Animal Welfare Guidelines

Animal Welfare refers to an animal's collective physical, mental, and emotional states over a period of time, and is measured on a continuum from good to poor.

An animal typically experiences good welfare when healthy, comfortable, well-nourished, safe, able to develop and express species-typical relationships, behaviors, and cognitive abilities, and not suffering from unpleasant states such as pain, fear, or distress. Because physical, mental, and emotional states may be dependent on one another and can vary from day to day, it is important to consider these states in combination with one another over time to provide an assessment of an animal's overall welfare.

Staff will be trained by Chief of Research and Welfare and Chief of Animal Care on the completion of a welfare assessment.

Many of the following categories are monitored and recorded daily for all animals. For some animals, additional environmental data (e.g., temperature/humidity for reptiles) are monitored daily, but recorded on a weekly basis; if there is an abnormal change in values, data will be recorded more frequently until any abnormal changes have been resolved. Recorded data are all entered in Animal Care Software. The Chief of Research and Welfare, along with input from Chief of Animal Care, will determine which categories should be evaluated for each animal and templates will be created in Animal Care Software. Whether an animal is rated individually, as a group, or within an exhibit will be at the discretion of the Chief of Research and Welfare.

Daily records, as well as any additional environmental, physical, or behavioral data recorded, will be used to determine an overall welfare indicator score for each animal, group of animals, or exhibit that will be assessed on a variable schedule as determined by the Chief of Research and Welfare (see attached inventory; red = once/week assessment; orange = every other week assessment; yellow = monthly assessment; green = quarterly assessment). These assessments will be entered in Animal Care Software. If an animal receives a score of 3 or lower on any category, an action plan must accompany the score in order to decrease it. In this situation, welfare indicator scores for that animal will occur on a more frequent schedule until Chief of Research and Welfare and Chief of Care are satisfied any abnormal issues have been resolved and welfare scores increase. In addition, when animals are suffering from chronic or terminal illness, or become geriatric, a quality of life sheet will be completed for the animal monthly, weekly, or daily based on the quality of life score.

CATEGORIES

Nutrition: Health Status
- 1 = Not applicable
- 2 = Abnormal major issue requiring intensive vet care, health issue requiring hospitalization, life threatening
- 3 = Abnormal minor issue, taken to vet, resolves by itself or with meds administered by staff
- 4 = Abnormal, resolves by itself in a few days or less
- 5 = Normal

Nutrition: Diet Consumption
An assessment of how much of the daily diet appears to have been consumed by the individual or group. [Can refer to "Food Offered" and/or "Food Leftover" calculations in Animal Care Software].

- 1 = DNE (Does Not Eat); refuses all food/diet, requires tube feeding or intervention to maintain body condition
- 2 = Poor; refuses most food, long gaps between eating, may require assistance with feeding
- 3 = Fair; eats with some assistance, refuses some food/diet, does not eat full normal diet
- 4 = Good; eats unassisted and as expected for species, selects favorite items and may reject other
- 5 = Excellent; eats full diet, eats unassisted and as expected for species

Environment: External Impacts
An assessment of stimuli, temporary or permanent, biotic (e.g., new adjoining animal enclosures) or abiotic (e.g., construction noise, storms) that might affect animal welfare that are not related to the animal's actual living space, husbandry routine, or activity level.

- 1 = Life threatening issue affecting animal welfare – needs immediate resolution
- 2 = Large issue affecting animal welfare
- 3 = Recurring or multiple issues affecting animal welfare
- 4 = Small external issue potentially affecting animal welfare
- 5 = No safety threat or external impact

Physical Health: Mobility, Range of Motion

A subjective scale of how much the animal's locomotion appears within individual and species norms based on observations of use of limbs or movements; evidence of normal mobility, range of motion, gait, swim pattern, or flight.

- 1 = Immobile
- 2 = Frequent mobility issues – trouble accessing easy to reach parts of enclosure
- 3 = Occasional mobility issues – not able to access all of enclosure
- 4 = Small mobility issues – infrequent, still able to access all of enclosure, but slower
- 5 = Completely mobile

Physical Health: Body Condition Score

A visual assessment scale of the relative proportion of muscle and fat tissues covering an animal's skeletal structure. Grading can be done by comparison to a visual chart or by comparison to ideal norms for a particular species. [Can refer to recorded weights in Animal Care Software and reference BCS charts in Basecamp].

- 1 = Emaciated or Obese ("1" or "9" on BCS)
- 2 = Very under- or over-conditioned ("2" or "8" on BCS)
- 3 = Moderately under- or over-conditioned ("3" or "7" on BCS)
- 4 = Slightly under- or over-conditioned ("4" or "6" on BCS)
- 5 = Ideal condition ("5" on BCS)

Physical Health: Evidence of Pain/Discomfort

A subjective assessment (based on observation or institution-derived scale) of behavior/movements/facial expressions that may indicate pain. [See Behavioral Notes on Basecamp for species-specific indicators]

- 1 = Extreme signs of pain/discomfort
- 2 = Frequent signs of pain/discomfort
- 3 = Equal signs of pain/discomfort and no pain/comfort
- 4 = Occasional signs of pain/discomfort
- 5 = No signs of pain/discomfort

Behavior: Level of Interaction

A subjective assessment of the animal's interest and participation in positive reinforcement training sessions, as well as daily interaction with keepers. [Can take average rating of most recent 3 training sessions as recorded in Animal Care Software]

- 1 = Extreme non-typical reaction to keeper presence; Did not participate in training session
- 2 = Mild non-typical reaction to keeper presence; started to participate in training and left/walked away/crated, but did not come out of crate
- 3 = Mix of typical and non-typical reaction to keeper presence; did about half of training behaviors or maybe did all behaviors, but very slow response or missed cues
- 4 = Mild typical reaction to keeper presence; overall good training session, but maybe a few errors or some latency
- 5 = Normal, typical reaction to keeper presence; perfect training session, didn't miss any cues, quick responses

Behavior: Activity Budget Relative to Goal

An overall assessment of the extent to which the animal's activity budget matches an expected value, based on biology in the wild, behavioral goals established by caretakers, or other data.

- 1 = None – spend all time displaying undesired or stereotypical behaviors
- 2 = Few – demonstrates limited species-specific behaviors during observation period, only displaying 5% of normal behaviors
- 3 = Some – demonstrates some species-specific behaviors during observation period, only displaying 15% of normal behaviors
- 4 = Most – demonstrates most species-specific behaviors, only displaying 50% of normal behaviors
- 5 = Normal – same as animal in natural habitat, established activity budget or goal, demonstrates majority of species-specific behaviors

Behavior: Stereotypic behavior

Repetitive behaviors that appear fixed in form from which the animal is not easily distracted, and which are not associated with reliable cues (e.g., keeper sounds, time of day).

- 1 = All – only exhibits stereotypical behavior, no normal behaviors exhibited (100% of time observed)
- 2 = Heavy – exhibits stereotypical behavior most of the time (67-99% of time observed)
- 3 = Recurring – often exhibits stereotypical behavior (34-66% of time observed)
- 4 = Infrequent – may sometimes exhibit stereotypical behavior (1-33% of time observed)
- 5 = None – no stereotypical behavior (0% of time observed)

Mental Domain: Subjective Assessment of Animal Well-Being

A high level subjective and holistic assessment of how the animal is doing in terms of performance of natural behavior, affective states, physical and psychological health.

- 1 = Constant signs of fear or stress – continuous reactions with fear or stress to all objects and people
- 2 = Frequent signs of fear or stress – react with fear or stress to new and old objects and people
- 3 = Occasional signs of fear or stress – react with fear or stress to new and old objects and people; takes more than 1 day to adjust
- 4 = Infrequent signs of fear or stress – hesitates when approaching new objects or people, but adjusts quickly
- 5 = No signs of fear or stress – investigates new objects or people and show comfort with them

Summary:
- There are 10 measures
- Each measure has scale from 1 (Worst) to 5 (Best)
- Measures should ideally be 3 or higher
- So, lowest total score would be 10 and highest total score would be 50

Total score of:

10 - 20: Poor Welfare; evaluate more in-depth; make necessary husbandry adjustments; discuss QOL and possible EOL decisions

21 - 30: Fair Welfare; evaluate more in-depth and make necessary husbandry adjustments

31 - 40: Good Welfare; very few husbandry adjustments to be made

41 - 50: Excellent Welfare