect' location probably doesn't exist.

Renting or leasing property versus ownership of property:

Caring for sled dogs and operating even a small-scale kennel are long-term commitments. As a general rule starting a sled dog kennel on rented or leased property should be considered only a temporary arrangement. There is never a guarantee that a rental contract or lease will be renewed when it expires. The more dogs a musher or kennel operator owns, the more difficult it becomes to find another suitable property available for rent.

One of the most common reasons that adult dogs are relinquished to animal shelters is owners moving into a new living arrangement that does not permit dogs.^[14] All too frequently mushers who establish their kennels on rented or leased property find themselves in heartbreaking situations that force them to rehome some, or even all of their sled dogs.

Adequate space

The minimum amount of space required for each dog is 100 square feet. A modest 10-dog kennel would require an absolute minimum of 1,000 ft² just for housing and confinement. The confinement area is only a part of a sled dog kennel's space requirements. One must also consider the space needed for exercise and play yards or paddocks, the musher or kennel operator's home, storage sheds, driveways, vehicle and parking areas and other needs.

The point is to be sure your property has enough space to accommodate the needs of your dogs as well as your own before you start developing your sled dog kennel.

Access to resources

Every dog must be provided daily access to food and water to maintain good health. Veterinary care is necessary for the treatment of illnesses and injuries. Mushers and kennel operators in areas inaccessible by road or railroad must have a viable plan to ensure access to these important resources.

Communications and transportation infrastructure.

Mushers living well away from veterinary services need a means to communicate directly with animal health care professionals for assistance with emergency care and treatment of injuries and diseases. Mushers or kennel operators in regions where communication or transportation infrastructure is lacking must be well prepared to manage emergencies on their own.

Access to trails

Sled dogs require a lot of exercise and both training and conditioning require access to trails on which you and your team can work out and practice. Many mushers do fine transporting their dogs to relatively distant trails, but most prefer to have access to mushing friendly trails close to home. Many mushers agree that it is well worth the time and resources to implement easy access to trail systems directly from your property.

Exposure to Environmental Conditions

A dry, well-drained area makes life pleasant for both dogs and musher. These conditions are also best for the dogs' feet and for disease control. A location both visible and audible from a house window allows you to enjoy the company of your animals and alerts you to problems or emergencies.

Locating the kennel on a slight slope or on a high spot will greatly improve drainage. Low lying, flat areas may seem perfectly dry during winter but a few weeks of standing water during spring thaw will make life miserable for both you and your dogs. If at all possible try to avoid establishing your kennel in a flood plain.

In summer, shade helps keep the dogs cool, and a breezy location helps keep bugs away. During winter, a sunny area that is protected from wind helps conserve the dogs' energy. It is best to lay out the dog yard so the ground is exposed to full sunlight for at least part of the day. Direct sun (ultraviolet light) is one of the best natural means of controlling disease organisms. However, you should try to provide at least one shady spot for each dog to retreat from the sun's heat.

Ideally, your kennel should be located on a southern aspect adjacent to hardwood (deciduous) trees. The trees will provide summer shade, and after leaf fall the winter sun will improve the microclimate of the kennel.

Plan your dog yard in a way that allows you to do your chores efficiently so you can spend more time caring for and interacting with your dogs. If you are able to run dogs directly from the yard, it's well-worth planning a safe takeoff area for runs. Other considerations include access by vehicles for loading up dogs and for maintenance.

The risk of natural disasters should also be considered when selecting a location for your kennel. The two most common disasters that impact sled dog kennels are floods and wildfires. If at all possible, sled dog kennels should be located well above the floodplain of nearby waterways, and mushers or sled-dog kennel operators should follow the guidelines of local wildland firefighting agencies to reduce the risk presented by wildfire.

Confinement and Housing

It is the musher or sled dog kennel operator's responsibility to confine and house every dog in a manner that prevents escape, provides protection from natural or human threats, and helps achieve the welfare goals of the 5 responsibilities of sled dog welfare.

The manner in which a musher or sled dog kennel operator confines and shelters his or her dogs has a direct impact on four of the 5 Responsibilities of Mushers and Sled Dog Kennel Operators:

- Good environment
- Good health
- Appropriate behavior
- Positive mental experiences.

Each of these must be considered when designing, building, improving and managing your kennel.

Primary Confinement

Currently available scientific evidence does not support any confinement method to be either superior or inferior to others. All are associated with both positive and negative factors that mushers or kennel operators must consider when deciding which method or combination of methods is best for his or her own dogs and circumstances.

A June 2019 poll on social media asked dog mushers "how do you confine your sled dogs?" Poll results indicated that the majority of small-scale mushers confine their dogs primarily in their own homes with a fenced yard. ^[1] The majority of larger sled dog kennels preferred a combination of small-group pens and tethers (55%), small group pens only (25%), tether system only (9%), unheated building with attached individual runs (5%), and large group (>3 dogs) pens (5%). Only 1 respondent housed his or her dogs in a climate controlled building with attached runs.

5% of respondents confined their dogs with some other method.^[2] When asked to elaborate, these mushers described a combination of their homes and small pens, homes and tethers, or buildings and pens.

Outdoor Confinement Methods

A thorough review of scientific literature found only 1 peer-reviewed paper assessing the outdoor confinement of sled dogs. In that study the researchers determined that both small-group pens and tethers designed specifically as recommended in this guideline are equally humane^[3] Both methods are well supported by experiential evidence in the setting of sled dog kennels.

Small-group (2 - 4 dogs) Pen Confinement

Positive Factors	Negative Factors
Dogs housed in pens are less likely to escape than dogs housed on tethers. ^[4]	Size requirement of small-group pens has not been well established by science. ^[5] Mush with P.R.I.D.E. recommends small-group pens provide at least 150 square feet for 2 dogs plus 50 additional square feet for each additional dog confined within the pen.
Provides opportunity to interact with compatible pen mates	Cannot easily prevent fights. Mushers must assess the temperaments of dogs housed in small group pens carefully to ensure that pen mates are compatible.
Lower long-term repair and maintenance costs than other confinement systems.	Higher initial cost than recommended tethering system.
Dogs housed in small groups bark less frequently than dogs in individual runs. ^[19]	Maintenance and repairs may require more time and resources than maintenance and repair than some other confinement methods
	Dogs in adjacent pens may engage in obsessive parallel running or fence-fighting that can lead to serious dog fights should the antagonists be provided an opportunity to do so.

Recommendations:

When confining dogs in pens, the dogs sharing space must be chosen based on compatibility. In most circumstances dogs of the same sex should not be housed together as they are more likely to fight among themselves than dogs of opposite sexes. This is equally true regardless of whether the dogs are intact or have been spayed or neutered.^[14] In circumstances in which intact and 'fixed' dogs live in the same kennel, intact dogs can share pens with compatible spayed or neutered companions of the opposite sex.

Many sled dogs are notorious escape artists. Fencing material of pens should be sturdy and resistant to chewing. Chain-link or sturdy woven-wire fencing is preferable to more flimsy materials. Pen walls should be buried 6 to 12 inches (15-30cm) into the ground to discourage digging under.

Fence height of at least 6 feet (1.8 m) or more is recommended to discourage climbing. Coyote rollers can be installed across the top of fence walls to help prevent dogs from jumping or climbing out. Coyote rollers consist of a metal cable that is mounted at the top of the fence. The cable is run through the center of plastic pipe (usually three to four inch diameter pipe). The cable is mounted high enough above the fence so that the pipe is free moving on the cable but the dog or coyote cannot slip between the top of the fence and the cable. As a dog (or coyote) tries to climb the fence and tries to get a grip on the pipe, the pipe rolls and the dog or coyote falls back to the ground.

One can prevent dogs from tunneling under a fence by creating an L-footer along the base of the fence. Take a roll of heavy garden fence or hardware cloth and unroll it alongside your fence. Bend the fencing so a foot of it can be attached to the base of your fence posts and the remainder will lie flat on the ground at the base of the fence extending into your yard. The base of the L can be staked to the ground, covered with dirt, gravel, or other substrate.

Runs and pens must be equipped with gates that are wide enough to permit easy entry and exit from the enclosure while carrying feed or water pails or bedding material, but small enough to be closed quickly if necessary to prevent a dog from “rushing” the gate and escaping. A dual gate or “airlock” zone allows a caretaker to enter or exit the pen with less risk of a dog bolting through a single open gate. Gates must be equipped with latching devices that are easy for the musher to manipulate while wearing gloves, but difficult for dogs to manipulate. During winter it is important to shovel snow well away from gates in order for them to swing fully open when necessary.

Doghouses should be placed in areas of the pen where they cannot be used as platforms from which a dog can climb or jump over a fence.

Because there is scientific evidence that single-housing dogs in pens may be detrimental to their welfare, in most circumstances Mush with P.R.I.D.E. does not recommend pen confinement for an individual dog housed outdoors. Possible exceptions are;

- When that individual is the only dog owned by the musher.
- It is necessary to confine a female in estrus (in season or in heat).
- It is necessary for care and recovery from an illness or injury.^[7,8]

When such circumstances require isolating a dog from his or her kennel-mates it is recommended that they be housed within sight of the other dogs and that they receive extra attention from caretakers. ^[9]

Tether Confinement

Positive Factors	Negative Factors
Allows dog to interact with up to four different kennel mates	Space requirement not well determined by science ^[5,6] . Mush with P.R.I.D.E. recommends a minimum of 100 square feet per dog confined by the recommended tether system.
Prevents dogfights and allows dogs to safely retreat from more aggressive neighbors.	Requires close monitoring and more frequent maintenance of hardware to prevent injury or escape.
Allows caretakers easy access to each dog for individual health care, husbandry, and individual socialization and training.	Requires appropriate collars for each individual dog's coat type and head shape.
Allow caretakers to monitor the amount of food or water consumed by the dog, quality of the dog's feces and individual behavior without the interference or stimulation of a second animal in the same space.	Tether systems with low-lying anchors requires the chain to drag entirely on the ground, stirring up dust and spreading feces. Such systems require more frequent feces removal (scooping).
	Tether systems with low-lying anchors can result in the chain freezing to the ice and snow when the dog urinates on its post.
	Dogs are more likely to escape from tethers than from fenced enclosures. ^[4]
	Illegal in some political jurisdictions and socially controversial in others.

Tethering systems are controversial and when used inappropriately have been associated with circumstances that are detrimental to the welfare of dogs. Association is not causation, and when used appropriately by diligent mushers or kennel operators there is no evidence that tethering in and of itself results in poor welfare.^[3,4,31]

Recommendations:

The circular tethering system described in these Guidelines is intended for use only in sled dog kennels housing four or more dogs. Each dog confined on a tether should be able to interact with at least one of his or her kennel mates. This requires that anchors be placed close enough to allow dogs to touch noses and play, but far enough to prevent chains from tangling. In a circular tethering system 6 foot (1.8 m) chains measured from the anchor point to the snap and spaced 14 feet (4.27 m) apart accomplishes this.

Cable must never be used to tether sled dogs. Cable is much too likely to tangle around legs (in an armpit or hock) and can cinch up like a snare. Cables also have a tendency to fray and break.

Elevated anchors that prevent the chain from dragging on the ground are generally preferable to ground level anchors where ground conditions permit their use. Elevated anchors prevent the chain from dragging on the ground, spreading feces and generating dust. In circumstances where elevated anchors are impractical ground level anchors are permissible but require more frequent feces removal.

The preferred tethering method consists of a chain attached to a rotation device at the top of a post or pipe, thus allowing the chain to travel in a full circle around the anchor. A simple rotation device, called a "spinner", consists of a piece of rebar with a 90-degree angle bend and an eye for the chain welded on the end. A hollow iron or steel pipe is driven deeply into the ground to serve as the post. In use, the long arm of the spinner slips inside the pipe, allowing the spinner to swivel through a complete circle. With this system the post can be easily lengthened in deep snow by slipping a taller pipe of larger diameter over the shorter summer post.

Collars of dogs confined on tethers should be well constructed of durable material, at least 3/4" wide and caretakers must be diligent to ensure the system is not inadvertently causing injury. Collars should be inspected daily to ensure they are not abrading the dogs' fur or chafing the dogs' necks. Chains, connectors and snaps should be inspected for wear at least monthly. Some dogs put a great deal of strain against their chains, causing links to stretch over time. Therefore it is recommended the chain be measured at least every 6 months to ensure they don't stretch so much that dogs can tangle together.

Indoor Confinement Methods

In Home Confinement

Positive Factors	Negative Factors
Promotes more frequent interactions with human caretakers making it easier to monitor body condition, vigor and behavioral indicators of welfare.	Requires a greater time commitment for socialization, habituation and training than some outdoor confinement methods.
Most homes provide a temperature controlled environment adequate to meet the thermoregulatory requirements of dogs.	May not provide the space required for sled dogs to engage in the full range of typical behaviors.
May provide more opportunities for environmental enrichment than outdoor confinement methods.	May expose dogs to environmental toxins such as household cleaners and chemicals, human foods that are unsafe for dogs and other substances not normally found in an outdoor environment.
	May require temperature regulation more suited to the dog's needs than those of human residents
	May promote competition between dogs for resources, including caretaker attention that can lead to dogfights, resource guarding behavior and other unpleasant interactions between dogs.
	Close confinement in an indoor space may promote the spread of infectious diseases.
	May be difficult or impossible to separate intact females from intact males during estrus.
	Noise levels may be excessive and uncomfortable or unhealthy for both dogs and human caretakers.
	Dogs housed in human dwellings may not be adequately acclimated to tolerate cold temperatures during dog mushing activities.

Building with Attached Runs, Pens or Yards (Paddocks)

Positive Factors	Negative Factors
May be able to incorporate climate control mechanisms (heat or air conditioning) appropriate for the needs of dogs.	Space requirement not well determined by science [5,6] . Mush with P.R.I.D.E. recommends that each dog housed in a building with attached runs or pens be provided at least 100 square feet for an individual dog plus an additional 50 feet for each additional dog sharing the space.
When equipped with dog-actuated doors, permits individual dogs to choose between different environments.	Construction, maintenance and climate control expenses can be considerable.
Depending upon wall and flooring materials, it may be easily cleaned and sanitized.	Close confinement in an indoor space may promote the spread of infectious diseases.
When well constructed and maintained is perceived positively by most of the general public as a confinement method.	Requires adequate ventilation
	Noise levels may be excessive and uncomfortable or unhealthy for both dogs and human caretakers.
	Maintenance and repairs may require more time and resources than maintenance and repair than some other confinement methods

Recommendations:

Poor air quality has been identified as a potential welfare concern in USDA regulated indoor kennels and animal shelters and is applicable to both the musher's home as well as kennel buildings. It can have a detrimental impact on human health as well as the health of our dogs. The American Veterinary Medical Association states that proper ventilation removes excess heat, dampness, odor, airborne microbes, and pollutant gases such as ammonia and carbon monoxide, while allowing for the introduction of fresh air. Both the AVMA and the Association of Shelter Veterinarians recommend 10 to 20 fresh air changes per hour in buildings or rooms in which animals are housed.^[17,18]

Adequate ventilation is particularly problematic for dogs housed in the owner's home. Modern homes constructed in northern regions are relatively air-tight to conserve energy, and most are so tightly constructed as to permit less than 1 fresh air change per hour. It is nonetheless the responsibility of the musher or kennel operator housing sled dogs in his or her own home to ensure that air quality is adequate to remove heat, dampness, odor, airborne microbes and pollutants as necessary to ensure a healthy environment for his or her dogs.

Dogs housed inside buildings are at particular risk in the event of a structural fire. Many government jurisdictions enforce building codes that regulate the construction and maintenance of buildings in which animals are confined. It is the musher or kennel operator's responsibility to ensure that his or her own kennel is in compliance with all applicable statutes and regulations.

Mush with P.R.I.D.E. recommends that any structure in which sled dogs are housed, including the owner's home, be equipped with A-B-C type fire extinguishers located within 50 feet of any point in the structure. Heating devices used in dedicated kennel structures should be of a type designed for agricultural use and placed well away from any flammable materials. Straw, wood chips or other bedding material should be stored away from the building in which dogs are housed and evacuation routes such as aisles or alleyways must be kept clear of obstructions.

Alternative Confinement Systems

Although the confinement methods listed above are recommended other alternatives may also be acceptable so long as they meet the objectives of preventing escape from the owner's property, provide adequate space, allow interaction with caretakers and other dogs and provide protection from natural and human threats. Mush with P.R.I.D.E. encourages mushers using suitable confinement methods not included in this chapter to share their experiences with others so we can build on the body of evidence that supports excellent welfare for our dogs.

Space Requirements for Dogs Housed in Sled Dog Kennels

It is the musher or kennel operator's responsibility to provide every dog confined and/or housed within the kennel adequate space to engage in a full-range of species typical behaviors, including elimination of waste outside the shelter or bedding area, standing upright, lying down full length, turning about, walking, running, trotting and jumping at least the distance of the dog's height as measured at the shoulders.

In circumstances in which a dog's behavior must be restricted for the treatment of illness or injury, the dog must nonetheless be provided adequate space in which to stand upright, turn about, sit upright or lie full length.

The space requirements of dogs have not been well established by scientific researchers.^[5,6] The most useful study thus far available shows that dogs housed as a pair in a 193.8 ft² (59 m²) enclosure were 1.34 times more likely to be active than a single dog housed in a 96.9 ft² (29.3 m²) kennel.^[6] This suggests that available space can influence the well being of kenneled dogs because more space allows dogs to engage in a wider range of natural behaviors.

The space recommendations in this guideline are based on the limited available scientific evidence combined with the experiential evidence provided by sled dog veterinarians and the observations of experienced dog mushers. We recommend providing an individual dog with at least 100 square feet (30.4 m²), with an additional 50 square feet (15.2 m²) for each additional dog housed in the same space. Less space may be acceptable in circumstances in which dogs are provided ample opportunities to exercise in a larger area outside of their primary confinement area.

Recommendations:

Dogs housed primarily in their owners homes should be provided at least 100 square feet of floor space unencumbered by furniture for 1 dog, and an additional 50 square feet for each additional dog. Less space may be acceptable in circumstances in which those dogs are provided opportunities to exercise outside the house several hours each day. Dog actuated doors providing free access to a fenced yard increases the dogs' available space considerably.

Pens used for primary confinement should provide at least 150 ft² for two dogs, and an additional 50ft² for each additional dog in the group. Therefore a group of three dogs should be provided a pen of at least 200 ft² and four dogs a pen of at least 250 ft². In circumstances requiring that a single dog be confined alone in a pen, that pen should provide at least 100 ft² of space.

Measured from the anchor to the snap, chains used in the circular tether methods should be a minimum of 6 ft (1.8 m) in length. This provides each individual dog at least 113 ft² (34.4 m²) of space.

Perimeter Fencing

Wherever practical, Mush with P.R.I.D.E. highly recommends that sled dog kennels be surrounded by a perimeter fence that is tall and strong enough to prevent any dogs that escape from their primary confinement from leaving the owner's property and to prevent wild animals, stray pets or human trespassers from coming into contact with the dogs.

Shelter

It is the musher or kennel operator's responsibility to provide each dog with easily accessible shelter sufficient to provide protection from wind and precipitation, to meet the dog's physical thermoregulatory needs and to promote physical comfort during extremes in environmental temperature.

Every dog confined outdoors or in a building that does not include climate controls (heating and/or air conditioning) or who spends unsupervised time outdoors must be provided a house that is adequate to meet his or her thermoregulatory needs, even if the dog chooses to not use it. The type of house should be based on the dog's coat type and condition, body condition, age and general health.

In the United States wooden doghouses have been criticized because they are difficult to thoroughly clean and sanitize. Meanwhile in Norway plastic doghouses are criticized because they may not provide adequate insulation to meet the needs of the relatively thin-coated dogs that are popular in long-distance sled dog racing in that region. To address these conflicting concerns Mush with PRIDE presents several different options. It is the kennel operator's responsibility to choose the option best suited for each dog in his or her kennel.

Uninsulated Wood or Plywood Dog Houses

Positive Factors	Negative Factors
Good wind and precipitation resistance	Difficult to clean and sanitize
Provides more insulation than plastic	Easily damaged by chewing and dogs may ingest wood splinters.
Easily constructed, maintained and repaired.	Unightly if not frequently maintained
	In extreme northern climates may only be suitable for adult dogs with thick, double-layered coats and a body condition score of 4 or higher (9-point scale) in good general health. May not be suitable for very young, very old, thin-coated or underweight dogs.

Insulated Wood or Plywood Dog Houses

Positive Factors	Negative Factors
Good wind and precipitation resistance	Difficult to clean and sanitize
Provides adequate insulation for most thin-coated sled dogs.	Easily damaged by chewing and dogs may ingest wood splinters.
Easily constructed, maintained and repaired.	Heavier, more expensive and more complicated than uninsulated houses.
	Unightly if not frequently maintained
	Adult dogs with thick double-layered coats in good body condition and health may avoid using insulated houses, particularly during relatively mild temperatures.

Repurposed Plastic Drums

Positive Factors	Negative Factors
Good wind and precipitation resistance	May require ventilation to prevent accumulation of frost
Repurposed non-biodegradable barrels would otherwise be discarded, possibly into a landfill or the general environment.	May not provide adequate insulation for thin or short coated dogs in harsh winter environments.
	Socially controversial

Commercially Manufactured Dog Houses

Positive Factors	Negative Factors
Generally perceived positively by the general public.	Expensive compared to owner-built and repurposed options.
Variety of styles widely available	Insulation value varies greatly and is sometime difficult to determine.
Many are constructed of materials that are easily cleaned and sanitized.	Some are easily damaged by dogs who may then ingest pieces of the construction material.

Recommendations:

Every dog that spends unsupervised time outdoors must be provided a shelter adequate to meet his or her thermoregulatory needs. Most mushers accomplish this by providing each dog a doghouse. Each doghouse should be suitable for that individual dog's coat type, body condition, age and general health. Each house should be large enough for the dog to turn around and relax inside, but small enough to conserve body heat during winter.

During winter dogs should be provided insulative bedding material such as straw, hay or wood chips. Bedding should be monitored closely, replenished as needed and replaced if it becomes wet. Beware of foxtails, mold, contact dermatitis and individual allergies. If a dog develops an issue with one type bedding switch to another. Remove organic bedding material during the summer to keep dogs cooler and prevent irritation from mold, dampness or skin parasites. Removable roofs or floors make it easier to remove or maintain bedding material.

During winter the doorway to the doghouse must be elevated above the level of the snow and snow shoveled away from the doorway to ensure the house is accessible to the dog. A trim board or small tunnel-like portal extension around the door of the house helps prevent males from urinating through the door, deflects wind and rain and discourages chewing and chain wear around the door.

Although doghouses with pitched or domed roofs are acceptable, those with flat roofs offer several advantages. Snow accumulation on a flat roof provides additional insulation and flat roofs provide comfortable sunning, sleeping and observation platforms for dogs. Many mushers train their dogs to jump on top of flat-roofed doghouses for handling, nail trimming and other husbandry procedures.

Wooden doghouses painted with non-toxic coating are more durable and more easily cleaned and sanitized than untreated wood. Be sure to avoid paints or coatings that contain lead or other toxic chemicals. Coating the interior of wooden doghouses makes them easier to clean and sanitize when necessary.

Substrate (Surface Material)

While there is strong scientific evidence that the type of surface on which animals live is important to their health and well-being, there are few scientific papers that support any type of surface as being either superior or inferior to any others for dogs.^[10]

Natural Earth	
Positive Factors	Negative Factors
Least expensive	May harbor parasites and bacteria for long periods of time.
Permits the innate natural behavior of digging	Difficult to clean and nearly impossible to sanitize
Easily manipulated with hand tools or light equipment	Requires frequent maintenance
	Wet, muddy conditions can result in foot injuries to some dogs, including splits or fissures. ^[11]
	May allow rock eaters access to stones that can cause health and life threatening gastrointestinal blockages.

A 2019 poll of Mush with P.R.I.D.E. members found the majority of our members house their dogs primarily on a surface consisting of natural earth or a mixture of natural earth and organic material, sand or gravel .^[12] Natural soil without other materials is fine in areas with good drainage but long term exposure to mud or wet surfaces can result in foot injuries, including splits and fissures.^[11]

Recommendations:

Excessive silts and clays in the surface will produce a rock-hard surface when dry but slows drainage and becomes slick and sticky when wet. Adding sand or fine gravel to soil improves drainage and also helps reduce dust during dry conditions. Due to the risk of dogs eating rocks, it is recommended that screened gravel less than 3/4 inch (19 mm) in diameter be used for this purpose.

During wet seasons many mushers add straw, woodchips or other organic materials to help keep the surface drier. Because excessive amounts of decaying organic material increase water retention and increase the amount of fungi, mites and other potentially health-threatening organisms such materials should be removed when the weather improves.

Digging is an innate, “species typical” behavior. When unable to dig many dogs resort to displacement behaviors to vent their frustration such as chewing on houses, stereotypical pacing, rock eating and other potentially dangerous behaviors. Many mushers accept the extra work of filling in holes rather than discouraging or preventing digging.

Some methods that can limit digging to acceptable areas or depths include installing platforms over just a portion of the dog's confinement area or by burying sturdy fencing or concrete reinforcing mesh beneath the surface material.

Wooden Platforms and Home Flooring

Positive Factors	Negative Factors
Prevents digging	Thwarts innately rewarding behavior, which may be detrimental to welfare.
Easier to thoroughly scoop feces, clean and sanitize than natural earth	May harbor parasites and pathogens within pores.
When well maintained and tidy is visually appealing to humans.	May be slippery increasing the risk of injuries to both dogs and caretakers.
May provide a cleaner and drier surface in kennels located in low-lying areas with high water tables or areas prone to heavy seasonal rainfall.	Requires more frequent nail clipping and care on the part of caretakers
	May have a detrimental effect on the development of bones and joints in very young puppies. ^[13]

Concrete, Asphalt or other Pavement

Positive Factors	Negative Factors
Prevents digging	Thwarts innately rewarding behavior which may be detrimental to welfare.
Easier to thoroughly scoop feces, clean and sanitize than natural earth or wood or wood-like materials	May harbor parasites and pathogens
When well maintained and tidy is visually appealing to humans	May be slippery when wet or icy, increasing risk of injuries to both dogs and human caretakers
	Is abrasive and may cause excessive wear and injury to feet. ^[11]
	May have a detrimental effect on the development and health of bones and joints, particularly in very young puppies. ^[13]

Recommendation:

Mush with P.R.I.D.E. recommends that dogs housed on primarily solid surfaces such as wooden floors, home flooring, platforms or pavement be provided ample opportunities to play and exercise in a larger area with natural surface.

Kennel Maintenance and Hygiene

It is the musher or kennel operator's responsibility to provide each dog a safe environment that promotes comfort and good health.

Waste Management

Dog feces are a significant source of bacterial and parasitic infectious material, and frequent feces removal is important to the health of both dogs and human caretakers. Mush with P.R.I.D.E. recommends that all visible feces be removed from each dog's primary confinement at least once every day, and encourages more frequent scooping. It is good practice to integrate scooping with other routine kennel chores such as feeding and watering, and remove feces whenever it is encountered.

Once removed from the kennel, feces have to go somewhere. In many jurisdictions official regulations or ordinances govern disposal of pet waste. It is the musher or kennel operator's responsibility to know and obey the laws of his or her own community.

Disposal in Municipal Sewage Systems

Positive Factors	Negative Factors
Preferred by United States Environmental Protection Administration (EPA).	Impractical to introduce the volume of feces produced by more than a few dogs into the sewage system.
Suitable for small kennels.	

Where practical, disposal into municipal sewage systems is the method most highly recommended by the United States Environmental Protection Administration (EPA). Mushers or operators of small-scale sled dog kennels can conveniently dispose of their dogs' feces by simply flushing it down a household toilet. Those with larger kennels should discuss the feasibility and methods of introducing dog waste into those systems with public works or sanitation department officials.

Disposal in Municipal Landfills

Positive Factors	Negative Factors
Removes waste and associated pathogens from the kennel.	Contributes significant volume to the waste stream.
Prevents waste products from leaching into the watershed.	Requires off-site transportation and may require payment of disposal fees.
Preferred method of disposal in some municipalities. ^[16]	

Disposal in a municipal landfill is the preferred method of disposal in many suburban and developed rural jurisdictions. Landfills are designed to prevent contaminants from leaching into both surface and groundwater. Removing the feces from your kennel property prevents dogs from coming into contact with it, which helps reduce the risk of disease and parasites.

Composting

Positive Factors	Negative Factors
Destroys many pathogens	Does not adequately destroy all pathogens in some environments.
Reduces risk of polluting groundwater and streams	Requires additional organic material (straw, wood chips, etc.) to break down the feces and kill pathogens.
Produces a useful, safe soil amendment	Discouraged in some municipalities. ^[16]
	Dog waste compost is not safe for use in agriculture or gardens where human food is produced.
	Ineffective during winter so requires accumulation and storage of feces until outdoor temperatures rise in spring.
	Moderately complex process requires monitoring and significant time commitment.

Good composting can remove raw dog waste from the environment where it can pollute surface water and streams. Good composting is believed to destroy pathogens and produce a safe soil that can be used for flower beds and landscaping purposes. It also eliminates the need to transport dog waste to a landfill or safe disposal facility.^[15]

Safe dog waste composting requires sustained temperatures of 140° F (60° C) or higher for extended periods of time. While this is achievable during most warm weather months, composting is ineffective during periods of freezing outdoor temperatures. Guidelines and instructions for dog waste composting can be downloaded at <ftp://ftp-fc.sc.egov.usda.gov/AK/Publications/dogwastecomposting2.pdf>.

Dog Waste Digesters and Septic Systems

Positive Factors	Negative Factors
On site treatment.	High volumes of hair and ash not normally found in human waste, can interfere with septic system functions and clog drain fields. ^[29]
Relatively odor free	Septic systems designed for kennel use are expensive to install and require periodic maintenance.
	Discouraged in some municipalities. ^[16]
	Digesters are ineffective during winter so require accumulation and storage of feces until outdoor temperatures rise in spring.
	Based on manufacturer recommendations, commercially manufactured digesters lack the capacity to manage waste from more than 2 or 3 typical sled dogs.

Members of the Mush with P.R.I.D.E. Guidelines Committee lack the technical expertise necessary to provide reasonable recommendations for the use of septic systems or digesters for disposal of dog waste. Mushers or kennel operators interested in building or installing such systems should discuss the feasibility of such systems with local public works, sanitation department, or environmental regulatory officials.

Waste disposal pits

Positive Factors	Negative Factors
Removes feces from the primary confinement and housing area.	Attracts flies and mosquitoes, which may then transmit bacteria or viruses to dogs or humans.
Reduces contamination of surface water.	May be a source of sub-surface groundwater pollution.
Relatively inexpensive to construct and maintain.	Odoriferous, particularly during warm weather.

Dog waste disposal pits serve the same purpose as dry-pit latrines (outhouses) for human use. They are most suited for kennels located in very remote rural or frontier settings. Their primary purpose is to prevent dogs and people from being exposed to feces that has been removed from the primary confinement area and to prevent contamination of surface water while the feces decomposes naturally.

A waste disposal pit is simply a hole in the ground. Fecal material is dropped into the hole as it is removed from the kennel. Organic materials such as used straw or wood chips from doghouse bedding or that has been used to improve drainage in the dog yard can also be disposed of in the pit. When the disposal pit is nearly full it should be covered with at least 24 inches (61 cm) of soil and new pit dug in a different location to serve in its place.

Mush with P.R.I.D.E. Guidelines Committee members were unable to find any evidence based guidelines for dog waste disposal pit construction or maintenance. The following information is based on Alaska Department of Environmental Conservation regulations for the construction and operation of pit privies for human waste.^[30] *Because the suitability of these guidelines for dog waste disposal cannot be determined, this information is provided for comparison purposes only.*

Site Selection:

- *Find a site where the groundwater table is deep enough to ensure the four foot minimum vertical separation between the bottom of the pit and the groundwater.*
- *Locate the pit privy in area where the water will drain away from pit.*
- *A pit privy shall not be installed in an area that is subject to flooding.*
- *Pit privies meeting the below requirements are not required to be approved by or registered with the Department. Check with local government for additional restrictions or requirements.*
- *The pit privy must meet the following minimum separation distances (setbacks)*

Minimum Required Separation Distances Measured Horizontally or Vertically

<i>Distance in Feet</i>	<i>Separation Distance to...</i>
<i>100 feet</i>	<i>Surface water, wetlands, sloughs, swamps and from any potable water system that is not a public water system</i>
<i>200 feet</i>	<i>Any water source used to supply a public water system serving at least 25 people for more than 60 days</i>
<i>6 feet</i>	<i>From the edge of the pit privy to any other soil absorption fields</i>
<i>4 feet</i>	<i>The distance between the bottom of the pit privy and seasonal high groundwater table</i>

Pit Construction:

- *Dig a pit deep enough to provide capacity for the amount of waste anticipated. When sizing the pit, include the estimated amount of used bedding and other organic waste if you intend to dispose of in the pit.*
- *As noted above, dig the pit so that the bottom of the pit is at least four feet above the groundwater table to prevent flooding of the pit and provide adequate treatment of the waste.*
- *Construct the pit to prevent cave-ins. If necessary, cribbing can be used to shore up the sides of the pit. Cribbing should fit firmly against the earthen walls on all sides. Cribbing should descend the full depth of the pit and rise flush with the ground level. Use only untreated lumber for the cribbing.*
- *Construct the pit so water drains away from the opening and not into the pit. Use the excavated soil to berm up around the pit.*

Abandon the pit properly when solids are within two feet of the ground level or when use of the pit is permanently discontinued

- *Remove any structure erected over the pit.*
- *Apply lime to the pit.*
- *Cover with a minimum of two feet of compacted soil. More cover may be needed to adequately cover the pit.*
- *Contour the soil so there is a mound that will ensure drainage away from the pit and to allow settling of the soil.*
- *Mark the pit location so that future owners avoid digging a new pit into a previously abandoned pit.*

Noise Management

Kennel noise is a significant health and safety issue for both dogs and humans. Scientific researchers have recorded sound levels in kennels as high as 120 dB, and continuous sounds levels in the range of 100 - 108 dB.^[19] This is well in excess of safe noise level standards established by the United States Occupational Safety and Health Administration. Mushers and sled dog kennel operators should consider the reasons why dogs bark excessively and develop a plan to address those issues.

Recommendations:

Because dogs housed together bark less than those housed individually, your dogs should be confined in a manner that allows them to interact with at least one kennel mate.^[19] All of the confinement methods described in this guideline can accommodate this recommendation.

Control exposure to circumstances that stimulate barking in your kennel. Nearly all sled dogs can be expected to bark during feeding and when hooking up or loading a team for a training run. These controllable events should be timed so that the noise generated by excited dogs does not interfere with your neighbors sleep patterns. This is particularly important if your neighbors are night-shift workers.

Mushers or operators of sled dog kennels located close to roads or trails may consider installing privacy fences or other barriers to restrict the visual stimulation of pedestrians, other dogs or moving vehicles that can trigger barking. Visual barriers may also help prevent your dogs' barking from bothering grazing livestock or wildlife on neighboring properties.

Some experienced scientific researchers and subject matter experts feel the most effective means of reducing the frequency and intensity of barking is to simply spend time with your dogs. Incorporating play, petting and one-on-one behavior training sessions are all associated with lower sound levels in the kennel environment.^[21, 22]

Other enrichment methods that can help reduce nuisance barking are discussed under the heading Environmental Enrichment, below.

Environmental Enrichment

It is the responsibility of the musher or kennel operator to provide safe, congenial and species-appropriate opportunities to have pleasurable experiences

Environmental enrichment enhances the quality of animal care by increasing behavioral diversity, reducing the frequency of abnormal behaviors, increasing the range or number of normal behavior patterns, increasing positive utilization of the environment, and increasing the ability of the animal to cope with challenges in a more normal way. ^[23, 24]

There is strong scientific evidence that environmental enrichment may be one of the most important things mushers can do to meet the psychological as well as physical needs of our dogs.^[9, 25, 26] The Mush with P.R.I.D.E. Guidelines Committee plans to write an entire chapter on the topic for these guidelines in the near future. In the meantime, the following recommendations can be used to enrich the lives of your own dogs.

Recommendations:

Occupational enrichment is one of the best, and most natural, forms of enrichment we can provide working dogs. Taking your dogs on frequent training and conditioning runs provides both physical and mental exercise and exposes them to the unique sights and scents of the trail. Other forms of occupational enrichment useful during the off-season include participation on other dog sports, such as agility, flyball, or dock-diving. Sporting breeds popular with many mushers may also excel at (or at least enjoy the physical and mental challenges of) field trials. Many pure-breed mushers also participate in dog shows and obedience competitions.

Social enrichment refers to providing opportunities to interact with other dogs and with human caretakers. Some forms of social enrichment such as confining dogs in a manner that allows interaction with at least one other kennel mate. Other options for social enrichment include walking dogs, allowing dogs to interact in supervised play groups, and participating in obedience classes. Training and practicing simple cues such as "sit", "down" or "stay" have been shown to be particularly enriching for dogs and even human-socialized wolves kept in captivity.^[27]

Physical enrichment involves the complexity and quality of the dogs' living space. Some forms of physical enrichment already discussed in this guideline include providing flat-roofed doghouses dogs can use as raised platforms, access to outdoors through pens or paddocks attached to kennel buildings, and providing dogs with doghouses in which they can hide if frightened or stressed. Other practical physical enrichment methods can be as simple as housing dogs on a soil, sand or gravel substrate in which they can dig and providing toys they can manipulate,

Sensory enrichment engages the different senses of dogs, such as sight, sound and smell. Outdoor kennels in rural or remote settings allow the dogs to see, hear and smell wildlife as well as other natural stimuli in the environment. In suburban or urban settings the dogs can nonetheless respond to interesting movement, sounds and odors in their own environment. Olfactory enrichment can be achieved by introducing interesting odors into the dogs environment, such as spritzing perfume or cologne while walking through the kennel. One researcher reported that the placement of lavender-scented cloths in kennels had a calming effect, reducing the amount of barking and other activity.^[28]

Feeding enrichment encourages dogs to perform natural foraging and feeding behavior with the use of food as a reward. Feeding enrichment can be as simple as scattering a dog's ration in his or her confinement rather than placing it in a bowl. Puzzle feeders can also be used to provide feeding enrichment.

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Watering and Feeding Sled Dogs

The Mush with P.R.I.D.E. Guidelines Committee and Board of Directors would like to express our deep appreciation to Dr. Anna Kate Shoveller, PhD for her assistance in updating this chapter on Watering and Feeding Sled Dogs. Dr. Shoveller is an associate professor in the Department of Biosciences, University of Guelph. Much of Dr. Shoveller's current research involves the study of racing sled dogs.

The Five Responsibilities of Mushers and Sled Dog Kennel Operators, and their Animal Welfare Objectives

Responsibility	Sled Dog Welfare Goals
1. Good nutrition: It is the responsibility of the musher or kennel operator to provide ready access to fresh water and an adequate diet to maintain full health and vigor	Minimize thirst and hunger and enable eating to be a pleasurable experience
2. Good environment: It is the responsibility of the musher or kennel operator to provide every dog within the kennel with suitable housing, good air quality and comfortable resting areas	Minimize discomfort and exposure and promote thermal, physical and other comforts
3. Good health: It is the responsibility of the musher or kennel operator to prevent or rapidly provide appropriate treatment of disease and injury, and to foster good muscle tone, posture and cardiorespiratory function	Minimize breathlessness, nausea, pain and other aversive experiences and promote the pleasures of robustness, vigor, strength and well coordinated physical activity
4. Appropriate behavior: It is the responsibility of the musher or kennel operator to provide sufficient space, proper facilities, congenial company and appropriately varied conditions	Minimize threats and unpleasant restrictions on behavior and promote engagement in rewarding activities
5. Positive mental experiences: It is the responsibility of the musher or kennel operator to provide safe, congenial and species-appropriate opportunities to have pleasurable experiences	Promote various forms of comfort, pleasure, interest, confidence and a sense of control

It is the musher or sled dog kennel operator's responsibility to provide each dog a complete and balanced diet and adequate water to support good health.

Summary of Recommendations:

- Provide each dog adequate quantity of water to prevent excessive thirst and maintain a normal level of hydration.
- Provide each dog a complete and balanced diet in sufficient quantity to maintain an ideal body condition score.
- Homemade or combination diets should be formulated based on scientific evidence provided by a companion animal nutritionist or board certified veterinary nutritionist.
- Appropriately adjust feeding and watering regimen to meet the special needs of puppies, pregnant or lactating bitches and/or geriatric dogs.

As a musher or sled dog kennel operator, your feeding and watering regimen has a direct impact on 3 of the 5 responsibilities of mushers and sled dog kennel operators, including good nutrition, good health and positive mental experiences. It also has a major impact on your team's performance, regardless of the mushing discipline in which you and your dogs participate.

Watering Sled Dogs

Canine nutritionists frequently stress that water is the most essential part of a feeding regimen. While deficiencies in protein, fat, vitamins, or minerals will affect a dog's health, it may take days or months before such problems are noticeable. In contrast, dehydration has an acute affect and can quickly result in death if left untreated.

A dog gains water by drinking it directly, by eating foods that contain water, and by generating water through metabolism. Water is lost each day through urine, feces, sweating and water vapor in the breath. The latter is particularly important because dogs lose a significant amount of water through panting during ambient temperatures that are warmer than those to which they are acclimated. ⁽²⁰⁾

Dogs ingest much of the water the need through their food. On average, about 75% of meat or poultry is made up of water.⁽¹⁴⁾ Meanwhile, dry kibble has a water content of only 6% to 10%.⁽¹⁵⁾ Musher and kennel operators who feed kibble can encourage water consumption by soaking the dogs' ration in warm water at least 10 to 15 minutes prior to feeding.

In addition to the water consumed in their food healthy, sedentary adult dogs in comfortable (thermo-neutral) temperatures drink about 1 fluid ounce (3 ml) of water per pound (2.2 kg) of body weight.⁽¹³⁾ During the off-season one should expect most 50 lb. sled dogs to drink about 1 1/2 quarts of water daily, and a 65 lb. dog will need at least 1/2 gallon.

During periods of extreme temperature, either hot or cold, dogs require more water to remain well hydrated. Puppies, females nursing puppies and geriatric dogs all require more water than other comparably sized adult dogs. Dogs who are ill, particularly those with vomiting and / or diarrhea may require much more water to counterbalance fluid loss.

Exercise leads to considerable amount of water loss not only through the breath, but also through the stool and urine. A dog's water requirement may double if it participates in open-class sprint racing and increase three to five-fold if it participates in long-distance racing.^(12, 16)

It is the musher or kennel operator's responsibility to provide each dog adequate quantities of water to prevent excessive thirst and maintain a normal level of hydration.

To minimize the sensation of thirst, each dog housed in temperature controlled buildings or outdoors during above-freezing temperatures should be provided access to clean, fresh water in spill resistant containers at all times. Many legal jurisdictions require that dogs be provided access to clean, drinkable water at all times. It is always the musher or sled dog kennel operator's responsibility to understand and obey the laws and regulations of his or her jurisdiction.

During very cold conditions it is nearly impossible to ensure that dogs housed outdoors have access to unfrozen water at all times. Eating snow or licking ice may help relieve the sensation of thirst but cannot provide the dog enough water to maintain good hydration. It is the musher or sled dog kennel operator's responsibility to ensure his or her dogs are provided enough drinkable water to maintain good hydration.

To meet their physiological needs, dogs must be watered at least twice per day.⁽²⁰⁾ Dogs fed twice each day should be offered water during or after eating. Dogs fed once each day should be offered water during or after their meal and again 10 to 12 hours later. Dogs should also be watered before working and shortly after the training, racing or work session.

Dogs housed outdoors in temperatures below 32° F (0° C) can be encouraged to drink by offering warm, flavor enhanced water two or more times each day. The flavoring can be any food source that dogs find appetizing, thus encouraging them to drink the resulting slurry or "soup" before it freezes in the dish. Scientific evidence shows that flavor enhanced water is consumed more readily and is thus more effective at preventing dehydration than plain tap water alone. ⁽¹⁵⁾

Water containers must be kept clean, free of rust or corrosion and free of debris, feces, urine or other contaminants. Bacterial contamination of water served in dirty containers may result in food borne illness and may also reduce the dog's desire to drink. ⁽²⁰⁾

Flat-sided buckets that can be hung from hooks and dishes or bowls placed in brackets affixed to dog houses or kennel fences are spill resistant, practical, reasonably priced, easily maintained and readily available in many livestock and pet supply stores. Mush with P.R.I.D.E. discourages permanently fastening food or water containers to doghouses or other structures unless they can be easily removed without tools for frequent cleaning.

In general, it's recommended that dogs be watered before working and at intervals through the course of the working day. Sprint mushers rarely need to water during the course of a training run or race, but should offer water shortly after finishing the run. Both scientific and experiential evidence indicates that in addition to providing water in meals long-distance racing and expedition style mushers should provide snacks of meat, fish or well-soaked kibble at two to three hour intervals to enhance performance.

Some dogs seem to be sensitive to changes in water quality, and may avoid drinking water from unfamiliar sources. Mineral content (hardness) and water treatment chemicals such as chlorine or fluoride are detectable to dogs by odor and flavor. When traveling to train, race or work mushers may be well advised to bring water from their home source for their dogs. During cold weather, freezing the water and then melting and warming it prior to offering it to the dogs may help encourage them to drink more.

These recommendations are a starting point and should be adjusted according to the needs of each individual dog. During winter it's particularly important to monitor how much water each dog actually drinks. If your dog typically empties his/her container s/he probably needs more with each serving. Be sure to provide as much water as your dog is willing to drink, particularly if the dog is housed outdoors during winter.

Monitor your dogs' hydration status by observing their urine and examining their gums and skin turgor. A healthy, well hydrated dog's urine is transparent yellow, sometimes referred to as "straw yellow". The intensity of yellow color in normal, clear urine indicates the concentration or dilution of urine. In simplest terms, dilute urine is associated with increased water excretion and concentrated urine correlates with less water.⁽²²⁾ Bright yellow, amber or honey colored urine is an early sign of dehydration and should prompt the caretaker to provide more water.

In a well-hydrated dog the gums are pink and wet and capillary refilling time is less than 2 seconds. Tacky or sticky gums is a sign of mild to moderate dehydration. Dry gums, delayed capillary refilling time and poor skin turgor are signs of significant dehydration that must be treated as soon as possible. More information on these clinical signs can be found in the chapter on Basic Health Care.

Feeding Sled Dogs

It is the musher's or kennel operator's responsibility to ensure each dog is provided a complete and balanced diet in adequate quantity to maintain a body condition score between 4/9 and 6/9 of the ISDVMA 9-point body condition scale.

The dietary energy requirements of dogs depends on several factors. These include environmental temperature, genetic makeup of the dog, the age and reproductive status of the dog, the degree of physical conditioning, speed and duration of exercise and others.⁽¹⁾ Mush with P.R.I.D.E. recommends monitoring each dog's weight and body condition and adjusting your feeding regimen as needed to maintain a body condition score within the ideal range.

A healthy adult working dog in good body condition will fall within the ideal body condition score range (4/9 to 6/9) of the ISDVMA 9-point scale. His or her ribs will be easily palpated, with some fat covering. The curvature of his or her waist should be easily felt or seen. Although geriatric dogs, like older humans, tend to develop a paunch most working age dogs' abdomens should be tucked up and easily discerned.

Coat quality is also an important indicator of good nutrition. With proper nutrition, the coat should be lustrous and shiny, free of any flakes or dandruff, and with little or no general body odor. Although it can also be attributed to underlying medical conditions such as hypothyroidism, poor coat quality may be an indicator that the animal's diet is lacking essential nutrients such as essential fatty acids, vitamins or minerals. Your kennel's veterinarian can help you determine the precise cause.

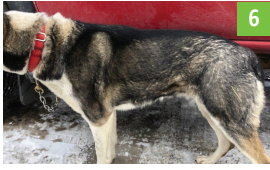
As weather, training and/or working conditions change it is important to anticipate your dogs' increasing nutritional needs and begin feeding them more before they start to lose weight. During the most demanding times, a sprint dog may require two to three times more food than during the offseason and a long-distance dog racing in extremely cold temperatures may require up to 10 times more.⁽²⁰⁾



Body Condition Score Guidelines

INTERNATIONAL SLED DOG VETERINARY MEDICAL ASSOCIATION www.isdvma.org

ISDVMA, a non-profit organization 501(c)(3), has the mission to enhance the well-being, welfare and safety of sled dogs through the use of education, research and collaborative relationship between mushers, veterinary professionals and race organizers.

Too Thin		1	Prominent ribs, backbone and spine of shoulder blade. Abdomen tucked in under transverse processes of lumbar spine. No palpable fat on ribs, sternum (breastbone), or sacrum. Eyes and temporal muscles may be sunken in. Evident loss of muscle mass on back, thigh and shoulder muscles. Severe energy deficit. Too thin to start or continue race.	
		2	Prominent ribs, backbone and spine of shoulder blade. Abdomen somewhat tucked in under transverse processes of lumbar spine. No palpable fat on ribs, minimal on sternum (breastbone), or sacrum. Minimal loss of muscle mass on back, thigh, and shoulder muscles. Less convex curves on muscles. May be slight temporal muscle atrophy. Pronounced energy deficit. Too thin to start or continue race.	
Watch BCS! Borderline		3	Intercostal room/ribs less obvious, backbone and spine of shoulder blades even with muscles, possibly some prominence. Some palpable fat, mostly over dens of sacrum. No or minimal layer of fat on ribs. No or minimal loss of muscle mass. Convex curves on muscles. Watch BCS closely. Ensure good energy intake.	
OK		4	Some muscular prominence over bones on backbone and spine of shoulder blade. Good convex curves on muscles. Slight palpable fat on ribs. Dens of sacrum filled out. Ideal weight.	
		5	Good muscular prominence over bones on backbone and spine of shoulder blade. Good convex curves on muscle. Palpable thin layer of fat on ribs. Sacrum partially filled out. Ideal weight.	
		6	Good muscular prominence over bones on backbone and spine of shoulder blade. Good convex curves on muscles. Fat clearly palpable on ribs, sacrum filled out, hip bones less prominent. Good starting weight in cold conditions especially longer races.	
Overweight		7	Less likely to see on races. Some muscular prominence over bones on backbone and spine of shoulder blade. Curves on muscles more difficult to determine. Fat covering over most of body. Somewhat overweight for racing dog, but OK especially starting distance race in cold conditions. Not ideal for sprint dogs or in warm temperatures.	
		8	Not suitable for racing.	
		9		

ISDVMA 12/2020

Choosing Feeds:

Modern sled dogs include a vast variety of dog breeds in a wide range of sizes doing different activities in almost every kind of climate. There is no single perfect diet that will meet the nutrient and energy requirements of every sled dog under every condition. The ideal diet for an individual dog depends on that individual's genetic makeup, age, physical state, training regimen, environment and the food sources that are available to the musher or kennel operator.

Sled dog diets usually consist of commercial dry food (kibble), meat or fish-based homemade food, or a combination of the two. There are positive and negative factors associated with each. Regardless of the type of food you provide your dogs, their diet must provide adequate calories while also providing all of the 26 known essential nutrients at levels and ratios necessary to support good health.

As a general rule, working adult sled dogs should be provided feed comprised of 32-42% protein, 25 -50% fat and 3-7% total dietary fiber on a dry matter basis ^(1,20). Most commercially manufactured dog food that is formulated for non-working companion dogs and sold in supermarkets or warehouse-type stores do not provide sufficient protein and fat to meet these criteria. Commercial dog food formulated specifically for athletic dogs is more commonly available in animal feed stores or dedicated pet supply stores. In some circumstances your local feed store may have to obtain your kibble through special order.

Commercially Manufactured Dry Kibble Formulated for Athletic Dogs

Positive Factors	Negative Factors
Readily available at animal feed stores and some specialty pet supply outlets.	Less palatable than meat
More conveniently stored and fed than meat or fish-based feed. Does not require refrigeration, freezing or thawing.	Less digestible than meat
Kibble formulated for athletic dogs meets or exceeds AAFCO recommendations for essential nutrients for dogs.	There are no specific AAFCO recommendations or guidelines specifically for active athletic dogs.
Lower risk of introducing bacterial pathogens than meat or fish based homemade foods. ⁽¹⁾	

Animal nutritionists encourage dog mushers and kennel operators to feed kibble within 12 months of the date it was manufactured. ⁽²⁰⁾ Label information regulations vary between nations, with some requiring that dog food labels include an expiry date that reflects the minimum shelf life of the product. When available, the food should be used prior to the expiration or "best by" date stamped or printed on the bag. Where a date of manufacture is provided, the food should be used within 12 months of that date.⁽²⁰⁾

Kibble should be stored in the original airtight bag, in a cool dry location. The United States Food and Drug Administration recommends that dry kibble be stored at temperatures under 80° F (26.6° C).⁽²⁾ Higher temperatures can cause nutrients in the food to break down and fats to become rancid.

When the original bag is opened exposure to air and humidity results in rapid nutrient losses. Once a bag of dry kibble has been opened the contents should be fed within one month⁽²⁰⁾. If the food looks or smells rancid or you notice specks of mold or moisture the remaining food should be discarded.

Meat or Fish Based Homemade Food

Positive Factors	Negative Factors
Highly palatable to dogs	Most homemade diets studied by researchers lack one or more <i>essential</i> nutrients necessary to support good health in dogs. ^(3,4)
Highly digestible	May induce an imbalance of vitamins or electrolytes resulting in potentially serious disease. ^(1,7)
Most readily available source of affordable food in some extremely remote communities or homesteads.	Has a shorter storage life and requires more stringent and carefully controlled storage conditions than commercially manufactured kibble.
	Meat from domestic animals undergoing veterinary care prior to death may be contaminated with drugs that may be detrimental to the dog's health or result in positive drug test results in racing sled dogs. ⁽²⁵⁾

Meat, fish and other animal sourced products require refrigeration for short term storage, and thorough dehydration or freezing at or below 0°F (-18°C) for long-term storage. Referring to over 55 peer reviewed scientific papers, the AVMA discourages the feeding of raw meat or fish to dogs and recommends that animal-sourced dog food be thoroughly cooked or heat pasteurized prior to feeding.^(8,9,10)

According to the USDA, freezing to 0 °F (-18° C) inactivates any pathogens present in food. Once thawed, however, these microbes can again become active, rapidly multiplying to levels that can lead to foodborne illness.⁽¹¹⁾

It's important to note that meat from domestic livestock under veterinary care prior to death may be contaminated with veterinary drugs. Such drugs may be detrimental to your dog's health or may result in positive drug tests in racing sled dogs. Before accepting such meat from local sources it's important to determine whether or not the animal was given drugs prior to death. When purchasing non-human grade meat from a commercial source, determine whether or not that meat was tested for residual drugs. The safest option is to feed meat graded for human consumption.⁽²⁵⁾

Meat and/or fish is not nutritionally balanced and if inadequately formulated, meat-based rations pose potential health risks due to nutritional deficiencies, excesses or imbalances of nutrients. For example meat provides little or no dietary fiber, provides inadequate levels of calcium that can result in poor bone mineralization and/or hyperparathyroidism.⁽⁷⁾ Vitamins that are definitely deficient in meat include B12, vitamin E, thiamine, riboflavin and vitamin A. ⁽¹⁷⁾ Inadequate micronutrients can impair energy production and fat-soluble vitamin deficiency can impair anti-oxidant activities and reduce immune system function.⁽²⁰⁾

To combat these deficiencies it's recommended that homemade meat or fish based diets include between 1.5 to 4.0 grams of ground bone or bone meal per meal.⁽¹⁷⁾ Adding a canine multi-vitamin to the diet is warranted and reasonable.⁽²⁰⁾ Dietary fiber in the form of dried apple pomace, root vegetables such as carrots, miscanthus and/or beet pulp is also helpful to maintain and improve intestinal health. ^(1,17,20)

The difficulty in providing a homemade diet that is complete and balanced is demonstrated by a study published in 2013, which found that only 9 of 200 recipes studied contained essential nutrients in concentrations that met the minimum standards for adult dogs established by the Association of American Feed Control Officials. All 9 of those rare nutritionally complete and balanced recipes were formulated by veterinary or animal nutritionists.⁽⁴⁾

Combination of Kibble and Meat or Fish

Positive Factors	Negative Factors
More palatable than dry kibble alone.	More likely to introduce disease-causing bacterial pathogens than dry kibble alone ^(1,5,6)
Meat/fish portion more digestible than kibble alone.	May provide insufficient or imbalanced essential nutrients necessary to support good health. ^(3,4,7)
More easily adjusted to accommodate fluctuations in energy expenditure in individual dogs.	May induce an imbalance of vitamins or minerals resulting in potentially serious disease. ^(1,7)
Less likely to lack essential nutrients than meat/fish alone. ⁽¹⁾	Meat from domestic animals undergoing veterinary care prior to death may be contaminated with drugs that may be detrimental to the dog's health or result in positive drug test results in racing sled dogs. ⁽²⁵⁾

A research paper published in 2018 reported that 62% of dog mushers or kennel operators surveyed fed their dogs a diet that combined complete and balanced commercially manufactured dog food with homemade ingredients.⁽⁷⁾ While combination diets enjoy the benefits of both kibble or meat/fish based home made diets, they also share the risks of both.

Many mushers add kibble to their otherwise homemade recipe in order to provide the essential nutrients that meat or fish diets generally lack. Most commercial dog foods formulated for athletic working dogs are supplemented with significant excesses of water soluble vitamins, which have large margins of safety.⁽¹⁷⁾ Whether or not your own combination diet provides adequate and balanced levels of essential nutrients depends upon the ratio of kibble to meat in the feed. If meat or fish contributes a substantial portion of your dogs' diets you may consider some or all of the dietary supplements recommended for dogs fed homemade meat or fish based diets.

Mush with P.R.I.D.E. encourages mushers or sled dog kennel operators who feed meat or fish or combination diets consult with a board certified veterinary nutritionist or animal nutritionist to ensure their dogs are receiving a nutritionally complete and balanced diets that meet their caloric and nutrient needs.

Feeding During the Off Season

Sled dogs require considerably more energy, and therefore more food, during the working season than during the off-season. Nutrient and energy proportions must be adjusted appropriately to meet the requirements of each dog, whether they be seasonal or daily requirements.⁽⁷⁾

To maintain a dog's health while optimizing athletic performance large changes in body weight should be avoided. Both weight gain from over feeding during the off season and weight loss from under feeding during the working season can be detrimental.⁽¹⁸⁾

During periods of less intensive exercise, dogs maintenance diets should provide fewer calories. Mushers or kennel operators who feed combination diets frequently reduce or eliminate the meat/fish portion of the diet as the first step reducing calories, and if needed they next reduce the amount of kibble the dogs receive to maintain their body condition within the ideal range. Mushers who exclusively feed either kibble or a meat/fish based home made diet need to reduce the amount of food they provide each day.

Mushers or kennel operators who feed twice each day during the working season may elect to feed only once daily during the off season. This provides the dogs a larger portion of food during less frequent meals that is more likely to reduce hunger and promote satiation. Those who feed only once each day during the working season may elect to change their feed to products that are more bulky and provide fewer calories per serving to achieve the same result.

Note that generally accepted standards of care, including the Mush with P.R.I.D.E. 10 Basic Kennel Standards demand that dogs be fed and watered at least once every day unless directed otherwise by a licensed veterinarian.

Life Stages and Dogs with Special Needs:

Young puppies, geriatric dogs and bitches that are pregnant or nursing puppies have different nutritional requirements than most healthy adult dogs.

The **geriatric dog** may have a decreased ability to digest and absorb nutrients and it may also take an older dog longer to move a meal through its gastrointestinal tract. Most older dogs will continue to do well on the same ration as younger dogs in the offseason. Because loss of muscle mass is a major problem in geriatric it's important that their food continue to provide ample protein and energy.^(20,21)

Senior dogs may have dental problems that make chewing difficult or uncomfortable and loss of appetite is particularly common in very old dogs. These dogs should first be treated for whatever dental or health problem they have. Warming their food, switching them to a combination of kibble and meat or fish diet or to canned food may help encourage these dogs to eat more readily. ⁽²¹⁾

More information the care of geriatric sled dogs can be found in the Geriatric Dogs and End of Life Issues chapter of these guidelines.

Pregnant females can be fed at their normal maintenance levels for the first four weeks. From the fifth to the ninth week of pregnancy her ration should be increased by 10 percent each week so that when she whelps, she is getting about 1 1/2 times more food than during the maintenance state. While nursing puppies (lactating) her food intake should be increased by 30 percent of maintenance for each puppy she is nursing. Thus, if she only has one puppy, she should be fed 130 percent of maintenance. These suggestions are just guidelines - remember to monitor her body condition and adjust her diet as needed. A lactating female should be kept at an ISDVMA body condition score within the ideal range of 4/9 to 6/9, neither skinny nor obese.

Puppies can begin to eat solid food at three weeks of age and can be completely weaned by 7 weeks. Puppies should be given food specifically formulated for puppies or food formulated for athletic performance, labeled for all life stages and with small sized kibbles that can easily be chewed in small mouths. Puppies given specifically formulated puppy food can transition to performance formulated adult good at about four to five months of age.

Mush with P.R.I.D.E. recommends that puppies under 6 months of age be fed commercial dog food to ensure an appropriate calcium to phosphate ratio.⁽¹⁷⁾
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Puppies should be fed enough to support growth and development, but not so much as to become obese. Obesity during puppyhood is strongly associated with painful developmental disorders of joints later in life, including hip and elbow dysplasia and osteoarthritis.⁽¹⁹⁾ Weaned puppies should be fed only enough to maintain a body condition score within the ideal range.

Dietary Supplements for Sled Dogs:

In addition to the supplements recommended for dogs fed home made meat or fish diets and dogs fed combination diets, there are a few other supplements that scientific evidences suggests may be beneficial for sled dogs.

There is strong scientific evidence to support providing sprint racing and stage racing dogs supplemental carbohydrate within 30 minutes of intense exercise.^(1, 17, 24) Carbohydrate ingestion immediately after intense exercise rapidly restores muscle glycogen levels and enhances recovery, which in turn enhances performance. Typically a partially hydrolyzed starch or glucose polymer such as maltodextrin is given in water, but rice or other carbohydrate sources will also work. The objective is to provide 1.5 grams of glucose per 1 kg of body weight.^(1, 24)

Carbohydrate replacement is less useful for dogs competing in long distance endurance races. After about 150 km (93 miles) long distance sled dogs' metabolism changes such that they rely less muscle glycogen for energy production. The specific physiological mechanisms of this adaptation is uncertain and is currently being studied.⁽²⁶⁾

ISDVMA veterinarians do recommend providing long distance sled dogs with 400 IU vitamin E daily in addition to that provided in their normal diet. Vitamin E is an antioxidant and may help decrease the incidence of myopathies.⁽¹⁾

Other supplements may be helpful for some dogs. Long chain omega three fatty acids from marine sources have anti-inflammatory properties and are considered universally safe for sled dogs.⁽²³⁾ Glucosamine may help with joint health and probiotics can help maintain intestinal health. A complete discussion of dietary supplements is far beyond the scope of this guideline. Mushers and sled dog kennel operators are encouraged to consult with board certified veterinary nutritionists or animal nutritionists when considering additional supplements for their dogs.

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Chapter 3: Training and Conditioning

Planning Your Dogs' Training and Conditioning Regimen

Many training principles are specific to the type of activity in which your dogs will be involved. Other variables include climate, terrain, age of the dog, breed of the dog, etc. All forms of mushing, with all the different variables, are wonderful ways of forming a close bond with your dogs.

In general, training can be separated into two categories: education and physical conditioning. When you are planning your training schedule, consider your goals and your dogs' abilities. Simply counting miles, for instance, can be deceptive. The type of conditions that the dogs encounter are important too, i.e. steep hills, trail breaking in heavy snow, extreme temperatures or wind. New mushers should consult books and experienced mushers for help, but also use common sense. Think about what your dogs have been trained to do and do not allow them to get carried away in their enthusiasm to run. Never ask your dogs to do more than you are reasonably certain they can accomplish.

Educating Your Sled Dogs

Anything you do repeatedly with a dog is educational. Be sure you want your dogs to learn what you are teaching. Think about the signals you are giving your dogs, and don't send mixed messages. For example, if you want your dogs to pass well, don't stop and chat with the neighbor every time you pass. Doing so trains your dogs to stop at every pass.

It is important that you never lose your temper with your dogs. Try to train them in a calm, consistent manner. If one method is not working, try another. For example, if a dog is not pulling well in a large team, reduce the size of the team and put that dog in wheel position for a week. If a dog continually plays with the dog next to it while running, run that dog alone for a few weeks. Remember that repetition is a great teacher. If your leader is not taking gees/haws well, go out with a very small team and work on commands. Always praise the dogs enthusiastically when they are doing what you want.

Recent research has proven that dogs learn much more readily with positive, reward-based methods than with methods that rely primarily on punishment. Positive methods also result in a closer bond between musher and team, and are much less likely to cause unwanted fearfulness or human-directed aggression in sled dogs.

A reward is anything that increases the likelihood that a behavior will be repeated. The value of a reward is determined by the dog, rather than the handler. Just because you think something should be rewarding doesn't necessarily mean your dog will agree. A food treat is only a reward if the dog is willing to repeat the behavior in order to earn another.

Most sled dogs place high value on tasty food treats and on running, but there are exceptions. If your dog doesn't respond to one type of reward, switch to something the dog is more willing to work for such as chance to play with a favorite toy. If your dog does not place a high value on running you may want to reconsider its suitability as a sled dog. You may both be happier if the dog becomes someone's pet.

In addition to the cues used while mushing, training traditional 'obedience' cues is a great way to help socialize your dogs and provide psychological stimulation. Formal training classes expose your dog to new situations and introduce a positive image of sled dogs and mushers to the general public. The learning process will help your mushing training continue smoothly during the working season and the day-by-day, step-by-step progress will keep your dogs active during their offseason. Different dogs will enjoy different activities, but each dog needs individual attention.

Physical conditioning.

Do not expect your dogs to do more than they are ready for. Watch each individual. Dogs work as a team but they have individual needs and abilities. Don't be afraid to be conservative and don't worry about how far other mushers are taking their dogs. Never push a dog to go any farther or faster than it is capable of going.

Have fun and build relationships with your dogs. Small teams are better for training. Depending on your preference and the size of your kennel, training teams might include only three dogs or as many as six to ten. Dogs can only run at their own pace and must never be pulled, whether by mechanical or other means.

Summer/Warm Season Training

Dogs need some form of physical exercise all year long. As long as your dogs are in good health, light training in the summer is fun and beneficial. Equipment options include a bicycle, cart, dog walker, ATV, or a leash. For some dogs and mushers, running a few dogs loose may be an option. It is important to always use proper harness sizes and gang line lengths. Always check each dog for foot problems or injuries after each run.

If you mush dogs in the summer, ensure they are well-hydrated before and after each run. Wetting them down beforehand with a hose or with creek or lake water can be effective. It is best to exercise sled dogs during the coolest time of the day, but even then you must watch carefully for signs of overheating. Signs of heat stress include heavy panting with an open trachea, gait change, wobbly legs and vomiting.

If you are concerned that a dog might have heat stress, remove the dog from the team and carry it in your sled or vehicle. If you need to cool a dog down during summer, wet it with cool water. During winter, pack its body in snow. During and after cooling, continue to monitor its temperature with a rectal thermometer. Dogs routinely have temperatures of 103 to 106 degrees F while running (normal is 101 to 102 degrees F). Recheck the temperature every fifteen to thirty minutes as the dog cools. If the dog's temperature is still not normal after you have attempted to cool the dog, call your veterinarian. This could indicate a serious problem.

Fall Training

Most mushers like to start on some kind of wheeled rig before the snow comes. Make sure the rig has good brakes to slow the dogs down and that there is some type of parking brake. ATV's are widely used because they give the musher complete control over the dogs' speed, and they steer more easily than a cart. They also have lights, which provide safety in darkness, especially along roads, and they make noise that warns wildlife of the team's approach. A speedometer is convenient on any type of training vehicle.

Start your fall training season with small, easily controlled teams and short runs, perhaps only 1/4 to 3 miles in length. Early season runs may require frequent rest stops. Decrease the number of rest stops and gradually increase mileage in subsequent runs as the dogs get stronger and fitter. If you have run the same distance over repeated training sessions and the dogs are finishing strong and happy, it is time to move up to the next level. In early fall training, don't push the speed too much. The dogs' muscles are not well-toned yet and it is easy to injure them. The goal of early training is to build up the dog's muscle structure to prevent injury later in the season.

Any training schedule must include rest days to allow time to build muscle. You might run a dog every other day, or run two days followed by a day off. Water (or broth) your dogs when you return from a run, and check for worn pads, especially if they are running on gravel or pavement.

Winter Training

Once you are working on snow, continue to build slowly to the distance and speed of your choice. Always check each dog's feet and provide plenty of water or broth. It is not good enough to let them bite snow for their fluids.

Not all injuries are easy to detect. A dog does not always show a substantial limp, so watch carefully for subtle signs. If a dog seems weaker or slower one day than the previous week, it might be due to injury or illness. A back can be injured without causing a limp, or a dog can be so excited to run that it will not show any signs of injury while running. You may be able to detect problems by observing the dog at home.

Detecting injuries or illnesses early can keep your team healthy and working all season, and can save money on veterinarian fees. Check each dog over carefully at least once a week. Knowing each dog's "healthy" condition will make it easy to detect changes. Consult with your veterinarian or another expert if you suspect problems.

Booties should be used to prevent injuries on rough trails, including when snow crystals are abrasive in severely cold weather. If your dogs' feet develop any signs of worn pads or soreness, use booties on those feet until the problem is completely healed. You might consider not running the dog at all for a short while, depending on the severity of the problem. Be sure the booties fit well. A bootie that is too large flops around, picks up snowballs, and makes it difficult for the dog to run normally. A bootie that is too small can constrict the foot and be uncomfortable.

Be sure to check booties regularly. A bootie with a hole in it can cause more problems than no bootie at all. Also, pick off all snow and ice balls around the tops of the booties frequently, as these frozen clumps can cause severe chafing. If your dog has dewclaws, watch for signs of wear around them. Remember that booties are not a cure-all for every foot problem. Consult your veterinarian or an experienced musher for more advice.

In extremely cold or windy conditions, dogs can get frostbitten on some body parts. On a male, watch the sheath of the penis and the scrotum. On a female, watch the nipples, flanks, and vulva. Be extra careful with any female that whelped over the summer. Her nipples are usually somewhat enlarged throughout the winter, making them more susceptible to problems. Special dog jackets, belly pads, and fur sheath protectors are available and can help prevent cold-related injuries. Contact a mushing equipment company or other local mushers for ideas. Remember that males and females have very different problems, and the same equipment does not always suit all dogs.

Dog Fights

Minor spats and squabbles are relatively common among dogs, but serious dogfights are dangerous for both dogs and mushers. Dogs should be taught at a young age that fighting is unacceptable. It is essential to stop a dogfight before a dog is injured or killed. Fighting dogs must be separated and restrained, but be extremely cautious when handling highly aroused or aggressive dogs. In the heat of the battle, the dog may redirect its attack to you, inflicting serious wounds. Mushers have been severely bitten while breaking up fights and care should be taken when intervening.

Long-distance racing:

Before you consider running a long-distance race for the first time, evaluate your skills carefully. You must be good at winter camping with dogs, starting campfires at -50 degrees F with a strong wind blowing, applying first aid to dogs and yourself or another musher should you get caught between checkpoints, etc. You must have advanced skills in handling however many dogs you choose to start the race with. (In your first race, it is better to start with fewer dogs. A smaller team is easier to control and means fewer dogs to feed and care for.) You must also be an expert in feeding and foot care during high mileage situations. The time to learn these skills is during training, not out on the race trail.

In general, to run a thousand-mile sled dog race, you should have at least 1,500 miles of training on each dog. These miles should be accrued in no less than a six-month period. To run in a 200 to 500 mile race, you should have at least 750 miles of training on each dog. These miles should be put on in no less than a four month period. Much of the training should duplicate your proposed racing situation, with weight in the sled, some four to six hour runs, camping trips etc. It is inadvisable to run any dogs under 18 months old in a thousand mile race. The ability of each dog in the team should be fairly equal so that no one dog is being pushed too hard. Teach your dogs to eat, drink and sleep in harness before you race them. Feed them the same diet that they will race with, at least during the latter stages of training.

Sprint racing:

To create a quality team, sprint racers use the same training and conditioning techniques as those used for other types of mushing. Distance and speed should be built up slowly on a schedule determined by your dogs' progressive conditioning and willingness. It is better to err on the conservative side than to risk hurting a dog physically or mentally by demanding more than it is ready for.

While speed may be the primary objective in sprint racing, not every training run should be at "race pace." To prevent injuries in the fall, dogs should be physically conditioned with slower working runs before you allow them to run fast. Throughout the race season, vary your training speeds and your dogs will be more willing to go fast when asked.

Proper manners and well-behaved dogs are a must for a top-performing sprint team. Even the quickest stop for a tangle or problem dog is a major disadvantage in a race. Take the time required to teach your dogs the necessary behavioral skills. Some sprint mushers simply concentrate on maintaining enthusiasm in their team, but a well-behaved and enthusiastic team is possible and should be the ultimate goal.

Recreational mushing:

Training a recreational team can be extremely rewarding and satisfying. It can also be extremely expensive, both in time and money. Keep your priorities straight, share the work among family members, and have fun!

Before you begin, decide whether you want a dog team for your family to enjoy and consider everyone's goals for the team. If you have small children, you may want to select dogs that are small and gentle so the kids are comfortable with them. Some older, well-trained retired dogs from another team may be perfect for you, and they can help train younger dogs.

Make your dog time quality time for your family. Chart the accomplishments of each dog. In the summer, you might have a weekly dog show to demonstrate each dog's new tricks. Having a small number of dogs allows you to give each individual lots of attention. The dogs will learn that they have fun with you, and they will be eager to please. Seeing your dogs thrive on this special attention, watching your family share the responsibilities, experiencing the magic of bonding with animals and the satisfaction of a job well done are ample rewards.

In winter, plan methods of training and goals for your team with family members. Listen, talk, encourage, and reward. Have fun and don't be afraid to ask other mushers for help. Practice "whoa" and "come haw" repeatedly, until the dogs respond easily; this will give the less experienced members of your family a better sense of security. You may want to work with the dogs on a leash, rewarding them for correct behavior.

Take a family member with you on the sled. A less experienced passenger can help out and learn what you ask of the dogs. Make sure your passenger is comfortable. After the dogs have settled down, let your passenger drive the team on a safe stretch of trail. Always train with small, controllable teams. Gradually increase your distance over the winter. Explore new trails. This gives your dogs experience in different conditions: breaking trail, running into open water and on ice, and turning around. Take a picnic along. Stop along the trail and build a campfire.

Your family might enjoy working toward taking the team on an overnight trip, either camping out or staying in a remote cabin. This could be a spring celebration after a winter's training. Remember that you don't have to go a thousand miles. Plan according to the abilities and desires of your family and the endurance built up by your dogs.

Skijoring:

Skijoring is one of the simplest forms of dog driving, but common sense, patience, and general training principles still apply. Stay within your dog's capabilities for weight load, speed, and distance. Be aware that some dogs (including experienced sled dogs) can be quite frightened by the strangeness of the skis, and a dog may need extra time and lots of positive reinforcement before it will accept being followed by them. Avoid running into your dog with your skis or ski poles at all costs.

Proper equipment is important both for your own safety and for the comfort of your dog. Use a wide skijoring belt (at least 3 inches wide across the back) and a releasable skijoring line at least 7 ft long. Longer lines (up to about 15 or 20 ft) work well for recreational skijoring and hilly terrain. Shorter lines give better control and are favored for racing. Be sure the line is long enough to prevent the tips of your skis from hitting the dog. A line with a shock (bungee) cord incorporated into it will absorb the stress of sudden starts and stops, a benefit to both you and your dog. Use a properly fitted, standard X-back or H-back mushing harness. Weight pulling harnesses are not recommended.

A wide variety of dog breeds have been used successfully for skijoring. If you skijor with a non-- Northern breed, watch carefully for foot problems. Some breeds of dogs, especially those with silky coats, are particularly prone to ice balls. Booties may be necessary in some cases. Also, a shorthaired dog may need a dog coat and/or a sleeping pad in very cold weather or when camping out.

Weight pulling:

A weight pull dog should be strong, sound, in good health and have a desire to please. Before a dog is entered in a weight pull competition, it should have at least basic training and be in good physical shape. A dog that is in poor condition might pull beyond its physical abilities simply because it wants to please or because of the excitement of the activity. Avoid heavy pulling until your dog is in top shape.

Conditioning can be accomplished in various ways: running in a team, running alongside a bicycle, skijoring, or pulling a tire. Perhaps the best method is for your dog to pull a tire with increasingly heavy loads. Be very careful to increase the loads gradually. This is important for mental as well as physical conditioning. A dog must know that when it is commanded to pull, the load will move. Many factors influence the ease with which a dog can pull: weight of the load, snow depth and conditions, and temperature. As you train, adjust the load downward if your dog has difficulty starting the load. It is important to condition the cardiovascular system as well as the building muscle. This is done by alternating days of pulling heavy and light loads.

You can't begin too early to train your dog to pull. Even a young puppy can have fun wearing a harness and pulling an empty box around. Use this time to teach some basic commands, such as those to pull, whoa, and perhaps gee and haw, as well as to sit, lie down, and stay. Be careful not to let the box bump into the dog or let the dragging noise frighten it. Gradually increase the weight the dog pulls and progress from a piece of firewood to a 12 inch tire, for instance. Give the command to pull, let the dog pull a short distance and lavish it with praise. Make it fun. Your dog will pull for sheer enjoyment and because it pleases you. Be sure to let your dog know that you appreciate its effort.

Dogs should not be entered into competition until they are at least a year old; large breeds should wait until a year and a half. This gives them time to reach skeletal maturity. When the time comes to enter a weight pull competition, your dog will know what is expected and will be ready to do it well.

Winter transportation:

Some mushers use their teams for traveling cross-country, doing fieldwork for their jobs, freighting supplies, running trap lines, and general winter transportation. Training these teams may focus on building endurance and strength and on mushing in severe weather conditions. It is critical that the dogs learn to whoa, wait in harness, and find old trails in drifts. They need to learn to follow along behind their musher when he or she is breaking trail on snowshoes, and they should learn to ignore animals caught in traps. These abilities come by working with small teams, day after day.

Mushers who depend on their dogs for winter transportation often have a very close relationship with their teams. The trust and appreciation that develops after many hours, many days, and many seasons together create a team that seems able to go anywhere and do anything. This is not magic. It is simply the result of clear communication, mutual respect and consistent, repetitive reinforcement.

Revision 4.1, adopted 15 June, 2020.

Basic Sled Dog Health Care

The Mush with P.R.I.D.E. Guidelines Committee and Board of Directors would like to express our deep appreciation to the International Sled Dog Veterinary Medical Association (ISDVMA) for their assistance in updating this chapter on Basic Sled Dog Health Care.

The Five Responsibilities of Mushers and Sled Dog Kennel Operators

1. <i>Good nutrition:</i> It is the responsibility of the musher or kennel operator to provide ready access to fresh water and an adequate diet to maintain full health and vigor.
2. <i>Good environment:</i> It is the responsibility of the musher or kennel operator to provide every dog within the kennel with suitable housing, good air quality and comfortable resting areas.
3. <i>Good health:</i> It is the responsibility of the musher or kennel operator to prevent or rapidly provide appropriate treatment of disease and injury, and to foster good muscle tone, posture and cardiorespiratory function
4. <i>Appropriate behavior:</i> It is the responsibility of the musher or kennel operator to provide sufficient space, proper facilities, congenial company and appropriately varied conditions.
5. <i>Positive mental experiences:</i> It is the responsibility of the musher or kennel operator to provide safe, congenial and species-appropriate opportunities to have pleasurable experiences .

Summary of Recommendations:

- Establish a veterinarian-patient-client-relationship to ensure access to the professional services of a licensed veterinarian.
- Maintain a health record for every dog in the kennel.
- Daily health monitoring
- Make and adhere to an infectious disease prevention and management plan that incorporates at least the following:
 - o Vaccination protocol for every dog in the kennel.
 - o Parasite prevention and control protocol for every dog in the kennel
 - o Safety precautions to prevent exposure to infectious pathogens
 - o Infectious disease response plan that includes isolation of infected dogs, segregation of dogs exposed to the infected dog(s) and isolation of dogs at special risk.
- Comprehensive health examination for each dog performed at least annually

Access to Professional Veterinary Advice:

Your team or kennel's veterinarian is your most important source of health care advice. Mush with P.R.I.D.E. strongly recommends that the musher or sled dog kennel operator establish and maintain an on-going veterinarian-client-patient-relationship with a doctor of veterinary medicine licensed to practice in your state, province or other political jurisdiction. Mushers located in extremely remote or inaccessible regions with no access to regular veterinary care should nonetheless have a means of acquiring medical advice from a licensed veterinarian electronically or telephonically.

As the dog's owner, you may be able to perform some routine procedures yourself but even the most knowledgeable mushers need to access professional veterinary care or advice. The science of veterinary medicine is rapidly growing and evolving and frequent contact with your team or kennel's veterinarian will help you stay informed about the latest changes in veterinary care. Sled dog kennels are frequently recruited as subjects for scientific and veterinary medical research with the results of those studies often having an immediate, positive impact on sled dog care.

Veterinary care, like human health care, has become increasingly specialized. Mushers or sled dog kennel operators in regions where dog mushing is relatively common should seek a veterinarian who is also a musher, who's practice includes other sled dog kennels or has experience as a sled dog race or sled dog event veterinarian as they will be most familiar with the health care needs specific to sled dogs. If none of those are available, seek a veterinarian with an interest in athletic, working or sporting dogs such as agility, law enforcement or protection, search and rescue, hunting and field trials, or sight hound coursing and racing.

The name, phone number or contact information and address of your primary veterinarian's practice should be posted in numerous locations in your kennel along with the contact information and address of nearby emergency veterinary clinics.

Consider having an annual veterinary house call to your kennel. Familiarity with your kennel and your dog's living environment allows the vet to customize care the treatment advice to better suit your overall needs. An annual kennel-call is one way of becoming a P.R.I.D.E. certified kennel, providing every dog an annual wellness examination, administering necessary vaccinations and reviewing your kennel's infectious disease control and response plan.

Veterinary Health Record Keeping:

Record keeping is an essential part of any kennel operation. Health records are required by laws or regulations in many jurisdictions and are a requirement for Mush with P.R.I.D.E. kennel inspection certification. A record of medications, vaccinations, illnesses, general health and behavioral incidents can allow you and your kennel's veterinarian to identify health trends and provide important clues for diagnosing and treating illnesses or injuries.

Records may be kept either on computer or on paper. Each dog's file should contain the following minimum information:

- Name. Include previous names if it was changed when you acquired the dog.
- Date of birth if known. Estimated age at acquisition if the date of birth is unknown, as may be the case in a dog acquired from a shelter or sled dog rescue organization.
- Date that you acquired the dog.
- Name of the person or organization from whom you acquired the dog.
- Reproductive status of the dog, i.e. intact, spayed or neutered.
- Permanent identifying information such as microchip number, tattoos and/or photograph of the dog.
- Dates of each of the following:
 - o Vaccinations administered, including name of the vaccine, manufacturer name, lot# and expiration date.
 - o Dewormers administered, including name of the product.
 - o Estrus (heat) cycles of intact females.
 - o Veterinary examinations, procedures or treatments
 - o Administration of any medications or supplements administered, including name of product, dosage, frequency of dosage, and length of treatment. ISDVA veterinarians stress that this information is extremely important for dogs competing in events that require drug testing as part of their anti-doping protocols.
 - o Any observed changes in the dog's physical condition or behavior that may indicate a possible health issue.

Health Record of a 9-week old puppy acquired by a Mush with P.R.I.D.E. member



From Points Unknown - Dam Sirius, Sire Gunflint
DOB 11/20/2019
Microchip #:

Intact Female

Rabies vaccination status: Puppy - Rabies due after 3/20/19.

Next core ~~vax~~ due date: 1/28/2020

Date	Procedure	Comments
11/20/19	Live, natural birth	
1/7/20	Core vaccination (5-way)	
1/15/2020	Examined by Karen DuMez, DMV for health certificate.	Weight 13#
1/16/2020	En route to Alaska via air cargo	
1/18/2020	Arrived at Stardancer kennel	

Although not required, a daily kennel log can make it easier to identify dogs with issues and record observations associated with daily health monitoring. A written record will always be more accurate than your own memory and accurate knowledge of the dog's health history can be invaluable to a veterinarian when diagnosing and treating an illness or injury. It can also be an important means of documenting the care you provide your dogs should that care be questioned by authorities. Documentation of daily activities in your kennel can be particularly valuable to high-profile mushers or kennel operators who participate in highly publicized races, operate commercial touring kennels or are otherwise subject to public scrutiny.

Sample Daily Kennel Log

Date	Handler	Activity and Notes
1/20/2020	SH	0500 - Puppies taken out to eliminate 0600 - All dogs fed, watered and scooped - Rover picking at feed - Silver given extra water - Loose stool in Dozer's circle - Normal volume feces scooped from kennel.
	TS	0800 - 1000: 4 dogs taken to Dr. Smith for rabies vaccination - Lady, Queen, Duke and Knight.
	SH	0900 - 1400: Training run for Silver, Gold, Marcy, Lacy, Boulder, Sneaky, Squeaky, Fox and Bo.
	TS	1000: Rover, Dozer, Lady, Queen, Duke and Knight released to play yard for exercise and enrichment.
	SH & TS	1500 - 1600: Scooped kennel. 1 full bucket feces removed.
	TS	1800 - 1930: All dogs fed, watered and scooped. - Rover eating with good appetite. - Normal stool in Dozer's circle. - Water baited with hamburger, all dogs drank readily - 1/2 bucket feces scooped from kennel. - Puppies brought inside for the night.
1/21/2020	SH	21:15: Puppies taken out to eliminate and returned inside.
	TS SH	0530: Puppies taken out to eliminate, fed and watered. 0600 - 0730: All dogs fed, watered and scooped. - All dogs display good appetite and drank well. - Water baited with fish broth - 1 full bucket feces removed from kennel.

Monitoring Your Dogs' Health

Daily health assessment:

In order to recognize an abnormal condition for an individual dog, one must first know what is normal for each individual. Daily health observations of each dog allow you to quickly learn your dog's normal states and promptly identify changes that may be indicators of disease, injury or compromised welfare.

Daily observations are easily integrated into the daily care routine of feeding, watering and scooping feces. While the process may seem time consuming at first, you will quickly learn how to conduct the daily health assessment very quickly. For example, after just a few days of practice you'll be able to simply stroke (pet) the length of the dog's body and assess his or her nose, eyes, ears, collar fit, coat, and body condition in less time than you spent reading this sentence.

Any change from the dog's normal state should prompt you to determine the cause of the change and take appropriate corrective action. Daily monitoring should include observations of the dog's behavior, appetite and water consumption, body condition and feces.

Behavioral changes are often the first indication that something is amiss. For example, a dog who normally seeks petting and physical contact shies away from you, a normally voracious feeder shows no interest in a meal, or a dog who normally greets you with excitement remains inside his or her dog house when you approach is communicating that there may be a problem. As a general rule any sudden, unexplained change in behavior should prompt you to consult with your kennel veterinarian.

Behavioral changes associated with feeding and watering should particularly be noted. There are many reasons why a dog may go off his or her feed. Here are some of the more common:

- Food has gone rancid. Some dogs detect and refuse food that's rancid, which usually happens when the fats inside have degraded due to poor storage or age. Higher-fat diets are more prone to rancidity than lower-fat diets.
- Stress due to change of routine, change in housing arrangement (new companion in pen or new neighbor on tethers), aggressive dogs nearby or any other reason.
- Recent vaccination, deworming or medication.
- Soft tissue injuries resulting in pain or inflammation.
- Dental pain or discomfort.
- Infectious diseases
- Intestinal parasites
- Numerous others.

An adult dog in good body condition who skips a meal or two but is otherwise behaving and drinking normally, has no vomiting or diarrhea and displays no other signs of illness or injury may be of only minor concern. If a dog refuses feed for 48 hours or longer the musher or kennel operator should consult with a veterinarian and provide appropriate treatment based on the veterinarian's advice.

The musher or sled dog kennel operator should perform a brief hands-on examination of each dog daily. A healthy adult dog's eyes should be clear, without excessive tearing, redness, or a gray or blue haziness on the cornea. The pupils should be symmetrical. His or her ears should be clean inside without a waxy or pus discharge and without a foul odor.

The dog's collar should fit properly with no rubs or sores underneath. There should be no nasal discharge, raw areas, or dry, crusty buildup around the nostrils. Your dog should have a healthy, shiny coat and skin that is a light pink with no raw areas or excessive flaking and should be groomed when necessary.

Palpation means feeling with the fingers or hands during a physical examination. Palpate over the dog's whole body, checking for wounds, swelling or tenderness, lumps, bumps and sores. Use your hands to check the dog for symmetry. Check the feet for signs of injury or excessive licking between the pads (mahogany, discolored hair). Examine the nails and dewclaws and trim when necessary.

Body condition assessment is a method for evaluating body fat using palpation of the ribs, waist, abdominal tuck and spine to assess body fat. Mush with P.R.I.D.E. recommends using the Nestlé Purina Body Condition System 9-point scale for recording your observations. A healthy working dog in good body condition will fall within the ideal weight range (4 or 5) of the 9-point scale, which would be recorded in the dog's health record as 4/9 or 5/9. His or her ribs will be easily palpable with some fat covering, the curvature of his or her waist easily felt or perhaps seen and the dog's abdomen will be tucked up or easily discerned. Adjust the dog's food ration as needed to maintain his or her weight within the ideal range.

Any sled dog with a BCS less than 3/9 or higher than 7/9 requires veterinary care and should not be worked in harness until his or her weight has returned to the ideal range.



Nestlé PURINA

BODY CONDITION SYSTEM

TOO THIN

1

Ribs, lumbar vertebrae, pelvic bones and all bony prominences evident from a distance. No discernible body fat. Obvious loss of muscle mass.

2

Ribs, lumbar vertebrae and pelvic bones easily visible. No palpable fat. Some evidence of other bony prominence. Minimal loss of muscle mass.

3

Ribs easily palpated and may be visible with no palpable fat. Tops of lumbar vertebrae visible. Pelvic bones becoming prominent. Obvious waist and abdominal tuck.

IDEAL

4

Ribs easily palpable, with minimal fat covering. Waist easily noted, viewed from above. Abdominal tuck evident.

5

Ribs palpable without excess fat covering. Waist observed behind ribs when viewed from above. Abdomen tucked up when viewed from side.

TOO HEAVY

6

Ribs palpable with slight excess fat covering. Waist is discernible viewed from above but is not prominent. Abdominal tuck apparent.

7

Ribs palpable with difficulty; heavy fat cover. Noticeable fat deposits over lumbar area and base of tail. Waist absent or barely visible. Abdominal tuck may be present.

8

Ribs not palpable under very heavy fat cover, or palpable only with significant pressure. Heavy fat deposits over lumbar area and base of tail. Waist absent. No abdominal tuck. Obvious abdominal distention may be present.

9

Massive fat deposits over thorax, spine and base of tail. Waist and abdominal tuck absent. Fat deposits on neck and limbs. Obvious abdominal distention.



1



3



5



7



9

The BODY CONDITION SYSTEM was developed at the Nestlé Purina Pet Care Center and has been validated as documented in the following publications:

Mowbray D, Barajas JM, Moyers T, et al. Comparison of body fat estimates by dual-energy x-ray absorptiometry and deuterium oxide dilution in client-owned dogs. *Compendium* 2001; 23 (9A): 70

LoFrenco DP. Development and Validation of a Body Condition Score System for Dogs. *Canine Practice* July/August 1997; 22:10-15

Kaaly et al. Effects of Diet Restriction on Life Span and Age-Related Changes in Dogs. *JAVMA* 2002; 220:1315-1320

Call 1-800-222-VETS (8387), weekdays, 8:00 a.m. to 4:30 p.m. CT



Nestlé PURINA

Examination of feces:

You should examine each dog's droppings every time you scoop. Observe the color, coating, contents and consistency of the feces.

Normal dog feces is chocolate brown colored. Changes in color can indicate a range of health concerns:

- Green is usually an indication that the dog has been eating a lot of grass or other vegetation but may also indicate bile in the feces, a sign of gall bladder issues.
- Orange or yellow colored feces indicates biliary or liver disease.
- Red streaks or blood seen in the stool comes from bleeding in the colon, rectum or anus. This may be due to parasites, tumors, hemorrhoids or other lesions.
- Black and tarry stool is an indication of potentially fatal bleeding in the upper gastrointestinal system.
- Gray, greasy stool is an indication that the dog is receiving too much fat in his or her diet or disease of his or her pancreas.
- White stool is a result of too much calcium in the dog's diet and may be seen if the dog has been consuming bones or eggshells.
- White specks in stool are an indicator of tapeworms.

Coating:

A trace of mucus is normal in dog feces, but feces that is coated with mucus is not. Causes of mucus coating may indicate any of the following:

- Intestinal parasites
- Dietary indiscretion
- Sudden change in diet or adverse reaction to ingredients in the dog's diet.
- Intestinal infection
- Inflammatory bowel disease
- Hemorrhagic gastroenteritis, particularly if the mucus coating contains blood, giving it an appearance similar to raspberry jam.

Contents:

Normal dog feces should not contain any foreign material. Small, white flecks that resemble grains of rice or tiny seeds is a sign of tapeworms and should prompt you to administer an appropriate dewormer. Significant amounts of fur is a sign of overgrooming indicating your dog needs more mental stimulation and/or exercise. Other foreign materials are a result of dietary indiscretion or compulsive behavior.

Dogs who ingest nonfood items may suffer gastric or intestinal blockages that are potentially fatal. Pica (eating nonfood items) must be addressed as it threatens your dog's life. Care must be taken to ensure the dog is confined in a manner that prevents him or her from finding rocks or nonfood items to eat and steps should be taken to correct the behavioral or psychological disorder that prompts the behavior. Your kennel veterinarian may be able to refer your dog to a veterinary behaviorist,

university certified canine behaviorist or professional dog trainer with documented successful experience treating dogs with behavioral disorders.

Consistency:

Normal dog feces appears similar to a log or cigar and when fresh has a consistency similar to that of cookie dough or Play-Doh. Changes in consistency indicate changes inside your dog. Hard, dry feces that easily breaks up into pebble-like pieces is usually a sign of dehydration and an indicator that you need to provide more water or provide incentive for your dog to drink the water that is provided. It may also be a sign the dog received inadequate fiber in his or her diet, is not getting enough exercise or has blocked or infected anal glands.

Diarrhea can be caused by many things. Some of the relatively benign causes of a sudden onset of diarrhea include response to exercise, dietary indiscretion (ate something he or she shouldn't), stress due to changes in the dog's circumstances or a sudden change in food.

Some of the more serious causes of diarrhea include, but are not limited to, the following:

- Parasites
- Infectious diseases such as parvovirus, distemper or coronavirus
- Toxins or poisons
- Pancreatitis
- Diseases of the liver or kidneys

Most cases of diarrhea that occur in otherwise healthy adult dogs within their own kennel and who are behaving, eating and drinking normally will resolve without veterinary intervention within 1 to 2 days. Diarrhea accompanied by other signs of disease or distress should prompt you seek professional veterinary care, particularly in the following circumstances.

- Diarrhea accompanied by vomiting, dry heaves or signs of nausea such as drooling or lip smacking.
- Lethargy, loss of interest in surroundings or activities, or signs of weakness.
- Decreased appetite or refusing food.
- Abdominal pain, distension or tenderness.
- Fever
- Weight loss
- Substantial amount of blood in the stool.

It is vital that prompt veterinary care be provided to puppies that are not yet received all of their vaccinations and senior dogs who have diarrhea accompanied by other signs of illness, as the resulting dehydration can quickly result in death.

Infectious Disease Prevention and Control

Your poop shovel is your most important tool for preventing and/or controlling the spread of infectious diseases and intestinal parasites in your kennel.^[1] Several common diseases of dogs are transmitted through feces and feces-contaminated food, water, or environments. Some of these include viruses (parvovirus, coronavirus), bacteria (Salmonella, Campylobacter), protozoa (Giardia, coccidia), and intestinal parasites. After passing from an infected dog, most of these infectious agents remain in the environment for a long time (days to months) where they remain infectious to other dogs and possibly humans.^[4] To prevent exposure to intestinal infections and parasites all visible feces must be removed from each dog's confinement space at least daily, and should be scooped more frequently whenever practical.

Because many pathogens thrive in standing water holes that become puddles during snow melt or rainy weather should be filled as a routine part of your daily dog care routine. Organic bedding material such as straw or wood chips used to control drainage should be raked up and removed when no longer needed, as it can also harbor a wide range of pathogens. Water bowls or other containers should be emptied and refilled with fresh clean water regularly.

Food, water bowls and enrichment items (e.g. toys) should be kept clean and should be washed and disinfected before being used by another dog.

Food storage areas should be kept clean, dry and free of rodents or insects that can introduce pathogens. Food should be stored in containers that are resistant to insects or rodents. Raw or frozen food must be stored at an appropriate temperature. Due to the risk of introducing intestinal parasites, it is recommended that wild fish or game meat be thoroughly cooked rather than offered raw.^[1]

If a dog does not eat all the food it is offered the uneaten food should be removed from the kennel and discarded. Because loss of appetite is a common sign of infectious disease it is unwise to feed potentially contaminated food to another dog.

Puppies not yet fully vaccinated, senior dogs and dogs with suppressed immune systems are at particular risk of infectious diseases. Such dogs should be confined and managed in a manner that permits interactions with only fully vaccinated, healthy dogs. When performing routine kennel chores special needs dogs should be tended first to reduce the risk of transmitting pathogens from your hands, clothing or tools. Any signs of disease in these populations should prompt you to seek immediate veterinary care.

Vaccination Protocols:

It is the musher or kennel operator's responsibility to know and obey laws or regulations in his or her jurisdiction that pertain to the vaccination of dogs and to appropriately vaccinate his or her dogs against vaccine preventable diseases that his or her dogs may be exposed to.

The rabies virus is present in all continents except Antarctica and is responsible for over 50,000 human deaths each year.^[3] Rabies vaccination is required in all jurisdictions but laws and regulations regarding the frequency of vaccination and types of rabies vaccine to be administered vary greatly. Vaccinations against other diseases may also be required in some jurisdictions.

Unless rabies vaccination exemption authority is specifically defined by statute or regulation, rabies vaccine must be administered at the appropriate interval regardless of the dog's age or state of health. Rabies antibody tests (aka titers) are not recognized as an indicator of immunity and cannot be used in lieu of vaccination or revaccination.^[4]

Mush with P.R.I.D.E. recommends that mushers or sled dog kennel operators consult with their veterinarians to establish an appropriate vaccination protocol and schedule for each dog in his or her kennel. An appropriate vaccination protocol for your sled dogs depends on the age of the dog and the diseases that are prevalent in your region and other regions your dogs may travel to. Your veterinarian is your best resource for establishing an appropriate vaccination protocol for you and your kennel's circumstances.

In addition to rabies vaccination, both the American Animal Hospital Association^[5] and World Small Animal Veterinary Association^[6] recommend 3 additional "core" vaccines be administered to all dogs. All 3 diseases are both extremely infectious and extremely severe. These additional vaccines include canine distemper virus (CDV), canine adenovirus (CAV; types 1 and 2) and canine parvovirus type 2 (CPV-2) and its variants.

Mushers or sled dog kennel operators whose dogs compete in races must also consult rules of the organization(s) hosting the race(s) in which you wish to compete. In addition to preventing the spread of disease among dogs competing in the race, race-giving organizations must also consider the risks of introducing vaccine preventable diseases to dogs residing in communities or villages along the race route and which may not have regular access to veterinary care. Consequently race rules may require vaccines that you otherwise might not administer.

Mushers or sled dog kennel operators residing in rural or remote locations where veterinary care is not regularly available may consult with a distant veterinarian or refer to the current American Animal Hospital Association Canine Vaccination

Guidelines^[5] or the World Small Animal Veterinary Association Vaccination Guidelines^[6]. Both are readily available on-line.

Parasite Prevention and Management:

Dogs are hosts to a variety of both intestinal parasites (worms) and ectoparasites such as fleas, ticks and mites. Similar to vaccination protocols, you should consult with your kennel veterinarian to develop an appropriate deworming and parasite control protocol. It should be based on the age and general condition of each dog, the types and species of parasites common in your region, parasites your dog(s) may encounter while traveling, and other factors.

In most geographic regions control of fleas, ticks, and mites is necessary to prevent potentially fatal heartworms or Leishmaniosis.

Response to Infectious Disease or Illness:

Each musher or sled dog kennel operator should develop an infectious disease response plan in consultation with your kennel's veterinarian. The response plan should include provisions to isolate infected dogs from the general kennel population, for the rapid diagnosis and treatment of illness and for responding to outbreaks of infectious diseases within your kennel.

Your infectious disease response plan should also include provisions to protect puppies, seniors and dogs with weakened immune systems as these dogs are at higher risk of suffering severe illness or death from diseases that may produce only mild or moderate symptoms in otherwise healthy adult dogs.

Infectious Disease Prevention and Control at Sled Dog Races, Dog Mushing Events and similar gatherings of dogs:

Mush with P.R.I.D.E. encourages dog mushers, sled dog kennel operators and organizers of races or events where dogs from multiple kennels may gather to read and follow the applicable recommendations and guidelines found in the document *Infectious Disease in Dogs in Group Settings: Strategies to Prevent Infectious Diseases in Dogs at Dog Shows, Sporting Events, and Other Canine Group Settings*.^[7] Both the layperson's white-paper and open-access article in the Journal of the American Veterinary Medical Association can be downloaded from the Ohio State University College of Veterinary Medicine website at <https://vet.osu.edu/preventive-medicine/vpm-research/disease-prevention-canine-group-settings>.

These resources may also provide useful information for mushers or sled dog kennel operators to consider while establishing the infection control plans for their home kennels.

Comprehensive Health Examination:

Mush with P.R.I.D.E. recommends that each musher or sled dog kennel operator provide a comprehensive veterinary examination of each dog at least annually. If at all practical an annual examination of each dog should be performed by a licensed veterinarian.

Mushers in remote areas where veterinary care is not readily available may have to perform health examinations themselves. If performed by the musher or sled dog kennel operator detailed examination findings should be recorded on an itemized form and retained in the dog's veterinary health record for the life of the dog. Abnormal findings should prompt you to contact a licensed veterinarian for appropriate medical advice.

A thorough physical examination is an important skill for any musher or sled dog kennel operator to master. A good physical examination can detect minor abnormalities before they become serious problems. As you practice your examination skills, it's important to be consistent and be thorough. The objective is to examine the dog from head to tail, and everything in between. Develop a consistent method and use it every time. Avoid the temptation to focus on the most obvious finding. For example, don't focus so intently on a sled dog's limping that you miss a potentially fatal head injury.

Begin the examination by observing the dog from a distance. Note how he or she walks, trots, sits, breathes and so forth. As you approach the dog note his or her response to your presence. Unusual signs of anxiety, fear or distress should be noted and respected. As the dog moves look for limping, signs of incoordination or abnormal limb placement.

Nose

Normal: Moist and clean

Abnormal:

- Dry or cracked
- Nasal discharge (such as thick greenish mucus)
- Bleeding

Skin

Feel your dog's skin and haircoat, noting any lumps or sores. Many older dogs can develop accumulations of fatty tissue known as lipomas. In order to differentiate these benign masses from cancerous ones, it is important to have your dog evaluated by your veterinarian.

Normal

- Shiny and smooth haircoat
- Soft and unbroken skin
- Minimal odor

Abnormal

- Sparse or patchy haircoat
- Lumps (masses)
- Open sores or wounds
- Oily or greenish discharge
- Foul or rancid odor

Eyes

Normal

- Bright, moist, and clear
- Centered between the eyelid
- Pupils equal in size and reactive to light
- Whites of the eye should not appear colored (such as red or yellow) and should have only a few visible blood vessels

Abnormal

- Dull, sunken eyes. Eyes that look dry. Thick discharge from eyes.
- One or both eyes not centered.
- Pupils unequal in size or do not respond to light.
- Abnormal colors that indicate problems are yellow (jaundice), or red (bloodshot).
- Pupils fail to respond or respond differently when bright light is shined into either eye.

Ears

Chronic ear problems are common in dogs, and are often a result of infections with bacteria or fungus and sometimes due to allergies to inhaled pollen (like hay fever in people).

Normal

- Skin smooth and without wounds
- Clean and dry
- Almost odor-free
- Typical carriage for breed
- Pain-free

Abnormal

- Wounds or scabs on skin. Lumps or bumps on skin. Any sign of rash
- Crust, moisture, or other discharge in ear canal
- Any strong odor from the ear
- Atypical carriage for breed; for example, a droopy ear in a breed with normally erect ears
- Painful or swollen ears.

Mouth

Normal

- Teeth are clean and white
- Gums are uniformly pink.

Abnormal

- Broken teeth
- Tartar accumulation around the base of the teeth
- The gums are red, pale, inflamed, or sore in appearance.

Press on the gum tissue with your finger or thumb and release quickly. Watch the color return to the gums. This checks the capillary refill time (CRT) and is a crude assessment of how well the heart and circulatory system are working. A normal CRT is 1 to 2 seconds for color to return.

Neck, Chest, and Breathing

Normal

- No wounds, sores, lumps, collar rubs, pain, tenderness or swelling
- It is difficult to hear the dog breathe at all except when he or she is panting.
- The chest wall moves easily to and fro during respiration.
- Most of the act of breathing is performed by the chest wall.

Abnormal

- Coughing or any other unusual noise heard while the dog is breathing could indicate a problem, especially if the noise is new for the dog.
- There is noticeable effort by the dog to move the chest wall.
- The abdomen is actively involved in the act of inhaling and exhaling.
- The dog stands with elbows held out further than normal or, is unable to rest or lie down.

Abdomen

Start just behind the ribs and gently press your hands into the abdomen, feeling for abnormalities. If your dog has just eaten, you may be able to feel an enlargement in the left part of the abdomen just under the ribs. Proceed toward the rear of the body, passing your hands gently over the entire abdomen.

Normal

- No lumps, bumps, or masses either on the surface or deep in the abdomen
- No discomfort on palpation
- No distension or muscular tension of the abdominal wall.

Abnormal

- Any lump, bump, or mass may be abnormal.
- Palpation causes groaning or difficulty breathing. Any evidence or indication of pain is a serious finding. Use caution to avoid being bitten.
- The abdomen feels hard or tense and appears distended.

Any pain felt during an abdominal palpation indicates a potentially serious problem. Consult your veterinarian.

Anus and External Genitalia:

Inspect the anus for hair mats, hernias, feces, masses and evidence of discharge

Male

- Inspect prepuce and penis-noting any discharge, inflammation, tumors.
- Expose penis and look for masses and evidence of trauma, note any color abnormalities.
- If intact – inspect both testicles for symmetry, size, location (both descended) and conformation

Female

- Palpate and visually assess mammary glands for tumors, cysts, swelling, heat or discharge
- Inspect vulva for size, inflammation, discharge (blood, pus), polyps, tumors or structural defects

Skin Turgor Test

The skin turgor test may be the most helpful one to determine whether an animal is well hydrated. To perform this test, pull the skin over the chest or back into a tent and release it quickly; avoid the skin of the neck as it's often too thick for this test. Observe the skin as it returns to its resting position.

Normal

- The skin snaps back into position quickly.

Abnormal

- The skin returns slowly or remains slightly tented. This is a sign of possible dehydration.

Measure Vital Signs:

Pulse rate (Heart rate)

The best place on a dog is the femoral artery in the groin area. Place your fingers around the front of the hind leg and move upward until the back of your hand meets the abdominal wall. Move your fingertips back and forth on the inside of the thigh until you feel the pulsing sensation as the blood rushes through the artery. Count the number of pulses in 15 seconds and multiply by 4.

Normal

- 60 to 160 bpm. Athletic sled dogs in good physical condition tend to have slower heart rates at rest, and higher immediately after exercise.
- Pulse is easily palpated, strong, and regular.

Abnormal

- Too rapid or too slow
- Pulse is weak, irregular, or hard to locate.

Respiratory Rate (breathing rate)

Count either inhalations or expirations, not both. If the dog has a thick haircoat it may be easier to feel the dog's respirations rather than see them. If you have a stethoscope use it to listen to the dog's breathing. Count the number of respirations in 15 seconds and multiply by 4.

Normal

- 15 to 30. Athletic sled dogs in good physical condition tend to have slower respiration rates.
- When heard through stethoscope, no wheezes, gurgling or crackling sounds.

Abnormal

- Too rapid or too slow.
- Wheezes, gurgling or crackling sounds

Temperature

Use a digital rectal thermometer. Lubricate the thermometer with petroleum jelly. Gently and slowly insert the thermometer into the rectum about 1 or 2 inches. Remove and read the temperature when the thermometer signals (beeps or flashes) that the measurement is complete.

Normal

- Temperature is between 101°F and 102.5°F (38.3°C and 39.1°C) in dogs that are completely rested.
- The thermometer is almost clean when removed.

Abnormal

- Temperature is below 100°F or above 103°F. (37.8°C or 39.4°C). Any temperature below 99°F (37.2°C) or above 105°F (40.5°C) is life threatening and requires immediate veterinary care.
- There is evidence of blood, diarrhea, or black, tarry stool on the thermometer.

Dogs with Special Health Care Needs

This Basic Sled Dog Health Care chapter provides recommendations to meet the needs of generally healthy adult sled dogs. Dogs at different life stages and dogs intended for breeding have additional needs that are addressed in other chapters of the Mush with P.R.I.D.E. Sled Dog Care Guidelines. Please refer to the appropriate chapters for recommendations on meeting the special needs of these dogs. Additional needs of sled dog puppies and for intact dogs intended for breeding are found in the chapter on Breeding, Whelping and Puppy Rearing.

Additional needs of senior sled dogs are found in the chapter on Geriatric Dogs and End of Life Issues.

Recommended Reading

Musher and Veterinary Handbook. By Dirsko von Pfeil et al. International Sled Dog Veterinary Medical Association (ISDVMA). Washington D.C. 2015.

References:

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[2] Jason W. Stull, Jennifer I. Kasten, Michelle D. Evason, Robert G. Sherding, Armando E. Hoet, Jeanette O'Quin, Mary Jo Burkhard, J. Scott Weese. Risk reduction and management strategies to prevent transmission of infectious disease among dogs at dog shows, sporting events, and other canine group settings. Journal of the American Veterinary Medical Association, 2016; 249 (6): 612 DOI: 10.2460/javma.249.6.612

[3] WHO = World Health Organization, <https://www.who.int/news-room/fact-sheets/detail/rabies>. Accessed 1/19/2020.

[4] AAHA 2017 Vaccination Guidelines, Frequently Asked Questions, Rabies Vaccinations. <https://www.aaha.org/aaha-guidelines/vaccination-canine-configuration/frequently-asked-questions/what-are-the-recommendations-for-rabies-vaccinations/>: Accessed 1/20/2020.

[5] American Animal Hospital Association (AAHA) Canine Vaccination Guidelines: <https://www.aaha.org/aaha-guidelines/vaccination-canine-configuration/vaccination-canine/>

[6] World Small Animal Veterinary Association Vaccination Guidelines: <https://www.wsava.org/Global-Guidelines/Vaccination-Guidelines>

Mush with P.R.I.D.E. Comprehensive Health Examination Checklist

Name of dog: _____

Examined by (name): _____

Date of examination: _____

Level of Consciousness:

☐ Awake, alert and oriented to his/her surroundings.

Abnormal observations: _____

Movement:

☐ Normal movement and gait

Abnormal observations: _____

Nose:

☐ Moist and clean

Abnormal observations: _____

Skin:

☐ Smooth, shiny, unbroken, no lumps or masses and minimal or no odor.

Abnormal observations: _____

Eyes:

☐ Bright, moist and clear.

☐ Pupils centered between eyelids, equal in size and respond to changes in light

☐ No discoloration to whites of the eyes

Abnormal observations: _____

Ears:

- ☐ Skin smooth without wounds, clean, dry and odor free.
- ☐ Proper carriage for breed (perked or flopped)
- ☐ No pain, tenderness or swelling

Abnormal observations: _____

Mouth:

- ☐ Teeth unbroken, clean and white
- ☐ No pain, swelling or tenderness
- ☐ Gums uniformly pink and moist

Abnormal observations: _____

Neck, chest and breathing:

- ☐ No wounds, sores, lumps, collar rubs, pain, swelling or tenderness.
- ☐ No signs of difficult breathing.
- ☐ No unusual breath sounds

Abnormal observations: _____

Abdomen:

- ☐ No lumps, bumps, masses, pain, swelling or tenderness.

Abnormal observations: _____

Anus and External Genitalia:

- ☐ No hair mats, hernias, feces, masses or evidence of discharge around the anus.

Sex and Reproductive Status:

- ☐ Intact Male
- ☐ Neutered Male
- ☐ Intact Female

☐ Neutered Female

Male

- ☐ No injuries, inflammation, tumors or abnormal discharge to prepuce or penis.
- ☐ No masses, injury or color abnormalities to exposed penis.
- ☐ If intact, scrotum contains 2 normal sized, symmetrical testicles with no lumps or masses.

Female:

- ☐ No tumors, cysts, swelling, heat or discharge to mammary glands.
- ☐ Vulva is appropriate size with no inflammation, discharge, polyps, tumors or structural defects.

Abnormal observations: _____

☐ Body Condition Score (9-Point Purina Body Condition system) _____

Skin Turgor:

- ☐ Normal
- ☐ Delayed

- ☐ Pulse rate _____ beats per minute (normal range 60 - 160).
- ☐ Respiratory rate _____ breaths per minute (normal range 15 - 30).
- ☐ Temperature _____ (normal range 101 - 102.5 F)

Treatment Plan for each abnormal observation recorded above: _____

Examiner's Signature: _____

Chapter 5: Keeping Your Kennel The Right Size

Determining Your Needs

Any trainable dog can be a sled dog, depending on what you want to do with it. A musher must use appropriate care when asking any dog to work. A team of beagles can pull a sled, but they couldn't break trail in deep snow. A team of 30 lb border collies might pull well, but they should be outfitted with booties to protect their long-haired feet. A team of poodles can make good sled dogs but it isn't wise to ask them to camp out in severe weather.

Some dogs have a head start for some types of mushing. Northern breeds evolved specifically as sled dogs and they have physical adaptations that keep them comfortable in very cold weather. Thousands of years of selective breeding have given them a strong instinct to run and pull.

When deciding how many dogs you should own, consider how much money and time you can dedicate to your team, what your zoning laws and living situation will allow, and what it will take to do the type of mushing you want. There are different types of sled dogs and you will need fewer dogs if all of the dogs you own are suitable for what you want to do. If you keep fewer dogs, your costs will be lower, and you can give more attention and better care to the ones you have. Keep your kennel the size you can care for properly. Don't let numbers increase to the point that neither you nor the dogs are happy.

Preventing Breeding

The most effective method for preventing dogs from breeding is to spay or neuter all dogs you do not intend to breed. Spaying (ovariohysterectomy) or neutering (castration) are good options for dealing with heat cycles and for preventing unwanted litters. Sterilization can also make it easier to run females and males together, and can save money by reducing dogfights, health problems, and food requirements. Spaying and neutering can save a tremendous amount of frustration, energy and money in the long run. One unwanted litter or one serious dogfight is much more expensive than the cost of the surgery.

Some mushers are under the false impression that spaying or neutering will reduce the drive of the racing sled dog, but this is not the case. (Zink 2005) Many top long-distance and sprint mushers have successfully run neutered and spayed dogs in their racing teams with no decrease in performance. And, many races have been lost

by having a bitch come into heat at an inopportune time. The only reason to not neuter or spay a dog is the desire to breed the dog.

Some veterinarians who specialize in canine athletes recommend spaying or neutering athletic dogs including working sled dogs any time after 14 months of age. Dogs sterilized prior to puberty seem to run a higher risk of injuries to bones and joints, to some types of cancers and to some behavioral problems, including fearfulness and aggression. (Zink)

If you own any female dogs that aren't spayed, you must have at least one heat pen. It should be capable of containing all dogs in season comfortably and securely at the same time. To be effective your heat pen should be either tall enough or roofed over so that dogs can't get in or out. Even if all of your male dogs are secured and under control, the heat pen is necessary to prevent breeding with stray dogs. (See The Dog Yard and Housing section for details on heat pen design.)

If you suspect a bitch has been accidentally bred, consult with your veterinarian as soon as possible. Your vet may be able to perform tests to determine whether or not she is actually pregnant. If she is pregnant you may abort the pregnancy and prevent future mishaps by having the vet spay the dog. If you strongly feel you want to breed her in the future, treatments are available to terminate pregnancy if given within a few days of breeding. Abortions can cause complications and aren't a substitute for prevention. Consult your veterinarian for details.

What to Do with Dogs You Don't Want to Keep

It is unfair to the dogs to own more than you can handle. Any musher only has so much time, space, and money, and those are divided by the number of dogs in the yard. Sled dogs are born to run and should not be kept on their chains all their lives. Don't keep them if you don't have the time to exercise them. Review your needs, honestly evaluate the dogs you already have and then decide the best course of action.

The most difficult part of owning dogs is figuring out what to do with the ones you can't keep. You might be able to sell your extra dogs, but don't assume so. The market is very limited except for sellers with top-notch kennel records or dogs from rare and highly desirable bloodlines. If you do sell dogs, be honest and try to make the right matches. Be sure that the new owner will care for the dog properly. Consider giving trial and return periods as a means to encourage adoption. Occasionally contacting and being available to assist new owners in the care of your old dog is a great way to maintain a positive relationship with the new owner and let you maintain a lifelong connection to the dog.

Another option is to give surplus dogs away to interested, reliable people. Consider recreational or junior mushers, skijorers, mushers competing in a different mushing discipline or less demanding classes, or pet owners looking for a companion. Be sure to fit the dog to the right person. Many sled dogs are challenging pets; some have an instinct to roam or kill livestock and are often more independent than some pet owners expect. Keep in mind that dogs that have been properly cared for and socialized have the best chances to be placed. Since a dog that is not good enough to keep is probably not good enough to breed, consider having the dog spayed or neutered before giving it away, or requiring that the person taking the dog have the operation performed.

If you are unable to find new homes for unwanted dogs you may be able to relinquish your surplus dogs to a sled dog rescue organization. Some sled dog rescue groups specialize in pure-bred dogs such as Siberian huskies or Alaskan malamutes, and others are willing to accept Alaskan huskies and other mixed breeds. A group that specializes in sled dogs will generally have a better chance of placing your working dogs in an appropriate home than a government operated animal shelter. Such shelters should only be considered for dire and/or emergency situations.

If you must relinquish your dogs to an animal control agency be aware that any dog not adopted within a limited time period will probably be euthanized no matter how friendly or well-socialized the dog is. Sled dogs are often misidentified as non-adoptable or overly aggressive by some shelters and can be euthanized immediately based on local ordinances or requirements. Your dog's chances of survival are much greater if you take responsibility for finding it a new home yourself.

Acquiring Dogs

It is important that you determine your mushing goals before acquiring even a single sled dog. Once your mushing goal is firmly established acquire only those dogs with physical and behavioral attributes that will help you achieve that goal. This will prevent you from acquiring unsuitable dogs that will need to be re-homed later.

Leasing or borrowing dogs may be an option if you aren't sure how committed you are or if you need extra dogs for only one race or one season. Shop carefully, as there are many options. Ensure your lease or loan agreement is clear about who is financially responsible for illnesses or injuries, and remember that borrowed dogs need the same responsible care as the ones you own. Another option is to volunteer to "foster" rescued sled dogs for a sled dog rescue organizations.

When you are ready to establish your own kennel, keep your mushing goal in mind. If your goal is to win sled dog races, it isn't enough to buy the best dogs you can afford. Instead, you must afford the best dogs you can buy. Today's sled dog races are extremely competitive. Only teams made up of exceptional dogs can win consistently.

Mushers with more modest goals have a much wider range of options. Experienced sled dogs suitable for a variety of mushing disciplines are frequently available through sled dog rescue organizations or from other mushers in your area who have surplus dogs that need to be re-homed. There are very good dogs available but you have to make sure the dogs you get are the right dogs for you. Don't make the assumption that a dog from a well-known kennel or bloodline will meet your needs. Evaluate the individual dog in relation to your goals. For help in evaluating the health of the dog you are considering acquiring, see the Basic Health Care: Basic Health Examination section.

Another option for building a team is raising puppies yourself if you have the time and energy for this process. Good dogs are easier and probably less expensive to buy than to raise. However, raising puppies is a fulfilling experience if you can afford to do it and have homes for each of the puppies. Breeding sled dogs should be viewed as a way to produce better dogs, not just more dogs.

If you do decide to breed dogs, remember that in less than six months you will have essentially full grown dogs, each needing a house and chain or a pen of its own. For Alaskan huskies, plan on more than six pups per litter. A litter can easily be as many as ten or as few as one. Two litters can therefore produce as many as twenty new dogs!

Before you breed dogs you must do two things: (1) Make a realistic plan for what you will do with every pup that is born. (2) Ensure that the dogs you breed have all the essential characteristics you want. If you don't have the right dogs, buy a good female, buy the service of a good stud, or offer to raise pups for a musher who has high quality dogs. Never breed dogs with any physical or behavioral defects. Undesirable attributes are as likely to be inherited by their offspring as the traits you wish to perpetuate.

Remember that good genes are responsible for only a portion of the final result. Raising excellent sled dogs requires excellent physical care, mental and physical conditioning, socialization and training. The more time you spend with your puppies the better sled dogs they will be.

Both male and female dogs become fertile at six to 12 months of age. The average interval between estrus cycles is about six months, but it varies widely. Some females come into heat every three to four months, others only once a year. Although a female may be bred in her first heat, many breeders prefer not to because it interrupts her growth and because young dogs can be poor mothers. It is also a good idea not to breed very young dogs so that you can be sure they have the traits you want. Older dogs can be bred, but fertility generally declines after about 10 years of age. Be cautious about breeding females over six years old that have not been bred for two or three years, as they more frequently have problems with whelping.

Be sure the female is adequately vaccinated and wormed before breeding. Be sure to disinfect the puppy pen, doghouse and whelping box before the pups arrive. Pups are usually born 60 to 65 days after the breeding. An experienced veterinarian can often tell if a dog is pregnant by palpating the abdomen 21 to 28 days after breeding. For more information, consult your veterinarian.

A pregnant female will need progressively more food starting the last three weeks of her pregnancy. The female should be in good condition and weight. Do not allow her to become obese, as this can cause trouble during whelping. See the Feeding and Watering section for more information.

References:

Zink, C., "Early Spay-Neuter Considerations for the Canine Athlete One Veterinarian's Opinion", Canine Sports Productions,
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Edition 3, adopted October, 2009

Chapter 6: Whelping and Raising Puppies

Whelping and Puppy Pen

Give the female all the advantages possible so she can produce a healthy litter. She needs an extra large house in which she can easily stand up and turn around. She should have extra room all around her when she lies down so she won't lie on the pups or be restricted during whelping. The whelping house should be equipped with a hinged or removable roof to make it easier to access the mother and pups.

Most litters should be planned to arrive during the spring, summer, or fall so the outside temperature is not too cold at birth. If you decide to have a winter litter you may have to plan on having the female inside a building where it is at least above freezing. Whelping can take place outside at lower temperatures but extreme caution should be used, especially with a female whelping for the first time or under exceptionally harsh weather conditions.

Summer temperatures above 70 degrees F can also be dangerous for the puppies. During their first few weeks of life puppies cannot regulate body temperature. Mosquitoes can also be a very serious problem for pups born during summer. You may need to whelp and raise the puppies inside your home if you have a bad mosquito problem or high temperatures.

Keep the whelping pen clean and dry. Many pathogens that are lethal to puppies are soil borne. In areas where such pathogens are known to exist it is important to maintain a level of pathogen protection. Basic hand-washing before and after handling both mother and offspring will go a long way. Other practices such as shoe and boot pans placed outside of the whelping pen will also prevent various pathogens infecting the puppies. A boot brush and a solution made up of one part household bleach and 10 parts water will reduce the risk of introducing soil borne organisms into the puppy pen.

A whelping box provides a nest or den in which the female can whelp and begin raising her litter. It should be large enough to allow the female to stretch out without lying on or disturbing her puppies. It should be tall enough to contain the puppies but allow the mom to leave them when she desires.

The whelping box should be placed in a larger enclosure or pen either indoors or out as a primary containment for both the mom and puppies, but also isolate them from other dogs. Puppy pens should be a minimum of 100 square feet. If birds of

prey might be a threat the pen should have a roof. Rawhide or hard rubber chews and balls are nice extras for the puppies' enjoyment. Ramps, tunnels and bridges provide mental stimulation. Be sure all additions are of sizes and made of materials that are safe for the puppies and mother.

The puppy pen needs to be cleaned at least once a day, or more often as needed. Whelping boxes need little bedding since the mother does most of the cleaning. If the puppies are reared in warmer months a smooth wooden floor will suffice.

Weaning and Feeding Puppies

Puppies should be offered gruel of ground and soaked kibble beginning at three weeks of age to supplement what they receive via nursing. Puppy food or a performance diet is recommended. Puppies under four months should be fed two to three times per day or free fed. Puppies should be fed enough to keep them fleshed out and to ensure they have enough energy to grow, but they should not be allowed to become obese. (See Feeding and Watering section.)

Weaning

Mothers will usually wean puppies themselves when the pups are between four and a half and eight weeks old. If you wish to remove the mother from her pups at this time, you can. Ideally puppies should remain with the mother for the entire eight weeks. Emergency health situations may require early separation, but this should only be done under the direction of your veterinarian. If the pups are removed while the mother is still lactating the mother will need to be dried off. If the mammarys become firm, swollen, or red, consult your veterinarian.

Many mushers choose to leave the mother with the pups until the pups are individually tethered or penned. If the mother is still enjoying the pups and playing with them, this can be a good source of education for the puppies.

Reintroduce the mother to mushing slowly. She needs time to recover from nursing the pups. Short runs of 2 to 3 miles with the team are fine. Protect her enlarged nipples from cold weather for the whole season after whelping.

Puppies need to stay in the litter for at least eight weeks to ensure normal psychological development. During the fourth through sixth week, a puppy learns basic social behavior for dogs. If a puppy is removed from its family before six weeks it may have behavioral problems as an adult. When you rehome a pup, make sure you provide copies of all vaccination and deworming records to the new owner and caution him or her to change the pup's food slowly.

Puppy Health Care

Day 1: Examine each puppy for abnormalities. Check the mouth for cleft palate. Make sure that all puppies are nursing, as it is important for the puppies to receive the mother's colostrum, which flows for only a few days. If you have any questions or problems, call your veterinarian right away.

Day 2: Remove dewclaws, if there are any, from both the front and rear paws. This prevents trouble with booties later on and prevents the dewclaws from getting caught on something and damaged. Have your veterinarian perform this procedure, or have a veterinarian or an experienced musher show you how to do it yourself.

Three to four weeks: Deworm with the product recommended by your veterinarian. Continue deworming the puppies and mother on a schedule recommended by your veterinarian.

Eight weeks: Vaccinate with a combination vaccine that is recommended in your area. These may include distemper, parvovirus, and adenovirus. Work with your veterinarian to develop a vaccination program to meet the specific needs of your team.

Rearing

Just as children have formative years, puppies have formative months. Puppies need lots of human attention early. The more you put into your pups, the more you will get out of them as adults. Play with them at least a little every day so they don't become shy of people. Try to familiarize your puppies with as many different situations as possible by taking them on walks, bringing them inside, having children play with them, exposing them to crowds etc.

The most important time to develop a trusting, positive relationship with a pup is between its third to 16th weeks of life. Many people mistakenly believe that good genetics are all that are needed to produce a good sled dog. Without the proper care and training, a puppy with great potential can become a complete failure as a sled dog or pet. The following are some benchmarks in a puppy's development:

One to three weeks: During their first weeks of life, handle each puppy two or three times a day. Weigh them to ensure that no negative changes are occurring. Pet them and talk to them. Their relationships to humans can start from the day they are born.

Three to sixteen weeks: Introduce the puppies to as many unique experiences as possible. Between six and eight weeks is a particularly critical time for socialization

with people. They can learn their names, learn to come when called, and develop a strong bond with humans during this stage of their development.

Four to six months: If tethering is the method of confinement this is the time to introduce them to this experience. Put a collar on each puppy and in the months following frequently check the collar's tightness and adjust it as the puppy grows. Place them on individual tethers.

Five to eight months: Harness training is most easily done during this stage of the puppies' development. Many methods are used: putting one or two pups in a small team with adults, or putting one adult leader with all the rest of the pups. Either way, the teams should be small (three to seven dogs), and the runs should be short (perhaps 1/2 to 3 miles). It is best not to have a steep down slope, icy trail or open water on the puppies' first few runs in harness. It is easy to scare a puppy. The most important thing is to let the pups have fun. Mushing will be an important part of their lives and it should always be a positive experience. Puppies should never be dragged along or pulled by a machine; they should always be going forward on their own accord and have the option to stop if they become frightened or tired.

Some puppies will have a natural instinct to pull the first time they are harnessed. Other puppies will be overwhelmed by being tugged by the neck while at the same time running next to another dog. To avoid this, you might want to connect a pup and a reliable lead dog with a neckline and let them run around for a few minutes. Be sure to do this away from the dog yard to avoid tangles. Repeat the experience a few days before running the pup in the team. This helps a puppy to learn to jump over the ropes and accustoms it to the neckline. Be careful to match compatible dogs, and be ready to jump high when they come toward you at full speed.

Eight to twelve months: It is important to get the pups out often in harness so that they learn all the basics of mushing while they are young: not getting tangled in the traces, pulling hard, urinating and defecating on the run, not chewing harnesses and gang lines, how to cross ice and water, how to pull on hills, forward and whoa commands, how to pass other teams, and most importantly, to have fun with their owner out on the trail. All of these are easiest and best learned when they are young.

Twelve months: At this point, a dog has attained its basic size, although depending on the breed and genetic background, many dogs continue to fill out until about two and a half years old. Also remember that although a dog is one year old and looks mature, it is not mentally mature yet and still needs much more time to develop before it can be expected to behave and perform like an adult.

Everything you would like to teach your dog (in addition to mushing) is also best done at an early age. At 4 to 12 months, their minds are open and responsive. For example, if they will spend a lot of time inside as adults or if they need to be obedience trained, put in the effort training them while they are young and make each experience positive and educational.

Chapter 7: Geriatric Dogs and End of Life Issues

When planning your mushing kennel it is important to recognize that, like humans, sled dogs grow old and eventually die. It is important that the musher have a plan for dealing with the special issues presented by geriatric dogs. As a dog matures beyond his or her physical prime you must decide whether to keep the dog for the remainder of his or her life, or find an appropriate new 'retirement' home for the dog.

Most sled dogs start showing physical signs of aging at around seven years of age, though there are plenty of exceptions to this rule of thumb. The first sign that many racing mushers see is that the dog is no longer able to run as fast or as far as his or her younger teammates. Competitive sled dog racers who do not want to support older, slower dogs should consider finding the dog a new home while it is still in good physical condition.

Gifts of older dogs in good physical condition are often greatly appreciated by junior mushers, beginners and mushers competing in less demanding disciplines or classes. You may also consider placing a retired dog into a home as a pet. Be sure the dog and the new owner are a good fit. Many sled dogs can be challenging pets; some have an instinct to roam or kill livestock and are often more independent than expected. Keep in mind that dogs that have been properly cared for and socialized have the best chances to be placed. Since a dog that is not good enough to keep is probably not good enough to breed, consider having the dog spayed or neutered before giving it away, or requiring that the new owner have the operation performed.

Many mushers prefer to keep their geriatric dogs and care for them until the end of their natural lives. Older dogs are especially valuable for helping train puppies and young dogs.

Housing Considerations for Geriatric Sled Dogs:

Older dogs often do not cope well with sudden changes in their environment. If you plan to keep your older dogs as house pets or change your confinement method, make the transition gradually, bringing the dog into the new environment for short visits and gradually increasing the amount of time until the dog becomes comfortable in his or her new setting.

Older dogs are often less tolerant of weather extremes than younger dogs. They may require additional bedding or even an insulated doghouse to be comfortable during cold weather. During warm weather, ensure that older dogs have easy access to shade and fresh, clean water.

Like younger dogs, geriatric dogs require adequate space and mental stimulation. (See Managing the Physical Environment of Sled Dogs.)

Feeding Considerations for Geriatric Sled Dogs:

As your aging dog's metabolic rate and general activity levels decrease, he or she will require less food to maintain a healthy body. Most older dogs will do well on the same ration you feed your younger dogs during the offseason. Occasionally a dog will have trouble digesting all the fat in this ration or may become constipated on it. If this occurs, try feeding a diet lower in fat or higher in fiber, respectively. It is important that you not allow your geriatric dog to get too fat. Obesity is the most common cause of major health problems in dogs, including kidney and liver diseases, diabetes and arthritis.

Monitor older dogs' weight just as you do younger dogs, and adjust the volume of feed accordingly. Consult a veterinarian if you have concerns or questions.

Health and Husbandry Issues of Geriatric Sled Dogs:

Geriatric dogs lose muscle mass and tone, long bones such as those in their legs become brittle, and arthritis frequently sets in. Providing your geriatric sled dogs opportunities for frequent short, slower runs with other older dogs or with puppy teams can help the geriatric dogs maintain a higher degree of flexibility, mobility and fun as they age.

Geriatric dogs are more prone to infectious and chronic diseases than young dogs. Work with your veterinarian to determine an appropriate vaccination schedule for your older dogs and consult with him or her if you notice any changes in the dog's behavior, activity level or appearance. Be especially alert for any of the following signs of disease in geriatric sled dogs:

- Sustained significant increase in water consumption or urination
- Weight loss.
- Significant decrease in appetite or failure to eat for more than two consecutive days.
- Significant increase in appetite
- Repeated vomiting
- Diarrhea that persists more than two days.
- Lameness that lasts for more than three or four days.

- Lumps or masses in or under the skin.
- Open sores or multiple scabs in the skin, especially if they seem to be getting larger or worse.
- Hair loss, especially if accompanied by scratching.
- Persistent coughing or gagging.
- Excessive panting .
- Sudden collapse or weakness.
- Inability to chew dry food.
- Seizures, convulsions or sudden changes in behavior.

Many of the diseases associated with aging can be easily diagnosed and treated, providing comfort in the dog's senior years.

End of Life Considerations for Sled Dogs:

Injuries and illnesses can threaten dogs' quality of life. Whether your dog is injured during the prime of life or debilitated due to the diseases of old age you may have to decide whether or not to euthanize your dog.

Animal care experts agree that it is appropriate to humanely kill a dog rather than to prolong suffering. There are no hard and fast rules regarding when it is or is not appropriate to do so. Here are some considerations you can use to help make your own decision:

- Is professional veterinary care available in your community?
- Can you afford to pay for the necessary veterinary care?
- How likely is your dog to recover from the problem?
- Is your dog in pain? If so, can the pain be effectively controlled?
- Is your dog able to eat and digest enough food to remain properly nourished?
- Is your dog mobile enough to move around its housing area?
- Is your dog able to breathe without difficulty?
- Does your dog behave as though s/he still enjoys living?

Once you have considered the above, establish a euthanasia baseline condition. These are best established before the animal reaches the euthanasia threshold. It is much easier to establish these before human emotion becomes the deciding factor. It can be stated as simply as: When the dog is not longer able to..., then we will euthanize it. It is very easy to change this threshold as a dog approaches it. Experience has shown that as one “quality of life” measurement goes by, another threshold is established and so on. When this happens, it is only avoiding the inevitable.

Whenever possible, animal control shelters or veterinarians should be used to perform euthanasia as necessary. In isolated rural areas where such facilities are not available you must still make sure your dog is killed humanely, with no suffering. Consult a veterinarian or animal control officer for advice.

In some regions local or state/provincial laws or regulations regulate body disposal. Many veterinarians and animal control shelters can cremate the body for you at little or no cost. If the law permits and you wish to bury your dog’s body at your home or kennel it is recommended you place the body in a heavy duty plastic bag encased in a secure receptacle such as a wooden or metal box. You should bury the body under at least 3 ft of earth to prevent other animals from digging at the gravesite.

Sled Dog Kennel Safety, Emergency Management and Security

The Five Responsibilities of Mushers and Sled Dog Kennel Operators

1. <i>Good nutrition:</i> It is the responsibility of the musher or kennel operator to provide ready access to fresh water and an adequate diet to maintain full health and vigor.
2. <i>Good environment:</i> It is the responsibility of the musher or kennel operator to provide every dog within the kennel with suitable housing, good air quality and comfortable resting areas.
3. <i>Good health:</i> It is the responsibility of the musher or kennel operator to prevent or rapidly provide appropriate treatment of disease and injury, and to foster good muscle tone, posture and cardiorespiratory function
4. <i>Appropriate behavior:</i> It is the responsibility of the musher or kennel operator to provide sufficient space, proper facilities, congenial company and appropriately varied conditions.
5. <i>Positive mental experiences:</i> It is the responsibility of the musher or kennel operator to provide safe, congenial and species-appropriate opportunities to have pleasurable experiences .

Summary of Recommendations

- Protect each dog and each human caretaker from foreseeable circumstances or risks that can threaten their health and well being.
- Ensure that every dog is provided a means of identification to facilitate prompt return should the dog go missing.
- Receive formal training in at least basic first aid or emergency medical care.
- Develop emergency response plans for common emergencies that occur in sled dog kennels.
- Assess the kennel's risk and vulnerability to disasters and take reasonable steps to mitigate, prepare for and effectively respond to the risks presented by foreseeable disasters.
- Take reasonable precautions to prevent unauthorized people from coming into contact with sled dogs in the kennel.

It is the musher or sled dog dog kennel operator's responsibility to protect each dog and each human caretaker from foreseeable circumstances or risks that can threaten their health and well-being.

Introduction:

Mushers and sled dog kennel operators have a responsibility to protect ourselves and other humans from safety risks that can be posed by our dogs, and to protect both our dogs and ourselves from safety risks that can be posed by a wide range of conditions that can threaten our health and well-being.

A 2019 poll of Mush with P.R.I.D.E. members asked "What is the worse injury you've suffered while mushing or caring for your dogs?" Responses were based on the level and length of health care that was needed for them to heal. The results were sobering. Only half (50%) of poll respondents reported their worst mushing or dog care related injury required only basic first aid. The second most common response (23%) was "surgery and long-term follow up PLUS some degree of chronic physical restrictions or pain." In other words, nearly a quarter of the mushers who responded to the poll had suffered truly extreme injuries with lifelong consequences. ^[1]

In addition to the obvious pain and suffering, an injury to a musher, kennel operator or sled dog caregiver can have a significant detrimental impact to the welfare of his or her sled dogs. Quite simply, a musher or caretaker who is severely injured cannot personally meet his or her responsibility to provide for any of the needs of his or her dogs.

As a general rule, anything that represents a hazard to a dog is also hazardous to humans, and vice versa. The safety of one cannot be compromised without compromising the safety of the other.

The most important thing you can do to ensure the safety of you and your dogs is to develop the habit of constantly answering 2 questions.

1. What can possibly go wrong?
2. What can I do to make sure it doesn't go wrong?

Identification and Control of Safety Hazards:

A hazard is any source of potential damage, harm or adverse health effects on something or someone.^[3] For example, should a dead limb of a shade tree overhanging a sled dog kennel fall, it may potentially damage a sled or dog house or injure a dog or human standing beneath it.

Focused Safety Inspections.

Mush with P.R.I.D.E. recommends that the musher or sled dog kennel operator and each caretaker within the kennel conduct a thorough walk-through safety inspection at least once each year, with the objective of identifying all safety hazards present in the kennel. Carry a clipboard and pencil and make a list of every hazard you observe.

During the focused safety inspection look at everything you can possibly observe and ask "What can possibly go wrong?"

Areas of special concern include;

- Confinement areas
- Dog houses
- Food storage and preparation areas
- Vehicles used to transport your dogs
- Sleds, wheeled rigs or ATVs used for conditioning, training or working dogs.
- Anything you or your dogs are in contact with on a regular basis.

Once the inspection is complete, go down your list and make a plan to eliminate or minimize the risk presented by each hazard. The goal is to answer the question "What can I do to make sure it doesn't go wrong?"

- Eliminate the hazard.
- Replace the hazard with something less dangerous.
- Isolate the hazard so that people or dogs can't come into contact with it.
- Change the job procedure to reduce the risk presented by the hazard.
- Use personal protective equipment (PPE) to reduce the risk of presented by the hazard.

Obviously, the focused safety assessment is worthless unless you follow-up by performing the hazard correction actions you identified in your plan.

Personal Task Safety Assessments:

Everyone who performs work in your kennel should make it a habit to conduct a simple task safety assessment before starting every task, no matter how simple or routine that task may be. Mentally review each step of the task, answering those 2 vital questions:

1. What can possibly go wrong?
2. What can I do to ensure that it doesn't go wrong?
 - Eliminate the hazard
 - Replace the hazard
 - Isolate the hazard
 - Change work plan
 - Use PPE

Any time circumstances interrupt the smooth flow of work, you should repeat the personal task safety assessment to address the changing circumstances.

Identifying hazards through experience:

Industrial safety professionals have determined that most major on-the-job injuries were preceded by one or more minor incidents, the significance of which were overlooked. These "near misses" were accidents that almost occurred. Something went wrong, but through pure luck the consequences were minimal. Consider your own near misses to be an opportunity to identify and correct safety hazards before luck turns against you.

Emergency Planning and Response

An emergency is a serious, usually unexpected, potentially dangerous situation requiring immediate action. In spite of our best prevention efforts emergencies do occur from time to time. This section is intended to help mushers and sled dog kennel operators anticipate emergencies that may occur and develop a response plan to manage those emergencies with the goal of achieving the most favorable outcome that circumstances permit.

Identification and Evidence of Ownership:

It is the responsibility of the musher or sled dog kennel operator to ensure that every dog is provided a means of identification to facilitate its prompt return should the dog go missing.

There are many unpredictable circumstances that can result in a dog, or even a team or group of dogs, being separated from the owner or musher. Therefore it's vital that the musher or sled dog kennel operator provide each dog with a means of identification to facilitate its prompt return should it ever go missing.

RFID Microchips

Positive Factors	Negative Factors
Permanent form of identification that cannot be easily lost or altered.	Requires special equipment (scanner) to be detected.
Very safe	Adverse events occur at a rate of about 1 per 1 million animals implanted. [AVMA]
Very effective	Requires notification of chip manufacturer's registry of change of ownership.
Not easily altered or removed by thieves or others with ill-intent.	Implantation requires service of a licensed veterinarian or trained technician.
Is considered evidence of ownership by most municipal animal control agencies.	

Mush with P.R.I.D.E. strongly recommends that mushers or sled dog kennel operators identify every sled dog with a radio frequency identification (RFID) microchip. An RFID microchip is required by many race-giving organizations for every dog participating in their events and is mandated by law in many local jurisdictions in North America and all countries of the European Union, United Kingdom, Australia, New Zealand, Russia and many others.

Tattoos

Positive Factors	Negative Factors
Permanent	Risk of infection and allergic reaction to ink.
Tattoos are visible, so anyone finding the animal knows it belongs to someone.	Fades over time and may be difficult to detect.
	No central registry for identification tattoos in the United States and many other countries, so a tattoo alone may not help return a lost dog to the animal's owner.

An identification tattoo, usually applied under the ear or on the belly or inner thigh, is another way to permanently ID your dog. The tattoo is a code of numbers and letters that is then registered with a pet registration service. Unlike a microchip, the tattoo can be read without special equipment. It's there for anybody to see if they know to look for one.

A veterinarian or specialist must apply the tattoo, and your dog may need to be sedated. The tattoo can fade over time or become overgrown with fur. Unlike microchips, there is no internationally traceable registry for tattoos.

Collar Tags

Positive Factors	Negative Factors
Inexpensive and easily acquired	Easily lost. A tethered or leashed dog may escape by slipping his head through the collar leaving it behind.
Requires no special equipment to be detected and read	Tags dangling from a ring in the collar may hang up in brush and be pulled off.
Can result in prompt return of a lost dog without the intervention of animal control agencies, veterinarians or other third parties.	Thieves can easily remove and/or replace a collar.
	Not recognized as proof of ownership by many animal control agencies or shelter organizations.

Collar tags permanently affixed to each dog's collar is a common and often effective way to be reunited with a missing dog. Anyone who finds the dog can read the information on the tag and use it to quickly arrange for the dog's return without the intervention of third-parties with RFID scanners.

Metal identification tags permanently attached to collars are very durable, reasonably priced and less likely to be lost than those that dangle from a ring. Information on the collar tag should include your name or kennel name and contact phone numbers, including area codes.

Evidence of Ownership:

Animal control and/or law enforcement agencies must go to great lengths to ensure that a lost or stolen dog be returned to his or her rightful owner. In addition to microchips, tattoos or collar tags they will usually require you to produce additional evidence of ownership. Additional proof of ownership accepted by shelters and rescue organizations may include the following:

- Bill(s) of sale or adoption contracts.
- Veterinary health records kept over time
- Rabies vaccination certificates
- Several photographs of the dog, preferably with the owner, showing distinctive markings and taken over a period of time.

First Aid and Emergency Medical Training:

Mush with P.R.I.D.E. recommends that every musher, sled dog kennel operator and sled dog caretaker receive formal training in at least basic first aid and/or emergency medical care. Those who reside or travel in areas or circumstances in which access to advanced medical care may be delayed by 1-hour or longer should strongly consider training in wilderness first aid and/or wilderness emergency medical care.

Mushers or sled dog kennel operators who may be responsible for the safety of others, including commercial sled dog tour operators and sled dog tour guides should strongly consider more advanced training such as certification as wilderness first responders or wilderness emergency medical technicians. Such training is required for licensure in some jurisdictions.

Organizations in North America who provide or certify suitable wilderness emergency courses include the American Red Cross, Canadian Red Cross and NOLS.

Low cost certification training in CPR and first aid for dogs is available on-line from the American Red Cross at <https://www.redcross.org/take-a-class/first-aid/cat-dog-first-aid>. Many veterinarians and dog related organizations also provide courses in first aid for dogs.

Response Planning for Common Sled Dog Kennel Emergencies:

Planning your response to common emergencies before they happen rather than while your judgment is clouded by a surge of adrenaline helps ensure a faster and more favorable resolution. Like safety inspections and assessments, the objective is to answer 2 questions - What can possibly go wrong? What can I do to make it right again?

Well-considered emergency response plans will include identification of the emergency (how to know that something is happening), a step-by-step plan for managing the emergency, and a plan for actions to take after the emergency to resume your normal routine. An example of one Mush with P.R.I.D.E. certified kennel's emergency response plan for wildlife inside the dog yard provides a simple example:

Emergency Procedures – Wild Animal in Kennel

IDENTIFICATION: The first sign of problems will likely be the behavior of the dogs. If an animal is inside the dog yard the dogs will be aggressively barking and 'carrying on'.

RESPONSE:

1. Assess the situation. If an animal is present but outside the kennel perimeter fence monitor to situation to ensure the animal does not break into the dog-yard. If the animal is inside the kennel fence, go to step 2
2. Fully open as many of the kennel perimeter gates as you can safely access.
3. A small animal (snowshoe hare, porcupine, etc) can be safely hazed and "herded" out one of the gates from inside the kennel.
4. If a large animal such as a moose or bear, you must keep the kennel fence between you and the animal, as a barrier. Remember that a big animal can go through the fence as though it isn't even there.
5. If trained and equipped to do so, Alaska statutes and regulations permit the killing of animals in defense of life and property. It is preferable to avoid doing so if at all possible.

FOLLOW UP:

1. Close all opened kennel gates.
2. Assess and treat injured dogs as described in the veterinary emergency procedure.
3. If the animal was killed in defense of life and property, contact Alaska State Troopers and salvage the meat or hide as required by law.

Topics deserving response plans may include, but are certainly not limited to;

- Fire in the kennel or home
- Lost or stolen dogs
- Dog fights
- Dog bite to a human
- Wildlife in the dog yard
- Lost team on the trail
- Injury on the trail
- Dangerous wildlife encounters on the trail
- Veterinary emergencies
- Transportation break-downs and collisions
- Many others

Your emergency response plans should be shared with family members, handlers or other caretakers in your kennel so that everyone involved knows and understands the best way to manage the emergency. Written response plans kept in a readily accessible three-ring binder can provide guidance to handlers or caretakers when the musher or kennel operator is elsewhere. In the United States, Occupational Safety and Health Administration regulations require those who employ handlers, guides or other caretakers to have such plans in place. ^[5]

Disaster Preparation and Response

A disaster is a sudden, calamitous event that seriously disrupts the functioning of a community or society and causes human, material, and economic or environmental losses that exceed the community's or society's ability to cope using its own resources.^[4] During a disaster the demand for emergency assistance overwhelms the ability of the community to provide it. During a disaster the musher or sled dog kennel operator must be self-sufficient for days or even weeks.

There is no location and no sled dog kennel anywhere in the world that is not at risk from some type of natural disaster and many are at simultaneous risk for several. Many kennels are at simultaneous risk for floods, wildfires, earthquakes, extreme heat and high wind.

Even a kennel not directly hit by a disastrous event can be severely affected. For example a kennel located on high ground may be immune from a flood, but be isolated by damaged bridges, long-lasting power outages and disruptions in telephone or cellular communication service.

Mush with P.R.I.D.E. strongly recommends and encourages mushers and sled dog kennel operators to assess their kennel's risks and vulnerabilities and take steps to mitigate, prepare for and effectively respond to the threats presented by foreseeable disasters.

Risk Assessment

Effective disaster mitigation, preparation and response requires that you know the hazards most likely to impact your kennel. Where available, your local community emergency management office is your best source of information. In the United States and Canada local municipalities are required to develop and maintain comprehensive emergency management plans (CEMPs). Other local resources include your local Red Cross chapter and/or local fire department.^[6]

Consulting these sources you specifically need to learn;

- Hazard risks and vulnerabilities
- Methods of notification
- Emergency evacuation routes and methods
- Provisions for evacuating, sheltering and caring for animals in disasters

Mushers in remote Bush locations may be able to assess their risks based on information provided by State or Provincial emergency management agencies, historical records and geographical characteristics. ^[7]

Mitigation

Mitigation refers to actions taken to reduce loss of life and property by lessening the impact of disasters prior to their occurrence. Knowing the types of disasters most likely to occur, you can take actions to reduce your kennel's vulnerability to those risks. Just a few examples of mitigation measures pertinent to sled dog kennels might include;

- Building structures of fire and flood resistant materials and securing them to solid foundations to prevent shifting in high winds, flowing flood waters or earthquakes.
- Creating a defensible space against wildfire around your home, kennel structures and primary confinement area.
- Purchasing and maintaining back-up generators to provide electrical power during an emergency.
- Maintaining driveways to provide easy access by large and heavy emergency vehicles.
- Landscape to provide shade, improve drainage or prevent erosion of floodwater, or create windbreaks.
- Building or maintaining trails for evacuation to safer areas is particularly important for those who live in remote areas with no road access.
- Many others.

Preparation

Preparedness activities are those actions taken in advance that can increase your ability to respond effectively when a disaster occurs. Preparation activities already discussed in this chapter include providing each dog with identification and taking formal first aid or emergency care courses.

Situational Awareness:

Situational awareness means being aware of one's surroundings and identifying potential threats and dangerous situations. You can maintain a higher degree of situational awareness by monitoring weather forecasts and being aware of local seasonal hazards such as rising water levels in nearby rivers or streams or local wildfire ignition sources such as nearby thunderstorms and neighborhood activities such as illegal or careless burning or shooting off fireworks.

Priorities of disaster preparation and response - The "5-Ps of Emergency Preparation and Response":

1. People
2. Pets and domestic animals
3. Prescriptions, pills and other medical needs.
4. Papers - important documents such as property deeds, insurance policies, birth certificates, etc.
5. Property - particularly priceless or irreplaceable items such as photo albums, heirlooms or irreplaceable works of art.

Some disasters are best managed by sheltering in place while others may require rapid evacuation. Mush with P.R.I.D.E. recommends that mushers and sled dog kennel operators prepare for both.

Preparations for sheltering in place:

For mushers or sled dog kennel operators who live off the grid sheltering in place is often little more than a continuation of their day-to-day lifestyle. For those reliant on public utilities and infrastructure it may be considerably more challenging, but is nonetheless easier and less stressful than evacuation.

To prepare for sheltering in place consider the resources you may need in order to be completely self-sufficient for at least 7 days. Acquire those resources well in advance, learn to use them effectively and maintain them in good condition. Assume that public infrastructure and utilities such as roads, electricity, telephone and cellular service, natural gas, water or sewer systems will be damaged and therefore not available.

Suggested Supplies and Resources for Sheltering in Place

Resource	Considerations
Water	- At least 7 gallons for each human and each dog - o Store at least a 3-day supply in containers you can easily load and transport if forced to evacuate.
Food and means of preparing it for consumption.	- At least 7 days (21 meals) for each human and 7 day supply for each dog. - o Store at least a 3-day supply in containers you can easily load and transport if forced to evacuate.
Medications,first-aid, emergency medical and veterinary care kits.	- 7 day supply of prescription medications for each human and each dog requiring them. - Stock over the counter (OTC) medications you may need. These may include aspirin, acetaminophen or ibuprofen, antacids, anti-diarrhea medicine, etc.
Hygiene and personal care items.	- Consider items you can use when water service is not available. Honey buckets, hand sanitizer, cleaning wipes, etc.
Alternative heat source(s) and fuel	- Be aware of the risks of carbon monoxide produced during combustion of fuels. Many alternative heat sources are unsafe in enclosed spaces.
Alternative light sources.	- Headlamps, flashlights and lanterns. - Stockpile batteries and fuel.
Communications devices	- Battery or hand-crank powered radio receivers - Cellular phones (text can often get through systems that are too overloaded to support voice calls.) - Citizen's band or ham radios
Tools and materials.	Consider the type work you may need to do and types of damage your kennel may suffer in a disaster and stock the tools and materials you need to make at least temporary repairs.

Preparations for Evacuation:

The speed with which you must evacuate will be determined by the immediate circumstances. The speed at which you **can** evacuate will be largely be determined by the preparations you've made in advance.

Identify safe destinations away from your local area, and evacuation routes. If possible try to avoid overwhelming the capacity of community emergency animal shelters by making arrangements with friends or family outside of your local area. Be prepared to camp out with your dogs during the evacuation so you can provide them the care and comfort they need.

Identify and scout out evacuation routes. Your primary route may be impassable due to the disaster so know alternative routes that may be available. Try to seek out evacuation routes in several different directions.

Maintain your means of transport in "ready to go" condition. While most mushers on road systems will evacuate with trucks or cars with trailers, those in the Bush may need to use boats, ATVs, snowmachines or perhaps even aircraft. Regardless of the specific type of vehicle or vessel, be sure that it;

- has adequate fuel in the tank
- is in good operating condition
- is parked with trailers already hitched
- is easily accessible with keys in the ignition switch.
- You have a competent driver or operator available for each.

Make a contact list of people with resources you can enlist for assistance during the evacuation. This is particularly important if you have more dogs than you can transport in a single trip. Make sure your list has current landline and/or cellular phone numbers and that they've agreed to be part of your personal emergency evacuation team.

Try to recruit other mushers, experienced handlers or sled dog caretakers who reside outside your immediate area. Other mushers in your immediate neighborhood will probably be evacuating their own kennels. Call or visit your local animal control authority or Red Cross / Red Crescent chapter and ask if they have a community animal rescue team (CART) available to help or can recommend others you might enlist.

Gather the resources you need to evacuate your family and your dogs and stage them in an easily accessible location. Consider loading your emergency evacuation kit and storing it in your transport vehicle during seasons when the risk of weather-related disasters such as wildfires or floods is highest. Your objective should be to make an emergency evacuation as much of a turn-key operation as possible.

Suggested Resources and Supplies for Evacuation

Resources	Options and considerations
Means of transport	- Trucks, trailers, boats, ATVs, snowmachines or aircraft ○ Maintain in safe operating condition ○ Ample fuel ○ Keys in the ignition ○ Qualified operators
Portable shelter	- Humans ○ Seasonal appropriate clothing ○ Tent, RV, etc. - Dogs ○ Boxes in or on purpose built trucks or trailers ○ Transport crates ○ Materials to improvise shelters
Water	- At least 1 gallon per person and per dog each day. - At least 3 day supply
Food and means of preparing it.	- At least 3 day supply of non-perishable food for each person and dog. Don't forget a camp stove or other source of cooking heat, fuel, and cooking and eating utensils.
Dog-related needs	- Confinement ○ Picket lines ○ Drop chains ○ Crates, transport boxes, etc - Shelter ○ Tarps and ropes for improvising shelter. - Feed pans, water buckets, ladles or scoops, etc. - Veterinary emergency care kit - Handling equipment (collars and leashes) - Hygiene equipment (shovels and poop scoops and/or buckets.)
Prescriptions and medications.	- 3 day stock for each person and dog - Copies of prescriptions stored with other important papers - Over the counter medications (Aspirin an/or NSAIDs, anti-diarrheal, antacids, etc.)
Papers	- Deeds or titles, mortgage contracts, insurance policies, etc - Rabies vaccination certificates, veterinary health records, pedigrees, proof of ownership for each dog. ○ Digital records can be stored on a thumb-drive stored in your evacuation kit.
Priceless possessions	- Anything that is portable and cannot be easily replaced.

Because most of the items needed to evacuate during a disaster are usually stored in different locations in your home or kennel most of the time, Mush with P.R.I.D.E. recommends you create a checklist of those things needed to evacuate so they can quickly assembled and staged or loaded well before they are needed if circumstances permit. Those kennels subject to seasonal events such as wildfires or spring break-up flooding can use those checklists each year to help ensure that nothing important is forgotten.

Just as long-distance and expedition mushers train their dogs and their dogs to camp out, all mushers and their dogs benefit from training to evacuate and camp. A few trial runs will help you identify and correct weaknesses in the evacuation plan.

Response:

Your response to any given disaster will be dictated by the immediate circumstances. In most cases it is prudent to follow the recommendations and instructions of local emergency response agencies. Keep yourself mentally and physically focused on the task, be methodical as you follow your disaster plan step by step and be confident that your disaster response plan will help ensure your survival and that of your dogs.

Sled Dog Kennel Security

Unauthorized people in your kennel present a safety hazard to dogs, human caretakers and the trespassers themselves. A lost hiker or curious child who enters your kennel may inadvertently introduce pathogens or parasites that threaten the health of your dogs. Should that innocent hiker or child be injured you may be held liable for damages in many jurisdictions. Should she or he be bitten or scratched by a dog that dog could be seized by authorities, held in quarantine and perhaps even be euthanized even if properly vaccinated.

Sled dogs have been stolen, injured and even killed by trespassers in kennels, demonstrating that basic security precautions are necessary to promote the welfare of dogs. Even if the dogs aren't directly targeted, the theft of a sled, wheeled rig or ATV can have a detrimental impact on your ability to provide mental stimulation and enrichment for your dogs.

It is the musher or sled dog kennel operator's responsibility to take reasonable precautions to prevent unauthorized people from coming into contact with his or her dogs.
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Mush with P.R.I.D.E. recommends that every musher or sled dog kennel operator develop a security plan that includes measures to prevent unauthorized intrusion and to calmly and effectively respond to the presence of trespassers when necessary to do so. It is reasonable to contact your local law enforcement agency in advance of an emergency and request their assistance to perform a security survey of your property and kennel and discuss measures you can legally take to protect yourself, your dogs and your property.

The following recommendations are general guidelines that mushers or kennel operators should consider when developing security and trespass response plans:

Prevention:

Enlist the assistance of your neighbors to maintain a high degree of vigilance within your neighborhood. Encourage everyone to take note of strangers or suspicious people who may be scouting for opportunities. Be particularly aware of rental vehicles or vehicles of a type not commonly seen in rural areas. Often just the presence of obviously watchful residents or neighbors is sufficient to prevent a potential crime.

In most jurisdictions an intruder is not considered a trespasser unless she or he has been forewarned to keep out. Therefore it's important to post "No Trespassing" signs around the perimeter of your property. Legal requirements for posting against trespass vary greatly between different legal jurisdictions and may govern anything from the location of signs, the minimum size of signs or even specific wording of signs. Learn the laws that apply in your location and post your signs accordingly.

Closed gates across driveways, access trails or pathways are useful for preventing trespass by casual intruders and may provide evidence of ill intent if the intruder must physically open a gate, remove or walk around a chain or cable stretched across the route of travel. If using a chain or cable be sure it is clearly visible to snowmachine (snowmobile) or ATV drivers. It is illegal in all jurisdictions in North America to intentionally booby-trap access points. Fences and natural barriers such as hedgerows can also help prevent unauthorized people from entering your kennel property.

If your property is too large to enclose in a fence, it is nonetheless recommended that a perimeter fence be erected around your dog's primary housing and confinement area. This is particularly important in dog yards or kennels that might be accessible to children too young to read or safely interact with your dogs. Recommendations for perimeter fences can be found in the Mush with P.R.I.D.E. Sled Dog Care Guidelines chapter on Managing the Physical Environment of Sled Dogs.

Trespass by thieves, vandals or others with ill intent is less likely in circumstances in which the risk of detection and intervention is greatest. Mush with P.R.I.D.E. recommends that dog housing and confinement areas be located with view and earshot of the musher or kennel operator's home whenever feasible. With their acute senses, dogs are an excellent alarm system and the musher, kennel operator or a designated caretaker should investigate any time the dogs are in a high state of arousal for an unknown reason.

Mushers unable to keep their dogs near their own homes should consider additional methods of monitoring their dogs, including any or all of the following.

- Request local law enforcement or animal control agencies to include the kennel in their regular patrols.
- Recruit neighbors, friends and relatives in the community to help monitor your kennel.
- Purchase and install security systems that can detect and alert you to the presence of unauthorized people in or near your kennel.
- Mushers or operators of kennels at particularly high risk may want to consider contracting professional security companies to provide patrols, watchmen or guards during times of unusual high risk.

Always ask to see the credentials and photo identification of unexpected strangers who claim they are doing business on your property. Examples might include contract delivery drivers, utility workers or government employees. If you doubt the authenticity of the identification contact the company or agency they claim to represent to verify their status. It's good practice to deny access to anyone unwilling to provide identify themselves.

Mushers or sled dog kennel operators who employ handlers or caretakers, whether paid or volunteer, should conduct background checks prior to providing them access to your kennel. Contact employment or personal references, check criminal records back for 7 years in all jurisdictions of employment or residence. Check the applicant's driver's license records if s/he will be driving your vehicles. Enter the prospective employees name into an internet search engine, paying particular to attention to social media and news articles.

Protect your kennel's most important assets such as vehicles, ATVs, snow machines (snowmobiles), rigs or sleds and supplies. Remove the keys from motorized equipment when not in use and consider locking storage buildings. For valuable items without serial numbers-or with numbers that are easily defaced-add an identifying mark of your own in a discrete location. Photograph the mark showing its exact location to assist in its recovery should it be stolen.

Response to unauthorized intruders:

Mush with P.R.I.D.E. recommends that every musher or sled dog kennel operator plan his or her response to unauthorized intruders beforehand. Your intrusion response plan must be based on trespass and use-of-force laws that are applicable to your jurisdiction. It is wise to consult with your jurisdiction's law enforcement agency in the earliest stage of planning. Most police departments, sheriff departments, state or provincial law enforcement agencies are willing to work with you in order to prevent future problems.

Your response plan should be shared with family members, handlers or caretakers and every other person authorized to be present on your property or in your kennel. General guidelines for response to unauthorized intrusion include the following:

Control your emotions. While it's natural to want to express your anger or frustration with trespassers doing so rarely ends well. A calm, measured response is more likely to result in an efficient, timely and less dramatic resolution.

Using the emergency phone number applicable in your nation (9-1-1 in North America) request an immediate response by law enforcement officers. In most jurisdictions a 9-1-1 call will result in a faster and more urgent response than a call on a non-emergency line. It is almost always preferable to let law enforcement officials contact, identify and remove the trespasser(s) unless the intruders presents a significant and immediate safety risk to your or your dogs.

Document the presence of the intruder(s). Videotape or photograph the trespasser(s) and everything you see them doing. Record as much detail as possible including any signs they may be carrying, unique articles of clothing, their vehicles and license plates, their path of entry, interactions with dogs, attempts to damage your property or interfere with your normal dog care routine. If no camera is available write detailed notes of everything you observe, preferably while it is happening.

While it is preferable to allow law enforcement officers to be an intruder's first point of contact, in some circumstances you may have to do so instead. In such circumstances your personal safety must be your highest priority.

Do not contact any trespasser you suspect may be armed with any sort of weapon unless absolutely required to preserve human life. Do not allow yourself to be surrounded by groups of trespassers. Stay at least 2 arms lengths away from the intruder and avoid making any physical contact, which may be misconstrued as retaliation or even assault.

If possible, record your contact with the intruder. Video recorded by a member of your family or fellow caretaker is best but if not available a voice recorder app on your cell phone will be sufficient.

Maintain a professional demeanor. Introduce yourself, state your status and clearly state the reason you are contacting the intruder. For example, "My name is John Doe, I own this property. You are illegally trespassing. The police are on their way and you must leave immediately."

Refrain from offering any additional explanation and don't allow yourself to be baited into an argument. If the trespasser(s) offer an explanation for their presence, listen and make a record of what they say, but do not let yourself be drawn into conversation. This is particularly important if you are being recorded. Recordings by protestors will be heavily edited and presented in a manner intended to discredit you to the greatest extent possible. Legitimate journalists who may be accompanying protestors will offer you an opportunity to explain your own position after the drama of the incident is over.

If the trespasser(s) obey your demand that they leave, follow them to ensure they do so. Continue to record or document their behavior. Remember that once they have reached the boundary of your property you have no legal authority to restrict their movement or activities on public land.

Follow Up:

Provide first aid for any injuries that you, family members or other caretakers may have suffered during the incident. Document those injuries, no matter how minor they might be. If law enforcement officers have arrived, ask an officer to accompany you as you inspect your dogs and property.

Calm and examine your dogs for injuries that may have occurred during the incident. Pay particular attention to any dogs that were in direct contact with intruders. Any injuries should be documented and treated by a licensed veterinarian. It may also be prudent to have dogs that may have consumed food, treats or water offered by trespassers thoroughly examined by a licensed veterinarian who can consider the risk of toxins or potentially infectious pathogens or parasites that may have been either inadvertently or intentionally introduced by the intruders.

Inspect the remainder of your property. Note the location of footprints and other evidence but leave it in place until law enforcement officers have had an opportunity to record or collect it.

Make an extremely detailed record of the incident as soon as you can, while your memory is still fresh. Those who struggle to create a written report should dictate their recollections to a voice recorder. Keep an incident file that includes all of the photographs and video recordings of the incident. Ask responding law enforcement officers to provide you a copy of their official report and keep that in your incident file as well.

Encourage law enforcement officers and prosecutors to pursue criminal charges for all but the most trivial of incidents. If the responding officer(s) seems reluctant to do so, work your way up the chain of authority by asking a supervisor or chief of the department to intervene. If they are also unwilling to pursue the case consider presenting your evidence directly to the prosecuting attorney in your jurisdiction.

Regardless of whether criminal charges are pursued you may be able to recover the costs of damages caused by the trespass in civil court. Contact your attorney and follow his or her advice. Damages can include the cost of repairing stolen or vandalized equipment, time lost responding to and following up on the incident, any medical, veterinary care or emotional health care bills and so forth.

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