



WILDLIFE
REHABILITATORS'
NETWORK
Of British Columbia

MINIMUM STANDARDS FOR WILDLIFE REHABILITATION

For the Province of British Columbia



The Wildlife Rehabilitators' Network of British Columbia
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We are also grateful to Christina Carrières for bringing the AWRA document to our attention and for her generous assistance in adapting the standards to British Columbia.

This document is an abbreviated, BC-specific version of the NWRA/IWRC Minimum Standards for Wildlife Rehabilitation. The WRNBC recognizes the soundness of the practices set out in the NWRA/IWRC document, and encourages all British Columbia wildlife rehabilitators to strive for and adhere to these standards.

STATEMENT OF PURPOSE

British Columbia wildlife rehabilitators are dedicated to the rescue, rehabilitation and release of injured, ill or orphaned British Columbia wildlife. BC wildlife rehabilitators are also committed to public education to help prevent wildlife mistreatment, injury and conflict.

The objectives of this document are to establish professional standards for wildlife rehabilitation, and to encourage the development of improved wildlife rehabilitation programs which maximize the quality of care given to all wildlife in rehabilitation. Good judgment, common sense, materials at hand, and an understanding of the urgency of the situation and extent of the injury will help determine what can be done to assist an animal in distress. This document describes the **minimum** acceptable practices to strive for.

COMMITMENT TO ANIMAL WELFARE

In contrast to wildlife managers and biologists, who have traditionally emphasized the status of populations and species, wildlife rehabilitators are concerned about the welfare of individual animals. They care about easing an animal's suffering, facilitating its recovery and ultimately seeing the animal restored to its natural state. They believe wild animals have intrinsic value – not as mere members of a population or species, but in and of themselves.

Wildlife rehabilitators recognize that life in the wild is challenging. Upon release, wild animals will face – at the very least – predation, harsh weather, disease and competition for food. The role of a rehabilitator is to prepare wild animals for this life.

Wildlife rehabilitators cannot protect animals from the hardships of a wild life once they are released. While still in care, however, rehabilitators are responsible for an animal's wellbeing. Accordingly, wildlife rehabilitators must strive to ensure that the animals in their care experience:

- **Freedom from thirst, hunger and malnutrition** (by ready access to fresh water and a natural diet to maintain full health and fitness, and by appropriate assistance if unable to self-feed),
- **Freedom from discomfort** (by providing a suitable environment including, but not limited to, shelter and isolation from sight, sound or smell of predator species),
- **Freedom from pain, injury and disease** (by prevention or rapid diagnosis and treatment),
- **Freedom to express normal behaviour** (by providing sufficient space, proper facilities, enrichment and, if applicable, company of the animal's own kind), and
- **Freedom from fear and distress** (by ensuring conditions that avoid mental suffering).

These freedoms require consideration of an animal's physical, emotional and behavioural wellbeing. They are not absolute, and will vary – by individual, by species and by stage of the rehabilitation process. Most importantly, these freedoms should be continually evaluated in order to determine how well an animal is progressing, and to identify any deterioration in an animal's condition or any husbandry problems.

In striving to achieve these freedoms, wildlife rehabilitators can improve the welfare of the animals in their care, and contribute to the professionalism of the field.

COMMITMENT TO THE PUBLIC

Wildlife rehabilitators are often the first point of contact for members of the general public with questions or concerns regarding wildlife in need. Thus, rehabilitators have a unique responsibility to the public. By accepting wild animals into their care, wildlife rehabilitators also commit to:

- Educating the public about proper coexistence with wildlife,
- Preventing the spread of diseases and parasites, and
- Assisting the public in minimizing human impacts on wildlife.

PERMITTING REQUIREMENTS

All rehabilitation facilities require a valid wildlife rehabilitation permit issued by the appropriate federal or provincial governing body. In order to obtain a permit, the applicant must:

- Be an adult resident of BC,
- Have a wildlife rehabilitation facility plan approved by the Regional Manager of the Ministry of Forests, Lands and Natural Resource Operations (or his or her designate),
- Have proof of a formalized relationship with a licensed veterinarian who will provide all necessary medical care, and

- Provide proof that at least one staff member or volunteer has passed the Basic Wildlife Rehabilitation course offered by the International Wildlife Rehabilitation Council; has served as an intern rehabilitator; or has an acceptable level of training.

1. MINIMUM CARE REQUIREMENTS

Minimum care requirements are specifically designed to increase the chance of a successful release and to orient the wildlife rehabilitator to basic protocols.

1.1 Facilities

- 1.1.1 The animal receiving area must:
 - Be neat, sanitary and well organized,
 - Be designed so that resident patients are not subject to stress during the intake of new animals,
 - Have sound and activity levels minimized to reduce stress on animals,
 - Have written procedures available for receiving animals, and
 - Be secure against the escape of animals.
- 1.1.2 The rehabilitation facility must have evidence of daily, weekly and seasonal cleaning schedules for both the cages and the facility.
- 1.1.3 The rehabilitation facility must be in good repair and there must be evidence of a continuing program for upkeep.
- 1.1.4 A facility operations manual must be available for staff and volunteers. This manual must include:
 - Policies and procedures needed to assist and educate the public in:
 - a) Humanely preventing or reducing wildlife problems, conflict situations and injury,
 - b) Determining if animals in fact need to be rescued, and
 - c) Providing strategies and techniques to re-nest or reunite mother animals with temporarily displaced young,
 - Safe capture, restraint and transport techniques to minimize risk of injury to animals and to humans,
 - Policies and procedures for daily operation of the facility and caring for the wildlife,
 - Training materials, and
 - Information on the services provided by the rehabilitation facility.

1.2 Safety

- 1.2.1 Rehabilitation facilities must be familiar with the Workers Compensation Act, the Occupational Health and Safety Regulation and their associated guidelines (WorkSafeBC). The minimum safety items that must be available are:
 - A first aid kit,
 - A smoke and fire detector,
 - A fire extinguisher,
 - Material Safety Data Sheets (MSDSs) for controlled products, and
 - Personal Protective Equipment (PPE) for all staff and volunteers.

- 1.2.2 The people handling wildlife must be trained in safe handling procedures and know how to use the capture and handling equipment.
- 1.2.3 The capture, handling and restraint procedures must be safe for animals and for humans.
- 1.2.4 Capture and handling equipment must be accessible and in good working order.
- 1.2.5 Each rehabilitation facility must provide a designated area(s) away from animal care areas in which staff and volunteers can eat, drink, etc., and all such activities must be restricted to that (those) area(s).

1.3 Training

- 1.3.1 At least one person at each rehabilitation facility must provide proof that:
 - They have passed the Basic Wildlife Rehabilitation course offered by the International Wildlife Rehabilitation Council,
 - They have worked as an intern rehabilitator under the auspices of a permitted rehabilitator for a period of at least 100 days over a two-year period, or
 - They have an acceptable level of training for the species they will be responsible for under their own permit.
- 1.3.2 Each facility must have a training program for staff and volunteers which includes:
 - Safe capture and handling of the wildlife,
 - Procedures for receiving animals,
 - Record keeping,
 - Cleaning procedures and schedules,
 - Incident reporting (for first aid/accidents/health problems), and
 - Ongoing training through continuing education programs and workshops offered by the International Wildlife Rehabilitation Council, National Wildlife Rehabilitators Association and Wildlife Rehabilitators' Network of BC.

1.4 Recording and Reporting

- 1.4.1 Each patient must be tracked from admission to a rehabilitation facility until its final disposition. This information must include:
 - Presenter information (name, address, telephone number),
 - Date and location animal was found,
 - Any history regarding cause of, severity of and/or time of injury or problem, and any care given by the presenter (in suspected poisoning cases, any additional information describing the site where the animal was found, weather conditions, other species present), etc.,
 - Treatment information and efficacy,
 - Data regarding surgery, clinical pathology, necropsy and histopathology (where applicable),
 - Weight (if known; if unknown, an estimate should be given),

- Age and sex (if ascertainable), and
- Final disposition outcome:
 - DOA – Dead On Arrival
 - EOA – Euthanized On Arrival
 - DWD – Died Within Day (within 24 hours)
 - DIC – Died In Care (after 24 hours)
 - EIC – Euthanized In Care
 - PIC – Predation In Care
 - HE – Human Error
 - R – Released
 - RI – Re-introduced
 - S – Escaped
 - T – Transferred
 - PHC – Permanently Held Captive

1.4.2 Reporting and recording requirements of the Ministry of Forests, Lands and Natural Resource Operations are:

1.4.2.1 Current on-premise records including:

- The common name of the wildlife,
- The location where the animal was obtained,
- The date the wildlife was received,
- The sex, maturity and physical condition of the wildlife on receipt,
- The bands or tags on the wildlife,
- The number of the permit under which the wildlife is held,
- The date and manner in which care of the wildlife was terminated, and
- Whichever of the following applies:
 - a) If the wildlife died, the circumstance of death (i.e. dead on arrival/died in care/euthanized on arrival/euthanized in care, etc.),
 - b) If the wildlife was released, the specific location of release,
 - c) If the wildlife was transferred, the transfer destination, or
 - d) If the wildlife is permanently held captive, the location of the holding facility.

1.4.2.2 An annual report at the time of application for permit renewal summarizing:

- The total number of each species received, and
- The overall disposition for each species received.

1.4.2.3 When transferring out of the rehabilitation system and into permanent captivity, documentation of the transfer must be retained.

1.4.3 Records should be kept for a minimum of 6 years after an animal's final disposition, as per the Code of Ethics of the College of Veterinarians of British Columbia.

1.5 Transportation

Rehabilitators may transport sick, injured or orphaned wildlife for rehabilitation purposes in accordance with the wildlife rehabilitation permit.

- 1.5.1 Shipping crates or cages must be an appropriate size so they are comfortable yet restrict unnecessary movement, thus preventing injury to the animal.
- 1.5.2 Floor area and/or perches must be provided with a covering that will prevent the animal from slipping during transport.
- 1.5.3 Proper ventilation must be provided to minimize thermal stress.
- 1.5.4 Food and water containers, perches or any other loose items must be removed from, or secured to, the crate or cage while the animal is being transported.
- 1.5.5 Crates or cages should be covered with a sheet or other light blanket to minimize visual stress.

1.6 Feeding

- 1.6.1 On a daily basis, animals must be fed a fresh species-appropriate diet and be provided with fresh potable water.
- 1.6.2 Adequate food supplies must be available.
- 1.6.3 Food must be prepared and stored under sanitary conditions and perishable prepared food must be dated. Meat, poultry, fish and shellfish should be kept for a maximum of 3 to 5 days after thawing. Frozen food should be kept for a maximum of 2 to 3 years.
- 1.6.4 Food must be presented in such a manner as to encourage proper foraging behaviour for each species.

1.7 Medical Care

- 1.7.1 There must exist a clear veterinarian-rehabilitator-wildlife patient relationship which abides by the laws and regulations governing the practice of veterinary medicine.
- 1.7.2 Adequate medical supplies must be available and include, but are not limited to:
 - Bandages, dressings, etc.,
 - Supplementary heat sources, and
 - An accurate scale.
- 1.7.3 Medications must be available from a veterinarian or kept on-site. If medications are kept on-site, appropriate formularies, dosages and protocols must be administered under the direction of a licensed veterinarian.
- 1.7.4 Pathology services must be available, as needed, at a veterinary clinic/hospital, laboratory or on-site.
- 1.7.5 Radiology services must be available, as needed, at a veterinary clinic/hospital or on-site. If radiology is maintained on-site, all equipment and procedures must follow provincial safety regulations.

- 1.7.6 Surgery must be available, as needed, at a veterinary clinic/hospital or on-site. If surgery is performed on-site, the following conditions apply:
- Must be performed by a licensed veterinarian or under the direction of a licensed veterinarian,
 - Personnel must be appropriately trained for the procedure,
 - The area must be made aseptic,
 - Surgical and anaesthetic equipment must be maintained in good working order,
 - Resuscitative equipment must be available, and
 - If gas anaesthesia is used, the area must be well ventilated in accordance with WorkSafeBC.

2. DISEASE CONTROL

Facility cleanliness is an integral part of disease prevention and containment. Proper cleaning agents (virucidals, fungicidals and bactericidals) combined with a sensible cleaning schedule will reduce the spread of disease within the facility.

2.1 Control of Diseases Transmissible from Animal to Human (Zoonoses)

- 2.1.1 Clothing must be clean and changed as often as necessary (lab coats or surgical scrubs are suggested).
- 2.1.2 Shoes and boots must be kept clean of fecal matter, dirt and cage litter.
- 2.1.3 Disposable gloves and surgical masks must be available for use during such procedures as necropsies or cleaning contaminated animal quarters.
- 2.1.4 Laboratory facilities must be accessible with hand-washing sinks, suitable liquid washing agents in pump bottles (not soap bars) and disposable drying articles (no cloth towels).
- 2.1.5 Eating and drinking must be restricted to designated areas free of animal waste.
- 2.1.6 All staff and volunteers must be given basic information on zoonoses and other transmissible diseases, including procedures to protect themselves from transmission.
- 2.1.7 All staff and volunteers who may be pregnant or immunocompromised must be advised to seek the consent of their physicians before working in the facility.
- 2.1.8 All staff and volunteers must acquire any necessary vaccinations (e.g. tetanus, rabies).
- 2.1.9 There must be separate refrigeration facilities for:
 - Animal food,
 - Human food,
 - Animal carcasses and specimens (fecal samples, tissue samples, blood samples, etc.), and
 - Medications.

2.2 Control of Disease Transmission from Animal to Animal

- 2.2.1 Animals must not be able to come into contact with excessive or unreasonable amounts of fecal matter or discarded food materials.
- 2.2.2 Animal enclosures must be kept reasonably sanitary by having an adequate and routine cleaning regimen.
- 2.2.3 Indoor facilities must have efficient ventilation and air movement with minimal recycled or reused air.
- 2.2.4 Animals confirmed or suspected of having contagious diseases must be kept isolated from all non-infected, susceptible animals.
- 2.2.5 An examination for external parasites must be performed on intake and an examination for internal parasites performed when appropriate and before placement with new cage mates.
- 2.2.6 Bowls, feeding utensils, medical equipment, linens used for handling animals and for animal bedding, and plastic/rubber gloves worn while handling wildlife must be cleaned/replaced daily and disinfected between use on different animals. If disinfection is not possible, items should be properly disposed of.
- 2.2.7 Animal diets must be prepared under sanitary conditions, minimizing the threat of microbial contamination, and foodstuffs must be stored in containers/areas free from all possible contaminants.
- 2.2.8 Instruments used on animals must be sterilized using a cold sterile solution or an autoclave after use.

2.3 Public Health Responsibilities

- 2.3.1 All organic refuse must be collected into airtight bags or containers and stored in a secure, animal-proof location until removed from the premises.
- 2.3.2 Domestic animals must not be allowed in areas of the facility where wildlife is housed as they may cause stress, habituation or a disease concern.
- 2.3.3 There must be a program for rodent and insect control in place; however, if pesticides are used, care must be taken to avoid contaminating both human and animal food and housing areas. Non-lethal methods of control (e.g. exclusion) are preferred over lethal methods.
- 2.3.4 Waste must be properly disposed of in accordance with all government regulations, including the collection of all used sharp objects in a properly labeled sharps container.

3. HOUSING REQUIREMENTS

It is very important that all wildlife rehabilitators are cognizant of the fundamental objective of wildlife rehabilitation – successful reintroduction of animals into the wild community. To be successful in reaching this basic goal, rehabilitators must ensure that animals preparing for release are healthy, fit and have the life skills they will need to survive. Proper caging will help to ensure this result.

3.1 General Caging Requirements

- 3.1.1 Wildlife must be provided with cages that are of appropriate size, protect the animal from injury, abuse or harassment, and which contain furnishings appropriate to the stage of rehabilitation, age and species being treated. These requirements are outlined in chapters 3, 4, 5 and 6 of the NWRA/IWRC Minimum Standards for Wildlife Rehabilitation.
- 3.1.2 Cages must be strong and of construction materials that can be cleaned and disinfected.
- 3.1.3 The cages must be maintained in good repair.
- 3.1.4 Cages must be predator-proof.
- 3.1.5 Cages must be escape-proof.
- 3.1.6 Cages must provide sufficient air flow and shelter from the sun, wind, excessive rain, snow or cold temperatures.
- 3.1.7 Animals must be provided with ample room to move about freely – to exercise (fly/swim), socialize, cache food or search for food, and perform other normal behaviours – unless restrained for medical reasons.
- 3.1.8 Facilities must have an adequate supply of potable water.

3.2 Indoor Caging

- 3.2.1 All indoor cages must be clean and sanitary.
- 3.2.2 To minimize stress, indoor caging must be located in an area that is quiet and has minimal visual stimuli.
- 3.2.3 Indoor caging must have visual screening from people and have adequate separation for prey and predator species.
- 3.2.4 Indoor caging must have reasonable natural sunlight and/or daylight exposure, or where natural light is not possible, have a combination of artificial UVB, UVA, visible light and/or infrared lighting with a time regime appropriate to the season and species, unless a specific molt-advancing light program is applied.
- 3.2.5 Indoor cages must be appropriately ventilated to allow air movement.
- 3.2.6 Indoor cages must have containers for clean water and appropriate food.
- 3.2.7 Substrates must consist of appropriate materials that can be regularly cleaned or changed.

3.3 Outdoor Caging

- 3.3.1 Outdoor cages must provide opportunities for exercise, behavioural rehabilitation and acclimatization to weather conditions.
- 3.3.2 Entrances to outdoor cages must have a double-door system.
- 3.3.3 To ensure the safety of staff and volunteers entering outdoor cages and to prevent animals from escaping, inner entrances to large cages must have no visual barriers.

- 3.3.4 Outdoor cages must have adequate shelter from adverse weather conditions, be safe for animals and humans, and provide species-specific habitat.
- 3.3.5 Outdoor cages must be predator-proof.
- 3.3.6 Outdoor cages must be escape-proof.
- 3.3.7 Outdoor cages must have proper substrates and furnishings appropriate for each species.
- 3.3.8 Outdoor cages must have fresh water for drinking and bathing.
- 3.3.9 Outdoor cages must provide visual barriers or hiding places that screen animals from human disturbance and/or viewing.

3.4 Caging for Over-Wintering Animals

- 3.4.1 When over-wintering animals that do not normally winter in British Columbia, an indoor heated facility or appropriate heated shelter in outdoor cages must be provided.
- 3.4.2 Species that normally winter in British Columbia can remain outside but must be provided protection from the elements such as high wind and precipitation.
- 3.4.3 There must be enough space and appropriate habitats/substrates/materials for denning, or other escape from exposure.
- 3.4.4 Animals must be provided with items for enrichment and behavioural stimulation.

4. AVIAN HOUSING REQUIREMENTS

Understanding the natural history of any species in rehabilitation is necessary when considering caging arrangements. Cage materials and dimensions are based on species requirements. See chapter 4 of the NWRA/IWRC Minimum Standards for Wildlife Rehabilitation for specific caging information.

4.1 General Avian Housing Requirements

- 4.1.1 Aviaries must have a double-door entry system.
- 4.1.2 The flooring substrates must be dry and clean, provide appropriate footing and be appropriate for the species and its condition.
- 4.1.3 Aviaries must have drinking/bath pans or pools, provided that the medical condition of the occupant does not prohibit them from getting wet.
- 4.1.4 There must be a minimum of 2 perches customized to the appropriate size and material for the species. The perches must be placed at varying heights to encourage activity and allow for the strengthening of wings and feet. Larger cages should have more.
- 4.1.5 For cavity nesters, a sheltered area and a roost/nest box must be provided.

4.2 Songbirds and Miscellaneous Avian Orders

The songbird (passerine or perching) group of birds includes a large number of individual species with wide ranges in size, behaviour, habitat, foraging techniques, food items and subsequent rehabilitation requirements. See chapter 4, section 2 of the NWRA/IWRC Minimum Standards for Wildlife Rehabilitation for specific caging information.

- 4.2.1 Cages must be constructed of materials and have furnishings that prevent or minimize feather damage.
- 4.2.2 Cages must have floors composed of, or covered with, appropriate substances to prevent slipping (splay leg) and/or bumblefoot.
- 4.2.3 Cages must be appropriately furnished to help reduce stress and provide the birds with natural shading, perching, hiding and foraging opportunities.

4.3 Waterbirds

Most waterbirds spend the majority of their time in or near large bodies of water and are conditioned to seeing open sky overhead. See chapter 4, section 3 of the NWRA/IWRC Minimum Standards for Wildlife Rehabilitation for specific caging information.

- 4.3.1 Net-bottomed cages must be used for any species kept off water and unable to stand, whether due to natural history, injury or weakness.
- 4.3.2 The outdoor cage must allow for a clear view of the sky (e.g. roof made of netting).
- 4.3.3 There must be a pool in the outdoor (unlimited activity) cage that is appropriate for the animal's age, species and condition. The natural feeding, drinking and bathing behaviour of each species must be considered in the design of the pool.
- 4.3.4 Good water quality in pools must be maintained using a filtration system or frequent water changes.

4.4 Raptors

Sizing for raptor housing is based on a combination of the size and flight style of the bird. See chapter 4, section 4 of the NWRA/IWRC Minimum Standards for Wildlife Rehabilitation for specific caging information.

- 4.4.1 Walls and roofs of cages must be constructed of rods (wooden dowels, metal conduit), soft netting, heavy plastic netting, welded wire or solid material. If using rods, they must be vertical on the walls. Chicken wire must not be used in raptor caging except for predator protection as a second wall outside of vertical rods, netting or welded wire. Caution must be used with welded wire and netting as some individuals or species in some local settings may fly onto it, hang on and damage their flight feathers. Good quality hessian (sacking) on the inside of welded wire is an acceptable means for preventing such feather damage.

- 4.4.2 Floor covering must consist of material that does not damage feet or promote dust or fungus. Acceptable floor coverings are natural vegetated soil, washed sand, pea gravel or rubber matting. Unacceptable floor materials are wood chips, hay, straw or concrete.
- 4.4.3 Cages other than restricted activity cages must have at least 2 perches at different heights. All non-flighted raptors and all flighted medium and large raptors must have only padded perches (e.g. non-looped carpeting, AstroTurf™, rope, bungee cord). Non-flighted raptors must have ramps allowing access to water, food and security perches.
- 4.4.4 Additional conditioning or condition-testing methods must be used prior to release of rehabilitated raptors. These include, but are not limited to: hacking, forced exercise or falconry. Choice of conditioning depends on the natural history of the species, their age and/or their injuries. A rehabilitator's resources will also play a part in conditioning considerations.
- 4.4.5 Live testing should be used when appropriate (e.g. eye injury, head injury, young age). Live testing should not be used as a means of enrichment.

5. MAMMAL HOUSING REQUIREMENTS

General guides for mammal housing are difficult to define due to the variation in size, temperament and life history of mammals. Refer to the natural history of specific species for appropriate habitat requirements. See chapter 5 of the NWRA/IWRC Minimum Standards for Wildlife Rehabilitation for specific caging information.

Where possible and feasible, infant mammals should be fostered to a wild, nursing female. Otherwise, they should be raised in the rehabilitation facility with minimal contact with people prior to release.

5.1 Bats

- 5.1.1 As bats can escape through a crack greater than ¼", the cage must be well sealed.
- 5.1.2 Cages for crevice-dwelling bats must have an appropriate roosting spot made of soft, snag-resistant fabric, wire mesh or rough wood.
- 5.1.3 Cages for foliage-roosting bats must have a frame covered with soft, lightweight plastic mesh with natural foliage or small branches with silk leaves against the ceiling of the cage.
- 5.1.4 Temperature and humidity must be appropriate for the season and species. Drafts must be avoided.

Captive Management Procedures

- 5.1.5 Staff or volunteers must wear protective gear while handling bats due to the risk of rabies.

- 5.1.6 Staff or volunteers must receive their complete series of rabies vaccinations prior to handling a bat.
- 5.1.7 The rehabilitator must determine if the presenter, their pets or any other member of the public has come in direct skin-on-bat contact and report such incidents.
- 5.1.8 Foliage-roosting bats should be housed alone. Crevice-dwelling bats can be housed together following a 14-day quarantine period.
- 5.1.9 Bats that die of unexplained causes while in care must be sent for rabies testing.

Release Procedures

- 5.1.10 Bats must be released in appropriate habitat within the distance dictated by individual permits.

5.2 Rodents

- 5.2.1 Species-appropriate materials are required for gnawing in order to prevent tooth overgrowth.
- 5.2.2 Cages must be constructed of a material that is chew resistant in areas that are accessible to the animals (e.g. concrete, stone, tile, heavy wire).

5.3 Opossums

- 5.3.1 Objects to promote climbing (e.g. branches, logs) must be provided and placed at various heights.
- 5.3.2 If exercise wheels are used to keep young opossums active, plastic is preferred to wire (unless a transmissible disease is suspected), as tails and feet can easily catch in the spaces between the wires and be injured.

5.4 Raccoons

Note that currently, raccoons do not carry rabies in British Columbia.

- 5.4.1 Cages must be made of welded wire with a solid floor.
- 5.4.2 Cages must be escape-proof with a double-door entry system.
- 5.4.3 Cages must have a hammock of 1" wire or plastic mesh and a den box suspended from the roof or attached to the wall of the open pen to provide sleeping areas.
- 5.4.4 Cages must have tree limbs and logs to promote climbing.
- 5.4.5 Cages must have a pool or water container appropriate to the size of the animal for bathing and food handling which can be easily emptied, cleaned and refilled.
- 5.4.6 Contact between different groups in care must be prevented and contact with the wild population must be prevented, if possible.

Captive Management Procedures

- 5.4.7 Staff or volunteers must wear protective gloves and outer clothing (smock and rubber boots) while handling raccoons to decrease the risk of contracting and/or spreading the *Baylisascaris procyonis* roundworm and other diseases within the facility.
- 5.4.8 Each raccoon must be treated for *Baylisascaris* on arrival and kept on a strict deworming program while at the facility.
- 5.4.9 Raccoons must not be housed together unless they are from the same litter or are introduced as kits.
- 5.4.10 Everything raccoon-related (dishes, outer clothing, restraining gear, footwear, cage furniture, etc.) must be dedicated for raccoons and must not be used for any other animal.
- 5.4.11 Dishes used for food and water must be sanitized and refilled in the raccoon area to prevent cross-contamination of non-raccoon dishes.
- 5.4.12 Cages must:
 - a) Be used for raccoons only AND
 - b) Be flamed or chemically disinfected between raccoon groups.
- 5.4.13 A footbath made of a 10 % bleach solution or other appropriate sanitizer must be placed at the entrance of every raccoon cage and used with each passage. It is recommended that the bleach solution be replaced at least twice daily or according to manufacturer specifications for other sanitizers.
- 5.4.14 Clothing, towels, etc. used with raccoons must be laundered in a raccoon-only washing machine and dryer, or properly disposed of.
- 5.4.15 Feces must be collected and disposed of in a manner that will not contaminate the facility.

Release Procedures

- 5.4.16 Raccoons must be released in suitable habitat, within the distance dictated by individual permits.

5.5 Mustelids (Badgers, Weasels, Skunks, Mink, Wolverines, Martens, Fishers)

Note that currently, skunks do not carry rabies in British Columbia.

Indoor Caging

- 5.5.1 Cages for infants must be free from drafts and temperature variations.
- 5.5.2 A container of earth must be provided for digging.
- 5.5.3 A portion of the cage must provide a suitable substrate for defecation.
- 5.5.4 A hiding area must be provided.

Outdoor Caging

- 5.5.5 Cages must be made of welded mesh or chain link.
- 5.5.6 Fenced cages must have smooth overhangs or be roofed to prevent escape.
- 5.5.7 Cages must have varied terrain, piles of earth, logs or rock.
- 5.5.8 Perimeter fencing must be constructed in a manner that will prevent the animal from digging out.
- 5.5.9 Cages must have a den or hiding area.

Captive Management Procedures for Skunks

- 5.5.10 Skunks must not be housed together unless they are from the same litter or are introduced as kits.

Release Procedures for Skunks

- 5.5.11 Skunks must be released in suitable habitat, within the distance dictated by individual permits.

5.6 Cats (Bobcats, Lynx)

Note that currently, cats require special rehabilitation facility plan approval.

Indoor Caging

- 5.6.1 Climbing materials such as large branches and logs (some of which should be hollow) must be provided.
- 5.6.2 Platforms for resting on must be provided and be placed high above the cage floor.
- 5.6.3 The indoor cage must give access to a second smaller enclosed "treatment" area, the door of which can be operated from outside the indoor cage.

Outdoor Caging

- 5.6.4 Outdoor cages must be well treed with a natural or artificial cave-like shelter.
- 5.6.5 For enclosures without a roof, a 4' overhang to the inside is required to prevent cats from climbing out or other animals from climbing in, and have no climbable structure within 20' of the cage's perimeter. Electrified wire is strongly recommended.
- 5.6.6 There must be an indestructible tub for bathing.
- 5.6.7 The cage must have visual barriers around it so that the enclosed cats cannot see people.

5.7 Semi-aquatic Mammals (Muskrats, Beavers)

- 5.7.1 Cages must be constructed of a material that is chew resistant in areas that are accessible to the animals (e.g. chain link, concrete, stone, tile, brick).
- 5.7.2 Indoor caging must have an indestructible tub large enough to enable the animal to submerge and swim (a minimum 2' depth is suggested) and that can be easily cleaned.
- 5.7.3 Food and water containers must be made of chew-resistant material.
- 5.7.4 Digging material to a depth of at least 1' must be provided.
- 5.7.5 Large amounts of natural, species-appropriate browse should be provided daily until the animals are released.
- 5.7.6 Cages must have a nesting box of suitable size and material appropriate for the species.

5.8 River Otters

- 5.8.1 Indoor caging must have shelter, dry land and water available.
- 5.8.2 Outdoor caging must have water containers large enough to enable the animal to submerge and swim (a minimum 2' depth is suggested).
- 5.8.3 Containers must be of metal, concrete or fibreglass.
- 5.8.4 The cage must have blankets or a suitable substrate on which the animal may dry.
- 5.8.5 The cage must have a nesting box of suitable size and material.

5.9 Foxes and Coyotes

Indoor Caging

- 5.9.1 A container of earth must be provided for digging.
- 5.9.2 A portion of the cage must provide a suitable substrate for defecation.
- 5.9.3 A crate in which to hide, lined with bedding material, must be provided.

Outdoor Caging

- 5.9.4 Cages must have hiding and play structures or terrain features.
- 5.9.5 Perimeter fencing must be constructed in a manner that will prevent the animal from digging out.

Release Procedures

- 5.9.6 Coyotes and foxes must be released according to individual permits. Written permission must be obtained from the land owner before the coyotes or foxes are released on private land.

5.10 Lagomorphs (Rabbits, Hares, Pikas)

- 5.10.1 The cage must be constructed of a material that is chew resistant in areas that are accessible to the animals (e.g. heavy wire, concrete, stone, tile, brick).
- 5.10.2 All cages must have a sight barrier up to at least the height of the adult animal's ears (24") lining the perimeter to prevent the animal from colliding with the walls of the cage.
- 5.10.3 Indoor housing must also be screened from human disturbance as a means of reducing stress.
- 5.10.4 Shelter must be provided within the cage to allow the animals to hide.
- 5.10.5 There must not be any protruding objects along the interior surface of the cage walls as these animals will usually run the perimeter of their cage.

5.11 Ungulates

All young ungulates must be raised with minimum human contact to avoid habituation or imprinting to humans.

Outdoor Caging

- 5.11.1 Ungulates over one month of age must be raised in secluded enclosures that contain natural vegetation, with trees and/or visual barriers so they cannot see people.
- 5.11.2 Elk and moose calves must have trees in their cages.
- 5.11.3 Cages for mountain sheep must have a rock or concrete hills to wear their hooves down.

Captive Management Procedures

- 5.11.4 Ungulates under one month of age may be kept inside in barn-like conditions. Under two months of age, they may be kept in barn-like conditions with access to the outdoors during the day.
- 5.11.5 Every effort must be made to raise a fawn with others of its species, and not raised and released alone.
- 5.11.6 Fresh browse must be provided daily and ideally presented off ground using fence or tree ties.

Release Procedures

- 5.11.7 Ideally, facility-reared fawns should be released from a remote enclosure that allows for a gradual release into an immediately adjacent, appropriate deer foraging habitat.
- 5.11.8 Release sites must be approved by the local Conservation Officer and must not support conflict with the public.

5.12 Bears

Note that currently, bears require special rehabilitation facility plan approval.

All bears must be raised with minimum human contact to avoid habituation. Every effort should be made to allow cubs to socialize with other cubs while in rehabilitation to facilitate normal development and behaviour. Larger enclosures containing natural vegetation and habitat enrichment likely decrease the probability that bears will develop stereotypic behaviours and increase their chances of successfully adapting to life in the wild.

- 5.12.1 The number of bear caretakers must be kept to a minimum.
- 5.12.2 Feeding and care interactions with the bears must be limited, especially after weaning.
- 5.12.3 Bears must not be released in areas where there is a high probability they will become involved in conflict situations with humans.

Outdoor Caging

- 5.12.4 The enclosures must contain large, sturdy climbing structures such as trees or heavy logs.
- 5.12.5 For enclosures without a roof, 4' of metal sheeting at the top or a 4' overhang to the inside are required to prevent bears from climbing out or other animals from climbing in. Electrified wire is suggested.
- 5.12.6 The enclosures must prevent bears from digging out. Buried wire is suggested.
- 5.12.7 Entrances to outdoor cages must have a double-door system.
- 5.12.8 There must be items such as logs, tires and rocks for the bears to explore.
- 5.12.9 There must be an indestructible tub for bathing.
- 5.12.10 The rehabilitator must have the ability to isolate bears for medical or observation purposes. A gate that closes off a section of the enclosure and can be operated by the rehabilitator from outside the enclosure is suggested.
- 5.12.11 The enclosures must be located in an area of the facility with minimal foot traffic or have visual barriers around them so that the bears cannot see people.
- 5.12.12 Flooring substrate should be natural (dirt and grass) in order to avoid damage to foot pads.
- 5.12.13 During a bear's hibernation period, disturbance around its enclosure must be minimized.

Release Procedures

- 5.12.14 The release site must be within the geographical range of the orphaned cub, and approved by the Ministry of Forests, Lands and Natural Resource Operations.
- 5.12.15 Ideally, bears should be released in areas (and at times of the year) where it is

unlikely they will encounter people during the first two weeks after their release.

- 5.12.16 A Ministry representative may observe the bear prior to release and has the right to first refusal if the bear seems inappropriately familiar with people. If the release is refused, the bear must either be euthanized or placed in permanent captivity.
- 5.12.17 The sedation of the bear for transportation to the release site must be done under the supervision of a licensed veterinarian.
- 5.12.18 Bears must be thoroughly examined and tested for disease and parasitic infestation by a veterinarian prior to release.
- 5.12.19 Bears must carry a Ministry of Forests, Lands and Natural Resource Operations ear tag and be registered with the government for identification purposes. Other forms of identification, such as a tattoo, may also be used.
- 5.12.20 Ideally, a monitoring device should be affixed to the bear prior to release, and the bear should be tracked to determine post-release success.
- 5.12.21 Bear releases must occur in areas with adequate natural food resources.
- 5.12.22 The release team must be aware of potential attractants in the release area that could result in high mortality rates from human-bear conflicts.

6. REPTILE AND AMPHIBIAN HOUSING REQUIREMENTS

The natural history of each species will help to determine their preferences for microhabitat, thereby influencing housing practices. The rehabilitator must provide adequate space and furnishing for the animal to move, hunt, hide or bask, depending on the needs of the species. See chapter 6 of the NWRA/IWRC Minimum Standards for Wildlife Rehabilitation for specific caging information.

- 6.1 Fresh water must be available at all times.
- 6.2 Water dishes must be kept clean and disinfected.
- 6.3 Those species that require water must be provided with water dishes large enough in which to submerge and with ramps to exit the water.
- 6.4 Animals must be provided with heat, humidity and light similar to their natural habitat.
- 6.5 Cages must be free of rough surfaces on the interior walls and roof that may cause injury to the animal, and include appropriate substrate or objects to aid in shedding.
- 6.6 Cages of see-through or mirrored material must have a visual barrier at eye level to prevent repeated rubbing or bumping, causing bruising, wounds and/or fractures.

7. FINAL DISPOSITION

Once an animal enters rehabilitation, it is faced with one of five fates: death from its injuries, successful rehabilitation and release, permanent confinement as an education or display animal, euthanasia or unpredictable events.

7.1 Release

Releases must be carried out according to the terms of the rehabilitation permit. Release location depends on whether an animal is native to the area or not. It is advisable to avoid releasing an animal during an active hunting season, or if unavoidable, within an established hunting and trapping territory.

- 7.1.1 Exotic species and animals that are far outside of their normal range (legitimate “accidental” and “vagrants”, and possible “truck- or train-hoppers”) must not be released outside of their normal range. Contact the governing body for the species (i.e. Ministry of Forests, Lands and Natural Resource Operations, Canadian Wildlife Service, or Department of Fisheries and Oceans) to determine a suitable release site.
- 7.1.2 When possible, a rehabilitated adult animal must be released within the animal’s original home range.
- 7.1.3 Animals must be released:
 - Into suitable habitat containing adequate food and water supply,
 - During mild weather,
 - At an appropriate season,
 - At an appropriate time of day, and
 - Within the parameters of local, provincial and federal regulations and laws.
- 7.1.4 The facility’s senior rehabilitator or their veterinarian must ensure that the patient is healthy and ready for release.
- 7.1.5 The animal must exhibit full recovery from the injuries incurred.
- 7.1.6 The animal must no longer be in need of medical care.
- 7.1.7 The animal must exhibit no signs of active disease, including parasites.
- 7.1.8 The animal must have normal laboratory values, if tested.
- 7.1.9 The animal must possess pelage or waterproof plumage that is adequate for that species to survive.
- 7.1.10 The animal must possess adequate vision to find/catch food and maneuver in a normal manner.
- 7.1.11 The animal must possess adequate skills to find and catch food.
- 7.1.12 The animal must exhibit locomotive skills necessary for that species to survive, including sufficient stamina.
- 7.1.13 The animal must demonstrate appropriate fight or flight response.
- 7.1.14 The animal must demonstrate proper foraging behaviour (self-feeding if raised in captivity).
- 7.1.15 The animal must demonstrate proper species behaviour.

- 7.1.16 The animal must be old enough for independent survival unless fostered into the wild.
- 7.1.17 The animal must be within 10 % of the correct weight for that sex, species, age and season during which it is to be released.
- 7.1.18 The animal must have been acclimatized to the conditions into which it will be released.

7.2 Permanent Non-Releasable Animals

Primary consideration throughout the treatment of each animal must be the quality of life of the patient. Decisions should not be based on emotional or sentimental factors. In some cases, permanent placement where a good quality of life is expected may be an option instead of euthanasia. However, quality of life should be evaluated on a continuing basis to ensure the animal is not deteriorating over time, either physically or mentally. Detailed care and housing requirements of permanent residents are beyond the scope of this document.

- 7.2.1 Rehabilitation facilities must not hold more than two non-releasable individuals of each species for educational, display or fostering purposes, unless colonial.
- 7.2.2 Non-releasable or permanent residents must be provided with cages that:
 - Are of appropriate size for the number and species being held,
 - Protect the animal(s) from injury, abuse or harassment,
 - Contain furnishings appropriate to the age and species,
 - Promote natural behaviours, and
 - Stimulate the animal's mind to prevent behavioural or captivity-related problems.
- 7.2.3 The animal must be:
 - In good health,
 - Free of disease, and
 - Free of physical distress.
- 7.2.4 The animal must not display behaviours indicative of depression, boredom or frustration.
- 7.2.5 Permits must be obtained for all non-releasable animals.

7.3 Euthanasia

Euthanasia is the induction of death with minimal pain, stress or anxiety. It must be reliable, irreversible, simple, safe and rapid. It must also be conducted according to the terms of the rehabilitation permit.

All methods used must result in a quick loss of consciousness followed by cardiac or respiratory arrest and subsequent loss of brain function. Loss of consciousness must precede loss of muscle movement to avoid conscious perception of distress or pain prior to death. See chapter 7, section 3 of the NWRA/IWRC Minimum Standards for Wildlife Rehabilitation for specific euthanasia information.

Working in close association with a veterinarian will ensure a rehabilitator has the proper information and assistance in carrying out this function. It cannot be overemphasized how imperative a good veterinarian-rehabilitator relationship is in this area.

7.3.1 There are few hard and fast rules and each case must be considered individually. This is an area where knowledge of the species and contact with experts in the field is essential. Decision to euthanize must be based on individual condition or permit, not based on species discrimination. If the animal suffers from any of the following conditions, euthanasia is recommended (an exception may be made if the animal is held for education or fostering purposes). Euthanasia is recommended if:

- A small-bodied bird has the loss of both feet, or the loss of use of both feet; a large-bodied bird has the loss of a single foot, or the loss of use of a single foot.
- A bird has an amputation of a whole wing or part of a wing, or other damage to the wings that makes flight impossible.
- There is permanent loss of sight. There may be exceptions (e.g. bats).
- A bird has damage to the elbow or shoulder joint that will permanently restrict natural wing movement and flight.
- A mammal has the loss of or loss of use of any body part that is required for survival such as loss of a hind leg in a hare.
- There is neurological damage persisting for 8 weeks affecting the ability to maintain the normal position of the head, maintain normal balance or evacuate the large intestine.
- Chronic infection is evident in any species.
- A malignant tumour is present in any species.
- Abnormal behaviour is displayed, making it unlikely that the animal will survive in the wild.

7.3.2 The method of euthanasia employed must:

- Produce rapid loss of consciousness and death,
- Exhibit consistent and predictable action,
- Be easily and safely administered by properly trained personnel,
- Cause minimal psychological stress to the animal,
- Cause minimal emotional effects to observers and participants,
- Interrupt consciousness and reflexes simultaneously,
- Not be a sanitation or environmental problem,
- Be economical and readily available, and
- Cause little or no stress/anxiety.

7.4 Necropsy

Necropsy is a post-mortem examination. Since accuracy fades as time passes due to post-mortem changes, necropsies should be performed shortly after death or the bodies sealed and preserved in a fridge until such time as the necropsy can take place. When a necropsy is

merited, it is recommended to contact a clinician to determine which available method of euthanasia will have the least negative effects to the post-mortem analysis and results.

Exploration of a deceased animal introduces the potential to spread disease to people or other animals in care. All necropsies performed must adhere to strict sanitary practices, outlined briefly here and found in more detail in chapters 3, 4, 5 and 6 of the NWRA/IWRC Minimum Standards for Wildlife Rehabilitation.

- 7.4.1 When performing a necropsy:
 - Use disposable gloves, surgical masks and appropriate outer garments,
 - Ensure a well-ventilated location separate from other animals or areas for food preparation, and
 - Use veterinary-caliber sanitizers according to manufacturer specifications to clean all surface areas that may have been in contact with the animal, animal parts or instruments used.
- 7.4.2 If a reportable disease is suspected, contact your veterinarian for further instruction.

7.5 Disposal of Carcasses and Animal Waste Products

- 7.5.1 Carcasses, whether necropsied or not, must be disposed of according to the terms of the rehabilitation permit.
- 7.5.2 All carcasses and all animal waste products must be disposed of in accordance with acceptable practices as required by local ordinances as well as applicable provincial and federal regulations, especially in the case of controlled drug use.
- 7.5.3 Bodies or parts of bodies must not be kept, stuffed, displayed or sold unless appropriate permits have been acquired through the Ministry of Forests, Lands and Natural Resource Operations, Canadian Wildlife Service, or Department of Fisheries and Oceans.
- 7.5.4 Bodies or parts of bodies must not be released to individuals not affiliated with the organization unless appropriate licenses/permits have been acquired and it is not in conflict with rehabilitation permits.