Global Federation of Animal Sanctuaries

Standards Appendix for Bear Sanctuaries

All applicants are expected to comply with the General Animal Care Standards. This Appendix is intended to be read in conjunction with the General Animal Care Standards, and provides additional requirements and recommendations for bears.

Version: 1.1

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ANIMALS COVERED BY THESE STANDARDS

Family / Genus/Species/Common Names

Family: Ursidae

Subfamily: Ailuropodinae, Tremarctinae, Ursinae,

Genus	***Species***	**Common name**
Ailuropoda	*Melanoleuca*	Panda bear
Helarctos	*malayanus*	Sun bear
Melursus	*ursinus*	Sloth bear
Tremarctos	*ornatus*	Andean bear, Spectacled bear
Ursus	*americanus*	American black bear
Ursus	*arctos*	Brown bear
Ursus	*maritimus*	Polar bear
Ursus	*thibetanus*	Asiatic black bear

BEAR STANDARDS

The purpose of these standards is to assist sanctuary directors and personnel, other animal welfare agencies and professionals, and the public regarding best practices and appropriate criteria for the effective and efficient operations of an animal sanctuary. These standards are voluntary, but provide the basis for GFAS Accreditation and Verification.

Each standard or each part of every standard may not be applicable to all animal sanctuary and rescue center facilities. Further, these standards do not include every practice, procedure, or policy that might be desirable for or implemented by a sanctuary since the programs, conditions, facilities and objectives of all sanctuaries are not identical. GFAS does not suggest or infer that those who do not follow all of these standards or recommendations engage in unsafe practices.

GFAS recognizes that there may be many acceptable ways of meeting the intent of each standard. In order for a sanctuary to be considered compliant with the GFAS Standards, the sanctuary must be able to demonstrate compliance with the entire standard, as applicable, through the totality of the accreditation process which may include, but is not limited to, submission of required documentation, interviews, and demonstration and/or confirmation of practices during a sanctuary site visit. GFAS encourages sanctuaries to offer feedback on the standards and to explain any reasons why it meets a standard or believes any particular standard is not applicable and/or appropriate to its situation.

The exceeding of the standards is encouraged. In addition to meeting these standards, an organization is expected to comply with all applicable international, national, state/province, and local laws and regulations.

BEAR HOUSING

H-1 Housing

Animals are safely contained. Unless otherwise directed by a veterinarian, and for a specified medical reason, animals are provided sufficient opportunity to move about freely and rapidly, and to exercise choice in location so as to maintain positive welfare.

General

- Facilities are required to have shifting protocols in place to move bears into separate enclosures prior to personnel entering an enclosure. Additionally, a double entry system is recommended for enclosures so that there are two barriers between the animals and escape, and should be in place for all outdoor enclosures, particularly for entries through which vehicles enter. The two barriers are never open at the same time.
- The physical space provides varied opportunities for the bears to interact with the environment and key elements are changed often, resulting in a dynamic living space.
- Facility design takes into account caregiver-bear safety and ease of maintaining a positive relationship.

Outdoor Enclosures

- Outdoor enclosures are either covered, with minimum height to allow for natural behaviors, or open roofed, with cantilever angle, hotwire or sufficient height to prevent escape (see Recommended Dimensions for appropriate measurements).

- Where outdoor enclosures are the primary enclosure, indoor day/night rooms or other means of providing night housing and secure shelter during inclement and extreme weather may also be provided. This space also provides alternate housing for sick or injured individuals while in close proximity to the social group.
- Enclosures are designed to provide the maximum possible freedom and complexity for enclosure residents. The enclosures have sufficient area per animal to accommodate natural individual and group activities. Enclosure design allows for daily observations of each animal by qualified personnel and facility maintenance as needed.

Indoor Housing

- Indoor housing provides year-round protection from the elements. For sanctuaries located in colder climates (where freezing temperatures occur regularly during any part of the year and temperate or tropical species are housed), indoor space is insulated and is large enough to allow for all forms of species-specific behavior (running, climbing, swimming, digging, playing, etc.).
- Routine restrictive night housing should be avoided whenever possible.
- Indoor day/night rooms - One room per bear is recommended. Room dimension is dependent on intended purpose and/or duration of confinement.
    - Rooms for bears are a minimum of 100 sq. ft. (9.3 sq. m) for short term or overnight confinement, with a minimum vertical dimension of 8 ft. (2.5 m) and increased height for longer-term confinement, plus one spare room to allow shifting, should the bears need to be managed indoors.
    - Rooms which interconnect do so without creating ‘dead ends’ to allow for freedom of movement for subordinate individuals and include a minimum of one transfer door per room to the main outdoor enclosure.
    - Bears are familiarized with rooms through routine feeding in or transfer through, or by being allowed continuous access.
    - Enclosures are designed to allow for bears ' normal defense reactions and appropriate 'flight' or escape distances.
    - All enclosures are designed, constructed and maintained to securely contain bears and to present no likelihood of harm to them.
    - Distance or barriers between bears and between enclosures and personnel is sufficient to minimize stress to the bears, as well as reduce the risk of disease transmission.
    - Whenever possible and species appropriate, separated animals have visual and tactile access to group members to facilitate reintroduction.

Recommended Dimensions

Many factors influence the minimum space required for a group of bears, including, but not limited to: species, group size, group composition, and enclosure complexity. The following are minimum recommendations. Facilities should provide as much space as is possible and/or practical.

- Bears are powerful and inquisitive animals who require large spaces to accommodate their daily activities. In addition to appropriate size, bear enclosures must provide physical challenges and sufficient complexity to benefit the body and mind of the residents. Housing bears in inadequately

sized enclosures can result in social stress between group-mates and/or stress to individual animals unable to express natural behaviors, including the ability to retreat from disturbance.

- Behavioral indicators of stress in bears can be seen all too often in small and/or stark environments. They include pacing, circling and other repetitive behaviors.
  - Additionally, inadequate exercise facilities are a suggested factor in the development of muscular weakness and degenerative joint disease in captive ursids.
- Sanctuaries meeting only the minimum requirements for enclosure space employ additional environmental enrichment, focusing on physical and mental exercise rather than food, to compensate for reduced space and complexity.
  - The use of a rotation system, which allows groups and/or individual bears to regularly spend time in a larger or different space, is strongly encouraged in these circumstances to increase enrichment and encourage activity.
- Outdoor enclosures for bears - Enclosure shape may be variable to take in natural features in the landscape such as rock formations, hills and trees. Space includes a minimum of one (1) animal transfer door leading to indoor shelter.
  - A minimum 10,000 sq. ft (929 sq. m) for groups of up to three compatible bears is recommended.
  - Ideally, enclosures that are close to the minimum recommended size should consider ensuring the length exceeds width by a minimum factor of 2 to accommodate natural running and walking behaviors.
  - Includes natural or artificial dens to appropriately accommodate the bears' needs.
  - Minimum vertical dimension of 12 ft. (3.65 m), if covered.
    - Uncovered enclosures have a vertical overhang and electric fence component

Fencing

- Gates and doors are at least as strong, and as effective, in containing the bears as the rest of the enclosure barriers. In particular gates and doors are designed and maintained so as to prevent animals from lifting them from their hinges or unfastening the securing device.
- All containment barriers have a mechanism to prevent bears from gaining access to dig under gates.
  - Wire mesh buried a minimum of 3.3 ft. (1 m) under the substrate or hot wires placed near the ground every 1 ft. (0.3 m) are recommended.
- A maximum dimension of 3 in. x 3 in. (7.6 mm x 7.6 mm) 4-6 gauge or heavier wire mesh or chain link fencing is recommended, particularly where enclosures share common fence lines (to be avoided as much as possible).
  - Rigid woven wire mesh is recommended for brown bears.

Electric Fencing

- Electric fence energizers emit at least 6,000 V with a joule rating appropriate for the length and condition of the fence (25 joules is recommended). Voltage readings should be taken at both the beginning and end of the fence line.
- A minimum of 14-gauge high-tensile wire is needed, with a stronger gauge (e.g., 12-gauge) more appropriate for some species.
- Fences are ideally a minimum of 12 ft. (3.66 m) tall, depending on species, with a maximum wire spacing of 4 in. (101.6 mm) for the first 4 ft. (1.22 m) and 6 in (152.40 mm) thereafter.
- Fence is alternating hot/ground to prevent bears from leaping onto the fence and avoiding shock.
- Energizers are connected to battery or generator backup for continuous power supply during outages.

- In dry climates, the earth rod area is watered to ensure adequate grounding.
- If using electric fencing as a primary barrier, two separate complete systems can be used to increase effectiveness and reduce the chance of system failure.
- It is recommended that electric fencing is not used as a primary barrier. Electric barriers are better utilized as secondary barriers.
- Safety signs on hot wire are visible to personnel and bystanders.

Solid Barriers

- Solid barriers such as concrete block, poured concrete and artificial rock can be used as the sole method of containment or in conjunction with other types of barriers.
- Walls are secured in appropriate footings to ensure wall stability and are of sufficient strength to anchor caging and furniture.
- Care is taken, especially with artificial rock, to ensure that contours in the rock do not provide escape routes from the enclosure.
- Height of the wall is the same as that for fences.
- Design of areas using solid walls allows for sufficient air flow throughout an enclosure.
- Solid barriers may require electric fence as well with Sun bears due to their ability to grip and climb almost all surfaces.

Moats

General

- There is a means provided for exiting the moat and returning safely back into the enclosure should animals fall into them.
- The moat is of sufficient size and depth to adequately confine the bears.
- The moat is accessible for service and repair needs.
- Moats are surrounded by fences, walls, hedges, or shrubbery to prevent others from approaching too close to the edge.

Water Moats

- Moat width is greater than the usual horizontal and vertical jump distance for the species housed. Perimeter barrier exceeds the reach of the largest bear housed when the individual is at the deepest part of the moat. There are both deep and shallow areas for use by the bears.
- Electric wires are not used as secondary containment.
- The moat does not serve as a primary source of drinking water.
    - Water quality parameters are established and water quality is measured on a regular basis.
- There is a management plan to keep moats free of ice in colder climates.

Indoor Enclosures

- Maximum mesh size of 2 in. x 2 in. (5 cm x 5 cm) recommended where mesh separates adjacent enclosures, with a maximum mesh size of 1 in. x 1 in. (2.5 cm x 2.5 cm) where small cubs are housed.
- Solid walls may be used, as described above, in conjunction with other types of barriers.
- Walls are of sufficient strength to anchor caging and furniture.

Preferred practice:

A non-electrified barrier is recommended to keep bystanders and wildlife from coming in contact with any electric enclosure fences and is advisable in areas where the visiting public may come in proximity to fenced enclosures.

H-2 Ground and Plantings

Ground cover indoors and out is healthy for animals. Plantings are appropriate and safe.

Vegetation

- All outdoor enclosures for bears include living or fresh vegetation, which can provide visual barriers, shade and resting sites.
- Enclosures may also be planted with no-toxic grasses, shrubs etc. that the bears do not tend to eat, provisioning the animals with preferred plant material as part of the daily diet.
- Enclosure design takes into account indigenous endangered vegetation and takes steps so it is not compromised.

Outdoor enclosures

- All outdoor enclosures have a natural substrate consistent with the needs of the species.
    - The substrate provides easy to clean, dry areas for ground feeding and digging.
    - The substrate can be amended with organic materials, including but not limited to soils, sand, leaf litter, bark mulch, grasses, straw, and hay.
    - The substrate drains well.
- Bears are provided with appropriate three-dimensional environments to accommodate an array of locomotory and foraging behaviors, as well as appropriate sleeping and resting areas, including nesting and bedding materials.
- Bears are provided with suitable substrates for digging and rooting, nesting and bedding materials, as species appropriate. Enclosures are regularly inspected for digging damage.
    - Digging risks (e.g. soil collapse, flooding and caregiver access to animals are considered in enclosure design.
    - Areas for raised nest building and adequate branches provided on a regular basis. Live trees would be the most natural resource for this but may not be appropriate due to the destructive nature of the bears.
- Bears are provided with species-appropriate water features and water quality is monitored.

Indoor enclosures

- Indoor enclosures have a concrete floor and, provided adequate septic service is present, the floor is sloped to a drain. Natural substrate, which is routinely replaced, may be used as species appropriate.
- Ideally, bedding materials are provided in sufficient amount/depth to prevent contact with the concrete.
    - Bedding material suitable for use includes, but is not limited to, bark mulch, leaf litter, wood wool, straw hay, shredded paper and wood shavings. Cedar shavings are used with caution as some species are sensitive to the aromatic oils. Cocoa mulch, if ingested, can be toxic and should be avoided.

- All bears are observed regularly for signs of illness that may be related to ingestion of foreign objects, including wood shavings, bark mulch or other materials that may pose a hazard.

H-3 Gates and Doors

Animal enclosure gates and doors, including transfer doors, are appropriately designed to ensure both animal and human health and safety, and are properly maintained to ensure proper functioning.

General

- Doors are designed to allow transport crates to safely attach to them or to be able to move in and out of the enclosure.
- Slide recesses should be deep enough that bears (particularly sun bears) cannot reach their claws in and pull-on slides. It is recommended that slide locks include a pin so there is no pressure on padlocks.
- Transfer doors are designed to remain functional under all circumstances and are maintained in good working order and free from any encumbrances that may prevent opening and closing.
- Minimum dimensions of transfer doors are such that bears can maintain normal posture when passing through the opening.

Security

- Transfer doors and their frames are constructed of materials similar in strength to those used in the primary enclosure.
- Doors are lockable in both the open and closed positions.
- For pneumatic or hydraulic doors, pneumatic or hydraulic pressure is sufficient for keeping doors in the open position. A mechanical lock is, however, in place to lock the door in the closed position.
- Particular attention is given to preventing hay/shavings from affecting door mechanisms.

Animal Safety

- Doors operated via remote control are visible from the control area.
- Sliding doors are preferred. Guillotine doors are not recommended due to risk of animal injury. If used, a backup system should be in place to prevent doors from free falling due to mechanical failure or operator error.
- Hydraulic and pneumatic door systems include backup systems to allow for door usage in the event of equipment failure or power outages.

User Safety

- If door handles or locking mechanisms are in close proximity to the enclosure, a solid barrier is present to protect the user.
- Where solid doors are used in entrances to inside enclosures, inspection windows can be incorporated into the doors to check animal areas are safe to enter before the door is opened.

H-4 Shelter

Animals have access to natural or artificial shelter that provides each individual with protection from extreme weather.

- Shade and shelter can be created through natural and artificial means including hollow logs, rock overhangs, underground dens, shade trees and shade fabric.
- Enough shelter must be provided so that every individual has access even when the group is not fully cohesive.

Hibernation/Denning

- Hibernation is never forced by restricting food or water access as this may result in disease or death through dehydration and starvation. Bears that are physiologically ready to hibernate will do so even when provided with an excess of food.
- Hibernation, as species appropriate, is encouraged by provision of sufficient nesting materials and a seasonally appropriate diet.
- All enrichment events, training, and food variability must cease as they directly interfere with denning. Giving the bear the proper conditions for effective denning is enrichment. Bears are not to be sought-out for programs or called for human interaction, but are to be left alone to den.

H-5 Enclosure Design

Animals are provided with an appropriately complex and rich habitat to explore, to ensure the animals' physical, nutritional and stimulation needs are met.

General

- Appropriate complexity is provided through the use of various natural and artificial materials in the enclosure, using a combination of items including, but not limited to, those listed below.
- Bears are provided access to the vertical space available within the enclosures to facilitate their ability to climb and seek security.
- Bears have access to areas for digging and/or are provided with artificial dens.

Outdoor Enclosures

- Visual barriers can be used to avoid confrontation or aggression, and include climbing structures, fallen logs, culvert pipes, walls, shade structures, topography and large enrichment items.
    - Logs are placed and secured in a manner that prevents rolling or falling onto animals.
    - Logs and/or rocks are provided for rubbing to promote skin health and aid in shedding.
- Areas for digging are provided where possible. Dens dug by bears are monitored for potential collapse and/or flooding.
- Denning sites suitable for seasonal dormancy are provided, where appropriate according to species and climatic conditions, along with suitable nesting materials, with minimal disruption to allow for success for torpor.
- Climbing structures accommodate natural locomotion patterns with consideration to animals of all ages and physical capabilities. When multiple species are housed together, climbing structures created specifically for each species' unique needs are provided. Metal pipe is preferably not used to construct climbers as, depending on climate, it may become dangerously hot in summer sun and can damage skin during cold weather. Climbing structures should be accessible by staff for routine sanitation, repairs and updates and should include:
    - horizontal and vertical elements

- locations and/or mechanisms to provide enrichment above ground level;
- resting platforms
- where possible, soft substrate such as soil, bedding material, mulch or leaf litter is installed below climbers to minimize risk of injuries from falls, especially to youngsters and older individuals.

- Water sources such as pools, streams or ponds are provided as species appropriate (e.g., shallow water for sloth bears to bathe, or deep water to enable brown bears the ability to submerge). Permanent pool structures, where present, have an adequate filtration system to maintain institutional water quality parameters or are designed to allow easy draining, cleaning and refilling at suitable intervals to ensure water remains potable.
  - Pool shouldn't be the only water source for drinking, and additional means of clean drinking water are available elsewhere in the enclosure.
  - Ideally, pools should have the ability to drain quickly in an emergency (e.g., if an animal needs darting in an enclosure to ensure they cannot wander into a pool).
  - Roots, trees and stumps on shore and in the water provide additional enrichment for bears. Such items, if placed in enclosures, are secured as necessary in a manner that prevents them from rolling or falling onto animals.
  - In excessive heat, fountains and misters may also be used to cool the air.

Indoor Enclosures

- To the greatest extent possible, all visual barriers, digging/denning spaces and climbing structures meet outdoor enclosure criteria, particularly where bears must be housed in these limited spaces for extended periods of time.
- Indoor furniture is constructed of materials that can be sanitized or easily replaced when they become overly soiled. Furniture is accessible to staff for routine cleaning and repair.
- Platforms and other structures such as hammocks allow for climbing and for sleeping above ground level as species appropriate.
- Dens and water features are provided, as species appropriate.

H-6 Sanitation

Proper sanitation is practiced to reduce pathogen transmission.

- As fomites (shoes, clothing, etc. which carry infectious materials) may be a source of zoonotic disease, all who may come in contact with such materials are made aware of these risks and trained accordingly. (See also Standard V-8, "Zoonotic Disease Program").
- Disinfecting foot baths are placed at the entrance to any indoor enclosures to be used when entering and exiting the enclosure. The foot bath solution is changed daily, and foot bath solution is disposed of appropriately, utilizing proper drainage.
- Sanitation tools or equipment, including wheelbarrows, are not used for transport or storage of foodstuffs or bedding.
  - Care is taken to minimize overspray of waste, directly or via aerosolizing, into adjacent cages during cleaning.
  - Concrete floored enclosures are dried with a squeegee, and as needed fans, to ensure floors are dry before bedding material is replaced.

H-7 Temperature, Humidity, Ventilation, Lighting

Temperature, humidity, ventilation, and lighting are appropriately addressed.

Temperature

- For facilities that do not have the means to install climate control systems, it is important to provide an opportunity for temperature control. Various means can be adopted according to species-specific needs and available resources. Examples include the opportunity to cool off in pools, providing appropriate shelter to protect from temperature (hot or cold), and/or providing suitable substrate for protecting against temperature (hot or cold).

- For outdoor enclosures, in general, bears have access to heated or cooled areas as appropriate for species and are provided with dry, well-bedded den space. Great caution is taken with elderly, infant and disabled bears.

- For indoor enclosures, an average ambient temperature range of 40ºF (4.4ºC) and 80ºF (26.6ºC) is generally appropriate. For sloth bears and sun bears, a range of 60F (15.5C) and 80F (26.6C) is recommended, as species appropriate. For temperatures outside this range, heat can be provided by forced air or hydronic heating systems and cool air by refrigerant air conditioning, “swamp coolers”, fans, or misters.

- Windbreaks are sufficient in number to accommodate all bears simultaneously with consideration for social structure and relationships in a group.

- Infrared bulbs or ‘heat lamps’ are not recommended as heat sources due to risks associated with bulb breakage and tissue damage to bears.

- Heating blocks/panels, if used, are installed and used so as to ensure they pose no risk to the bears.

- Providing bears with opportunities to choose temperature ranges within an enclosure is preferred. This can be achieved by access to areas near heat vents, skylights, or hog warmers for example.

- Even when ambient temperatures are ‘warm’, bare concrete floors, especially damp floors, are too cold for many individuals and are not considered suitable substrate or housing for bears. Den/nest areas are provided for all bears in indoor enclosures.

Humidity

- Optimal indoor humidity is between 40% and 70%. Humidity should not be kept above 80% in controlled environments to prevent fungal and mold growth. High humidity can be mitigated through proper ventilation or dehumidifier systems.

- Bears are monitored for signs of dry skin where forced air heating is used.

Ventilation

- Heat Recovery Ventilators and Energy Recovery Ventilators can provide fresh outdoor air with minimal heat loss.
- Indoor enclosures ideally have a negative air pressure, with regular exchange of non-re-circulated air.
- A minimum of one complete air exchange per hour is recommended.
- To the extent possible, separate air handling systems are maintained between animal areas to prevent disease transmission.
- Proper window and door placement can ensure sufficient cross-ventilation in warm climates.

Lighting

- Light, natural and artificial, is appropriate for the species housed in terms of intensity, spectrum and duration.
- Indoor enclosures - Natural lighting is optimal and can be obtained using skylights, windows, roll-up doors and other means. Glass bricks may be considered, taking into account the fact that light intensity will be less than with clear glass.
- Supplemental lighting is provided to ensure adequate light for caregivers to observe animals, clean enclosures and perform related animal care tasks.
- When animals are confined indoors overnight, sufficient lighting is used to extend the daylight period to a day/night cycle of 12/12 hours to allow animals time to eat and select sleeping sites.
- Outdoor enclosures - While not necessarily required, consideration is given to supplemental lighting or power sources for use in outdoor areas in event of an emergency. Tamper-proof lighting is used in bear enclosures.

NUTRITION REQUIREMENTS

N-1 Water

Fresh clean water is available in sufficient quantity at all times to all individuals.

- Multiple water sources are available for group-housed bears to ensure high-ranking individuals do not dominate water sources.

N-2 Diet

A properly balanced and healthy diet is provided appropriately based on the needs of each animal, following veterinary instructions for special needs.

General

- Although bears are generally perceived as omnivores, feeding strategies differ greatly among species. Whereas polar bears are primarily carnivorous, Andean (spectacled) bears can be regarded as mainly frugivorous while sloth bears are anteater specialists and brown bears eat, depending on the season, more than 50% plant material. Feeding strategies for bears in captivity should therefore be based on species specific knowledge.

- Bears are seasonality specialists. For most bear species, food sources and amounts of consumed food differ between seasons. With the exception of sun bears, all other bear species show a reproductive seasonality.

- Bear species living in cold and temperate climates hibernate, with body fat becoming their main source of energy following a period of excessive eating during the summer and autumn months. Marked body mass fluctuations throughout the year are thus quite normal in most bear species.

Species-Specific Considerations

Brown bears

- Wild brown bear diets vary strongly and include vegetables (grasses, sedges, bulbs and roots), berries and other fruits, nuts, insects, fish, small mammals, and they hibernate during the winter period when food is unavailable or of greatly reduced availability. In captivity, brown bears can be fed with nutritionally complete foods such as (bear) biscuits, leafy greens, root vegetables, nuts, browse, berries, fruits, insects, seeds, honey, fish and meat/bones.

American black bears

- Wild diets of American black bears consist of approximately 85% vegetative matter, with the bulk of animal matter coming from insects. However, because they are distributed over such a wide geographic area, relative proportions of vegetative versus animal matter can vary substantially among populations. In captivity, American black bears can be fed with nutritionally complete foods such as (bear) biscuits, leafy greens, root vegetables, nuts, browse, berries, fruits, insects, seeds, honey, fish and meat/bones.

Asiatic black bears

- Wild Asiatic black bears seasonally shift their diet. Asiatic black bears in captivity are fed with nutritionally complete foods such as (bear) biscuits, leafy greens, root vegetables, nuts, browse, berries, fruits, insects, seeds, honey, fish and meat/bones. The seasonal feeding strategy can be supported by allowing them during fall to eat as much as they wish and by offering them more fatty foods such as acorns and nuts. In autumn, bears may gain 20-30% of body weight over a period of 2-3 months.

Sun bears

- Sun bears are opportunistic omnivores. They are highly frugivorous but feed, due to large fluctuations in fruit availability, predominantly on insects during intermast periods. In addition, their large paws are essential for digging up termites and ants and their lips, snout and teeth are well designed to open hardwoods in their search for larvae and grubs. In captivity, sun bears can be fed with nutritionally complete foods such as (bear) biscuits, vegetables, fruits, nuts, seeds, honey, insects, and meat/bones. To mimic chitin intake from insects, a preference is given to insectivore pellets or high fiber biscuits due to the similarity between cellulose fiber and chitin.

Sloth bears

- Sloth bears are myrmecophagous and feed mainly on insects, especially termites and ants. Food habits of sloth bears differ across its distributional range and according to the seasons. In

captivity, sloth bears can be fed with invertebrates included in feeders and enrichment items to stimulate natural feeding behavior. Due to high chitin intake from insects in the wild, commercially available insectivore pellets are highly recommended. High fiber nutritionally complete biscuits are also acceptable since cellulose fiber and chitin are structurally comparable. In addition, vegetables, fruits, nuts, seeds, honey, and meat/bones can be provided. High fat, high protein, and low fiber diets should be avoided.

Andean (spectacled) bears

- The spectacled bear is, besides the giant panda, the most herbivorous bear species. Andean bears have a very varied diet which contrasts depending on geographical region, food availability and seasonality. Andean bears can be fed in captivity with greens and vegetables, fruits, nuts, seeds, honey, cereals, commercial (bear) biscuits, insects, and occasionally fish or small whole prey. Feeding trials have shown that these bears do not adapt to (seasonal) climatic conditions of their respective captive environment but retain their natural seasonality.

Panda

- Over 99% of the food consumed by free-ranging giant pandas consists of bamboo. They have also been observed to eat over 25 different plant species. In captivity, adult pandas should be consuming a diet of which bamboo is the principal component (over 85%). It is also advised to feed multiple species of bamboo.

Polar bears

- Polar bears are the most carnivorous of the Ursidae family; they prey primarily on ringed seals in the wild. Polar bear diets can consist of commercial meat diets, supplemented raw mixed meat, bone from the shank, whole carcass and fish. Vitamin A supplementation may be considered. Polar bears in captivity are mostly fed 1-2 times daily through a regular feeding schedule.

Vitamins/Supplements

- Prior to offering supplemental vitamins, the health and condition of the individual bear, as well as the diet, is reviewed by a nutritionist experienced in bear care and/or the attending veterinarian.

N-3 Food Presentation and Feeding Techniques

Food is prepared and presented in a safe and appropriate manner to meet animals' health and social needs.

General

- Bears are fed a balanced commercial diet and are fed a minimum of twice daily during the active feeding time of the species housed.
- More frequent feeding with smaller amounts of food, by different means of presentation, more closely matches food availability in the wild. For all species, multiple feedings are therefore recommended.

Feeding Techniques

- Food is provisioned at multiple feeding sites throughout enclosures to ensure all bears have access and to reduce or eliminate aggression that results from competition for food resources, especially preferred items.
- Food may be offered in shift yards and indoor areas to increase bear comfort with those areas and improve reliability in transferring from one area to another.
- Bears have regular access to food and constant access to potable water throughout the year. Food is not removed during the winter period, except in response to the bear's behavior. Food is not restricted to try to force hibernate bears. To stimulate natural foraging behavior, readily available food sources should be kept to a minimum. Natural behavior should be considered so what is important to the various bear species (and individual) should be provided (e.g., manipulation of a food filled puzzle feeder could resemble the complex foraging behavior of a Malayan sun bear looking for insects in a nest, and browse may fulfill the need of Asiatic black bears to forage for long periods of time and to build a nest for resting).

Diet Changes, Increases or Decreases

- Feeding bears according to the seasons and by observing their behavior is a must for all sanctuaries.

- Considerations for diet increase include weight and condition of the bear, food consumption, season, activity level and other medical or behavioral considerations.
    - Behavior may be a good indicator whether diet amounts are sufficient; when bears are highly anticipatory prior to feeding, are agitated and eat fast, they may be fed insufficient amounts. When bears leave large amounts of food or don't even show up for feeding time, they may receive too much food. Care should be taken that bears may leave certain food items that are not palatable, or the diet composition may not be correct, where the bear requires other nutrients than the items left over.

N-4 Food Storage

Food is stored appropriately to prevent spoilage and contamination.

See General Animal Care Standards.

N-5 Food Handling

Food is handled and prepared in an appropriate manner to retain nutritional value, freshness, and freedom from spoilage, invasive species or other forms of contamination.

See General Animal Care Standards

VETERINARY CARE

V-1 Veterinary Program Personnel

The sanctuary's veterinary medical program is developed and carried out under the supervision of a licensed veterinarian and with adequate support personnel. Veterinary care is on-site or on-call at all times.

See General Animal Care Standards

V-2 Veterinary Capabilities

The sanctuary has on-site and/or off-site capabilities for pathology, surgery, and other veterinary procedures and treatments, and any on-site facilities are appropriately maintained.

- Whenever possible, there is an isolated area on the grounds for performing necropsies, or appropriate storage facilities until the deceased bear can be transported to a facility for a postmortem examination as soon as possible, understanding that necropsies performed longer than 24 hours after death may be of limited value due to autolysis of the body.
- Consideration must be given to the manipulation and moving of bears under anesthesia, especially in larger species (>100kg) where manual manipulation can be more challenging and may cause inadvertent injury. Appropriate movement equipment such as tarpaulins, hoists etc may be required for larger bears.

V-3 Preventative Medicine Program

The sanctuary has a complete preventative medicine program, pursuant to a written protocol, appropriate for each species housed.

- A veterinarian, veterinary technician, or other trained person performs regular fecal examinations to look for parasites and other pathogens (random enclosure sampling is adequate for group-housed bears) and to guide appropriate treatment and/or management interventions. Results are recorded. Fecal examinations are repeated following treatment to evaluate efficacy.
- All bears are weighed and body conditions scored. Personnel are aware of seasonal influences on body condition and weight and plan routine medical interventions appropriately (e.g., administration of anesthesia).
- Ideally, bears are routinely weighed and body condition scored throughout the year, e.g. two-monthly or quarterly.

V-4 Quarantine and Isolation Care and Facilities

Appropriate quarantine and isolation policies and facilities are in place for the protection of animals and personnel.

- Upon arrival, all bears undergo quarantine for a minimum of 30 days or according to the protocol established by the attending veterinarian, and in accordance with applicable law. The quarantine period should be longer (at least 60-90 days) for those bears that have received minimal screening prior to arrival, such as animals from the wild. Bears previously housed together may be quarantined together.

V-5 Medical Records

Complete medical records are maintained, and animals have permanent identification.

See General Animal Care Standards

V-6 Medication Handling and Storage

All medications are purchased, prescribed and administered under the guidance of the veterinarian, and controlled substances are prescribed and stored legally.

See General Animal Care Standards

V-7 Breeding Policy and Contraception

There is no intentional breeding of animals in lifetime care.

- Sanctuaries are encouraged to work with their attending veterinarian to ensure that updated information on bear contraception is regularly available. The following are considered acceptable forms of contraception:
    - Females
        - GnRH Agonists - Gonadotropin Releasing Hormone Agonists are considered the safest reversible contraceptives, but dosages and duration of efficacy are not well established for all species.
        - Ovariohysterectomy or ovariectomy are safe methods and effective methods for preventing pregnancy if permanent sterilization is an option, but little data exists for carnivores.
        - PZP vaccine: Efficacy and safety have only been demonstrated in pinnipeds and bears among the carnivores.
    - Males
        - The recommended method for male contraception is vasectomy.
        - Castration is not an effective method of controlling aggressive behavior and is not performed for behavioral management purposes.

V-8 Zoonotic Disease Program

The personnel and sanctuary veterinarian are knowledgeable about zoonotic diseases that may affect animals at the sanctuary, and implement appropriate policies and procedures as needed to mitigate risk and deal with any exposures that occur.

- Caregiver personnel have tuberculin tests and other necessary tests and immunizations at the commencement of employment and annually thereafter, as appropriate for the country, bear species and individual.
    - All personnel who have direct contact with bears are tested for tuberculosis on at least an annual basis and are continually made aware of the potential threat.

- Rabies testing and vaccination protocols vary by location. Federal, state/province and local rabies prevention protocols supersede recommendations made in this document.
- Personnel with a fever or with signs of respiratory illness do not work with bears.
- Personnel-bear contact is generally avoided, reducing risk of cross-contamination of disease. Where contact is necessary for feeding, enrichment, and other care, personnel should always wash hands and and/or wear gloves.

Preferred practices:

✓ All work clothes should remain on site.

V-9 Euthanasia

Euthanasia is governed by an ethical written policy that includes identification of appropriate personnel and procedures.

See General Animal Care Standards

WELL-BEING AND HANDLING OF BEARS

W-1 Physical Well-Being

Bears should be routinely monitored to ensure their physical well-being, and any unusual activity should be reported and recorded, with appropriate response.

- The welfare of each individual bear is the overriding consideration in all sanctuary actions.
- Bears are able to enjoy lives that are as close as possible to that of their wild counterparts as regards stimulation and interest. This is achieved by adopting husbandry and management procedures, including appropriate housing and enclosure design, environmental enrichment programs, positive reinforcement training programs and a balanced diet to meet nutritional requirements.
- Bears are provided with species appropriate opportunities to dig, climb, bathe, forage for food, and play by providing species-appropriate climbing structures, baskets/hammocks, dens/burrowing/digging areas, water features, a variety of plants, logs and substrates and other enclosure enhancements and there are places to hide and rest in comfort. Where appropriate, they also need the opportunity to hibernate.
- Regular assessments are performed in an effort to quantify and measure the welfare of individual animals through monitoring of nutritional, physical, psychological/behavioral and social conditions. Qualified personnel familiar with the individuals conducts daily observations of each bear to monitor for signs of physical abnormalities. Any unusual activities are recorded in a log at each inspection. Sudden changes in food consumption and other behaviors are immediately brought to the attention of supervisory staff. Note: In open space enclosures, it may not be possible to observe each animal on a daily basis. In such habitats, it is important to get an accurate count and to spend time observing all bears on a weekly basis.
- Positive reinforcement training may be appropriate for bears who enjoy interacting with people, to provide additional enrichment, to reduce the need for chemical immobilization and to reduce stress during medical intervention.

W-2 Social Housing and Group Management

Animals are grouped so that they are compatible, with consideration to their natural social groupings and individual history, and with the safety of animals and sanctuary personnel in mind.

General

- Compatible castrated male bears may be housed together.
- Female bears may be housed with castrated males and compatible females. Pregnant females are separated to give birth and sows with cubs are housed separately from other bears.
- Individual bears may have differing social tolerances; time of year and amount of space provided influence bear compatibility.

Mixed-Species Housing

- Mixed species housing has been successful in certain facilities, but risks associated with interspecies aggression and disease transmission should be recognized. Before consideration of creating a new mixed species setting, the proposal should be comprehensively reviewed by the facility veterinarian and appropriate animal management staff.

Solitary Housing

- Solitary housing Is generally temporary and reserved for situations including but not limited to quarantine, medical assessment or care, lack of appropriate social partners, or social tension resulting in disruption to the main group/pack or physical aggression leading to injuries. For some bears, solitary housing may be appropriate for a portion of the year.
- As far as possible and appropriate, bears housed alone temporarily are given visual, olfactory and auditory contact with their social group.
- Solitary species may be housed alone provided they are regularly monitored for behavioral issues.

W-3 Introduction of Unfamiliar Individuals

Introduction of any new animal to a social group is done safely and according to techniques appropriate for each species, under the direction of designated personnel.

General

- Reintroduction of bears separated due to seasonal aggression is generally treated as a new introduction, unless the bears have been housed in close proximity.
- When attempting to form a group of 3 or more bears, introductions are generally done one to one before bringing all bears together.
- Where adequate space is available, the bear being introduced may be housed in an enclosure within the main enclosure, allowing existing group members to accept the new bear and the new bear to adjust to the surroundings. The new bear should be allowed to get familiarized with the main enclosure before mixing with the resident bears.

- Bear introductions are monitored closely for tension, aggression, etc.
- Food and water consumption is monitored carefully to ensure that all bears can access food/water. Staff ensures bears are not hiding, unable to approach/access food and water.
- All introductions should first take place through a mesh or barred partition fence, and full introduction should not take place until positive behavioral signals are observed. Bears have access to separate shelter, ample room to move away from each other, and no opportunities for an animal to be cornered.
- As needed and possible, information listed below is gathered for the introduction planning process:
    - A list of individual animals to be introduced, including all that the sanctuary ultimately hopes to integrate into a group.
    - Background of each individual, including but not limited to: age and gender; social experience with other bears; rearing history (hand-reared, parent reared, time spent with mother and siblings).
    - Physical location of animals during initial contact period;
    - Space and enclosures to be used for physical introduction, with reasons why the location is selected: neutral space, ample run around, visual barriers, doors that can be closed to protect animals in trouble etc.;
    - Set-up for physical introduction, enrichment etc.;
    - Emergency plan in place including necessary drugs and equipment that might be needed.
- As appropriate or needed, benchmarks or desired outcomes are identified for each step in the process. Examples include:
    - behavioral goals of the initial contact period;
    - benchmarks for proceeding to physical introduction;
    - time frame necessary to acclimate animals to presence of equipment;
    - criteria for separating animals if physical introduction does not proceed safely;
    - post introduction management and husbandry protocols.
- The plan is developed with involvement of all staff involved with care of the species and details a series of steps that will be taken to integrate the individual animals involved. Necessary modifications to enclosures are identified and completed prior to beginning the process.
- The plan establishes behavioral goals for introductions and is not driven by schedules, and is open to modification as introduction/integration develops and evolves.

W-4 Behavioral/Psychological Well-Being

The behavioral well-being of each animal is monitored and evaluated.

- A complete environmental enrichment program is provided pursuant to a written protocol and includes the following:
    - Structural enrichment: logs, ropes, swings, pools, climbing structures, and hammocks.
    - Object enrichment: tires, balls, barrels, tree stumps

- Food enrichment: food hidden in logs, hanging on ropes, scattering items for foraging, food puzzles.
- Scent enrichment: spices, perfumes, sprays
- Social enrichment: the decision to include social enrichment with caregivers should be made on an individual basis, considering only the social needs of the animal such as solitary animals, particularly those hand reared by humans with no conspecific contact; and neonatal and juvenile animals in situations where appropriate.

- All bear care staff are trained to recognize abnormal behavior and clinical signs of illness. Measures of well-being that are assessed include:
  - species appropriate behavior and interaction with other animals;
  - the animal's ability to respond appropriately to variable environmental conditions, physiological states, developmental stages, and social situations as well as adverse stimuli.
- Stereotypic behavior, self-injurious behavior, and inappropriate responses to various stimuli not previously documented or witnessed may be evidence of compromised well-being and are investigated. A welfare plan to address the concerns is developed and closely monitored for efficacy.
- Where possible and appropriate, a behavioral/psychological profile is maintained for each individual bear and updated annually and a copy is kept in the bear's permanent file.
- To the extent possible, avoiding set routines for the bears may minimize stereotypic behavior from occurring, especially from the anticipation of food.
- Enrichment items are removed when they become soiled, damaged or novelty has diminished.
- Imaginative presentation of enrichment foods in puzzle feeders, ice-blocks or papier-mâché piñatas will enhance enrichment and foraging value. Items may also be buried, hung from trees or climbing structures or smeared onto toys or browse.
- For bears housed solely indoors for any reason, more frequent enrichment sessions may be required and, at certain times of the year when bears are more active, the number of enrichment sessions in a day should be increased if possible.

W-5 Bear-Caregiver Relationships

Positive relationships between animals and caregivers are maintained.

General

- Facility design plays a key role in caregiver-bear safety and the ability to maintain a positive relationship.
- A positive relationship between the bears and regular caregivers, animal managers and veterinary staff is one in which the bears are given the freedom to integrate with their conspecific social group with minimal human interference or to interact regularly with caregivers if they choose.
- Care protocols should be designed and performed so bears do not become fearful or overly aggressive in response to human presence or routine care procedures.
- Physical abuse, deprivation of food or water, aversive spraying with a hose, and other forms of negative reinforcement or punishment-based training are never used to train, shift, or otherwise handle bears. Note: This does not preclude the use of hoses or other watering devices in caring for the bears who enjoy this form of enrichment.

W-6 Handling and Restraint

Any necessary handling and restraint is done safely and appropriately, with minimal distress to bears, and staff are trained in bear-specific safe handling techniques/practices.

General

- In general, manual capture and restraint of adult animals is not used on bears and is not attempted when multiple animals are present in an enclosure.
- With appropriate training, many procedures can be performed cooperatively and without anesthesia, such as examination of body parts, treatment of superficial injury, heart rate monitoring, injection administration, etc.
- Many bears can be conditioned to enter a squeeze cage or lockout area. Where this method of restraint is used, attachments for crates and squeeze cages are included in facility design or modifications.
- If physical restraint or drug delivery systems must be used, the lightest and least stressful methods that are appropriate are chosen, bearing in mind the safety of staff and animals.
- A written policy for the humane chemical restraint and safe capture of animals housed at the sanctuary is in place, to include:
    - Training and certification in the equipment, humane chemical restraint, immobilization process, and the use of drugs for veterinary purposes or emergencies;
    - Procedures listing at a minimum those persons authorized to administer animal drugs, situations in which they are to be utilized, location of sedative drugs in a safe and secure place, and those persons with access to them, and an emergency procedure in the event of accidental human exposure.
- All chemical restraint equipment is cleaned after each use, maintained in good working order and tested on a regular basis.
- Multiple staff members are trained to use restraint equipment (e.g., blowpipe, dart gun), and to employ safe capture techniques. The staff, and volunteers where appropriate, are aware of who is trained and authorized to use restraint equipment.
- As part of their training, staff members are instructed to report any medical conditions or physical limitations that may hinder their ability to employ safe capture techniques.

W-7 Animal Transport

Bears are appropriately transported to maximize safety and minimize stress and in accordance with all applicable laws.

General

- Bears are transported only when necessary, such as when being transported to the sanctuary, to a medical facility for care or to another accredited sanctuary or qualified facility for reasons as described in standard “ADR-2: Disposition”.
- Where possible and appropriate, bears are acclimated to the transportation crate prior to transport (e.g., keeping them in a transport cage for 10-15 minutes twice a day for several days before

transport). Capture, restraint, and transportation methods consider the bear's temperament and behavior in order to minimize injury, and distress.

- Where possible, transport containers:
    - have impervious surfaces, which are cleaned and disinfected after use.
    - are designed to permit safe transfer into a secondary enclosure.
    - are designed to allow appropriate ventilation and prevent overheating.
    - are designed to minimize the risk of the bears being able to make contact with personnel.
    - are placed within a secondary container or closed compartment on the transport vehicle.
    - depending on species and location, are placed in climate-controlled vehicles.
    - ideally have a feeding passage on the bottom side of the sliding door to facilitate en route feeding and watering.

- Ideally, non-tropical bear taxa are not moved long distances in summer, and tropical bear taxa, especially sun bears, are not moved long distances in winter.

BEARS BEING RELEASED TO THE WILD

GFAS supports the efforts of wildlife rehabilitators and sanctuary managers to return wildlife to its natural environment, provided appropriate steps are taken to ensure that the animals released are likely to survive in the wild and not come into conflict with humans.

Facilities releasing bears to the wild must also make every effort to reduce the risk of them having a damaging impact on ecological resources, including other animal species, found naturally in the release area. Examples of risk factors include but are not limited to:

- Displacement of indigenous animals;
- Transmission of novel pathogens and novel genetic material among populations;
- Disruption of local human communities, including damage to dwellings and injury to local inhabitants;
- Alterations to the environment that disrupt the ecological niche of other species.

For a more detailed discussion of the potential risks, as well as time and financial commitment involved in creating a quality reintroduction project, see the International Union for the Conservation of Nature Species Survival Commission (IUCN/SSC) Conservation Translocation Specialist Group's "Guidelines for Reintroductions and Other Conservation Translocations" (IUCN/SSC, 2013).

R-1 General Considerations

The sanctuary has policies, agreements and plans in place to optimize the chances for successful reintroduction of bears into the natural environment.

- Bears may only be released in current or former bear range; the bear should be indigenous to the release area.

- The facility has a written policy regarding the handling of any potential problems involving released animals. The policy should include but is not limited to:
    - a plan to minimize the risk to human life and property in the area of release;
    - a plan for management or removal of animals who fail to integrate appropriately or who become habitual 'problem animals.'
- In as much as possible, using the latest available information on potential health concerns regarding other species found in the area of release, bears are tested and treated for pathogens that might pose a threat to other wildlife.
- The facility has agreements in place with any and all appropriate authorities to allow the release process to proceed as smoothly as possible.
- Releases will not take place if they are contrary to a plan for the conservation of the species that has been developed or adopted by the relevant authorities.
- Cooperative agreements are in place prior to animals being released which may include, but are not limited to:
    - veterinary and scientific involvement in post-release monitoring (e.g., radio tracking of released bears);
    - community acceptance of the project and involvement in habitat protection and awareness raising;
    - landowner agreements enabling release, including the addressing of specific permissions and permits;
    - involvement of NGOs with similar or conflicting interests that may impact (positively or negatively) the project.

Preferred practices:

- Ideally, permissions, any necessary documentation, site determination, etc. begin as soon as it is determined that there are animals in care that are likely to be suitable for release.
    - In particular, facilities obtain any permits or other forms of authorization needed to proceed with the release.
    - Potential release sites are identified and evaluated as early in this process as possible.
    - A team of experts perform surveys to establish relevant topics including plant phenology, carrying capacity etc.
- Facilities that rescue and release bears should work on changes in law enforcement, human attitudes and behaviors toward bears, as improved management of human-bear coexistence is needed.

R-2 Evaluation of Suitability for Release

Bears admitted into sanctuary are evaluated for their potential suitability for release.

- All bears are treated as potential release candidates, particularly those who have not been kept long term in captivity. If bears admitted into sanctuary are determined to be potential release

candidates, every effort is made to protect them from exposure to human disease, as well as diseases carried by other wildlife, and to keep them as wild as possible.

- The sanctuary has a written protocol in place to evaluate potential release candidates and to determine which bears are given priority for potential release.
    - The protocol includes age-appropriate assessment points while monitoring a bear's behavior (e.g., a bear who has been in human care may need time to lose the habituation behavior, and a very young cub may suffer from separation anxiety and needs time to behave more 'normal').
    - Some animals can be released almost immediately after rescue once they have received care (e.g., small injury after a car accident). Where possible, they should be released near the area where they were rescued.
    - Overly human-focused individuals or those otherwise not behaviorally suited to survive in the wild should not be released.
    - Animals found to be free of diseases and/or parasites of potential concern to the health of the population, particularly in the intended release area, are given priority for potential release.
    - Animals rescued from, or believed to originate from, areas near intended release sites, are given priority for potential release to maximize the probability that a release candidate is familiar with the area and is genetically compatible with the existing bear population. Conversely, animals rescued from or originating far from intended release sites are given low priority for potential release.

R-3 Quarantine And Pre-Release Housing

The sanctuary has appropriate quarantine facilities and pre-release housing for bears, with consideration given to sick and injured bears.

(See also Standards H-1 to H-9, "Bear Housing," and V-4, "Quarantine and Isolation Care and Facilities")

General

- Non-quarantine housing for bears being considered for release provides as close to a natural setting as possible. The space allows for foraging, digging, climbing, nesting/denning, swimming and other actions naturally performed in the wild, while minimizing disease transmission risks.

- Quarantine facilities and prerelease housing for bears intended for release are situated a minimum of 66 ft. (20m), from resident bear populations to protect them from exposure to pathogens present in the sanctuary population that could compromise their return to the wild, giving consideration to factors such as wind direction and the flow of (waste) water. A wall surrounding the quarantine area reduces pathogen transfer risk and aids in restricting access to authorized personnel.
    - Where this is not possible, sanctuary residents are screened for potential pathogens of concern, and pathogen-free animals are housed closest to the animals intended for release to the wild.

Quarantine Housing

- Upon arrival, bears are quarantined for an adequate number of days, ideally for a minimum of 30 days. In some situations, a longer quarantine may be advisable.
    - The attending veterinarian works closely with regional, national and international experts and authorities to determine appropriate quarantine timing based on health risks to which the newly admitted bears may have been exposed.
- Bears are isolated until any potential health risks are evaluated.
- Sick or injured wildlife is quarantined in such a way that the rehabilitation process is begun during the quarantine phase.
- Quarantine facilities are designed to allow for monitoring and, as needed, modification of behavior of bears intended for release.
- Healthy bears admitted to quarantine have as large an enclosure as possible to help maintain natural locomotion and foraging behaviors.

Housing for Orphaned, Ill or Injured Bears

- Animals admitted requiring treatment for illness or injury are housed in enclosures that allow for ease of care. These initial care enclosures can be smaller than that which is acceptable for long-term care. Where possible and appropriate, sanctuaries follow National Wildlife Rehabilitators Association guidelines (Miller, E.A., 2012) or similar guidelines relevant to other countries/regions in dividing pre-release housing for injured bears into three types:
    - Restricted activity/mobility – for the initial stages of rehabilitation where the illness or injury requires the animal be treated and/or prevented from activities that would slow the rehabilitation process. At a minimum, the animal is able to maintain normal upright/alert posture and to stretch the body.
    - Limited activity/mobility – for the recovery stage of rehabilitation where the animal is regaining mobility and building strength, and staff does not need access to the animal on a daily basis. The animal is able to move short distances and perform some natural activities such as climbing.
    - Unlimited/Prerelease – the final stages of rehabilitation where the main concern is ensuring that the animal is fit for release. In this phase, the enclosure provides the bears with opportunities to demonstrate the skills necessary for survival in the wild (e.g., climbing, nesting, foraging, swimming).
- Orphaned bears are housed in nursery units, preferably with conspecifics, as species appropriate.
    - Where human caregivers must act as surrogates, they perform all duties in a manner that does not jeopardize the chances of the bear being suitable and fit for release.
    - As soon as the orphaned bears have been weaned of milk bottle feeding, they are moved to intermediate housing, where human contact is decreased and interaction with conspecifics, as species appropriate, is increased. Where possible, the animals are moved to the release site and cared for in a soft release enclosure.
    - In as much as possible, conspecifics are used to teach natural behaviors, as species appropriate. Where appropriate releasable conspecifics are not available, and where possible, safe, and appropriate, resident bears with strong natural skills who do not present a disease risk to the wild population, may be used to encourage the development of these behaviors.

Prerelease Housing for Bears

- Independent animals brought in for rehabilitation who can be released back into the environment from which they came are returned as soon as it is determined that the animal has recovered sufficiently to resume its presence in its former area.
- Consideration is given to social and territorial issues that may affect safe return to the original habitat.
- Prerelease housing for adult and independent subadult animals is ideally situated at the intended release site, allowing the animals to acclimate to their new environment before release.
- In both intermediate and pre-release housing, sufficient vertical as well as horizontal space is provided, as species appropriate, to allow the bears to develop strength and display normal wild behaviors.

R-4 Diet, Nutrition and Foraging Skills

Bears are fed an appropriate diet that approximates that which will be found in the habitat to which they are released, and foraging behavior is encouraged.

- As early in the rehabilitation process as possible, bears are exposed to the types of foods found naturally within the environment where they will be released and assessed for their ability to find appropriate foods and avoid inedible or poisonous foods.
- Release candidates are fed in such a way as to encourage natural foraging behaviors, and, dependent on species, facilitate gaining fat. Rescued bears admitted in poor physical condition may require specialized diets to recover their health, after which they are fed as many natural food items found in the release area as possible. Nutritional deficiencies are assessed and diets modified to address those deficiencies.

R-5 Husbandry and Health

All aspects of care, including caregiver-bear relationships, introduction to social groups and overall health evaluation, are focused on preparing bears for return to the wild.

- Once a bear has been evaluated as a potential release candidate, all aspects of care are focused on preparing the animal for the wild, and bears are managed in such a way as to optimize their chances for successful return to the natural environment.
    - Human activities and noises are minimized in areas housing bears being prepared for reintroduction.
    - Apart from dependent young with no suitable conspecific surrogates, human interaction with bears being prepared for release to the wild is restricted to those activities that will enhance the bears' ability to live in the wild.
- Bears are placed in an appropriate social group or paired with a compatible conspecific, depending on species. Where appropriate surrogate conspecifics are not available, dependent young may be reared by human caregivers using approved best practices for the species housed.

  - Care is taken to balance the need to nurture these young animals with their need to develop appropriate survival skills as well as intraspecific social behaviors. Care must be taken by the caregiver to allow the natural process of separation as the bear becomes more independent.
  - Bears are integrated into an appropriate social group, ideally composed of other conspecifics intended for release, as quickly as possible.
- Opportunities to explore, climb, dig, forage, wade in water, and learn skills in the natural environment are provided.
- Bears admitted into care from the wild at the stage where they are already independent, with recoverable illness or injury problems, are treated and released as quickly as possible, taking into account the potential for the animal not being accepted back into their previous social group.
- While young cubs will require a nurturing environment with conspecifics or caregivers for their psychological well-being, caregiver-bear relationships for animals intended for release to the wild, while ensuring the animals' psychological well-being is met, focus on:
  - avoiding any types of interaction that may compromise the bears' chances for release;
  - encouraging the bears to develop appropriate relationships with conspecifics for their social needs.
- A written veterinary protocol is in place to evaluate overall health including:
  - recovery from the initial cause for admission to the facility;
  - pathogen surveillance to ensure the animal does not present a risk to the wild population as a result of exposure during the rehabilitation process.
    - In as much as possible, using the latest available information from the OIE-World Organization for Animal Health (OIE, 2021) and the IUCN's Conservation Planning Specialist Group (http://www.cbsg.org), animals are monitored for human pathogens not found in the wild population.
  - See also Section "V" of the General Animal Care Standards and this Appendix.

R-6 <u>Assessment of Health and Skills</u>

Bears are fully assessed for health, behavior, and appropriate skills prior to release.

- Bears who have completed the rehabilitation process and have been successfully integrated into a social group or pair, as is species appropriate, are further evaluated for release, with attention to mental and physical health and all species-specific skills.
- Each animal's skills (e.g., foraging, nesting, appropriate interaction or avoidance behaviors in the presence of conspecifics, avoidance of dangers or predators, not actively seeking the company of human caregivers) are evaluated.
- A complete health assessment is performed including:
  - Overall fitness (including weight and size of bears) as relates to being able to survive in the wild, keep up with a conspecific group, avoid predators, etc.

    - Injuries and limitations that originally caused the animal to be brought into care are resolved, either completely, or to the extent that the bear has a reasonable chance for long-term survival based on the health assessment.

- Bears have been tested, and found free of pathogens that have potential to harm the wild population in the planned release area, based on the latest current knowledge. Appropriate vaccinations are considered and applied.

- Rescued bears should be released back to the region of origin if subpopulation / subspecies is known. Genetic assessment is done to ensure that the bears being released are of an appropriate subspecies/population/subpopulation for the release site if their origin is not known.

    - When the bear's origin is not known, but suspected to be at great distance from the intended release site, it is suggested that the individual not be considered a candidate for that release site.

- During a pre-release health examination, samples should be collected including hair, blood and other biological samples for individual identification. Where appropriate by species, a photo of the chest marking should be made as well (e.g. sun bears) Bears may also be marked in a way to allow for long term monitoring (e.g., implanted chips, ear tags).

- Bears are exposed to post-release monitoring equipment (e.g., radio-collar) prior to release to allow them to acclimate to its presence.

R-7 Determining Appropriate Release Sites

Release sites are evaluated for health and other threats and for appropriateness for the species.

- Governmental policy toward reintroductions and the taxon concerned must be assessed. This may include checking existing provincial, national, and international legislation and regulations, and working toward the provision of new measures and acquisition of required permits.

- The potential release site is evaluated for the presence of appropriate and adequate food and water sources

- The area is evaluated for potential health concerns.

- The potential release site is surveyed to ascertain whether any wild bears are present, either permanently or seasonally. See also Standard R-1.

- The area is evaluated for the threat of poaching.

- IUCN guidelines are, in as much as possible, followed when determining release sites for rehabilitated bears.

- The area is evaluated for instances of potential human-wildlife conflict (i.e., distance to homes and crop fields), and animals are released away from areas of known conflict.

- Bears are released in an appropriate habitat where carrying capacity has been considered.

    - An ecological survey should be executed, including assessment of the presence of indigenous fauna. The release area should be large enough or have suitable connectivity

to support a viable population without fragmentation (or meta-population management strategies are in place), with isolation from human populations.

- Release sites should have protected status, with active patrols focusing on illegal activities.
- Density of other bear populations should be assessed in regards to their competition for food and their potential capacity as vectors of anthropogenic infectious diseases.

R-8 The Release Process and Post Release Monitoring

Bears are supported as needed to adapt in their new environment and are monitored post release.

- The timing of the release should consider both the development/health of the animals and the seasonal food conditions (e.g., it may be better timing to wait for fruits to ripen in the release area).
    - For yearlings, it is advisable to maximize growth rates and reduce the length of time in captivity to increase survival rates and reduce the potential for human-bear conflicts in the first-year post-release.
- Collars used when the bear is released should have a break-away device/link, and for young bears, the collar should also have an expansion mechanism.
- A post-release monitoring program is in place to ensure the rehabilitation program is providing the animals with the skills necessary to survive, that the habitat is adequate and that, as is species appropriate, bears have integrated into the wild.
- Use of radio and satellite telemetry is recommended whenever possible and appropriate. Use of permanent marks for future identification of the animal should be considered as well (e.g., tag, microchip, lip and skin tattoo).
- As the first three months post-release are critical, monitoring should be continuous during this time.
- The level of monitoring may decrease over time as bears are determined to be acclimating to the environment, and there is a plan in place to intervene if monitoring is showing potential problems (e.g., poor condition, approaching human settlements, human-bear conflict etc.).
- Longer term monitoring of the animals and their impact on the habitat is preferred.
- Practices used and results obtained, both positive and negative, are shared both within the facility and with others involved in bear reintroduction to aid in the continued improvement of the program.

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