

Global Federation of Animal Sanctuaries



Standards For Ground Feeding Bird Sanctuaries

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INTRODUCTION

GFAS PRINCIPLES

The Global Federation of Animal Sanctuaries (GFAS) will designate an organization as “verified” or “accredited” based upon its substantial compliance with the standards listed below. GFAS recognizes that some organizations under consideration will operate valid rescue and rehabilitation programs with a goal of releasing wildlife to the wild pursuant to IUCN and/or other international or national standards. For those animals, lifetime sanctuary care may not be part of the organization’s mission. While the care for these animals may be provided on an interim basis only, the organization is still expected to meet the standards below with regard to all animals in its care and for purposes of these standards it will be identified as a “sanctuary.”

Consistent with GFAS’ philosophy and the standards below, it is expected that a sanctuary does not adopt policy positions that are in opposition to the welfare of the species of animals in the care of the sanctuary (for example, while it is not required that a primate sanctuary affirmatively promote a policy against laboratory research using primates, it should not promote a policy in favor of such research).

Note: Several standards make reference to a sanctuary’s “Director.” GFAS recognizes that a sanctuary may use a different title, and the term “Director” is intended to reference the sanctuary’s Sanctuary Director, who may be called an Executive Director or Chief Executive Officer, etc.

GFAS also recognizes that sanctuaries may rely on volunteers for certain functions, including some aspects of animal care (such as food preparation). Standards referencing “staff” may take into account appropriately qualified and trained volunteers as well as employees.

Appendix I of this document provides further guidance/suggestions on facility design and avian care. These are not requirements but rather provide sanctuaries with access to knowledge gained from experience at other sanctuaries/ avian care facilities.

ANIMALS COVERED BY THESE STANDARDS

Note: Ground Feeding Birds as covered in this document include the gruiformes, caprimulgiformes, struthioniformes, and any primarily ground-dwelling passeriformes, columbiformes, and cucliformes not included in the Arboreal/Perching Bird standards. Gruiformes requiring access to water for optimal health, are found in the Aquatic/Semi-aquatic Bird Standards.

Family/Genus/Common Names

- a. Family: *Aegothelidae*, *Apterygidae*, *Caprimulgidae*, *Cariamidae*, *Columbidae*, *Cracidae*, *Cuculidae*, *Maluridae*, *Megapodiidae*, *Mesitornithidae*, *Nyctibiidae*, *Odontophoridae*, *Otididae*, *Phasianidae*, *Podargidae*, *Psophiidae*, *Ptilonorhynchidae*, *Rallidae*, *Rhynochetidae*, *Steatornithidae*, *Struthionidae*, *Turdidae*, *Turnicidae*, *Tyrannidae*
- b. Genus: *Aburria*, *Aegothales*, *Aepyodius*, *Afropavo*, *Agelastes*, *Ailureodus*, *Alectroenas*, *Alectoris*, *Alectura*, *Amaurornis*, *Amblyornis*, *Ammoperdix*, *Amytornis*, *Anurolimnas*, *Anurophasis*, *Apopelia*, *Aramides*, *Arborophila*, *Archboldia*, *Ardeotis*, *Argusianus*, *Aulonocara*, *Bambusicola*, *Batrachostomus*, *Bonasa*, *Callipepla*, *Caloenas*, *Caloperdix*, *Canifallus*, *Caprimulgus*, *Cariama*, *Carpococcyx*, *Cassuariidae*, *Catreus*, *Centrocercus*, *Centropus*, *Chalcophaps*, *Chamaepetes*, *Chlamydera*, *Chlamydotis*, *Chordeiles*, *Chunga*, *Chrysolophus*, *Chrysolophus*, *Cinclosoma*, *Claravis*, *Clytomyias*, *Colinus*, *Columba*, *Columbina*, *Corythopsis*, *Coturnix*, *Crax*, *Crecopsis*, *Crex*, *Crossoptilon*, *Cryptophaps*, *Cyrtonyx*, *Dactylortyx*, *Dendragapus*, *Dendrortyx*, *Didunculus*, *Drepanoptila*, *Dromaiidae*, *Ducula*, *Dysmoropelia*, *Ectopistes*, *Eleothreptus*, *Eulipoa*, *Eupodotis*, *Eurostopodus*,



Francolinus, Gallicolumba, Gallirallus, Galloperdix, Gallus, Geococcyx, Geopelia, Geophaps, Geotrygon, Goura, Guttera, Gymnophaps, Haematortyx, Hemiphaga, Hemicophaps, Houbaropsis, Hyropsalis, Ithaginis, Lagopus, Leipoa, Leptotila, Lerwa, Lophophorus, Lophura, Leucosarcia, Lopholaimus, Lurocalis, Macrocephalon, Macrodipteryx, Macropsalis, Macropygia, Malurus, Megapodius, Melanoperdix, Meleagris, Mesitornis, Metriopelia, Microgoura, Mitu, Monias, Morococcyx, Muscisaxicola, Neotis, Nesoenas, Neomorphus, Nothocrax, Numida, Nyctibius, Nyctidromus, Nyctiphrynus, Nyctiprogne, Ocyphaps, Odontophorus, Oena, Ophryisia, Oreophasis, Oreortyx, Ortalis, Ortyxelos, Otidiphaps, Otis, Patagioenas, Pauxi, Pavo, Penelope, Penelopina, Perdica, Perdix, Petrophassa, Phaenicophaeus, Phalaenoptilus, Phapitreron, Phaps, Phasianus, Philortyx, Pipile, Podargus, Polyplectron, Porphyrio, Porzana, Priondura, Psophia, Ptilinopus, Ptilonorhynchus, Pucrasia, Rallina, Reinwardtoena, Rheidae, Rheinardia, Rhizothera, Rhynochetos, Rhynchortyx, Rigidipenna, Rollulus, Sarothrura, Scenopoeetes, Sericulus, Siphonorhis, Sipodotus, Starnoenas, Steatornis, Stigmatopelia, Stipiturus, Streptopelia, Struthio, Syrmaicus, Sypheotides, Talegalla, Tetrao, Tetraogallus, Tetraophasis, Tetrax, Tragopan, Treron, Trugon, Turacoena, Turnix, Turtur, Tympanuchus, Uropelia, Uropsalis, Xenoperdix, Zenaida,

- c. Common names: argus, bobwhite, bowerbird (includes the white-eared, green and spotted catbirds of Australia and New Guinea), bush-hen, bush-quail, brush-turkey, bustard, buttonquail, capercaillie, cassowary, chachalaca, chicken, chuck-will's-widow, chukar, corncrake, coucal, curassow, emu, emu-wren, fairywren, fireback, florican, flufftail, forest-crake, forest-partridge, francolin, frogmouth, grasswren, ground cuckoo, ground dove, ground-pigeon, ground-thrush, ground-tyrant, grouse, guan, guinea fowl, jungle fowl, kagu, kiwi, malleefowl, maleo, malkoha, megapode, mesite, monal, nighthawk, nightjar, oilbird, ostrich, owlet-nightjar, partridge, pauraque, peacock-pheasant, peafowl, pheasant, piping-guan, poorwill, potoo, prairie-chicken, ptarmigan, quail, rhea, roadrunner, sage-grouse, seriema, snowcock, spurfowl, takahe, tragopan, trumpeter, turkey, whip-poor-will, woodhen, wood-partridge, wood-quail, wood-rail.

Version Updates:

New and Updated content released on February 2015

- G-1 Nonprofit/ Non-Commercial Status, P-3 Disposition Ethics and Responsibility, P-4 Disposition of Live Ground Birds, P-7 Euthanasia.

New and Changed content released on July 2015

- V-7 Breeding/Contraception – section a.



GROUND FEEDING BIRD STANDARDS

GFAS notes that there may be other acceptable ways of meeting the intent of each standard, aside from those detailed below, and that in some instances there may be legal, cultural or other significant barriers to meeting GFAS requirements. The standards are considered mandatory, but GFAS will consider specific exceptions to some of the listed requirements (e.g., exact enclosure size, manner of record keeping, legal requirements that impact a sanctuary's acquisition policy, etc.). GFAS encourages sanctuaries to offer feedback on the standards and to explain any reasons why it believes it cannot meet a particular standard, or why the standard is not applicable and/or appropriate to its situation. Sanctuaries are also welcome to indicate a timeline for meeting a standard if the standard is not yet met at the time of application for accreditation for verification.

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.

GROUND FEEDING BIRD HOUSING

H-1. Types of Space and Size

Unless otherwise directed by a veterinarian, ground feeding birds are provided sufficient opportunity and space to move about freely and normally, and to exercise choice in location so as to reduce stress and maintain good physical condition.

General

- a. The habitat and living conditions are species appropriate and replicate, in as much as possible, the ground feeding birds' wild habitat with a balance between hygiene and the species' physiological and psychological needs. This includes adequate space, both vertical and horizontal, and appropriate space, in terms of diversity and complexity.
 - The physical space provides varied opportunities for the ground feeding birds to interact with the environment and key elements are changed often, resulting in a dynamic living space. Facility design takes into account caregiver-ground feeding bird safety and the ease of maintaining a positive relationship.
- b. The habitat provides appropriate visual, olfactory, and acoustic barriers.
- c. The habitat provides security from predators and unauthorized human access.

Types of Enclosures



Outdoor Enclosures

- d. Outdoor enclosures are designed for housing pairs, small, or large flocks in a manner that encourages natural behaviors including: flying, foraging, walking, swimming/bathing, dust-bathing and safely socializing as species appropriate.
- e. Size of enclosure and number of birds housed is such that aggression between birds is minimized.
- f. Outdoor enclosures include substantial areas which allow normal flight/locomotion and perching structures designed to allow for appropriate social interaction with conspecifics as species appropriate.
 - Enclosures include an indoor barn/shelter to provide secure shelter during inclement weather, extreme weather (hurricane, tornado, heavy snow) during which outdoor containment could be compromised and to provide alternate housing for sick or injured birds, in close proximity to the social group.
- g. Dimensions
 - Many factors influence the minimum space required for a pair or flock of ground feeding birds, including, but not limited to: species, group size and composition, and enclosure complexity. The following are minimum requirements. Facilities provide as much space as is possible and/or practical.
 - 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.
 - General
 - Enclosures are a minimum of 16 sq. ft. (1.48 sq. m) per small to medium bird, 2,000 sq. ft. (185 sq. m) per large bird.
 - To allow two birds to fly or walk side-by-side or to pass each other comfortably, the minimum enclosure width/depth is five times the wingspan or stride of the largest bird(s) housed. For non-rectangular aviaries the cubic equivalent are met.
 - Minimum vertical height 7 ft. (2.13 m) for covered enclosures, 9 ft. (2.7 m) for bustards.
 - Where possible, consideration is given to soft netting enclosure ceilings to reduce risk of injury.
 - Indoor barn/shelters are large enough for all birds to have adequate space to rest on the ground, perch and comfortably move around. Minimum heights same as the enclosure.
 - Minimum of 2 sq. ft. (.19 sq. m.) of open floor space per small bird.
 - Minimum of 4 sq. ft. (.37 sq. m.) of open floor space per medium bird.
 - Minimum of 10 sq. ft. (0.93 sq. m.) of open floor space per large bird.
 - Perches are provided for roosting species.
 - Space is available to isolate birds within the flock, however very sick birds are removed, particularly if additional warmth or cage rest is needed. Birds are returned to their regular enclosure upon recovery
 - Birds carrying contagious diseases are completely isolated from the flock in a separate enclosure.
 - Mixed species enclosures
 - Meet minimum space requirements for all species sharing an enclosure.



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- Elderly, blind or physically handicapped birds may be housed in appropriate sized enclosures or cages, provided they are given time outside of the cage for exploring and exercising in a safe, appropriate space.
 - The sanctuary has documentation of veterinary support for such housing and provides as much activity and enrichment as possible and appropriate for each bird housed in this manner.
 - Enclosure or cage size and equipment reflects the specific needs of the occupant.
 - Where possible and appropriate birds are regularly given time outside the enclosure or cage in a safe environment.
- Flooring of indoor cages and enclosures allows for adequate cleaning and sanitation.
 - Wire flooring is not used.

H-2. Containment

Ground Feeding birds are safely contained.

General

- a. Other than when being transported or for medical reasons, ground feeding birds are kept at all times in secure enclosures or other appropriate areas.
- b. Enclosures are designed to allow for ground feeding birds' normal defense reactions and appropriate 'flight' or escape distances.
- c. All enclosures are designed, constructed and maintained to securely contain ground feeding birds and to present no likelihood of harm to them.
- d. Distance or barriers between ground feeding birds and between enclosures and personnel is sufficient to minimize stress to the birds and reduce the risk of disease transmission.
- e. Enclosures are designed to allow for proper, safe cleaning and drainage.
- f. Materials are appropriate for their particular application and are maintained in good repair.
- g. Where larger predators such as raccoons are a concern, perimeter fencing is 0.5 in. (1.27 cm) X 0.5 cm (1.27 cm) and at least 16 gauge.
- h. Netting, mesh or wire is of durable material and of suitable size and strength to safely secure the species housed.

Outdoor Enclosures

- h. Perimeter containment of outdoor areas is constructed so as to prevent digging under the barrier by native wildlife, domestic species and the enclosure residents.
 - Fence is buried to a depth of 12 in. (30.5 cm) and or the enclosure has a buried wire floor connected to the fencing. Note: Wire flooring is not used in ratite enclosures to reduce the risk of foot and leg injuries.
 - Perimeter containment for bustards may be reinforced using thick shrubs place 4.2 – 8.2 ft. (1.3– 2.5 m) from the fencing, particularly in small enclosures.
- i. Fences and enclosures are inspected daily for signs of digging. Where fencing meets hard surfaces such as rock or concrete, the fencing is securely anchored in place.
- j. Aviary material is sufficiently secured to supporting posts in such a way that the weight of predators could not detach it from the support nor dislodge the supporting posts.



- k. Outdoor aviaries may include a covering, such as a tarp, over the top to reduce the risk of wild bird droppings entering the aviary.
- l. Outside areas may be covered with nylon mesh or netting to prevent predation from hawks and owls.
 - A rope, string or twine grid may be placed over runs of non-flighted birds to provide protection from aerial predators. Grid width measures less than the wingspan of aerial predators.
- m. If outdoor enclosures are not predator proof birds are checked throughout the day and secured before dark.
- n. Smooth, solid barriers along the base of any mesh containment may be used to limit predator entry to enclosures and reduce risk of foot and leg entanglements for long legged species.
- o. Gates and doors are designed and maintained so as to prevent native wildlife, domestic species and other enclosure residents from lifting them from their hinges or unfastening the securing device.
- p. Where snake predation is a concern, care is taken to regularly inspect and secure foundations, floors, ceilings, enclosure framework and mesh attachments such that snakes are not able to gain access to avian enclosures.

Indoor Enclosures

- q. Indoor enclosures are predator proof for known predators within the geographic region and birds are secured indoors at night where no predator proof enclosure exists.
 - Minimum 8 sq. ft. (0.74 sq. m) per large birds and 2 sq. ft. (0.19 sq. m) per medium and small birds.
 - New construction takes into consideration the use of a concrete base or at least one level of concrete block as a base to reduce predator risk.
 - Windows and doors are securely covered with heavy-gauge mesh wire or screening if predators are a concern.

H-3. Ground and Plantings

Ground cover indoors and out is healthy for ground feeding birds. Plantings are appropriate and safe.

Vegetation

- a. Any vegetation capable of harming birds is kept out of reach.
- b. Trees within or near animal enclosures are regularly inspected, trimmed or felled as necessary to avoid birds being harmed by falling branches, toxicity, or trauma.
 - Key shade trees within an outdoor enclosure are identified and protected from damage.
 - Health of trees close to fence lines is checked regularly and any removed if there is fear of it coming down on fence line.
- c. Any natural materials (e.g., plants and their products, such as seeds or fruit) are assessed for toxicity to the species held before use.
- d. All outdoor enclosures for include living or fresh vegetation, which can provide visual barriers, shade and resting sites.
 - All plant materials in an enclosure are evaluated for potential toxicity, including leaves, buds, seeds, fruit, bark and flowers.



- e. Enclosures may be planted with grasses, shrubs etc. that the ground feeding birds do not tend eat, provisioning the animals with preferred plant material as part of the daily diet.
 - Shrubs and vines are checked regularly to ensure they do not provide an opportunity for avian escape from the enclosure.

Outdoor enclosures

- f. All outdoor enclosures have a natural substrate consistent with the site.
 - The substrate can be amended with organic materials, including but not limited to soils, sand, leaf litter, bark mulch, grasses, straw, hay, and wood shavings. Amendments are chosen for their hygienic properties and ease of maintenance.
 - The substrate drains well. Appropriate rainwater runoffs are included in enclosure design as needed.
 - Substrate for ground feeding species remains as dry as possible to optimize foraging and reduce the risk of food mold/spoilage-related illness.
 - Where organic materials are provided in place of natural grasses, care is taken to ensure the enclosures do not become damp or moldy.
 - Smaller outdoor enclosures may have a cement base that can be easily disinfected which is then covered with an appropriate substrate.
 - An open soil or sand area is provided for dust baths as species appropriate.
- g. Enclosure plantings may be utilized to provide visual hides/blinds. Deciduous climbing plants such as clematis, grapevines, etc, may be grown on the outside of the enclosure to form a natural semi-shaded canopy immediately above the aviary.

Indoor barns/shelters

- h. All indoor enclosures have a floor of concrete or other non-porous material which is sloped to a drain and covered with an appropriate substrate.
 - Materials suitable for use as substrate include, but are not limited to, newspaper or recycled paper pulp, hay and aspen shavings.
 - Drainage is not blocked by substrate.
 - Substrate is not prone to retaining moisture or becoming moldy. Substrate is changed regularly to reduce risk of mold and moisture buildup.
- i. Plants which have been determined to be safe for the species housed may be placed within the shelter to provide visual hides/blinds.

H-4. Gates and Doors

Ground feeding bird enclosure gates and doors are appropriately designed to ensure both bird and human health and safety.

General

- a. Housing requirements all include a double entry system so that there are two doors (or a door and a safety net) between the ground feeding birds and freedom at all times. The two elements are never open at the same time.
 - Doors and gates are designed to allow transport crates to be moved in and out of the enclosures.
 - Installation of a trap cage, soft net sub-ceiling and/or walls which can be lowered/moved inward to reduce flight area is recommended, as species appropriate, to facilitate safe, rapid capture.



- o Birds are acclimated to these modifications to reduce risk of injury.
- b. Gates and doors are designed to remain functional under all circumstances, are maintained in good working order and free from any encumbrances that may prevent opening and closing.
- c. Safety catches are present on any doors leading to the outside except where there are two or more doors between the birds' enclosure and the outdoors.
- d. Gates, doors and safety netting are designed/chosen to allow caregiver view of enclosures while operating the doors.
- e. Doors are located at a level appropriate for the species housed. Ramps are provided, as needed, for ease of entering and exiting shelter. Openings allow the birds to maintain normal posture while entering and exiting.
- f. Doors and door hardware are properly maintained to ensure proper functioning.
- g. Where moveable pens are placed outdoors, a screened enclosure, mesh screen or cloth are used to reduce the risk of escape.

H-5. Shelter

Ground feeding birds have access to man-made shelter that provides each individual with protection from extreme weather (including, but not limited to, prevailing wind, snow, sleet, rain, sun, and temperature extremes).

- a. Ground feeding birds have space to seek refuge from sun, wind, inclement weather and enclosure mates.
 - Shelters are of sufficient size and/or number to comfortably provide protection for each bird housed in the facility.
 - Where open sided nest boxes are used for shelter, they are constructed of wood or other durable, non-toxic material and are designed to facilitate cleaning, inspection and egg management. Nest boxes provided do not increase territoriality or aggression.
 - o Nests built are regularly inspected for eggs and dismantled when too large to allow for thorough inspection.
 - Shade is provided in multiple locations within enclosures to ensure that all birds have simultaneous access to shade throughout the day.
 - Shade and shelter can be created through natural and artificial means including shade trees and shade fabric.
 - Shelter areas provide dry space during wet weather, as well as protection from wind.

H-6. Enclosure Furniture

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

General

- a. Enclosures are equipped, in accordance with the needs of the species housed, with bedding material, branchwork, nesting/hide boxes, baths, appropriate substrate, vegetation and other enrichment



materials designed to aid and encourage normal behavior patterns and minimize any abnormal behavior.

- Where nest boxes are provided care is taken to avoid increased territoriality and aggression. Nest boxes are regularly inspected for eggs and appropriate steps taken (See Standard V-7 Breeding)
- b. 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 above.
- Items are removed when they become soiled, damaged or novelty has diminished.
- c. Ground feeding birds are provided access to the vertical space available within the enclosures as species appropriate.
- d. Enclosures have multiple visual hides/blinds such as live plants with leaves or suspended cloth sheets to allow birds to find places with privacy to reduce potential aggression with the flock and stress from the sudden appearance of people or wild avian predators.

Outdoor Enclosures

- e. Water sources including shallow pools, streams or misters are provided.
- Cassowaries are provided with a water source large enough for swimming.
- f. Platforms or other nesting/roosting sites sheltered from sun and wind.
- g. Areas for scratching, pecking and dust baths with a variety of substrates.
- h. Visual barriers are used to avoid confrontation or aggression, and include climbing structures, walls, shade structures, topography and large enrichment items.

Indoor Enclosures

- i. To the greatest extent possible, indoor enclosures meet outdoor enclosure criteria.

Perching and Resting Areas

- j. Perches are of a variety of diameters and textures suitable for the species and arranged in the enclosure to allow all birds multiple comfortable locations and elevations to perch and to allow birds to walk or fly from one perch to another. Metal pipe is not used for perch construction.
- Roosting perches are of a sufficiently small diameter that the birds' toes can easily wrap three quarters of the way around the perch, allowing the natural foot-locking mechanism to function.
 - Perches are renewed and replaced regularly; but not all perches are renewed at the same time, as major change in perching arrangements can be disruptive.
 - Straw bales, shavings or other non-slip surfaces are provided for roosting off the ground, as species appropriate.
 - Birds who cannot fly or are only capable of limited flight, those with foot or leg injuries and/or any other physical disability are provided with special ramps, platforms or other specialized structures as appropriate for their condition.

H-7. Sanitation

Proper sanitation is practiced to reduce pathogen transmission.



General

- a. Local, county, state laws regarding proper waste removal are observed.
- b. Disinfectant and sanitizing products used allow for safe cleaning of avian enclosures where it is not possible to transfer birds from enclosures prior to cleaning, disinfection and/or sanitizing.
 - Areas are wiped dry after use of stronger disinfectants, such as dilute bleach, before birds are once again allowed access.
- c. 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 Protocols).
- d. Uneaten perishable food is removed within a timeframe appropriate for the type of foodstuff and size of enclosure, prior to molding or contamination.

Removal of Animal Waste

- e. Animal waste is removed from the habitat as often as necessary to prevent contamination of the ground feeding birds contained therein, to minimize disease hazards and to reduce odors. This also enables caregivers to collect fecal samples in a timely manner.
- f. Soiled bedding material and substrate are removed and replaced with fresh materials daily, or as needed to prevent buildup. If odorous, bedding is changed regardless of how long in place.
- g. Avian waste is handled with precautions appropriate to bio-hazardous waste, and is not composted.
- h. Damaged and soiled enrichment items are removed daily, or as soon as possible.
- i. Efforts are made to prevent native wildlife getting access to avian waste.

Tools

- j. Each enclosure has dedicated tools to prevent cross contamination between enclosures. When resources restrict the ability to have dedicated tools, tools are disinfected between enclosures to prevent the spread of parasites and disease.
- k. Tools are labeled when use is restricted to specific areas.
- l. Sanitation tools or equipment, including wheelbarrows, are not used for transport or storage of foodstuffs or bedding.

Cleaning and Disinfection

- m. Feeding areas, automatic water devices, water and food containers are cleaned and disinfected daily.
- n. Care is taken to minimize overspray of waste, directly or via aerosolizing, into adjacent cages during cleaning.
- o. Birds are not present in enclosures being cleaned using power hoses. Care is taken to prevent accidental spraying of animals in adjacent enclosures when power hoses are used for cleaning.
- p. Masks are available to staff cleaning avian enclosures and surfaces are dampened to reduce the risk of inhalation of aerosolized avian waste and dander.
- q. Concrete floored enclosures are dried thoroughly before bedding material is replaced.
- r. All hard surfaces including walls, floors, ceiling, benches, climbing structures, cage mesh and caregiver work areas are sanitized regularly to the extent possible. Note that in large outside enclosures with plenty of exposure to sunshine and rain, there may not be a need for regular scrubbing and cleaning but areas are monitored for potential sanitation problems.
- s. Cleaning and Disinfection Standard Operating Procedures are developed and followed to address:
 - safe disinfectant use to prevent hazards to the birds, caregivers and the environment;



- cleaning and disinfecting protocols for food preparation and veterinary care areas using more powerful disinfectants on hard surfaces;
 - daily, weekly, monthly and quarterly cleaning schedules for all hard surfaces including walls, floors, ceiling, benches, cage mesh and staff work areas are designed to minimize the risk of disease transmission;
 - disinfectants and other cleaning products stored separately from foodstuffs.
- t. A Material Safety Data Sheet (MSDS) or equivalent is readily available for all cleaning products in use and all containers are properly labeled as to contents.

H-8. Temperature, Humidity, Ventilation, Lighting

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

Temperature

- a. The temperature is within an acceptable range for the species housed.
- Weather is considered in addition to temperature.
 - Allowance is made to accommodate individual animals not able to tolerate temperatures above or below the usual range of comfort for the species.
 - Great caution is taken with elderly, infant and disabled birds.
 - Windbreaks and shade are sufficient to accommodate all ground feeding birds simultaneously with consideration for social structure and relationships within and among pair/flocks.
- b. In outdoor aviaries, ground feeding birds have access to heated or cooled areas when ambient temperature falls outside of the acceptable range for the species housed.
- For most ground feeding species temperatures below 32°F (0°C) and above 90°F (32.2°C) require supplemental heating and cooling respectively.
- c. In indoor enclosures, providing ground feeding birds with opportunities to choose temperature ranges within an enclosure is preferred.
- Areas of additional warmth may be provided for elderly, sick or very young birds.
 - Heated enclosures provide adequate ventilation to reduce excess humidity/moisture and the attendant health risks.
 - Any climate control systems include redundancy and back-up power in case of equipment or power failure.

Humidity

- d. Indoor humidity is kept within the optimal range for the species housed. Humidity should not be above 80% in controlled environments to prevent fungal and mold growth. High humidity can be mitigated through proper ventilation or dehumidifier systems.
- Where forced air heat is used, misters, spray bottles or humidifiers may be needed to add moisture to the air.

Ventilation

- e. Proper ventilation of indoor enclosures is used to maintain avian health.
- f. Air recirculation systems, heaters, air conditioners and humidifiers are regularly cleaned and serviced to reduce risk of respiratory disease.



- g. To the extent possible, separate air handling systems are maintained between avian housing areas to prevent disease transmission.
- h. Window and door placement is designed to ensure sufficient cross-ventilation in warm climates.

Lighting

- i. Light, natural and artificial, is appropriate for the species housed in terms of intensity, spectrum and duration.
- j. Every effort is made to approximate the natural day length of the species housed. For tropical species housed in other areas supplemental lighting may be needed to ensure adequate time for foraging and other natural behaviors.
- k. Indoor enclosures - Natural lighting is optimal and can be obtained using skylights, windows, roll-up doors and other means.
 - Newly arrived birds are protected from flying into windows by reducing reflectivity; brightly colored material strips hanging 2in(5cm) apart or Mobius strips will break up the reflection.
 - Windows may also be covered with netting to reduce reflection and, if properly placed, cushion any impact.
 - Supplemental lighting is provided to ensure adequate light for caregivers to observe animals, clean enclosures and perform related animal care tasks both day and night.
 - Species prone to fatal impact trauma when startled are provided with very low watt night-light (light level approximating moonlight) to aid in safe way-finding when startled at night, particularly in indoor enclosures.
- l. Outdoor enclosures –Supplemental lighting is available for use in outdoor areas in event of an emergency.

PHYSICAL FACILITIES AND ADMINISTRATION

PF-1. Overall Safety of Facilities

The premises, tools, equipment, animal care records, and hazardous materials are appropriately kept clean and safe.

- a. The sanctuary is committed to maintaining a safe and healthy environment for all employees, volunteers, visitors and ground feeding birds, and conforms to health and safety practices as outlined under applicable national and state/province laws and regulations (e.g., the Occupational Health and Safety Administration [“OSHA”] in the United States or an equivalent international/national occupational safety organization/agency).
- b. Premises (buildings and grounds) are kept clean and in good repair in order to protect employees, volunteers, visitors and birds from injury and to facilitate appropriate animal care.
- c. Materials and equipment are safely stored when not in use, and there is an effective system in place for regular inspection and maintenance of tools and equipment.



PF-2. Water Drainage and Testing

Water drainage is rapid and complies with all regulations, and soil and water are tested annually.

- a. A suitable method is provided to rapidly eliminate excess water.
- b. The sanctuary's method of drainage complies with applicable national, state/province, and local laws and regulations relating to pollution control or the protection of the environment.
- c. Enclosures are checked annually for potential water contamination and soil contaminants.

PF-3. Life Support

There are adequate and reliable utilities, with back up.

- a. Adequate and reliable electric power, potable water, water supplies and plumbing are available on the premises.
- b. An emergency power system, such as a generator, is in place in the event of a power outage.

PF-4. Hazardous Materials Handling

Hazardous materials are appropriately handled according to applicable regulations and laws, protective clothing and other equipment in isolation units are not used elsewhere, and waste is taken care of appropriately.

- a. The method for disposal of sewage, toxic/hazardous materials, garbage, and bird wastes follows all guidelines for hazardous materials. All national, state/province and local legal and regulatory requirements are met.
- b. All hazardous materials are labeled with the name of the contents, appropriate hazard warnings, and the name and address of the manufacturer as provided on the Material Safety Data Sheets (MSDS Sheets) or equivalent, if used in the country in which the sanctuary is based.
- c. If applicable, Material Safety Data Sheets, or similar, for each hazardous material to which employees may be exposed, are kept in the area where the materials are stored. Employees are made aware of, have access to and understand how to interpret the MSDS Sheets.
- d. All employees, and volunteers where appropriate, utilizing hazardous materials are appropriately trained in the use of, and made aware of the potential hazards of using these materials.
- e. Protective equipment and clothing is utilized where required, such as working with hazardous chemicals and potentially infectious ground feeding birds.
- f. Accumulations of trash is placed in designated areas and cleared as necessary to protect the health of the birds, staff, volunteers, visitors and the surrounding environment.
- g. The sanctuary considers the potential risks of releasing pathogens or non-native plants through effluent water and other routes.



- h. Provision is made for the safe and legal removal and disposal of ground feeding bird food wastes, bedding, dead birds, trash and debris.
- i. Disposal facilities are so provided and operated to minimize rodent and insect infestation, odors, and disease hazards while complying with applicable international, national, state/province, and local laws and regulations relating to pollution control or the protection of the environment.

PF-5. Security: Avian Enclosures

Proper security measures are in place to safely contain ground feeding birds at all times. There is a 24-hour security system in place.

- a. Entry and exit to avian enclosures is through a system of double gates or doors, or a door with safety netting, with sufficient space between to allow each door/gate or net to be securely closed prior to opening the other.
- b. For very large enclosures into which vehicles enter, the double gates and/or doors are located far enough apart to allow the vehicle to be completely enclosed into the area with both gates secured before entering the enclosure.
- c. The sanctuary has 24-hour security systems in place to minimize the risks of theft, malicious damage or release of ground feeding birds by intruders entering the grounds.
- d. If the sanctuary has enclosures that should have restricted access (e.g. an enclosure housing aggressive birds or birds with transmissible diseases) the sanctuary has a key control system and/or signage designed to ensure that only qualified staff have access to those areas of the sanctuary.
- e. Gates and doors to sanctuary perimeter are securely locked so as to prevent unauthorized openings.
- f. An adequate number of clearly visible safety signs, providing warning by means of a symbol, words or a combination of symbol and words, are displayed at each enclosure as needed.

PF-6. Perimeter Boundary and Inspections, and Maintenance

The perimeter boundary has suitable exits, is designed to discourage unauthorized entry, and any enclosures in need of repairs is immediately repaired or replaced, or ground feeding birds are relocated.

- a. The perimeter boundary, including access points, is designed, constructed, and maintained to discourage unauthorized entry and as an aid to the safe confinement of all birds within the sanctuary.
- b. Exits through any perimeter fence are suitably located and adequately designated and secured.
- c. Each exit from the sanctuary is kept clear and is capable of being easily opened from the inside to allow the release of staff.
- d. All such gates are capable of being closed and secured to prevent the escape of ground feeding birds and entry of unauthorized animals and visitors.
- e. Safety signs on any electrified section of the perimeter fence or enclosures are easily visible.
- f. A regular program of sanctuary maintenance is in place.
- g. Any enclosure in need of repair, or any defect likely to cause harm to ground feeding birds, is immediately repaired or replaced, or the birds are relocated to a secure enclosure.



PF-7. Security: General Safety Monitoring

Appropriate fire extinguishers and alarms are in place and in working order, weather is monitored, and all physical features of the sanctuary are designed and maintained to ensure the safety of the ground feeding birds.

- a. Adequate fire extinguishers and alarms are installed, regularly tested, maintained in good working order and the staff is trained in their use. Fire alarms can automatically be heard from the permanent residence.
- b. The sanctuary has a system in place to provide early warning of severe temperature extremes and weather patterns. This is communicated directly to the sanctuary director in case of emergency.
- c. Steps have been taken to protect birds as much as possible from fire, flood, and other natural hazards. This includes not storing more than the daily ration of bedding in the same building in which birds are housed.
- d. All plant and fixed equipment, including electrical and heating apparatus, are installed and maintained in such a way that they do not present a hazard to ground feeding birds, and their safe operation cannot be disrupted by the birds.

PF-8. Insect and Rodent Control

An appropriate, effective, humane and safe rodent control program is in place as needed. Insects are safely controlled as needed.

- a. An insect and humane rodent control program is in place, supervised by a veterinarian who determines the degree of toxicity that products in use may pose to ground feeding birds, native wildlife and staff.
- b. Insect and rodent control is implemented in all appropriate areas of the sanctuary, including storage areas for food items.
- c. Any pesticides are used in accordance with government regulations. Whenever possible, less toxic or non-toxic agents such as silica gel, diatomaceous earth, or insect growth regulator products are given preference.



PF-9. Record Keeping

Records are maintained appropriately as required by local, state and national regulations and as necessary for good husbandry, management and veterinary care.

- a. Detailed individual and group records are necessary for good husbandry, management and veterinary care. All nationally required records are kept, as well as records required by GFAS to meet other standards in this document (e.g. Standard P-2 “Acquisition Recordkeeping and Monetary Exchange”).
- b. Records that, if not required by law, are recommended by GFAS include but are not limited to:
 - Individual animal records showing origin, age, species, gender, microchip number, band, photo, bio, etc.
 - Individual veterinary record.
 - Weight, current diet and record of diet changes.
 - Food consumption and preferred food items.
 - Where applicable and appropriate, any positive reinforcement training records showing completed objectives and those in development.
 - Acquisition documents(see Standard P-2, “Acquisition Recordkeeping and Monetary Exchange”);
 - Welfare assessment for the ground feeding birds as a whole including measures of: disease prevalence, morbidity and mortality rates, activity levels.
 - Inspection Reports, as applicable, from international, national, state/province and local agencies, as well as accrediting organizations.
 - Other animal documentation as applicable such as complaints or police reports pertaining to specific bird and bird escape reports.
 - Police reports pertaining to specific bird.
 - Complaints pertaining to specific bird.

PF-10. Animal Transport

Ground feeding birds are appropriately transported to maximize safety and minimize stress and in accordance with all local, state/province, national, international requirements and laws.

General

- a. Birds are transported only when necessary, such as when being transported to the sanctuary, to a medical facility for care, or to another accredited Sanctuary for reasons as described in acquisition standards.
- b. Pre-transport health examinations ideally include a complete physical exam with attention to parasite checks, necessary vaccinations, and completion of any tests required by regulations of the receiving state/province or country.
 - For large groups of birds, a general flock health assessment is performed with parasite checks and any required tests done on a random sample from the group.



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- c. Health certificates and any required transport permits accompany the ground feeding birds when being transported interstate or internationally. All transport abides by local, state/province, national and international law. A veterinarian is responsible for preparing and signing the health certificate.
- d. Prior to transport, the sanctuary ensures that adequate facilities are available at the receiving end and food items that are familiar to the animal are available.
- e. Where possible and appropriate, ground feeding birds are acclimated to shipping container/carrier prior to transport. Capture, restraint, and transportation methods consider the bird's temperament and behavior in order to minimize injury, and distress.
- f. At a minimum, transport enclosures meet appropriate animal welfare standards (e.g., IATA, US Animal Welfare Act Transportation Standards or similar).
- g. Transport crates and vehicles are in good condition and meet national and/or international standards. Equipment suitable for lifting, crating and transportation of animals kept within the sanctuary is readily available.
- h. Transport containers:
 - have impervious surfaces, which are cleaned and disinfected after use.
 - provide adequate but not excessive space, which allows the bird to stand and turn easily while reducing the risk of panic flight injuries.
 - are padded with absorbable material and/or a layer of deep litter to prevent injury and allow the birds to remain clean.
 - are secured to prevent tipping or sliding.
 - are darkened to reduce stress.
 - provide adequate protection from weather extremes.
 - are not wire bottomed due to risk of toe injuries.
 - Large ratites may be transported in an appropriately modified horse trailer provided the walls are smooth from ceiling to floor and there is adequate traction to prevent slipping.
 - Ground bird species which are not prone to panic flight may be transported in the back of vans, SUVs, etc. on tarps and bedding provided that they are not overcrowded and the transport area is covered in such a way that the birds will not be caught or wedged in small crevices.
- i. Any bird taken outside the sanctuary, for an approved reason such as medical treatment or transfer to a more appropriate sanctuary, is in the personal possession of the sanctuary director, or of competent persons acting on his/her behalf and adequate provision is made for the safety and well-being of the animal and public safety.
- j. All birds taken outside the sanctuary are kept securely at all times. Birds are managed outside the sanctuary in such a way that the animal is under control and not likely to suffer distress, cause injury, or transmit or contract disease.
- k. Complete medical records, diet and husbandry information, and identifying papers (e.g., describing tattoos, or other identification methods) accompany all transported birds.



NUTRITION REQUIREMENTS

N-1. Water

Fresh clean water is available in sufficient quantity.

Quantity

- a. Fresh clean water is available at all times to all individuals.
- b. Multiple water sources are available for flocks of ground feeding birds to ensure all birds have constant access to water sources.

Quality

- c. Water quality parameters are maintained at a generally acceptable level for ground feeding birds in terms of turbidity, salts, etc.
- d. Potable water sources are tested for contaminants annually.
- e. All water sources (including water bowls) are cleaned at least daily, and more often if needed.
- f. If automatic water devices are not used in hot climates, water sources are shaded or changed multiple times to avoid overly hot water.

Automatic Water Devices

- g. Devices are tested daily to ensure water is available.
- h. Devices are easily disabled when birds must be fasted for medical purposes.
- i. When monitoring of water consumption is required, an alternative means of providing water is devised.
- j. In colder climates, steps are taken (such as installation of heat sources) to ensure water consumption does not decrease with lower ambient air temperatures.

N-2. Diet

A properly balanced and healthy diet is provided appropriately based on the needs of each bird, pair or flock of ground feeding birds, following veterinary instructions for special needs.

General

- a. A veterinarian or qualified nutritionist periodically reviews all aspects of the ground feeding birds' diet at the sanctuary.
- b. Diets of individual, pairs and flocks of ground feeding species (including vitamin supplementation) are of a quality, quantity and variety to match the physiological and psychological state of the individual as it changes over time, with consideration for the age, life stage, species, condition, and size of the individual.
- c. Food is wholesome, palatable, free from contamination and of sufficient quantity and nutritive value to maintain all ground feeding birds in good health.



- d. The sanctuary utilizes a feeding regimen that ensures each individual receives adequate nutrition regardless of status in social group.
- e. Where possible and appropriate, each bird, pair or flock's daily dietary needs are documented and made available to animal care staff.
- f. In large enclosures, routine observation of feeding activity ensures all birds are able to access sufficient food.
- g. Commercially prepared diets are not the sole diet for ground feeding birds, but are fed as part of a diet which includes seeds, grains, insects, fresh fruits and vegetables, greens, and other whole foods.
 - The natural diet of each ground feeding species is taken into account when developing sanctuary diets.
 - Exceptions may be made for commercially bred domestic species which may suffer from health problems when fed anything other than a commercially prepared diet.
- h. Commercially available insects including crickets, mealworms and waxworms are provided regularly to insectivorous species, particularly when the birds must be housed indoors for extensive periods.
 - Insects may be offered to other species who feed on the insects opportunistically.
- i. Care is taken to avoid the use of pesticides near avian enclosures, particularly where insectivorous species are housed.
- j. Grit and oyster shell are provided for seed-eating species.
 - As species appropriate, grit is offered from hanging containers.

Leafy greens, vegetables and fruit

- k. A variety of leafy greens is offered when fresh pasture is not available unless there are concerns regarding individual birds' health.
 - Ratites are offered flowers, fruits and roots in addition to leafy greens and seeds.
 - Cassowaries, guans, curassows and chachalas are provided with fruit and greens on a regular basis.

Browse

- l. Except when housed indoors for weather related reasons, ground feeding birds have access to fresh plant material in pastures and yards.
- m. All plants offered to ground feeding birds are nontoxic and grown without chemical pesticides. Caregivers are trained to identify safe, non-toxic plant species appropriate for the birds.

Vitamins/Supplements

- n. Prior to offering supplemental vitamins, the health and condition of the individual, pair or flock of ground feeding birds, as well as the diet, is reviewed by a nutritionist experienced in avian care and/or the attending veterinarian.

Treats/Enrichment items

- o. Species appropriate enrichment foods are fed in small amounts and dispersed throughout the substrate and/or plants and trees to encourage natural foraging behaviors.
- p. Preferred food items from the basic diet can be reserved for enrichment.
- q. The calories in foods used as enrichment are considered when planning the overall diet.
- r. Birds confined to indoor cages for medical or other reasons are provided with more frequent enrichment opportunities.



N-3. Food Presentation and Feeding Techniques

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

General

- a. Feeding and drinking receptacles are placed in positions that minimize the risks of contamination from soiling by the resident birds themselves, wild birds, rodents and other potentially invasive species.
- b. Food receptacles, where used, are appropriate for the species housed in terms of number, size and placement, and are cleaned daily.
- c. Receptacles for bird food and water are designed to minimize spillage and are not used for any other purpose.
- d. Within open top enclosures, feeding is handled to reduce the risk of attracting wild birds into the enclosure.
- e. Ground feeding birds have access to feed throughout the day, allowing them to forage for naturally.
 - Passeriformes are offered more food than is typically eaten to ensure there is sufficient food to meet their high metabolic needs.
 - Where birds are trough fed, there is adequate space for all birds to feed at once.

Feeding Techniques

- f. Variations in food presentation are considered part of the enrichment program for ground feeding birds. Distributing food throughout an enclosure allows natural foraging behavior.
- g. Food is offered in a manner that encourages positive social interaction appropriate to the species housed, including pair and/or flock feeding, sharing and foraging. Integrated individuals are fed together to maintain social relationships.
- h. Birds are separated as needed to prevent aggression and allow for accurate determination of food consumption.

Diet Changes, Increases or Decreases

- i. Adjustments made to an already formulated and nutritionally balanced diet are made to the entire diet to ensure continued nutritional balance.
- j. Considerations for diet increase include weight and condition of all birds in the group, overall food consumption, activity level of the group, feeding competition and other medical or behavioral considerations.
- k. Diet increases or decreases are made in modest increments with avian response to the change assessed for a minimum period before additional changes are made.
- l. Underweight individuals experiencing health or behavioral problems may be separated for supplemental feeding as needed to avoid undesirable weight gain in conspecifics.



N-4. Food Storage

Food is stored appropriately.

General

- a. Separate and secure facilities are provided for proper and hygienic storage of food.
- b. Dry goods (e.g., seeds, grain and commercial diets) are stored in clean, dry storage areas in sealed containers or on pallets. Products are dated and rotated to use oldest stock first, and expired food as well as bags damaged by pests is discarded.
- c. Produce is stored in a clean, dry refrigerator, and is ordered at regular intervals in amounts that can be used prior to spoilage.
- d. Forage and bedding (grass hay, alfalfa, straw and other baled products are stored in a sheltered area on pallets.
- e. Items frozen for use are dated and labeled, and no frozen items are thawed and refrozen. Items that are not fed frozen are thawed in a refrigerator to minimize risk of spoilage.
- f. Insects are housed per instructions from the provider or in appropriate insect colony housing . Insects intended for use as food are housed in appropriate containers to prevent contamination by insect pests.

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.

General

- a. Food is protected against dampness, deterioration, mold, and/or contamination by insects, wild birds, rodents or other animals.
- b. No food that is spoiled or otherwise contaminated is served.
- c. Fruits and vegetables fed to insect colonies are changed often to prevent consumption of spoiled food items.
- d. Diets are prepared in a safe and hygienic manner to reduce the possibility of contamination or spoilage.
- e. Food preparation techniques meet all local, state/province, and national regulations.
- f. Separate cutting boards, utensils and food preparation surfaces are used when meats, fish and produce diets are prepared in a common kitchen area.
- g. Food preparation surfaces are thoroughly cleaned after use.
- h. Staff and volunteers wash hands thoroughly prior to handling food, and wearing gloves during food preparation is recommended.



Veterinary Care

V-1. General Medical Program and Staffing

There is a written veterinary medical program, overseen by a veterinarian, with adequate support staff at the Sanctuary, with 24/7 veterinary care available on call.

- a. The sanctuary has a written veterinary medical program, including long term preventative medical protocols, disease surveillance and containment procedures, that is developed and carried out under the supervision of a licensed veterinarian – the attending veterinarian - who has training or experience in providing medical care for the ground feeding birds and other species housed at the sanctuary, and who is aware of specific health concerns regarding the birds at the sanctuary.
- b. One or more full-time veterinarians specifically concerned with the veterinary medical program is highly recommended for sanctuaries whose budget will support the salaries of such trained personnel. Sanctuaries unable to employ a full-time veterinarian have access to a part-time veterinarian, under a contractual or other similar arrangement, with training and appropriate experience with the arboreal/perching species housed at the sanctuary.
- c. Veterinary care is available 7 days per week and 24 hours per day for the sanctuary on an on-call basis when a veterinarian is not physically on grounds. When the primary veterinarian is unavailable, there are other suitably experienced veterinarians on call.
- d. There are support staff to carry out the following roles: (1) Husbandry (ground feeding bird caregivers), (2) Technical (medical technologists, veterinary nurses, or individuals trained at the sanctuary), and (3) Clerical. The sanctuary has available properly trained and qualified professional and supporting personnel as necessary to implement these roles.
- e. A staff member is trained to serve as medical program director, dealing with emergencies until a veterinarian arrives or is reached. He or she is able to direct any restraint of the ground feeding birds,, perform basic first aid, be responsible for administration of post-surgical care, and be skilled in maintaining appropriate medical records.
- f. Medications are stored appropriately on site, according to label directions. Medications requiring refrigeration are stored separately from food items.

V-2. On-Site and Off-Site Veterinary Facilities

Veterinary facilities are appropriately located, designed and equipped.

- a. Any on-site veterinary facility at the sanctuary meets all local and state/province building regulations.
- b. Surfaces in the on-site veterinary facility with which ground feeding birds can come in contact are non-toxic and can be readily disinfected.
- c. The on-site facility is located away from areas of heavy public use to minimize noise levels for hospitalized ground feeding birds.
- d. The on-site facility has separate areas for any of the following veterinary functions performed on-site: physical examinations and medical treatments, enclosures for hospitalized birds, sterile surgery, necropsy, medical quarantine, laboratory, radiology and pharmaceuticals storage which includes, when necessary, a safe for narcotics that meets the standards set by applicable regulations (e.g., the Drug Enforcement Administration [DEA] in the United States).



- Food preparation areas, storage areas and staff locker room/housing with showers are separate from the medical facility.
- e. If the sanctuary does not have an on-site veterinary facility, or only a partially outfitted veterinary facility, it has a contract or similar arrangement with a nearby veterinary hospital for off-site diagnostics and treatment as needed. The hospital should have a sterile surgical facility with anesthetic equipment, radiology equipment, a laboratory, and pharmaceutical storage. If necropsies are performed at the hospital, there is a separate area for necropsies and a separate storage refrigerator for storage of carcasses.
- f. See also Standard V-4 “Clinical Pathology, Surgical, Treatment and Necropsy Facilities.”

V-3. Preventative Medicine Program

The sanctuary has a complete preventative medicine program.

- a. Appropriate preventative medicine programs are in place to manage all ground feeding birds, with special attention paid to geriatric animals.
- b. The preventative medicine program includes quarantine procedures, parasite surveillance and control, immunization, contraception, infectious disease screening, and periodic reviews of diets, husbandry techniques and invasive species control.
- c. When circumstances permit, and as appropriate for the individual bird, an overall examination is performed annually, blood is collected, serum banked as a baseline control and the results are recorded. The attending veterinarian, in consultation with the sanctuary director, determines any schedule for routine physical examinations, including ocular and musculoskeletal assessment, and implements any necessary treatment.
- d. A veterinarian, veterinary technician/nurse, or other trained personnel performs regular fecal examinations to look for pathogens (random enclosure sampling is adequate for group-housed ground feeding bird). Results are recorded. Fecal examinations are repeated following treatment to evaluate efficacy.
- e. All ground feeding birds are immunized if recommended by the attending veterinarian, using currently recommended procedures and products as appropriate for the country, species and individual. Where possible, killed vaccines are utilized to minimize the potential for adverse reactions. Schedules and products are dictated by the disease status of domestic and wild animals in the area surrounding the sanctuary and relevant local and national laws.
- f. When ground feeding birds are immunized, the type, serial number, and source of product are recorded in the individual animal's medical record.

V-4. Diagnostic Services, Surgical, Treatment and Necropsy Facilities

Diagnostic services, surgical facilities and services, medical treatment for sanctuary ground feeding birds and necropsy are all high quality, humane, professional, legal, and safe.

Diagnostic Services

- a. Diagnostic laboratory services are available on- or off-site to assist with the evaluation of ground feeding birds and the diagnosis of disease.



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- Where diagnostic services are performed on-site appropriate safety equipment and training is in place, e.g. radiation exposure monitoring, personal protective equipment and hazardous material handling equipment; and there is a maintenance program in place for X-ray machines and other laboratory equipment.
- Diagnostic capabilities include radiology, cytology, microbiology, parasitology, complete blood count, blood chemistry, urinalysis, serology and other appropriate laboratory procedures.

Surgical

- b. The sanctuary has access to surgical facilities (either on-site or at a nearby veterinary hospital) that are clean, free from excessive noise and unnecessary pedestrian traffic, have adequate lighting, ventilation, and temperature controls, and can be easily cleaned and disinfected. For off-site aseptic surgical facilities, an on-site area that can be adapted for occasional or emergency aseptic surgical use is available.)
- c. Surgical facilities have access to appropriate anesthetics including injectable and inhalant anesthetics, reversal agents, etc. Where gas anesthetic equipment, including scavenger units, is used equipment is cleaned and calibrated and filters are replaced, annually at a minimum. Gas cylinders are safely stored and replaced regularly. Facilities have sterilized surgical packs, surgical preparation solutions, intravenous fluids, fluid administration equipment, pulse oximetry, heart monitoring equipment (e.g. electrocardiogram, stethoscope), and emergency drugs on-site with appropriate maintenance and/or replacement schedules for each.
- d. If on-site, the sanctuary ensures that surgical equipment is maintained in good working order and is on a program of routine preventive maintenance and calibration.
- e. Only a licensed veterinarian performs surgery, using standard operating procedures. (Note: A veterinary technician/nurse appropriately trained by a veterinarian in states or provinces where such action is permitted by veterinary practice acts can perform surgical first aid.)
- f. The veterinarian uses aseptic surgical procedures whenever applicable.
- g. Veterinarians and support personnel are compassionate and knowledgeable about the humane aspects of avian treatment, including the proper use of anesthetics, analgesics, and tranquilizers.
- h. Surgical incisions are observed daily, or as frequently as possible while minimizing stress to the ground feeding birds, for signs of dehiscence or infection. Analgesics are administered post-operatively when appropriate.

Treatment

- i. Medications are maintained and used in accordance with local, state/province, and national laws and regulations and are administered in accordance with the state veterinary practice act, or equivalent outside the US.
- j. The sanctuary has a pharmacy on-site where routinely used drugs, such as emergency resuscitative medications, antibiotics, anthelmintics, fluids, anesthetics, analgesics, tranquilizers, etc are maintained.
- k. All medications are purchased, prescribed and administered under the guidance of the veterinarian.
- l. When distributed to avian caregivers, medications are properly labeled and packaged, with the contents identified and instructions for the amount, frequency and duration of administration as well as the name and identification of the ground feeding bird to receive the medication, the expiration date of the medication, prescribing doctor and number of refills if any.
- m. All medical treatments and drug prescriptions are documented in the ground feeding bird's medical record.
- n. Basic physical capture and restraint equipment to facilitate medical treatment is available at the sanctuary.



Necropsy

- o. Whenever possible, there is an isolated area on the grounds for performing necropsies, or appropriate storage facilities for holding the deceased ground feeding bird until the body 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. (Note: Any refrigerated area for holding dead birds is physically separate from live bird holding, treatment, and surgery areas and from food supply storage or preparation areas.)
- p. Disposition of dead ground feeding birds and their parts meet all legal restrictions.
- q. Dead specimens not used are incinerated or disposed of as deemed suitable by the veterinarian in accordance with local, state/province and national regulations.

V-5. Quarantine and Isolation of Ground Feeding Birds

Appropriate quarantine and isolation policies and accommodations are in place and utilized.

- a. Upon arrival, all ground feeding birds undergo quarantine for a minimum of 30 days, according to the protocol established by the attending veterinarian, or for a greater period if required by applicable law. The quarantine period may be longer for birds that have received minimal screening prior to arrival, such as birds from the wild. Ground feeding birds previously housed together may be quarantined together.
- b. If the sanctuary does not have an adequate quarantine facility, steps are taken to have ground feeding birds undergo quarantine under these guidelines prior to their arrival.
- c. Local, state/province, or national regulations regarding quarantine of newly arrived ground feeding birds are followed.
- d. All utensils and outer clothing used in quarantine are restricted to that area.
- e. Protective clothing, if recommended by the attending veterinarian, and footbaths are used by all staff entering the quarantine area or areas containing quarantined birds. Quarantine clothing is not removed from the quarantine area, except in a sealed container if necessary for cleaning.
- f. Caregivers have access to masks when cleaning or handling anything with which the quarantine birds come into contact.
- g. If gloves are not worn (in an effort to reduce stress on the birds) sterile hand-washing technique is used before and after working in the quarantine area.
- h. Where possible, staff working in quarantine areas does not work with other sanctuary animals. If this is not possible, work is done in the quarantine areas last.
- i. Quarantine staff cares for newly admitted ground feeding birds in their quarantine area before caring for sick birds, which are housed in separate isolation enclosures.
- j. The quarantine area allows for daily cleaning and sanitation, either with removable catch trays or a drainage system that allows waste matter to flush into a septic system; waste is otherwise removed and disposed of properly.
- k. In enclosures housing birds carrying infectious or transmissible diseases, to the extent possible, all surfaces of the enclosure are properly sanitized.
- l. Quarantine areas have adequate ventilation, heat and air conditioning, which are used to ensure optimum conditions, particularly in the case of young, elderly or sick ground feeding birds who may be more sensitive to environmental changes.



- m. Separate air handling systems are maintained in quarantine and general sanctuary population areas to reduce risk of disease transmission.
- n. Quarantine bird waste is handled separately from all other manure or compost at the facility. Because of the risk of disease transmission, quarantine waste is not spread on pastures or composted.

V-6. Medical Records and Controlled Substances

Complete medical records and appropriate statistics are maintained, ground feeding birds have permanent identification, and controlled substances are prescribed and stored legally.

Medical Records

- a. Complete medical records are maintained on all birds, pairs or flocks of ground feeding species.
- b. Medical records are dated, legible and indicate examination findings, treatments (types of medication, dosage, duration), surgical procedures, anesthetic procedures (type of agent, dosage, effect), results of all laboratory tests (parasitologic, hematologic, bacteriologic, etc.) pathology reports, plus immunization records with all relevant dates, bird identification and nutrition/diet information, and, where applicable, necropsy reports.
- c. Copies of medical records accompany any bird, pair or flock of ground feeding species who is/are transferred to another sanctuary.
- d. Medical records are maintained under the direction of the veterinarian or trained avian caregiver. Where possible, duplicate record sets are stored at another site, or in a fire proof or theft proof safe on site or an online storage system.
- e. Statistics are tabulated regularly on the rates and nature of illness and mortality in the sanctuary.

Controlled Substances

- f. Only a licensed veterinarian prescribes controlled substances used at the sanctuary, and all such substances are secured in accordance with any applicable laws.
- g. The sanctuary maintains appropriate records and logs for all controlled drugs used. Controlled drug logs are kept up to date and comply with any national or other legal requirements (such as the Drug Enforcement Agency in the U.S.).
- h. Expired controlled drugs are marked as such and stored separately.
- i. Controlled drugs, are discarded in accordance with applicable national, state, and local law and regulations (such as the USDA and DEA in the United States).

V-7. Breeding

No intentional propagation of ground feeding birds occurs, sound practices are in place and implemented to prevent propagation and to properly care for chicks hatched at the sanctuary.

- a. Although GFAS recognizes the importance of appropriate “conservation breeding” programs, they fall outside the mandate of GFAS Accreditation programs unless they adhere to the following guidelines:



- Animals are not brought into captivity for the purpose of breeding. Animals that are allowed to breed should enter a wildlife facility as a result of normal acquisition protocols such as surrender or government confiscation and be considered an endangered or threatened species with available release sites within the state/province, conducted with specific conservation goals, in accordance with local, state/province, national, and international law and regulations.
 - Breeding should not be forced – that is, not the result of artificial insemination or being placed in enclosures of insufficient size or otherwise not in keeping with GFAS standards.
 - Breeders – that is, the parent animals – should be released into the wild with their young. If breeding animals are deemed unreleasable, there should be documented evidence from a qualified professional that the animals cannot be released because of a physical condition or other reason that would make them unable to survive in the wild. Offspring of unreleasable parents should not be released until an age of species-specific maturity for survivability.
 - Unreleasable breeding animals should receive the care required of all animals under the GFAS standards and should not be maintained for the purpose of breeding if they have incurable or unmanageable pain or suffering and do not have an acceptable quality of life.
 - The facility should have an identified release site for the breeding animals and offspring, with any necessary permits or memoranda of understanding in place. While GFAS may consider whether a definite plan (such as ongoing surveys of land for potential release sites and a timeline for releasing animals) is sufficient, it will not be sufficient for a facility to simply say that it hopes or plans to be able to release the animals one day. Thus, a facility may not breed any animals in captivity, even highly endangered animals in order to create a sustainable population, without a definite release plan in place.
 - In such facilities chicks are reared according to current best practice guidelines.
- b. Reproduction is controlled through habitat and egg management.
- Nesting behavior is discouraged through habitat design. Nesting sites are generally not provided in the aviary however, egg management may be used for species for which nest building is an integral part of their social behavior.
 - Nest boxes, if used, are regularly checked for eggs, which are removed. To reduce the risk of constant egg production, with subsequent health impacts, eggs may be replaced with ‘dummies’ or the eggs may be hard-boiled and returned. These replacement ‘eggs’ are removed once the bird has abandoned the unproductive nest.

V-8. Zoonotic Disease Program

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

- a. The sanctuary's veterinarian is knowledgeable about zoonotic diseases that may affect ground feeding birds at the sanctuary. The sanctuary has emergency procedures and a defined process to avoid transmission of potential or emerging diseases through bites, scratches, body fluids, direct contact with birds and other means. (Note: Additional precautions may be necessary for staff classified as increased risk of disease, including those who are immune-compromised.)
- b. Staff has any appropriate tests and immunizations prior to employment and annually thereafter, as appropriate for the country, avian species and individual.



- c. A physician with expertise in infectious diseases is consulted whenever an employee contracts an unusual illness or is exposed to a ground feeding bird diagnosed with a zoonotic disease.
- d. When a reportable disease is identified, all appropriate local, state/province, and national regulatory officials are contacted.
- e. All areas in which the staff has direct contact with ground feeding birds have hand-washing facilities available in the immediate vicinity (or an equivalent; e.g., bactericidal hand-wipes)
- f. Human food consumption by the staff does not occur in the immediate area of avian contact.
- g. See also Standard S-8 (“ First Aid and Zoonotic Disease Training, and Staff First Aid ”).

Well-Being and Handling of Ground Feeding Birds

W-1. Physical Well-Being

All ground feeding birds are routinely monitored to ensure their physical well-being. All aspects of husbandry, including veterinary care, environmental enrichment and diet are designed to optimize the birds’ physical well-being.

- a. The welfare of each individual bird, pair and flock is the overriding consideration in all sanctuary actions.
- b. Ground feeding birds are able to enjoy lives that are as close as possible to that of their wild counterparts as regards stimulation and interest through adopting husbandry and management procedures, including appropriate housing and enclosure design, environmental enrichment programs and positive reinforcement training programs if species appropriate, and a balanced diet to meet nutritional requirements.
- c. Ground feeding birds are provided with opportunities to fly or walk, nest, forage for food, and play by providing species-appropriate structures, open spaces to explore, places to hide and rest in comfort, and a variety of plants and substrates and other enclosure enhancements where food/enrichment items can be hidden.
- d. Regular assessments are performed in an effort to measure the welfare of individual animals through monitoring of nutritional, physical and social conditions. Qualified personnel conduct daily observations of each bird, pair or flock 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: Where it is not possible to observe each bird, pair or flock on a daily basis, time is spent observing all birds on at least a weekly basis, an accurate population count is maintained and health issues monitored.
- e. Where possible and appropriate, records of individual birds, pairs and flocks are kept to provide both behavioral and veterinary history.
- f. Where possible, ground feeding birds’ weight is assessed and recorded at least twice yearly to monitor for signs of illness and to determine dosages for chemical anesthetics.
- g. The use of positive reinforcement training may be appropriate for those ground feeding birds who enjoy interacting with people to provide additional enrichment, reduce the need for chemical immobilization and to reduce stress during medical intervention.

W-2. Social Housing



Ground feeding birds are grouped appropriately with the safety of birds and staff in mind.

General

- a. Ground feeding birds housed in the same primary enclosure are compatible.
- b. Ground feeding birds are not housed near animals that interfere with their health or cause them physical or psychological discomfort.
- c. Avian and non-avian predator and prey species are not housed in close proximity.
- d. Habitats are of sufficient size to allow appropriate space between individuals, within and between social groupings and to allow for temporary isolation from conspecifics.
- e. Ground feeding birds are housed so that no individual endures constant harassment or suffers physical injury, nor do social behaviors prevent any individual from maintaining proper nutrition and hydration.
- f. The sanctuary has the ability to separate and isolate animals to address behavioral concerns. If ground feeding birds are isolated for social reasons, all efforts are made to find a suitable social group within the facility or at another accredited institution.
- g. Solitary housing is temporary and reserved for situations including, but not limited to: quarantine; medical assessment and/or care; lack of appropriate social partners or social tension resulting in disruption to the pair or flock, or physical aggression leading to injuries.
 - Housing for species that are not naturally social or flocking takes their social needs into account.
 - Passerines who must be housed singly are placed in environmentally complex enclosures with opportunities to forage and hide, to reduce the risk of abnormal behaviors developing or panic flight injuries occurring.
 - Birds in solitary housing may benefit from being able to see and hear other birds.

Social Housing

- h. The individual developmental and social history of the ground feeding bird(s) is taken into consideration when determining social groups.
 - Birds are housed in compatible pairs or groups appropriate to the species' natural social structure(s) unless such pairs or groups present a danger to any individual or group or are restricted by the attending veterinarian for health reasons.
 - Housing is designed to encourage pair and flock activity that benefits the individuals and the flock as a whole while discouraging aggression, territoriality, food and/or mate competition wherever possible.
 - There is adequate space and options are available for individuals or paired birds to separate or hide from the group.
 - Cassowaries are not group-housed unless there are separate shift areas, designed to allow for visual contact, available for males and females.
 - Rhea and emu housing ensures sufficient space to prevent fighting between males during breeding season.
 - Ostrich social groups do not include multiple males to reduce risk of aggression.

Mixed Species Housing

- i. Compatible mixed species social pairs and/or groups may be encouraged as appropriate provided such pairs or groups present no danger to any individual or group.



W-3. Introduction of Unfamiliar Individuals

Introduction of any new arboreal/perching bird to a social group is done according to techniques appropriate conspecifics and heterospecifics for each species, with staff safety ensured.

General

- a. Every attempt is made to integrate social ground feeding birds into conspecific flocks or partnerships as species appropriate.
- b. Introduction of unfamiliar ground birds is closely monitored to ensure birds do not injure one another.
 - In particular, caution is used when introducing adult male birds into social groups.
 - As needed and possible, information listed below is gathered for the introduction planning process:
 - Age and gender
 - Social experience with other birds
 - Criteria are established for separating birds if introduction does not proceed safely.
 - All caregivers have a clear understanding of any contingencies for problems which might occur, and are empowered to take appropriate action in the event of a perceived emergency.

W-4. Behavioral and Psychological Well-Being

The behavioral/psychological well-being of each ground feeding bird, pair, or flock is evaluated and addressed, and a welfare plan and report is part of the bird, pair or flock file.

General

- a. There is a formal, written enrichment program that promotes species-appropriate behavioral opportunities and ensures captive ground feeding birds' psychological well-being. A complete environmental enrichment program includes the following:
 - Structural enrichment - Enclosure design and furniture that add complexity to the environment and promote species-specific behavior (e.g., walking/exploring, flying, perching).
 - Object enrichment – Objects that encourage inspection and manipulation and promote species-specific behavior (e.g., nesting, foraging, tool-use).
 - Food enrichment - Varying food choices and food presentation, including the use of puzzles that increase food procurement time.
 - Social enrichment – In addition to, or in place of, species appropriate pairing or flock structure, affiliative interactions between caregivers and ground feeding birds may be appropriate in some instances. The decision to include social enrichment with caregivers should be made on an individual basis, considering only the social needs of the bird.
- b. All avian 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 birds;



- the bird's ability to respond appropriately to variable environmental conditions, physiological states, developmental stages, and social situations as well as adverse stimuli.
- c. 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 plan to address the concerns is developed.
- d. Where possible and appropriate, a behavioral/psychological profile for each bird, pair or flock is maintained and updated annually. A copy of this profile is kept in the permanent file of the bird, pair or flock.

W-5. Ground Feeding Bird-Caregiver Relationships

Positive relationships between ground feeding birds and caregivers are maintained. Birds are not fearful or aggressive in response to human presence or routine care procedures.

General

- a. Ground feeding birds arrive at sanctuaries with a variety of previous experience with caregivers, which caregivers take into account in their interactions with these species.
- b. A positive relationship between the ground feeding birds and regular caregivers, animal managers and veterinary staff is one in which the birds are given the freedom to integrate with their conspecific social group with minimal human interference or to interact regularly with caregivers if they choose.
 - Particular attention is paid to preventing stereotypic behaviors from developing in highly human-socialized birds.
 - Staff are trained to perform routine duties in a consistent manner which helps the birds to anticipate where people will be during feeding, cleaning, etc. and allows them to move out of those areas.
- c. Interactions with ground feeding birds do not cause overheating, excessive cooling, physical harm, or unnecessary discomfort, and minimizes physical and psychological stress or trauma as much as possible.
- d. Negative interactions are avoided. However, when they occur, efforts are made to recover trust and a positive relationship, if the bird enjoys regular interaction with people
- e. Physical abuse, deprivation of food or water and other forms of negative reinforcement or punishment-based training are never used to train, shift or otherwise handle ground feeding birds.

W-6. Handling and Restraint

Any necessary handling and restraint is done safely and appropriately, with minimal distress to arboreal/perching birds. Staff are trained in ground feeding bird-specific safe handling techniques/practices.

General

- a. Handling for veterinary care is done as expeditiously and carefully as possible in a manner that does not cause trauma, overheating, excessive cooling, physical harm, or unnecessary discomfort, and minimizes physical and psychological stress as much as possible.



- b. Staff and volunteers handling birds are given a background in scientific knowledge of, and advances in, bird behavior. Up-to-date information on bird behavior is utilized to ensure appropriate handling procedures to minimize stress.
 - Except in case of emergency, birds are only restrained by animal caretakers trained in avian handling.
 - Care is taken to avoid injury or stress to the birds during restraint procedures.
- c. Acclimation of enclosure residents to a trap cage, or installation of features that facilitate minimum stress captures is highly recommended.
 - Catch pens, alleys and chutes may be used for larger species, such as ratites.
 - Smooth sided pens, not horse or cattle fencing, are used to create these facilities.
 - Once restrained ratites are hooded for calming.
 - Young ratites are handled gently to reduce risk of injury and no ratite is restrained using the wings.
- d. As species appropriate, shields, nets, gloves, hoods, towels or blankets may be used to ensure the safety of the bird and caretaker.
- e. Use of gloves may be inappropriate for species that learn to (or may learn to) associate them with stressful situations. Use of nets, towels/blankets or hoods may result in less stress for such birds.
- f. Chemical immobilization is performed only by a licensed veterinarian or by trained staff under the guidance of a licensed veterinarian, or other qualified individuals authorized by the sanctuary director or veterinarian, following the laws and regulations of country where the animals are housed. Specific anesthetic protocols, including record-keeping, are followed.
- g. Where possible and appropriate, positive reinforcement training is used to minimize the need for chemical immobilization and to reduce stress during procedures.
 - 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 and, in some instances, EKGs and blood draws.

STAFFING

GENERAL STAFFING

S-1. General Staffing Considerations

The sanctuary has a sufficient number of staff and volunteers, adequately supervised, to provide humane care, with clear job duties and equitable compensation.

- a. The sanctuary employs or enlists a sufficient number of qualified employees or volunteers to provide the appropriate level of care for the ground feeding birds and to ensure adequate supervision of all employees and volunteers. (Note: Staff-to-animal ratio will vary greatly given the nature of the facility and the type of birds and other animals at the sanctuary.)
- b. As described in Standard G-3 (Succession Planning), there is a written job description for the sanctuary director and other senior management positions at the sanctuary, providing a clear description of their duties and responsibilities.



- c. A list is maintained of all staff/volunteers authorized to work with the ground feeding birds, indicating lines of responsibility. Staff receives fair compensation commensurate with their skills. At a minimum, each salary complies with generally accepted standards of compensation for employees of the sanctuary.
- d. There is a clear management structure within the sanctuary, which is communicated to all employees, and to volunteers as appropriate.

S-2. Security and Emergency Coverage

Staff is available at all times to respond to emergencies.

- a. A qualified senior staff member or the sanctuary director should live on the sanctuary grounds. If not then at least one trained and qualified staff member or trained volunteer is on the sanctuary grounds at all times, and a staff member is immediately reachable via telephone, radio or pager, 24 hours a day, 7 days a week.
- b. The director is generally available to the sanctuary on a full-time basis (40 hours per week); when the director is not available due to vacation or another reason, there is a designated back-up from among the senior staff. Staff has various means to contact the Director at all times in case of emergency.
- c. A qualified veterinarian trained in the care of the ground feeding birds housed is available in person or via phone at all times in case of emergency.



Volunteer and Internship Programs

Volunteers and Interns are appropriately supervised, and those playing an integral role in the sanctuary receive the manuals, training and safety protocols.

- a. Any volunteers/interns and community workers have a specific employee/staff member assigned to direct their recruitment, training and supervision.
- b. Any volunteers/interns and community service workers allowed to work with or around ground feeding birds do so only under the appropriate level of supervision of a fully trained avian caregiver.
- c. Volunteers/interns who play an integral role in the sanctuary are treated as an employee would be treated, regarding the provision of manuals, training, and safety.

S-3. Manuals

The sanctuary has a current employee manual, standard operating procedure manual, and, if applicable, manuals for volunteer and internship programs. Manuals are reviewed and updated regularly.

- a. The sanctuary has a written employee manual that includes information pertaining to topics including: personnel practices, employee benefits, leave of absence, sick leave, personal appearance and conduct, environmental concerns, filing complaints, and performance evaluation. The employee manual is given to all new employees.
- b. A standard operating procedure (SOP) manual is available on the premises and in a location accessible to the staff at all times. The manual contains a detailed outline of all daily procedures, as well as emergency protocols and other policies relating to the care and safety of the ground feeding birds.
- c. Care procedures for each ground feeding bird species, as well as other animals at the sanctuary, are written down (either in the SOP manual or elsewhere) and include detailed information specific to that species or individual.
- d. If the sanctuary has a volunteer and/or intern program, it has prepared manuals outlining volunteer and/or intern responsibilities. Copies of the manuals are given to all new volunteers and/or interns.
- e. All manuals are reviewed at least annually and updated as necessary, and employees, volunteers and interns are advised of any changes.

S-4. Employee Training and Continuing Education

Training and supervision are carried out in a manner to ensure the highest and safest level of care for the ground feeding birds, including during unforeseen changes in personnel.

- a. New employees participate in a probationary training period suitable to the species in question and under the strict supervision of a fully trained senior staff member before working directly with apes at the sanctuary.



- b. At least one staff member and backup are trained in all aspects of ground feeding bird care for all species housed at the sanctuary to ensure that an experienced caregiver is always available to care for all birds in case of personnel changes; and that staff member and backup are noted in writing.
- c. The sanctuary director ensures that plans for continuing education to improve ground feeding bird care and management techniques are in place.
- d. Continuous in-house staff training and development (including availability of relevant literature) is offered to employees, and volunteers as appropriate, including such topics as: ground feeding bird husbandry and welfare, health and safety, first aid, action in emergencies, escapes or illness, safety procedures, emergency euthanasia, basic sampling for health monitoring and diagnosis, food hygiene, and disease prevention.

SAFETY POLICIES, PROTOCOLS AND TRAINING

S-5. Communication System

The sanctuary has a reliable communication system in place.

- a. A reliable communication system with back ups, which may utilize pagers, 2-way radios, cell phones, intercoms, or other electronic devices, is in place.

S-6. Emergency Response Plans and Protocols

The sanctuary has appropriate written disaster preparedness plans in place, needed information is posted, and appropriate coordination takes place with community emergency services.

- a. The sanctuary has a written disaster preparedness plan in place to cover emergency procedures in the event of a natural disaster, fire, injury, etc. The plan has taken into account all necessary ground feeding bird handling under situations of extreme stress.
- b. The written plan is provided to staff and, where appropriate, volunteers.
- c. Emergency information is posted throughout the sanctuary indicating emergency contacts and phone numbers including the local police and fire departments, attending veterinarian, sanctuary director, supervising staff members, location of nearest hospital and other important information.
- d. A detailed outline of communication lines, procedures, and locations of all exits and entrances to the sanctuary are clearly defined and known by the entire staff. This information is reviewed for needed updates periodically. Maps are posted throughout the sanctuary indicating the best evacuation route.
- e. All emergency plans are coordinated with local community emergency services as appropriate including fire, police, hospitals, and ambulance services. Appropriate community personnel and agencies are aware that ground feeding birds are housed at the sanctuary.
- f. The location of the sanctuary does not pose any undue hazards and minimizes risk from natural disasters (e.g. flood zone, riverbed). If such risks are present, the sanctuary has addressed this in the written disaster plan.
- g. The sanctuary is located in an area that is removed from heavily developed areas to the extent possible. If the sanctuary is near heavily developed areas, it has taken steps to address problems this may cause for the surrounding community or the ground feeding birds.



- h. A secure location is identified where ground feeding bird records (*i.e.*, acquisition, transport, medical, welfare assessment reports) are protected from fire, flood, and other hazards. (Note: Backed up offsite storage and web-based storage of electronic records are potential methods.) Governance documents, financial records, and permits and licenses are also stored securely.
- i. Provisions are made for long-term archiving in a secure format. A regularly backed-up copy should be stored in a separate location or online.

S-7. Escaped Bird Protocol

A detailed and appropriate written escaped ground feeding bird protocol is in place and understood by staff and local emergency services; and any escapes are detailed in reports.

- a. A detailed written escaped ground feeding bird protocol is in place addressing situations in which birds escape from their enclosures, regardless of whether the birds have escaped sanctuary property, and is reviewed and understood by all staff, and volunteers as appropriate.
- b. The protocol is shared with local emergency services such as animal control and fire and police departments, as needed and appropriate.
- c. The protocol includes the following:
 - A clearly defined chain of command in an emergency situation;
 - A notification hierarchy, indicating who to contact first, second, third and so on in case of an escape;
 - Possible ground feeding bird escapes occurring during off-hours, when staff may not be immediately available.
 - A communication system allowing for clear communication with sanctuary staff of all pertinent ground feeding bird information including the type of bird escaped by species, age and location;
- d. Clear plans and routes for personnel safety are plotted and displayed throughout the sanctuary.
- e. All escapes are recorded and detailed reports made.

S-8. Emergency Training

Staff participates in ongoing training for emergency response and drills are conducted regularly.

- a. All staff, and volunteers where appropriate, participates in ongoing training on all emergency, escape, and disaster preparedness procedures consistent with the sanctuary's written protocols, with drills held at a minimum of every 6 months.
- b. Records of training are maintained, including a list of those staff and volunteers who participated in training. Drills are evaluated to ensure that procedures are being followed, that the sanctuary's communication system is effective, that staff training is effective, and that improvements to protocols are made where appropriate.



S-9. Firearm Policy

The sanctuary has a written firearm policy, including identified personnel, and covering proper care and storage of firearms.

(Note: Not applicable for sanctuaries that do not need or use firearms.)

- a. A written firearm policy exists in compliance with all applicable laws; and personnel qualified to use firearms are identified and made known to sanctuary staff.
- b. Firearms, ammunition, where provided, are available for immediate use, used by licensed and trained operators only. Firearms are cleaned and maintained and tested as recommended by the manufacturer, and kept securely under lock and key when not in use or under maintenance.

S-10. Firearm Training

If the sanctuary has firearms, appropriate staff are identified for weapons training, and receive documented and up-to-date training.

(Note: Not applicable for sanctuaries that do not need or use firearms.)

- a. All staff qualified and licensed to use firearms undergo training and periodic refresher training and practice, including a review of current sanctuary protocols and policies. Such training is recorded.

S-11. Chemical Restraint

The sanctuary has a written chemical restraint policy, which covers appropriate use, maintenance and storage of chemical restraint equipment and attendant drugs.

- a. A written policy for the humane chemical restraint of ground feeding birds housed at the sanctuary is in place and in compliance with the Drug Enforcement Agency (or comparable agency outside the United States), to include:
 - Training and certification in the equipment, humane chemical restraint, immobilization process, and the use of drugs for veterinarian 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 animal 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.
- b. The sanctuary's policy provides for qualified personnel to partake in appropriate training programs on the safe and humane use of chemical restraint and immobilization equipment.
- c. All chemical restraint equipment is cleaned after each use, maintained in good working order and tested on a regular basis.



S-12. First Aid and Zoonotic Disease Training, and Staff First Aid

An appropriate written first-aid plan is in place, staff, and volunteers where appropriate, are informed when a zoonotic disease occurs at the sanctuary, and training is provided to staff and, as appropriate, volunteers.

- a. The sanctuary has a written first-aid plan that is accessible to all staff on the premises, and to volunteers as appropriate.
- b. Staff, and volunteers as appropriate, are trained in basic first aid.
- c. Written instructions are provided for staff (and volunteers as appropriate) on the provision of emergency health care and the procedures to be followed in the event of an incident involving any ground feeding bird and a visitor, volunteer or staff member, including (when appropriate) handouts with any special information that any attendant health care professional, on site or off, should know to help the victim and/or keep health care attendants safe from potential zoonotic diseases.
- d. First-aid stations are readily and easily accessible and are located throughout the sanctuary.
- e. Employees, and volunteers where appropriate, have adequate training to understand the potential risk of disease transmission, including potential sources of disease, modes of disease transmission, and clinical signs associated with disease. Each signs a form that clearly states that he/she has been fully trained in these procedures. Training and attendance is logged.
- f. All staff and active volunteers are informed when a zoonotic disease occurs at the sanctuary.
- g. See also Standard V-8, Zoonotic Disease Program.

GOVERNANCE AND FINANCE

GOVERNING AUTHORITY

Note: The term “Board of Directors” is used in this section to reference the governing authority for the sanctuary. In some instances, another term may be used (e.g., “Trustees”).

G-1. Nonprofit/ Non-Commercial Status

The sanctuary and/or its governing organization has a national legal nonprofit status, or is operated as a non-commercial entity by a national or local government.

- a. A facility and/or its governing body (if the facility is a program of one or more organizations) satisfies one of the following:
 - A sanctuary, or its governing organization has obtained national nonprofit status in the country of governance or operation. For example, sanctuaries located in or operated by organizations in the United States or its territories should have 501(c)(3) status, and sanctuaries located in or operated by organizations in the United Kingdom should have registered charity status.
 - A facility (such as a wildlife rescue center) is operated as a non-commercial entity by a national or local government.



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- b. An exception to this standard will be made if non-profit registration is not available in the country of governance or operation.



G-2. Ownership of Sanctuary Property and Contingency Planning

Sustainability of the sanctuary is promoted by ownership of the sanctuary property or a proper written lease agreement.

- a. All property on which the sanctuary sits is held in the name of the sanctuary (or its governing organization) as either owner or lessee.
- b. The sanctuary's governing body has confirmed that the sanctuary is located on property for which it is allowable (by law or regulation, such as zoning laws) to operate the facility and the activities conducted by the organization.
- c. If the sanctuary is on another person's property [e.g., housed in someone's home or on their land, including government land], there needs to be a written lease agreement between the property owner and the sanctuary (or its governing organization).
- d. If property is leased, a long-term (ten years or longer) contractual lease is in place, with a termination clause requiring sufficient notice (a minimum of a year) to allow the sanctuary to relocate or transfer its animals to another appropriate facility that has committed to providing their lifetime care.
- e. If property is leased, the sanctuary should have a written contingency plan describing the steps to take to relocate or transfer its animals to another appropriate facility at the end of the lease, or upon an unexpected termination of the lease.

G-3. Succession Planning

The sanctuary has a written succession plan for its continuance should the director or other key management be unable to continue in their positions.

- a. The sanctuary has a written plan outlining succession scenarios for key positions within the sanctuary, covering at a minimum the sanctuary director. Depending on the structure of the sanctuary management, this may also cover the assistant director, director of operations, director of finance, etc.
- b. For the director position as well as other key management, written job descriptions should exist outlining the primary functions and responsibilities of each position.
- c. The succession plan should include an emergency plan outlining who will carry out the key responsibilities in the event of a sudden and unexpected absence by the director or other key management in both short- and long-term scenarios.
- d. A succession plan should also define the role of the Board of Directors/Trustees in overseeing transition in the event of a planned departure of the sanctuary's director, including functions such as hiring and oversight of an interim director, determining salary ranges, re-assignment of responsibilities, and the appointment of a transition committee.



G-4. Board of Directors/Trustees

The Board of Directors/Trustees organizes itself and carries out its duties in an appropriate, legal and responsible manner, and has appropriate relationships with staff and volunteers.

- a. A Board of Directors/Trustees is in place with a minimum of three (3) members, or a greater number if required by law, where at least one board member is not a family member.
- b. The Board of Directors/Trustees has organized itself in a manner that allows its duties to be carried out in a timely and responsible manner and in accordance with all relevant non-profit regulations.
- c. Bylaws, in accordance with applicable law, have been developed and adopted as the general policies and rules that govern the sanctuary and define the Board's composition and structure.
- d. The Board of Directors/Trustees has regularly scheduled meetings, and minutes are kept. The Board has a written position description describing the responsibilities of its members, and members are knowledgeable of their legal obligations and accept responsibility for self-regulation, accountability, ethical practice of the sanctuary, and sound financial management and oversight.
- e. The Board is supportive of the sanctuary abiding by GFAS standards.

G-5. Ethics and Grievance Procedures

The sanctuary's policies and actions of the Board and staff reflect adherence to a high code of professionalism and ethics.

- a. Business and related activities, including outreach and interactions with other sanctuaries, are conducted in a professional manner, with honesty, integrity, compassion and commitment, realizing that an individual's behavior reflects on the sanctuary and greater humane communities as a whole. A code of ethics/conduct for the sanctuary has been adopted by the Board of Directors/Trustees.
 - The code of ethics/conduct addresses the core values of: integrity, openness, accountability, service and charity, and reinforces standards of professional behavior. (Note: In recognition that some animals are used for food, and sanctuaries are in the business of protecting animals, all sanctuaries should ensure that their sanctuary events are conducted in a manner that is consistent with their mission.)
 - All personnel associated with the sanctuary, including volunteers, have been provided with access to the code of ethics/conduct and have agreed to adhere to it.
- b. The sanctuary has a written Conflict of Interest policy prohibiting any Board member, Director, or key employee from approving or voting on a transaction in which he or she has a monetary or other interest. Members of the Board of Directors and the Director, as well as key employees as appropriate, are asked to sign written acknowledgements of receipt of the policy and have disclosed potential conflicts of interest.
- c. The sanctuary has a written anti-discrimination policy, specifically referring to any protected class under law.
- d. There is a written grievance process that is clearly communicated to the staff and volunteers to communicate the procedure for reporting a concern regarding workplace-related issues, including ethics complaints; includes an alternate pathway if the normal person to whom one should take



concerns is non-responsive or the focus of the concern; and allows for fair, prompt and meaningful resolution.

G-6. Required Licenses and Permits

The Sanctuary has all legally required licenses and permits (or other necessary government approval) to operate as a sanctuary and to house each animal.

- a. The sanctuary obtains and maintains all permits and licenses required under city, county, state/province, country and international laws and statutes for each animal housed at the sanctuary.

G-7. Strategic Planning

The sanctuary has at least a three-year strategic plan in writing to provide a structure upon which to base the fundamental actions that guide and shape operations.

- a. The sanctuary has a written strategic plan in place, developed by the Board of Directors and Director, with input from other sanctuary management and staff where appropriate, that provides a structure within which fundamental actions of the sanctuary are based to shape and guide sanctuary operation. The strategic plan addresses at a minimum three years.

FINANCIAL RECORDS AND STABILITY

F-1. Budget and Financial Plan

The sanctuary maintains an annual operating budget and a long-term financial plan.

- a. An annual operating budget exists and reflects estimated future expenditures. The budget includes expenses related to staffing salaries and benefits, overhead expenses, supplies, capital improvements, ongoing maintenance, etc. The budget is approved by the Board of Directors/Trustees.
- b. Periodically during the year, the estimated budget is compared to the actual expenses of the sanctuary and where necessary, appropriate adjustments are reflected in future estimated expenditures.
- c. The sanctuary has a long-term (minimum of three years) financial plan that projects future revenue and expenses, consistent with priorities set out in the strategic plan. The plan builds in protection for the care of the animals (*such as* creating a “bare bones” budget; seeking endowments for lifetime care of animals; building up increased operating reserves; entering into written agreements with other facilities to take animals in the event of closure of the sanctuary; or other such “safety nets”) in the event that significant decreases in operating income occur.



F-2. Financial Reports

The sanctuary keeps accurate and complete financial records.

- a. Detailed, accurate periodic financial reports are kept on file. The sanctuary produces on a regular basis (at least annually) the following financial statements:
 - A Statement of Financial Position (also known as the Balance Sheet);
 - A Statement of Activities (also known as the Statement of Revenues and Expenses, or Operating Statement, or Income Statement, or Profit and Loss Statement); and
 - A Statement of Cash Flows.
- b. Other pertinent information, such as loan amortization schedules and lease commitments, are also maintained and updated at least annually.
- c. Copies of IRS Forms 990 (or comparable documents required to be filed to maintain non-profit status outside of the United States) and other tax documents, such as exempt status determination letters, are kept on file with other sanctuary documents and are available for public review, as required by law.

F-3. Financial Stability

The sanctuary has a strategy in place for securing and maintaining at least minimal financial reserves.

- a. The sanctuary has a strategy in place, as reflected in strategic and financial plans, to maintain reserves equal to at least three months (or one month to achieve GFAS verification) of those operating costs essential to the proper care and welfare of the sanctuary animals.
- b. Consideration may also be given to cash equivalents as well as advance purchases of food, supplies, etc.
- c. See also Standard F-1(c).

F-4. Banking Responsibilities and Financial Transactions

The sanctuary maintains a bank account, keeps personal and sanctuary business separate, and properly records all contributions, petty cash transactions, and loans to the sanctuary.

- a. There is a checking account registered in the sanctuary's name that is used only for sanctuary financial transactions.
- b. Personal business is kept completely separate from the sanctuary's business (e.g., staff and Board members cannot use sanctuary funds to pay for personal expenses or take loans from sanctuary funds).
- c. If the sanctuary is being funded through personal loans, loan documents are signed and maintained in the accounting record. Repayment schedules are developed and followed.



- d. All contributions from donors are properly documented and promptly deposited. Donors are provided with receipts as required in accordance with applicable laws or regulations.
- e. If petty cash is kept on hand, transactions are documented and receipts are kept on file substantiating the related expenditures.

F-5. Fundraising Activities and Disclosures

Fundraising is conducted in a legal, ethical and transparent manner.

- a. Fundraising techniques conform to applicable tax regulations for maintaining non-profit status (e.g., sec. 501(c)(3) status in the United States) and conform to the spirit as well as the letter of all applicable laws and regulations.
- b. Fundraising activities are conducted with honesty and integrity, and put the charitable mission of the sanctuary above personal gain.
- c. All fundraising and soliciting materials are accurate, do not exaggerate financial needs nor incorrectly claim sole credit for joint efforts, correctly reflect the sanctuary's mission and use of solicited funds, and do not threaten to betray the mission by making misleading and unprofessional statements (e.g., claiming animals will have to be euthanized if donations are not received immediately).
- d. The sanctuary ensures proper stewardship of charitable contributions, including timely reports (e.g., tax filings, annual reports, reports required by funders) on the use and management of funds. Restricted funds are expended in accordance with donor's intentions. Explicit consent by the donor is obtained before altering restrictions or conditions of a gift.
- e. Fundraising expenses are reasonable, and total fundraising expense is disclosed on financial reports and any required tax filings.
- f. Fundraisers for the sanctuary ensure that all information provided to donors is accurate and complete. Any statements about the taxable nature of donations indicate that all or part of the donation may be tax deductible as a charitable contribution under applicable law.

F-6. Insurance and Waivers

The sanctuary has adequate insurance coverage and secures signed waivers from all visitors and volunteers who enter the sanctuary property.

- a. Insurance policies, where available, are in place that protect the financial resources of the sanctuary and staff, as well as protect the community from harm that the sanctuary might cause. The amount of coverage is commensurate with the size of the sanctuary and the implied risk associated with the animals housed at the sanctuary. Where available, this includes General Liability insurance and a management liability policy (often called Directors & Officers or "D & O").
- b. Visitors and volunteers sign waivers that acknowledge the potential risks of being on sanctuary property.

EDUCATION AND OUTREACH

E-1. Education Programs

Education programs are thoughtfully designed and overseen to promote a humane ethic, with careful respect and protection of all aspects of the individual welfare of the ground feeding birds involved, and ensuring public safety.



(Note: Not applicable for sanctuaries that do not have an education program.)

- a. Any education program is designed to promote awareness, empathy, and respect for all life through education and advocacy insofar as resources permit, and portray the issues surrounding why individual ground feeding birds reside at the sanctuary, the birds' natural history and conservation status, and how the highest welfare of each individual bird is ensured.
- b. An education program is conducted in accordance with a written Education and Outreach Policy that articulates and evaluates program benefits, under the direction of qualified staff and/or volunteers.
- c. The education program is evaluated periodically for effectiveness and content, ideally on an annual basis, by the director.
- d. Ground feeding birds are not taken off the grounds of the sanctuary for incorporation into the education program. Birds may be incorporated into education programs utilizing non-invasive educational methods/tools, such as audio-visual presentations, webcasts, or other forms of multi-media. In such cases, they are treated in a respectful, safe manner that does not misrepresent or degrade them, does not cause them distress, and does not put the ground feeding birds or humans at risk.
 - Rare exceptions may be allowed, as approved by the appropriate decision-making body of the Sanctuary, based on mandatory permit requirements (when none of the above options are feasible). Decisions are made based on the temperament of the particular bird involved. In no case shall such use cause distress or danger to the bird nor put humans at risk.
 - See *also* Standards P-8 and P-9.

E-2. Tours

Any tours are monitored and conducted in a careful manner that minimizes the impact on the ground feeding birds and their environment, does not cause them stress, and gives them the ability to seek undisturbed privacy and quiet.

- a. Non-guided tours are prohibited, and tour groups are of a size that allows for close monitoring and vary based on the size and staff of the sanctuary.
- b. Tours, if allowed, are for an educational purpose consistent with the sanctuary's education policy and not used for entertainment (see E-1).
- c. All tours are conducted to minimize the impact on the ground feeding birds and their environment.
- d. Ground feeding birds are confined within a secure environment and provided the opportunity to escape from public view. Birds are not in enclosures or habitats specifically designed to minimize their privacy and all wild birds have the ability to seek undisturbed privacy and quiet.
- e. Ground feeding birds that are easily stressed are excluded from tours.
- f. All tours prohibit the public from any physical contact with the birds residing at the sanctuary.
- g. Members of the public cannot feed sanctuary birds during tours.

E-3. Outreach

Sanctuary staff are appropriate advocates for ground feeding bird protection and welfare, and work cooperatively with other sanctuaries and the community.



- a. The sanctuary works cooperatively with other sanctuaries as applicable, keeping the ground feeding birds' welfare as the first priority. (For instance, best practices are shared, sanctuaries collaborate to arrange best placements for birds, etc.).
- b. Any community outreach is conducted in an ethical and professional manner.
- c. The sanctuary does not adopt policies in opposition to the welfare of ground feeding birds (e.g., endorsing the use of birds for entertainment).

POLICIES

POLICIES: ACQUISITION AND DISPOSITION OF GROUND FEEDING BIRDS

P-1. Acquisition Ethics and Commercial Trade Prohibition

Acquisition of ground feeding birds by the sanctuary is legal and ethical.

- a. The sanctuary has relevant legal documentation (including any required permits and licenses) for, and is in legal possession of, all animals in its care.
- b. The sanctuary has a written policy governing its acquisition of ground feeding birds, including the following provisions:
 - Ground feeding birds are only accepted if the sanctuary has the financial resources to provide appropriate professional care.
 - Ground feeding birds are only accepted if they will not jeopardize the health, quality of care or maintenance of birds currently housed at the sanctuary.
 - All acquisitions of animals by the sanctuary are consistent with its mission and in the best interest of the individual animals.
 - Acquisition of ground feeding birds occurs through donation or rescue. No commercial trade in sanctuary animals occurs (included, but not limited to, the sale of animals, animal parts, by-products, or offspring), and the sanctuary does not knowingly engage a third party to purchase a ground feeding bird on its behalf. (*Note: if animals have been purchased, or if the sanctuary has a policy in place that allows purchase under certain circumstances, the sanctuary must provide GFAS with this information, indicating why such purchases are consistent with the sanctuary's mission and why they do not sustain or promote the commercial exploitation of the species.*)
 - No acquisition results from the intentional breeding of animals for or at the sanctuary. An exception may be made for rehabilitation and release centers engaged in a bona fide breeding-for-release-program of endangered species with available release sites within the state/province, conducted with specific conservation goals, in accordance with local, state/province, national, and international law and regulations.
- c. Safe and humane transport is used for all acquisitions.

P-2. Acquisition Recordkeeping and Monetary Exchange

Acquisition contracts are clear, with ultimate responsibility for acquisitions clearly



- a. An acquisition contract is in place that clearly identifies the sanctuary as the "responsible party" for the ground feeding birds and when such responsibility takes effect; whenever possible, the contract includes information on the "surrendering party" as well as any intermediary parties (rescue groups, zoos, etc.). This written contract is kept as part of the permanent record for each ground feeding bird entering and housed at the sanctuary.
- b. Financial expenses associated with acquisition of a ground feeding bird may be received in order to enable the sanctuary to responsibly take in the bird, and may include medical testing, behavioral assessment, construction costs, quarantine costs, shipping and transport costs. Lifetime care costs may be factored in as appropriate.

P-3. Disposition Ethics and Responsibility

The sanctuary assumes lifelong responsibility for the sanctuary ground feeding birds, with some noted exceptions, with ultimate responsibility for dispositions clearly defined.

- a. The sanctuary assumes lifelong responsibility for the ground feeding birds acquired and only in very rare circumstances does a bird permanently or semi-permanently leave the sanctuary, with the exception of releasable wildlife introduction.
 - A rehabilitation center assumes responsibility (in accordance with national and local law) for the appropriate disposition of animals it acquires, with the goal or reintroducing native wildlife, where possible, to its natural habitat.
- b. Acceptable reasons for disposition, when movement of ground feeding birds to another sanctuary does not compromise the welfare of that individual or the other bird(s) with which s/he will be housed, include:
 - health concerns that cannot be adequately addressed by the sanctuary, where another accredited sanctuary or comparable facility is better equipped to provide care for the bird.
 - another accredited sanctuary or comparable sanctuary can provide a better long-term environment (such as creating a suitable social group of conspecifics).
- c. Other reasons for disposition include: financial insolvency, closure of the sanctuary, return of confiscated wildlife to its country of origin, or death of the ground feeding bird.
- d. Detailed records of ground feeding bird disposition are logged and maintained, including the details of all body parts.



P-4. Disposition of Live Ground Feeding Birds

Responsible steps are taken to ensure that any disposition of a live ground feeding bird is in the life-long best interests of that bird.

- a. The sanctuary has a written disposition policy that adopts substantially the language of this standard.
- b. Ground feeding birds are not transferred to individuals, sanctuaries or other facilities that lack the appropriate expertise and/or resources and/or facilities to care for them appropriately. Before transfers, the sanctuary is convinced that the recipient has the expertise, records management capabilities, financial stability and facilities required to properly care for the birds. Birds are not “loaned” to other facilities.
- c. Ground feeding birds are not disposed of at auctions or to breeders, dealers or brokers.
- d. For sanctuaries engaged in rescue, rehabilitation and release of ground feeding birds, subject to all pertinent regulations and laws, birds are released within native ranges, in accordance with local, state, national and international regulations.
- e. If a ground feeding bird, especially one housed individually (to be avoided whenever possible), shows signs of self-mutilation and/or apathy, is uncontrollable, has a highly aggressive personality, is suffering physically or psychologically, and if the sanctuary cannot remedy the situation, then, if possible, the bird is transferred to another accredited sanctuary or other appropriate facility, if it appears that environment will better suit the bird.
- f. See also Standard P-5 “Euthanasia” below.

P-5. Adoptions

Avian adoptions, accompanied by appropriate legal documents, are designed to provide a lifetime safety net for the bird and to insure responsible and humane care via placement in conditions close to that provided in sanctuary. Adoptions are only considered where it is legal, where there is a lack of capacity, and where rehabilitation and release is illegal or inappropriate.

- a. All avian adoptions are preceded by a home inspection during which the potential adopter is educated regarding potential hazards to the bird(s) and the site is evaluated for creation of a safe flight/exercise enclosure for the birds if an aviary/enclosure or appropriate indoor room can't be created.
 - If needed, this safe flight/exercise area is available to the bird(s) for a minimum of several hours per day.
- b. Adopted birds are placed as part of a pair or flock, or initially fostered, to test compatibility with bird(s) already at the home. Strongly human-bonded birds who show aggression towards other birds, despite efforts to encourage them to bond with other birds may be placed as solo birds.
- c. All avian adoptions are accompanied by a legally binding document which:
 - Prohibits the adopter from selling or placing the bird in question with another owner or facility without first contacting the facility from which the bird was adopted.
 - The original owner agrees to allow the sanctuary first right to reassume possession of the bird.
 - Prohibits the adopter from knowingly allowing eggs to hatch.



- Adopters are educated in proper egg management.
- Specifies the duties and expectations of each party and contains wording related to the recovery of the bird should the adopting party fail to abide by such duties and expectations.
- Specifies the methods by which the primary avian sanctuary/rescue facility may inspect the adopted bird and its habitat to insure compliance with the terms of the agreement.
- Specifies the length of time such agreement is binding.

P-6. Foster Care

Foster homes are inspected and care-givers enter into a legal agreement designed to insure responsible and humane care.

- a. All avian foster homes provide physical facilities and levels of care equal to or better than that of the primary avian sanctuary/rescue facility, as confirmed by site visits, every six months at a minimum.
 - No birds endure less adequate housing or care, nor exposure to new non-quarantined birds as a result of foster care.
 - Before fostering the home is evaluated for safety risks and any resident birds are evaluated for disease risks, preferably via access to previous veterinary history.
- b. All avian foster care placements are accompanied by a legally binding document specifying the duties and responsibilities of each party including but not limited to:
 - Steps to be taken should any birds show signs of illness or heightened distress.
 - Under what conditions, if any, the foster care-givers may take the bird off the property.
 - Having access to veterinarians, whose names and telephone numbers are also kept on file at the primary sanctuary/rescue facility, able to respond to emergencies.
 - Wording related to the recovery of the bird(s) should the foster home fail to abide by above duties and expectations, or if the foster home can no longer keep the bird(s).
 - Methods whereby the primary avian sanctuary/rescue facility may inspect the fostered birds, in person or virtually, to insure compliance with the terms of the agreement.
 - How potential adopters will be able to visit the bird(s) and under what circumstances and conditions.

P-7. Euthanasia

Euthanasia is governed by an ethical humane euthanasia policy, and deceased ground feeding birds are handled appropriately.

- a. The sanctuary has and maintains a written humane euthanasia policy (as part of the disposition policy) for ground feeding birds and other animals at the sanctuary, and in compliance with any national or local law, administered under the strict supervision of a licensed veterinarian.
- b. Euthanasia is only be used as a final option. Euthanasia is not used as management tool (such as a means to create space for more animals).
- c. Examples of cases where euthanasia may be accepted are:



- Incurable disease/injury that is likely to cause unmanageable pain or suffering;
 - Disease/injury where treatment is likely to cause unreasonable pain or suffering;
 - Disease/injury where treatment will not be effective in restoring the ground feeding bird to an acceptable quality of life;
 - Disease/injury where treatment is beyond the normal community standards of monetary expenditure and would cause an excessive burden on the sanctuary resources, and no other sanctuary can step in, after reasonable efforts to locate such a sanctuary;
 - The process of aging has resulted in an unacceptable quality of life;
 - In the event of presenting an infectious disease risk to some or all of the residents.
 - For facilities engaged in the rehabilitation and reintroduction of wildlife, it is determined in accordance with an appropriate protocol or other “decision tree” analysis that an animal cannot be reintroduced to its natural habitat and there is no appropriate (consistent with these standards) long-term care option.
- d. A licensed veterinarian, his/her authorized representative, or a trained staff member who is knowledgeable and skilled in performing euthanasia in a compassionate and professional manner and where possible, with an established relationship with the sanctuary and, as appropriate, the ground feeding bird, recommends and performs humane euthanasia.
- e. Euthanasia is performed so that it avoids distress to the ground feeding bird, and in as much as possible, is performed out of view of other birds.
- f. With regard to deceased ground feeding birds:
- Personnel conduct themselves in such a manner that is respectful during disposition activities;
 - Body parts are never to be sold, traded or donated (see exception at Standard P-11 “Ethics in Research”);
 - Disposition of deceased ground feeding birds meets the requirements of all acceptable practices along with applicable local, state, national, and international regulations and laws.
- g. The species and ecosystems are carefully considered during disposition activities.

POLICIES: PUBLIC CONTACT AND RESTRICTIONS ON USE AND HANDLING OF GROUDN FEEDING BIRDS

P-8. Public Contact

Contact between ground feeding birds and the public is not allowed or is restricted appropriately.

- a. No unescorted public visitation occurs. This is not to exclude discrete, nonintrusive observation by a carefully evaluated person, such as a wildlife student, as allowed by the appropriate decision-making body of the sanctuary.
- No direct contact between the public and ground feeding birds occurs. Potential adopters may be allowed direct contact with some limited avian species, solely if such adoption is in accordance with local, state/province, national, and international law and regulations.
- b. See also Standard E-3 “Tours.”



P-9. Removal from Sanctuary or Enclosures/Habitats for Non-Medical Reasons

Ground feeding birds at the sanctuary are not removed from the sanctuary or enclosures/habitats for non-medical reasons.

- a. Ground feeding birds are not taken from the sanctuary or enclosures/habitats for exhibition, education, or research purposes.
 - Rare exceptions for education may be allowed as approved by the appropriate decision-making body of the sanctuary based on mandatory permit requirements (when it is felt there is no other feasible alternative, such as the use of a webcam, for meeting the requirements) and based on the temperament of the particular bird involved. In no case does such use cause distress for the bird, nor put birds or humans at risk.

P-10. Public Viewing of Human/Ground Feeding Bird Interaction

With few exceptions, the sanctuary does not allow human/ground feeding bird contact to occur within public view.

- a. Any contact with birds for purposes of providing medical care or as part of an enrichment program is performed out of public view.
 - In avian sanctuaries with adoption programs, modeling enrichment is allowed for potential evaluated adopters, solely if such adoption is in accordance with local, state/province, national, and international law and regulations.

P-11. Non-Portrayal of Ground Feeding Birds as Tractable

With few exceptions, the sanctuary rarely portrays arboreal/perching birds as tractable in text, photos, video, or other media.

- a. The sanctuary rarely publishes material that portrays ground feeding birds as tractable. This includes but is not limited to: photos in which staff or others are shown holding birds or with a bird perched on them. Birds are never shown performing tricks.
 - Sanctuaries with adoption/ foster care programs which publish such materials as part of these programs, ensure that the overall message conveys the importance of adopting birds already in sanctuary and emphasizing the negative social and psychological impacts which captive breeding, and/or capture from the wild for the pet trade, has on the birds.
- b. In situations where text, photos, video or other media are published portraying the above, steps should be taken to add text to the publication (website, brochure, etc.) that explains the reason for the contact and discouraging the idea that the animals would make suitable pets.

P-12. Non-Harmful, Non-Exploitive Fundraising

Fundraising activities are not distressing or negatively disruptive to ground feeding birds, nor do the activities involve improper use of the birds.



- a. Fundraising activities approved by an appropriate decision-making body of the sanctuary are allowed provided the following:
 - The activities do not violate any of the other GFAS Standards, including those regarding contact with the public, handling of ground feeding birds, and removal from the sanctuary;
 - The activities are deemed to not be distressing or in any way negatively disruptive to the ground feeding birds and their normal routine, nor are normal routines designed specifically for fundraising needs;
 - Ground feeding birds are not in enclosures or habitats specifically designed to minimize their privacy, and all birds have the ability to seek undisturbed privacy and quiet;
 - Ground feeding birds are not being used as entertainment, which includes the performance of “tricks” for public display;
 - Ground feeding birds are not raffled or sold.

P-13. Ethics in Research

Any research conducted is devoted to benefiting the health and welfare of the individual ground feeding bird involved, and does not cause pain or distress.

- a. No resident ground feeding birds are made available for participation in research studies unless the studies are strictly observational and do not interfere with the normal daily activities of individual birds. Interventions that cause pain or distress are not acceptable.
- b. An exception may be made, with approval of an appropriate decision-making body of the sanctuary, if:
 - It is determined that the health and welfare interests of the individual bird are best served by participating in a new treatment study;
 - There is reason to believe that outcome of the study will be a tangible benefit for the individual bird involved;
 - The study does not prevent normal activities of daily living.
- c. An exception may also be made for research involving biological sampling if it will have a demonstrable health, conservation, or genetic benefit to captive animal management and/or wild ground feeding bird population conservation. In such cases, samples are only to be taken during routine examinations of the bird (which are otherwise needed for the welfare of the individual bird) or routine cleanings of enclosures, or during a necropsy that does not violate any other GFAS standards. Sanctuaries ensure that any biological samples are used ethically by the receiving institution or laboratory, and that any applicable CITES regulations are followed.

GROUND FEEDING BIRDS BEING RELEASED TO THE WILD

GFAS strongly 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.

Facilities releasing ground feeding birds to the wild must also make every effort to reduce risk of their 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;
- Disruption of local human communities, including crop raiding and damage to property;
- 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 re-introduction project, see the International Union for the Conservation of Nature Species Survival Commission (IUCN/SSC) Reintroduction Specialist Group's "Guidelines for Re-Introductions".

R-1. General Considerations

The sanctuary has policies, agreements and plans in place to optimize the chances for successful re-introduction of ground feeding birds into the natural environment.

- a. The facility has a written policy regarding the handling of any potential problems involving released birds. The policy should include but is not limited to:
 - a plan to minimize the risk to humans and property in the area of release;
 - a plan for compensation for or mitigation of damages incurred by the released birds;
 - a deterrent plan to discourage inappropriate activities, *i.e.*, spending time around human habitation or crop raiding.
 - a plan for management or removal of birds who fail to integrate appropriately or who become habitual 'problem birds.'
- b. In as much as possible, using the latest available information on potential health concerns regarding other species found in the area of release, birds are tested and treated for pathogens that might pose a threat to other wildlife.
- c. The facility has agreements in place with any and all appropriate authorities to allow the release process to proceed as smoothly as possible.
- d. Ideally, permissions, any necessary documentation, site determination, etc. begin as soon as it is determined that there are birds 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.
- e. Cooperative agreements are in place prior to birds being released which may include, but are not limited to:
 - veterinary and scientific involvement in post-release monitoring;
 - 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.

R-2. Rescue Of Ground Feeding Birds

The sanctuary has developed guidelines for rescue work, taking into account staff and animal safety, contingencies for caring for the bird once rescued, and any local, state or national regulations or agency cooperation required.



- a. Facilities accepting ground feeding birds from the illegal trade have policies and procedures (ideally in writing) in place with the appropriate authorities that allow for rapid transfer of the animals to the sanctuary or rescue center. These policies and procedures are designed to reduce the risk of:
 - disease transmission;
 - habituation;
 - Inappropriate or inhumane treatment, due to lack of knowledge, by personnel involved in seizure of wildlife from the illegal trade.
- b. In as much as possible, while respecting local or national cultural/religious tenets, a euthanasia policy is in place to address situations where the bird's prognosis for survival is too low to warrant attempting treatment.
 - In situations where field euthanasia is being considered, where possible and appropriate (e.g., the bird is reasonably safe from further human interference and the stress of capture would outweigh the benefit of humane euthanasia), the option of leaving the bird *in situ* may be considered.
 - See also Standard V-5, "Euthanasia."

R-3. Evaluation Of Suitability For Release

Ground feeding birds admitted into sanctuary are evaluated for their potential suitability for release.

- a. The sanctuary has a protocol in place (ideally in writing) to evaluate potential release candidates and to determine which birds are given priority for potential release.
 - Birds who have spent little time in captivity and/or who have had little human contact are given priority for potential release.
 - Birds 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.
- b. All ground feeding birds are treated as potential release candidates, particularly those who have not been kept long term as pets. If birds admitted into sanctuary are determined to be potential release candidates, every effort is made to protect them from exposure to human activities and to keep them as wild as possible.

R-4. Quarantine And Prerelease Housing

The sanctuary has appropriate quarantine facilities and prerelease housing for ground feeding birds, with consideration given to sick and injured birds.

(See also Standards H-1 to H-9, "Ground Feeding Bird Housing," and V-5, "Quarantine and Isolation of Ground Feeding Birds")

General

- a. Non-quarantine housing for ground feeding birds being considered for release provides as close to natural a setting as possible. The space allows for foraging, flying, nesting and other actions naturally performed in the wild.



- b. Quarantine facilities and prerelease housing for birds intended for release are situated a minimum of 66 ft. (20m), giving consideration to factors such as wind direction, from resident avian populations to protect them from exposure to pathogens present in the sanctuary population that could compromise their return to the wild. 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 birds are housed closest to the birds intended for release to the wild.
 - Sanctuary birds being used as surrogates are screened for pathogens prior to introduction to any dependent ground feeding birds.
- c. Where possible and appropriate, sanctuaries follow International Wildlife Rehabilitation Council guidelines (<http://www.nrawildlife.org/content/minimum-standards>) in dividing housing into three types:
 - Restricted activity/mobility – for the initial stages of rehabilitation where the illness or injury requires the bird be treated and/or prevented from activities that would slow the rehabilitation process. At a minimum, the bird is able to maintain normal upright/alert posture and to stretch the body.
 - Limited activity/mobility – for the recovery stage of rehabilitation where the bird is regaining mobility and building strength, and staff does not need access to the bird on a daily basis. The bird is able to move short distances and perform some limited flying and perching activities.
 - Unlimited/Prerelease – the final stages of rehabilitation where the main concern is ensuring that the bird is fit for release. In this phase, the enclosure provides the ground feeding birds with opportunities to demonstrate the skills necessary for survival in the wild.

Quarantine Housing

- d. Sick or injured wildlife is quarantined in such a way that the rehabilitation process is begun during the quarantine phase.
- e. Quarantine facilities have appropriate housing for the treatment of injured or ill ground feeding birds.
- f. Quarantine facilities are designed to allow for monitoring and, as needed, modification of behavior of birds intended for release.
- g. Healthy birds admitted to quarantine have as large an enclosure as possible to help maintain natural locomotion and foraging behaviors.
- h. Upon arrival, ground feeding birds are quarantined for an adequate number of days, ideally for a minimum of 30 days. In some situations a longer quarantine may be advisable.
- i. 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 ground feeding birds may have been exposed.

Initial Housing for Orphaned, Ill or Injured Ground Feeding Birds

- j. Birds 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.
 - Dependent on illness or injury, either Restricted or Limited activity/mobility housing may be utilized.
- k. Enclosures provide visual and acoustic barriers to minimize stress.
- l. Dependent young birds are housed in nursery units, preferably with conspecifics, as species appropriate.



- Where safe, and species appropriate, adult birds are utilized as surrogates to care for the young birds, thus reducing human contact. Where this is not possible, puppets and other devices are used to prevent imprinting or inappropriate socialization.

Intermediate Housing for Dependent Ground Feeding Birds

- m. As soon as the dependent birds are fledged or, in the case of precocial species no longer require specialized climate, they are moved to intermediate housing, where human contact is decreased and interaction with conspecifics is increased, as species appropriate. Where possible, the birds are moved to the release site and cared for in a soft release enclosure.
- n. Birds are provided with adequate opportunity for exploring, flying, roosting/perching and foraging.
- o. In as much as possible, conspecifics are used to teach natural behaviors, if species appropriate and necessary.
- p. Intermediate housing is isolated from resident bird areas, ideally within a natural habitat which allows the young birds to adjust to a more wild environment.

Intermediate and Prerelease Housing for Sick or Injured Ground Feeding Birds

Note: Adult and independent young birds, dependent on their admitting condition, may not require intermediate housing.

- q. Birds suffering from injuries that may affect their suitability for release are moved to intermediate housing while regaining strength. Birds are regularly evaluated to determine whether they are likely to be releasable. Once the birds are deemed fit, they are moved to prerelease housing.
- r. Independent birds 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.
- s. Consideration is given to social and territorial issues that may affect safe return to the original habitat.
- t. Prerelease housing for adult and independent young birds is ideally situated at the intended release site, allowing the birds to acclimate to their new environment before release.
- u. In both intermediate and prerelease housing, sufficient vertical as well as horizontal space is provided to allow the birds to develop strength for flight and to display normal wild behaviors.



R-5. Diet, Nutrition And Foraging Skills

Ground Feeding birds 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.

- a. As early in the rehabilitation process as possible, ground feeding birds 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.
- b. Release candidates are fed in such a way as to encourage natural foraging behaviors.
- c. Rescued birds admitted in poor physical condition may require specialized diets to recover their health. Nutritional deficiencies are assessed and diets modified to address those deficiencies. Once the birds are back on a normal nutritional plane, any foods not found in their planned release area are no longer fed.

R-6. Husbandry And Health

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

- a. Once a ground feeding bird has been evaluated as a potential release candidate, all aspects of care are focused on preparing the bird for the wild.
 - Human activities and noises are minimized in areas housing birds being prepared for reintroduction.
 - Human interaction with birds being prepared for release to the wild is restricted to those activities that will enhance the birds' ability to live in the wild.
- b. The bird is placed in an appropriate social group or paired with a compatible conspecific, depending on species. Where appropriate surrogate conspecifics are not available, dependent young birds may be reared by human caregivers using approved best practices for the species housed.
 - Care is taken to ensure these young birds develop appropriate survival skills as well as intraspecific social behaviors.
 - Birds are integrated into a social group as species appropriate as quickly as possible.
- c. Introductions follow Standard W-3 "Introduction of Unfamiliar Individuals."
- d. Opportunities to explore, fly and learn skills in the natural environment are provided.
- e. Birds admitted into care from the wild at the stage where they are already independent, with recoverable illness or injuries, are treated and released as quickly as possible, taking into account the potential for the bird not being accepted back into its previous social group or territory, as well as seasonal presence of the species in the area.
- f. Caregiver-ground feeding bird relationships for birds intended for release to the wild, while ensuring the birds' psychological well-being is met, focus on avoiding any types of interaction that may compromise the birds' chances for release;
- g. Veterinary staff evaluate overall health including:
 - recovery from the initial cause for admission to the facility;



- pathogen surveillance to ensure the bird does not present a risk to the wild population as a result of exposure during the rehabilitation process, using the latest available information from the OIE-World Organization for Animal Health (www.oie.int).
- h. Birds being cared for in sanctuary for later release back to the wild are managed in such a way as to optimize their chances for successful return to the natural environment.

R-7. Health And Safety Of Caregivers Working With Releasable Ground Feeding Birds

No caregiver begins work with releasable ground feeding birds until routine testing has indicated he or she poses no risk to the birds' release to the wild.

(See also Standard V-8, "Zoonotic Disease Program")

- a. Caregivers working with birds intended for release to the wild are routinely monitored for potential anthroponoses (diseases that have potential to be transmitted to the birds).
- b. Hematological testing and fecal cultures for pathogens may be utilized, as appropriate for the region, to ensure the health of both the birds and their caregivers. New caregivers should not have contact with the birds for the first two weeks of employment.
- c. Provision of adequate nutrition for staff is considered as a possible contribution to the continued well-being of both staff and birds.

R-8. Assessment of Health and Skills

Ground feeding birds are fully assessed for health and appropriate skills prior to release.

- a. Ground feeding birds 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 health and the skills attained.
- b. Each bird's skills (e.g. foraging, flying, appropriate interaction or avoidance behaviors in the presence of conspecifics, avoidance of dangers including poisonous foods and potential predators) are evaluated.
- c. A complete health assessment is performed including:
 - Overall fitness 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 bird to be brought into care are resolved, either completely, or to the extent that the bird has a reasonable chance for long term survival.
- d. Birds 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.
- e. Genetic assessment has been done to ensure that the birds being released are of an appropriate subspecies/population/subpopulation for the release site, if the origin of the bird is unknown.

R-9. Determining Appropriate Release Sites

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



- a. The potential release site is evaluated for the presence of appropriate and adequate food sources.
- b. The area is evaluated for potential health concerns.
- c. The potential release site is surveyed to ascertain whether any wild ground feeding birds are present, either permanently or seasonally.
 - Migratory birds are only released as seasonally appropriate, i.e. when conspecifics are still present, or they are transported to a site appropriate for the season.
- d. The area is evaluated to establish carrying capacity for the species to be released, taking into consideration others releases that may have already taken place and issues of territoriality. Birds are released in an appropriate habitat where carrying capacity for the species has not been reached.
- e. The area is evaluated for instances of potential human-wildlife conflict.
- f. IUCN guidelines are, in as much as possible, followed when determining release sites for rehabilitated ground feeding birds.
- g. Birds are released away from areas where there is potential for or has been a history of human-bird conflict.

R-10. The Release Process And Post Release Monitoring

Ground feeding birds are supported as needed to adapt in their new environment and are monitored post release.

- a. Once it is determined that the birds are able to sustain themselves within their new environment supplemental care is discontinued.
- b. A post-release monitoring program is in place to ensure the rehabilitation program is providing released birds with the skills necessary to survive, that the habitat is adequate and that, as species appropriate, the birds have integrated into the wild.
- c. Ideally, birds are returned to the wild using a soft release process wherein they are housed in an enclosure within the release area where supplemental food may be provided as needed and observation of their acclimatization may be observed.
- d. Post release monitoring, in conjunction with outside veterinary and scientific personnel, continues for a minimum of one year.
 - Where possible satellite tagging is used to monitor ground feeding birds, particularly migratory species.
 - In addition to providing information on the individual bird tagged, data on migratory routes, critical stopover points and seasonal habitat used is often gained from monitoring released birds.
 - Level of monitoring may decrease over time as birds are determined to be acclimating to the environment.
 - Longer term monitoring of the birds and their impact on the habitat is preferred where possible.
 - Practices used and results obtained, both positive and negative, are shared both within the facility and with others involved in ground feeding bird reintroduction to aid in the continued improvement of the program.



APPENDIX I

Housing

Where possible, consideration is given to soft netting enclosure ceilings and wall to reduce risk of injury from panic flights during capture. Birds are acclimated to these modifications to reduce risk of injury.

Containment

For outdoor enclosures, mesh of no larger than 1in (2.54cm) x 0.5in (1.27cm) is recommended for predator (rodent and snake) control.

Non-toxic materials are recommended where possible. (Please note, however, that much of the information provided below is anecdotal and may not reflect the latest information available. Sanctuaries are encouraged keep up to date on this subject.)

- Stainless steel, while more costly, is one of the safest options for outdoor aviaries and has the added advantage of resisting corrosion and weathering.
- Chain link may be appropriate for some species.
- Where there is no viable alternative to potentially hazardous materials, measures are taken to mitigate risk.
 - For example, galvanized-after-weld wire may pose a risk of zinc toxicity but can be treated with a dilute acid wash first.
 - Powder coated steel and galvanized wire cages are of recent manufacture as older construction methods pose a risk of zinc toxicity.
 - Galvanized steel cages pose a risk of lead toxicity.
 - Vinyl and plastic coated wire is easily chewed through by many bird species and ingestion may cause digestive problems.

Wire flooring is used with caution in enclosures housing ground feeding species.

Grounds and Plantings

Shavings from aromatic woods such as pine and cedar are used with caution as the aromatic hydrocarbons in their resins may be harmful if ingested or if they volatilize. (Please note, however, this information is anecdotal and may not reflect the latest information available. Sanctuaries are encouraged keep up to date on this subject.)

Enclosure Furniture

Natural materials for perches are recommended but where PVC pipe or other smooth materials are used, jute or other natural fibers are used to cover the perches and promote foot health.

Branches with high sap resin content (e.g. pines) or with thorny, very rough or very smooth/slippery bark are not advised for use as perches.

Ventilation

Ideally, indoor enclosures have a negative air pressure, with regular exchange of non-re-circulated air. A minimum of one complete air exchange per hour is recommended.

Lighting

Dimming systems may be used to prevent stress from sudden exposure to bright light or complete darkness.



Where secondary lighting is used to overcome problems of insufficient daylight length (in northern latitudes in winter) this should be of an intensity and color temperature which approximates natural daylight (about 5000 degrees K).

Fluorescent lighting, although energy efficient, is used with caution as there is evidence that many birds are negatively affected by the high frequency flickering (strobe effect) of some fluorescent and LED light sources. Where such lights are used these should be of a frequency greater than 170Hz with an electronic ballast operating at a minimum of 42,000 cycles per second (cps).

Transport

Ideally birds are transported in individual compartments of suitable size. Dog or cat carriers modified to prevent escape and injury may be utilized.

- Care is taken to ensure that gaps around the door and large grid openings are secured.
- Carriers with primarily solid walls or other means of providing a darkened environment are recommended to reduce stress.

Adequate food and water is provided per IATA specifications.

- Any food and water containers used are designed to prevent spillage.
- A sponge or other device may be placed in the water container to prevent drowning.
- Fruits can be a safe source of hydration for birds used to eating them.

Ideally birds are only transported in moderate weather or transport vehicles are climate controlled to prevent temperature extremes.

- Transport temperatures should be between 70°F (21°C) and 85°F (29.5°C) for most species.
- Vehicle suspension is in good condition to prevent excessive disturbance to the birds should rough roads be encountered.
- If transporting by personal vehicle, non-IATA approved shipping containers may be used.
- Cardboard boxes or other smooth and soft-walled containers may be safer than hard plastic or plywood containers for some species who are not likely to chew their way out, provided there is no danger of the boxes being crushed during transport.
- IATA standards for size, ventilation, perching, etc are followed.

Ideally small birds are not transported by air, except in passenger compartment.

- If regulations require the bird be removed from the carrier for inspection, this is done in an enclosed space (small room) and time for this procedure is factored into travel plans.
- If using commercial air carrier an itinerary with shortest total transport time and fewest plane changes is chosen.
- Adequate time to make connecting flights is part of the consideration when choosing itinerary.
- Smaller commuter planes are avoided where possible, as live cargo gets bumped from these flights more regularly.
- Temperatures and weather in all cities on route are checked to ensure they are within tolerances for the species and no obvious flight delays are likely.
- Shipping on weekends and holidays is avoided.



Social/Solitary Housing

Some ratite species show individual preferences in enclosure companions which may aid in determining group composition. Given the potential in these species for injury from kicking, introductions may require a period of visual contact before further steps toward introduction proceed.

Birds placed in solitary housing temporarily may benefit from being able to see and hear other birds.