Psittacine welfare institute



WELFARE ASSESSMENT

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PRODUCED BY THE PSITTACINE WELFARE INSTITUTE

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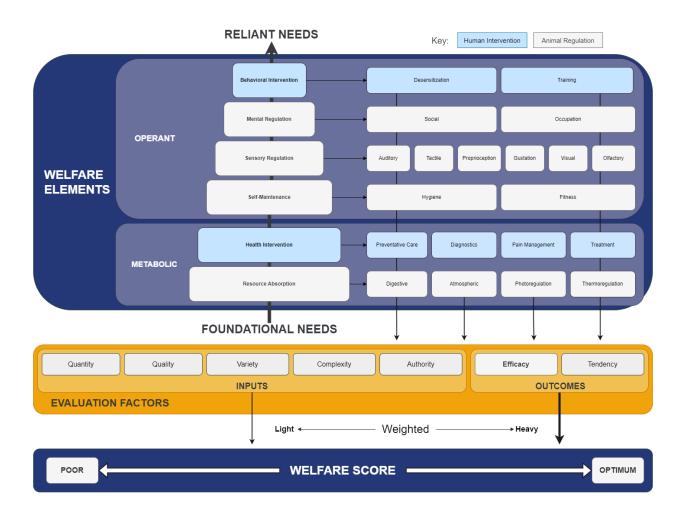
OBJECTIVE:

This assessment is intended to be used by facilities, individuals, and organizations whose goal is to improve individual animal welfare by comparing their current homeostatic condition with the prevailing scientific understanding of the optimum conditions for that species. The objective is to identify opportunities for improvement and to act on them.

Animal welfare assessments are most accurate when measured at the (n=1) individual level. Healthier animals may mask the needs of a less healthy individual in a group assessment; and other metrics: such as efficacy, will vary greatly between each individual.

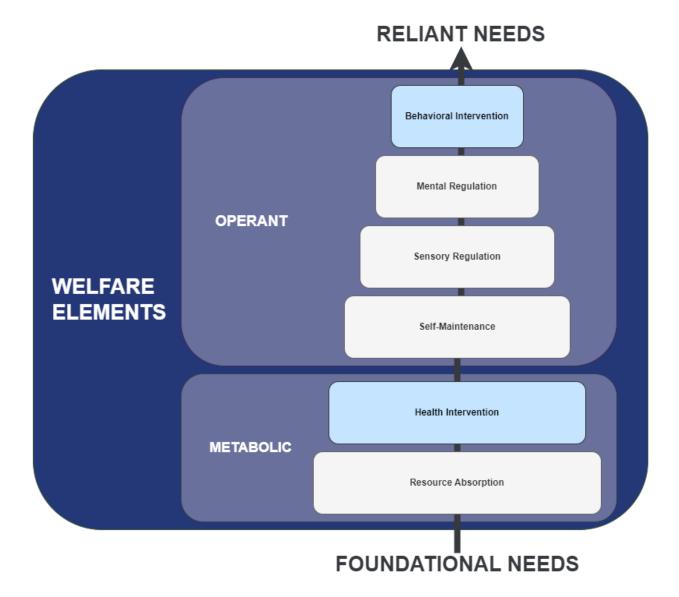
OUR WELFARE MODEL:

We created a welfare model derived from viewing animal care under a lens of their homeostatic relationship with the environment. It utilizes the same concepts as the 5 Opportunities, Domains, and Freedoms - without simplifying down to an arbitrary number.



ANIMAL HOMEOSTATIC NEEDS:

There are six categories of homeostatic needs in animals, broken into two subcategories: metabolic (i.e. innate self-regulation) and operant (i.e. behavioral self-regulation). These create a pyramid structure with the metabolic needs forming the foundation and the operant needs forming the tip of the structure. This is not indicative of importance, nor of quantifiable amounts, but rather that elements at the top of the pyramid are reliant on appropriate function of the elements below it. Additionally, while most of the elements are a function of an animal's self-regulation (white) - at the tip of each subcategory there are also elements where human intervention (blue) can add to an animal's welfare beyond the scope of its natural homeostatic self-regulation.



HOMEOSTATIC NEEDS CONTINUED:

Metabolic Interactions: Innate Self-Regulation

1. **Resource Absorption** - the

exchange of nutrients, molecules, and energy between an animal and its environment

- i. Digestive
- ii. Atmospheric
- iii. Photoregulation
- iv. Thermoregulation

2. Health Intervention - the

proactive measures taken to preserve bodily homeostasis and protect against future stressors

- i. Preventative Care
- ii. Diagnostics
- iii. Pain Management
- iv. Treatment

DEFINITION:

WELFARE /wel-fer/ (noun) - the quantifiable measure of an individual organism's homeostatic relationship with its environment

Operant Interactions: *Behavioral Self-Regulation*

1. Self-Maintenance - the

processes involved with maintaining bodily mobility and autonomy

- i. Hygiene
- ii. Fitness

2. Sensory Regulation- the

processes involved with regulation of appropriate sensory inputs

- i. Auditory
- ii. Tactile
- iii. Proprioception
- iv. Gustation
- v. Visual
- vi. Olfactory

3. Mental Regulation - the

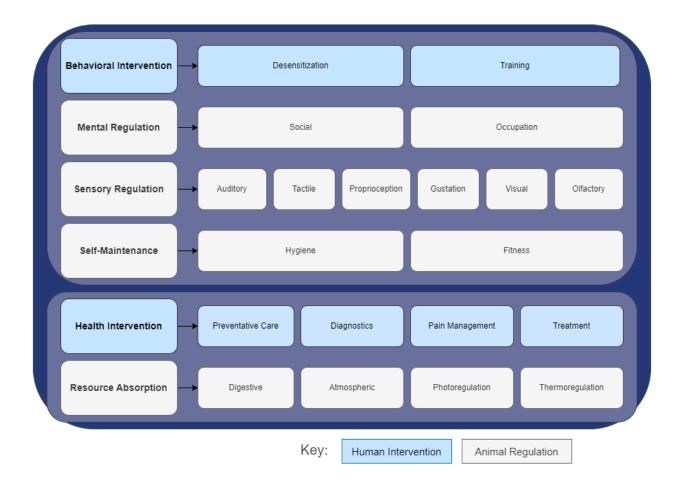
processes involved with satiating mental and emotional desires

- i. Social
- ii. Occupation

4. Behavioral Intervention - the

proactive measures taken to preserve normal homeostatic behaviors and protect against harmful stereotypies

- i. Desensitization
- ii. Training



WELFARE EVALUATION FACTORS:

Each *Homeostatic Need* should be evaluated with the following metrics for a holistic understanding of overall welfare. Evaluation factors can also be broken into two categories: inputs and outcomes. While our inputs towards an animal's care are important, our welfare program is an outcome-based model, where the efficacy of the stimulus is weighted over the fact it was simply provided. The higher your numerical score, the greater your animal's welfare is on a spectrum from optimum to poor.



Inputs -

| Quantity: | the optimum amount |
|-------------|------------------------|
| Quality: | the optimum category |
| Variety: | the optimum diversity |
| Complexity: | the optimum difficulty |
| Authority: | the optimum control |

Quantifiable Environmental Measurements

Outcomes -Quantifiable Animal Outputs

Efficacy:the optimum engagementTendency:the future trend

MISSION:

TO IMPROVE WELFARE

It is our duty as animal management professionals to create an environment where every need and factor is met optimally for the individual and species. With the information garnered from this assessment, next steps are to determine what changes can be made to shift the animal closer to optimum on the welfare continuum.

WHY TENDENCY?

CREATING TIMELINES

As you continue below, you will notice that tendency is one of the metrics we evaluate, but is not quantified with a score. It is important to note that an animal's welfare can change from moment to moment in the day. This evaluation is intended to be completed over the course of a week to create a cumulation of many snapshots - giving a holistic view of the animal's welfare. With this information, we are also able to view trends to note whether a particular metric is improving or deteriorating. This information could be invaluable to getting ahead of management issues before they begin.

WELFARE SCORECARDS

The scorecards below are intended for easy printing, and for cumulating the results of the questionnaires on each successive page into one unified location.

| | RESOURCE ABSORPTION | | | | | | | |
|------------|---------------------|-------|-------|--------|---------|----------|----------|-----------|
| | Dige | stive | Atmos | pheric | Photore | gulation | Thermore | egulation |
| QUANTITY | | 1 | | 1 | | 1 | | 1 |
| QUALITY | | 1 | | 1 | | 1 | | 1 |
| VARIETY | | 1 | | 1 | | 1 | | 1 |
| COMPLEXITY | | 1 | | 1 | | 1 | | 1 |
| AUTHORITY | | 1 | | 1 | | 1 | | 1 |
| EFFICACY | | 5 | | 5 | | 5 | | 5 |
| SUB-TOTALS | | 10 | | 10 | | 10 | | 10 |
| TENDENCY | | _ | | - | | | | |
| TOTAL | | | | | | | 4 | 0 |

| | | HEALTH INTERVENTION | | | | | | |
|------------|----------|---------------------|---------------------|----|----------|---------|-------|------|
| | Preventa | tive Care | Diagnostics Pain Ma | | Pain Man | agement | Treat | ment |
| QUANTITY | | 1 | | 1 | | 1 | | 1 |
| QUALITY | | 1 | | 1 | | 1 | | 1 |
| VARIETY | | 1 | | 1 | | 1 | | 1 |
| COMPLEXITY | | 1 | | 1 | | 1 | | 1 |
| AUTHORITY | | 1 | | 1 | | 1 | | 1 |
| EFFICACY | | 5 | | 5 | | 5 | | 5 |
| SUB-TOTALS | | 10 | | 10 | | 10 | | 10 |
| TENDENCY | | | | | | | | |
| TOTAL | | | | | | | 4 | 0 |

| | SELF-MAINTENANCE | | | | | |
|------------|------------------|-------|---------|----|--|--|
| | Hy | giene | Fitness | | | |
| QUANTITY | | 1 | | 1 | | |
| QUALITY | | 1 | | 1 | | |
| VARIETY | | 1 | | 1 | | |
| COMPLEXITY | | 1 | | 1 | | |
| AUTHORITY | | 1 | | 1 | | |
| EFFICACY | | 5 | | 5 | | |
| SUB-TOTALS | | 10 | | 10 | | |
| TENDENCY | | | | | | |
| TOTAL | | | | 20 | | |

| | | SENSORY REGULATION | | | | | | | | | | |
|---|-----|--------------------|----|-------|-------|---------|------|--------|-----|------|------|-------|
| | Aud | itory | Ta | ctile | Propi | riocep. | Gust | tation | Vis | sual | Olfa | ctory |
| Q | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 |
| Q | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 |
| v | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 |
| с | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 |
| Α | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 |
| E | | 5 | | 5 | | 5 | | 5 | | 5 | | 5 |
| s | | 10 | | 10 | | 10 | | 10 | | 10 | | 10 |
| т | | | | | | | | - | | | | - |
| т | | | | | | | | 60 | | | | |

| | MENTAL REGULATION | | | | | |
|------------|-------------------|-------|------------|----|--|--|
| | Sc | ocial | Occupation | | | |
| QUANTITY | | 1 | | 1 | | |
| QUALITY | | 1 | | 1 | | |
| VARIETY | | 1 | | 1 | | |
| COMPLEXITY | | 1 | | 1 | | |
| AUTHORITY | | 1 | | 1 | | |
| EFFICACY | | 5 | | 5 | | |
| SUB-TOTALS | | 10 | | 10 | | |
| TENDENCY | | | | | | |
| TOTAL | | | | 20 | | |

| | BEHAVIORAL INTERVENTION | | | | | |
|------------|-------------------------|------------|----------|----|--|--|
| | Desens | sitization | Training | | | |
| QUANTITY | | 1 | | 1 | | |
| QUALITY | | 1 | | 1 | | |
| VARIETY | | 1 | | 1 | | |
| COMPLEXITY | | 1 | | 1 | | |
| AUTHORITY | | 1 | | 1 | | |
| EFFICACY | | 5 | | 5 | | |
| SUB-TOTALS | | 10 | | 10 | | |
| TENDENCY | | | | | | |
| TOTAL | | | | 20 | | |

Section 1 Assess Metabolic Needs: **RESOURCE ABSORPTION**

Instructions:

Follow the list of questions for each *Welfare Interaction* and the corresponding *Evaluation Factors*, circling yes or no. If multiple questions are presented, circle yes only if the answer to all of the presented questions is yes. Once you've completed this section, return to the corresponding *Welfare Scorecard* and record your results.

1.) Welfare Interaction: Digestive

| • | Quantity - | Does the animal recei | ve an optimal a | amount of food? |
|---|--------------|-------------------------|--------------------|--|
| | | Does the animal recei | ve an optimal a | amount of water? |
| | | YES (1 |) | NO (0) |
| • | Quality - | Does the animal recei | ve nutritional fo | ood with optimal vitamins and minerals? |
| | | Does the animal recei | ve clean and po | otable water? |
| | | Does the animal recei | ve necessary di | ietary supplements? |
| | | Does the animal recei | ve a diet free of | f digestively aversive substances? |
| | | YES (1 |) | NO (0) |
| ٠ | Variety - | Does the animal recei | ve a wide variet | ty of food items? |
| | | YES (1 |) | NO (0) |
| • | Complexity - | Does the animal have | appropriately c | challenging access to food and water? |
| | | Are the animal's forag | ing opportunitie | ies optimally complex or difficult? |
| | | YES (1 |) | NO (0) |
| ٠ | Authority - | Does the animal have | choice and con | ntrol over their ability to eat and drink? |
| | | YES (1 |) | NO (0) |
| • | Efficacy - | Is the animal an optin | nal weight and b | body condition? |
| | | Is the animal free of s | ymptoms involv | ving nutritional deficiencies? |
| | | Are the animal's wast | e outputs of nor | rmal consistency, frequency, and color? |
| | | YES (5 |) | NO (0) |
| • | Tendency - | What is the overall tre | end for efficacy r | measures? |
| | | POSITIVE | MAINTAIN | NEGATIVE |

2.) Welfare Interaction: Atmospheric

| • | Quantity - | Does the animal receive a constant flow of breathable air or water? | | | | |
|---|--------------|---|-----------------------|--|--|--|
| | | Does the animal receiv | e an appropriate a | mount of environmental humidity? | | |
| | | YES (1) | NC |) (0) | | |
| ٠ | Quality - | Does the animal have | optimal water quali | ty conditions? | | |
| | | Does the animal have | access to clean bre | athable air - free of fumes or toxins? | | |
| | | YES (1) | NC |) (0) | | |
| ٠ | Variety - | Does the quality of the | ir atmosphere stay | consistent over time and location? | | |
| | | Does the humidity for | n a gradient of inte | nsity in the habitat? | | |
| | | YES (1) | NC |) (0) | | |
| ٠ | Complexity - | Is the opportunity to n | nove to optimal atm | nospheric conditions unhindered? | | |
| | | Are drown or suffocati | on risks appropriat | ely managed? | | |
| | | YES (1) | NC |) (0) | | |
| ٠ | Authority - | Does the animal have | adequate control o | ver removal from breathable space? | | |
| | | Does the animal have | the ability to seek o | r escape from humidity or dryness? | | |
| | | YES (1) | NC |) (0) | | |
| ٠ | Efficacy - | Is the animal free of sy | mptoms involving | boor air quality? | | |
| | | Is the animal free of sy | mptoms involving | boor water quality? | | |
| | | Is the animal free of sy | mptoms involving | boor humidity? | | |
| | | YES (5) | NC |) (0) | | |
| ٠ | Tendency - | What is the overall tre | nd for efficacy mea | sures? | | |
| | | POSITIVE | MAINTAIN | NEGATIVE | | |
| | | | | | | |

3.) Welfare Interaction: Photoregulation

| • | Quantity - | Does the animal receive an optimal amount of UV? | | | | |
|---|--------------|---|---|--|--|--|
| | | Does the animal receive an appropriate photoperiod cycle? | | | | |
| | | YES (1) | NO (0) | | | |
| • | Quality - | Does the animal receive approp | iate wavelengths of light? | | | |
| | | Does the animal receive light sou | urces at an optimal intensity? | | | |
| | | YES (1) | NO (0) | | | |
| • | Variety - | Does the animal receive an optir | nal photoperiod cycle? | | | |
| | | Does the light source form a gra | dient of intensity in the habitat? | | | |
| | | YES (1) | NO (0) | | | |
| • | Complexity - | Is the animal appropriately chall | enged with access to these locations? | | | |
| | | YES (1) | NO (0) | | | |
| • | Authority - | Does the animal retain appropri- | ate control regarding their ability to bask? | | | |
| | | Does the animal have control ov | er their ability to seek light or dark areas? | | | |

| | | YE | S (1) | NO (0) | | | |
|---|--|--|--------------------|------------------------------|-------|--|--|
| • | Efficacy - | - Is the animal observed in both their basking and shaded loca | | | | | |
| | | Is the animal free | of symptoms involv | /ing poor vitamin D3 product | tion? | | |
| | | YE | S (5) | NO (0) | | | |
| • | Tendency - What is the overall trend for efficacy measures? | | | | | | |
| | | POSITIVE | MAINTAIN | NEGATIVE | | | |

4.) Welfare Interaction: Thermoregulation

| • Quantity - | Is the animal's environment at an optimal low and high temperature? | | | |
|----------------|---|--------------------|--------------------------------|-----------|
| | YES (| l) | NO (0) | |
| • Quality - | Is the animal's heat s | ource a safe and | appropriate method of heat | exchange? |
| | YES (| l) | NO (0) | |
| • Variety - | Does the animal rece | ive an optimal th | ermal cycle daily and season | ally? |
| | Does the heat source | form a gradient | of intensity in the habitat? | |
| | YES (| I) | NO (0) | |
| • Complexity - | Is the animal approp | riately challenged | d with access to these locatio | ns? |
| | YES (| I) | NO (0) | |
| • Authority - | Does the animal reta | in control over th | neir ability to thermoregulate | ? |
| | YES (| l) | NO (0) | |
| • Efficacy - | Does the animal hav | e an appropriate | internal body temperature? | |
| | Is the animal free of | pehaviors involve | ed with cold or heat stress? | |
| | Is the animal consum | ing a temperatu | re-appropriate amount of foo | od? |
| | Is the animal observed utilizing basking areas and cool hides? | | | |
| | YES (| 5) | NO (0) | |
| • Tendency - | What is the overall tr | end for efficacy n | neasures? | |
| | POSITIVE | MAINTAIN | NEGATIVE | |

Section 2 Assess Metabolic Needs: HEALTH INTERVENTION

Instructions:

Follow the list of questions for each *Welfare Interaction* and the corresponding *Evaluation Factors*, circling yes or no. If multiple questions are presented, circle yes only if the answer to all of the presented questions is yes. Once you've completed this section, return to the corresponding *Welfare Scorecard* and record your results.

1.) Welfare Interaction: Preventative Care

| • | Quantity - | Does the animal rec | eive vaccinations o | on the recomme | nded annual basis? |
|---|--------------|------------------------|----------------------|-------------------|-------------------------|
| | | Do other animals re | ceive optimal quai | antine time bef | ore their proximity? |
| | | Does the animal rec | eive appropriate a | mounts of preve | entative treatment? |
| | | YES | (1) | NO (0) | |
| • | Quality - | Are vaccines species | s-specific to the an | imal's taxa? | |
| | | Are vaccines unexpi | red, stored, and a | dministered pro | perly? |
| | | Are facility cross-cor | ntamination policie | es and practices | optimal? |
| | | Is the preventative t | reatment type app | propriate for the | species? |
| | | YES | (1) | NO (0) | |
| • | Variety - | Does the animal rec | eive the full array | of recommende | d vaccines? |
| | | YES | (1) | NO (0) | |
| • | Complexity - | Is the animal able to | cope with the sid | e effects of vacc | ination well? |
| | | Is the animal able to | cope with the sid | e effects of prev | entative treatment? |
| | | YES | (1) | NO (0) | |
| • | Authority - | Does the animal hav | e choice through | training during v | vaccination? |
| | | Does the animal hav | e choice through | training for prev | entative treatment? |
| | | YES | (1) | NO (0) | |
| • | Efficacy - | Has the animal beer | n free of preventab | ole disease symp | otoms in the last year? |
| | | Has the animal teste | ed negative for all | preventable dise | eases in the last year? |
| | | Has the animal teste | ed negative for all | oarasitic exams | in the last year? |
| | | YES | (5) | NO (0) | |
| • | Tendency - | What is the overall t | rend for efficacy n | neasures? | |
| | | POSITIVE | MAINTAIN | NEGAT | IVE |
| | | | | | |

2.) Welfare Interaction: Diagnostics

| Does the animal receive an appropriate amount of diagnostics annually? Does the animal receive an appropriate amount of diagnostics when ill? YES (1) NO (0) Quality - Are the animal's physical exams complete and able to collect needed data Are the sample sizes adequate and are the diagnostics of an optimal clarit Is the individual reading the diagnostics qualified and reliable? | y? |
|--|----|
| YES (1) NO (0) Quality - Are the animal's physical exams complete and able to collect needed data Are the sample sizes adequate and are the diagnostics of an optimal clarit | |
| • Quality - Are the animal's physical exams complete and able to collect needed data Are the sample sizes adequate and are the diagnostics of an optimal clarit | |
| Are the sample sizes adequate and are the diagnostics of an optimal clarit | |
| | ? |
| Is the individual reading the diagnostics qualified and reliable? | y? |
| | |
| YES (1) NO (0) | |
| • Variety - Does the animal receive a diverse array of appropriate diagnostics? | |
| YES (1) NO (0) | |
| • Complexity - Is the animal able to reasonably cope with the stress of the diagnostics? | |
| Is the animal able to reasonably cope with the stress of a physical exam? | |
| YES (1) NO (0) | |
| • Authority - Does the animal have choice through training during diagnostics? | |
| Does the animal have choice through training during their physical exam? | |
| YES (1) NO (0) | |
| • Efficacy - Has the animal had illnesses or injuries successfully identified? | |
| Has treatment of identified illnesses or injuries been successful? | |
| YES (5) NO (0) | |
| • Tendency - What is the overall trend for efficacy measures? | |
| POSITIVE MAINTAIN NEGATIVE | |

3.) Welfare Interaction: Pain Management

| • | Quantity - | | opriate drug dosage for pain management? oriate anesthetic dosage during surgery? |
|---|--------------|-----------------------------------|--|
| | | YES (1) | NO (0) |
| • | Quality - | Does the animal receive the opti | mal type of drug given their species? |
| | | YES (1) | NO (0) |
| • | Variety - | Does the animal receive a holisti | c approach of medication and therapy? |
| | | YES (1) | NO (0) |
| • | Complexity - | Is the animal able to reasonably | cope with the stress of administration? |
| | | Is the animal able to reasonably | cope with the stress of anesthesia? |
| | | YES (1) | NO (0) |
| • | Authority - | Does the animal have choice thr | ough training during administration? |
| | | YES (1) | NO (0) |
| • | Efficacy - | Does the animal show appropria | te behavioral diversity? |

| | | Is the animal appropriately bright, alert, and active? Is the animal free of behaviors related to acute or chronic pain? | | |
|--------------|---|---|---------------|---|
| | Can the animal successfully navigate its habitat without abnormal gait? | | | |
| | Is the animal stable during anesthetic events? | | | 8 |
| | YES | (5) | NO (0) | |
| • Tendency - | What is the overall t | rend for efficacy m | neasures? | |
| | POSITIVE | MAINTAIN | NEGATIVE | |

4.) Welfare Interaction: Treatment

| • | Quantity - | Does the animal recei | ve an appropria | te dosage of its medications? | |
|---|--------------|---|--------------------|--|--|
| | | Does the animal receive an optimal amount of therapy given their condition? | | | |
| | | Does the animal recei | ve surgery wher | n needed? | |
| | | YES (1) |) | NO (0) | |
| • | Quality - | Is the animal receiving | g an effective typ | be of drug or therapy given the species? | |
| | | Is the animal receiving | g an effective typ | be of drug or therapy given their illness? | |
| | | Is the person perform | ing the therapy | or surgery qualified and reliable? | |
| | | YES (1) |) | NO (0) | |
| • | Variety - | Does the facility have | access to medic | ations for a variety of illnesses? | |
| | | Does the animal have | access to a vari | ety of therapies? | |
| | | Does the animal have | access to a vari | ety of surgical techniques? | |
| | | YES (1) | 1 | NO (0) | |
| • | Complexity - | Is the animal able to r | easonably cope | with the stress of administration? | |
| | | Is the animal able to r | easonably cope | with the stress of surgery? | |
| | | YES (1) |) | NO (0) | |
| ٠ | Authority - | Does the animal have | choice through | training during administration? | |
| | | YES (1) |) | NO (0) | |
| • | Efficacy - | Have symptoms of dia | gnosed illnesse | s resolved in the last year? | |
| | | Have rerun positive te | sts come back r | negative after treatment? | |
| | | Has the animal becom | ie more bright, a | alert, and active after treatment? | |
| | | Was the goal of any su | irgery met with | clear margins? | |
| | | YES (5) |) | NO (0) | |
| • | Tendency - | What is the overall tre | nd for efficacy n | neasures? | |
| | | POSITIVE | MAINTAIN | NEGATIVE | |
| | | | | | |

Section 3 Assess Operant Needs: SELF-MAINTENANCE

Instructions:

Follow the list of questions for each *Welfare Interaction* and the corresponding *Evaluation Factors*, circling yes or no. If multiple questions are presented, circle yes only if the answer to all of the presented questions is yes. Once you've completed this section, return to the corresponding *Welfare Scorecard* and record your results.

1.) Welfare Interaction: Hygiene

| • | Quantity - | Does the animal recei | ve an optimal ar | mount of opportunities for bathing? |
|---|--------------|--------------------------|---------------------|--|
| | | Does the animal recei | ve optimal oppo | ortunities for pest removal behavior? |
| | | Is the animal's habitat | cleaned at the o | optimal frequency? |
| | | YES (1 |) | NO (0) |
| • | Quality - | Is the animal's habitat | cleaned thorou | ghly and effectively? |
| | | Are the used chemica | l cleaners safe fo | or the species of animal? |
| | | Are the used chemica | l cleaners effect | ive against the hygienic concerns? |
| | | YES (1 |) | NO (0) |
| • | Variety - | Is cleanliness consiste | nt throughout t | he week? |
| | | YES (1 |) | NO (0) |
| • | Complexity - | Is the animal appropr | iately challenged | d with access to these areas? |
| | | YES (1 |) | NO (0) |
| • | Authority - | Does the animal have | choice and cont | trol during bathing? |
| | | Does the animal have | opportunities to | o avoid soiled areas of their habitat? |
| | | Does the animal have | choice and cont | trol during habitat cleaning procedures? |
| | | YES (1 |) | NO (0) |
| • | Efficacy - | Is the animal effective | ly free of fecal, f | food, or other biological debris? |
| | | Is the animal's fur, coa | at, feather, or sc | ale condition optimal? |
| | | Is the animal's mover | nent unhindered | by symptoms of poor hygiene? |
| | | YES (5 |) | NO (0) |
| • | Tendency - | What is the overall tre | nd for efficacy r | neasures? |
| | | POSITIVE | MAINTAIN | NEGATIVE |

2.) Welfare Interaction: Fitness

| • | Quantity - | | • | mount of time for physical exercise? portunities for keratin maintenance? |
|---|--------------|-------------------------|-------------------|--|
| | | YES (1) | | NO (0) |
| • | Quality - | Do exercises promote | | |
| | | ls keratin maintenance | e performed in a | a species-appropriate and safe manner? |
| | | YES (1) |) | NO (0) |
| ٠ | Variety - | Do fitness opportuniti | es promote grea | ater behavioral diversity? |
| | | Do exercises promote | development of | f a variety of systems and muscles? |
| | | YES (1) |) | NO (0) |
| • | Complexity - | Are exercises optimall | y intense and ch | hallenging for the individual? |
| | | Is the animal appropri | ately challenged | d during keratin maintenance? |
| | | YES (1) |) | NO (0) |
| • | Authority - | Does the animal have | choice and cont | trol during exercise? |
| | | Does the animal have | choice and cont | trol during keratin maintenance? |
| | | YES (1) |) | NO (0) |
| • | Efficacy - | Is the animal observed | d spending an op | ptimal amount of time self-maintaining? |
| | | Is the animal observed | d spending an op | ptimal amount of time exercising? |
| | | Are the animal's beak, | feathers, nails, | horns, etc. of optimal condition? |
| | | Does the animal have | an appropriate | fat to muscle ratio? |
| | | YES (5) |) | NO (0) |
| • | Tendency - | What is the overall tre | nd for efficacy n | neasures? |
| | | POSITIVE | MAINTAIN | NEGATIVE |

Section 4 Assess Operant Needs: SENSORY REGULATION

Instructions:

Follow the list of questions for each *Welfare Interaction* and the corresponding *Evaluation Factors*, circling yes or no. If multiple questions are presented, circle yes only if the answer to all of the presented questions is yes. Once you've completed this section, return to the corresponding *Welfare Scorecard* and record your results.

1.) Welfare Interaction: Auditory

| • | Quantity - | Is the environment fr | ee of chronic and | d aversive loud sounds? |
|---|--------------|--------------------------|--------------------|--|
| | | Is the environment fr | ee of chronic and | d aversive intense vibrations? |
| | | Are the levels of sour | id in an animal's | habitat species-appropriate? |
| | | YES (1 |) | NO (0) |
| • | Quality - | Is the environment fr | ee of chronic and | d aversive frequencies of sound? |
| | | Are cues to the anima | al of a comprehe | ensible and non-aversive frequency? |
| | | Are the types of soun | d in the animal's | s habitat species-appropriate? |
| | | YES (1 |) | NO (0) |
| • | Variety - | Is the variation in volu | ume throughout | the day appropriate and non-aversive? |
| | | Does daily auditory c | ycle allow for an | appropriate period of restfulness? |
| | | YES (1 |) | NO (0) |
| • | Complexity - | Is the animal able to | reasonably cope | with the stress from habitual sounds? |
| | | Is the variation and c | omplexity of sou | ands optimally engaging to the animal? |
| | | Is the animal optimal | ly challenged wit | th the presentation of novel sounds? |
| | | YES (1 |) | NO (0) |
| • | Authority - | Does the animal have | e opportunities to | o escape from areas of aversive sound? |
| | | YES (1 |) | NO (0) |
| • | Efficacy - | Is the animal free of s | startle behaviors | s related to environmental sounds? |
| | | Is the animal free of s | symptoms relate | ed to chronic stress? |
| | | Is the animal able to | complete an opti | imal continuous period of sleep or rest? |
| | | Is the animal free of s | symptoms of slee | ep deprivation? |
| | | YES (5 | 5) | NO (0) |
| • | Tendency - | What is the overall tro | end for efficacy n | measures? |
| | | POSITIVE | MAINTAIN | NEGATIVE |

2.) Welfare Interaction: Tactile

| • | Quantity - | Does the animal rec | eive appropriate | scratching or rubbing opportunit | ies? |
|---|--------------|------------------------|---------------------|---------------------------------------|---------|
| | | Is the animal handle | d an appropriate | e amount of times per day and we | eek? |
| | | YES (| 1) | NO (0) | |
| • | Quality - | Is the habitat free of | sharp and poten | ntially injurious materials? | |
| | | Is the habitat free of | surfaces that ma | ay cause heat, frost, or chemical b | ourns? |
| | | Are individuals train | ed on species-ap | propriate animal-handling protoc | cols? |
| | | YES (| 1) | NO (0) | |
| • | Variety - | Does the habitat pro | vide a variety of | textures and surfaces to choose | from? |
| | | Does daily handling | protocols allow fo | for an appropriate period of restfu | ulness? |
| | | YES (| 1) | NO (0) | |
| • | Complexity - | Is the animal able to | reasonably cope | e with the stress from handling? | |
| | | Is the animal approp | oriately challenge | ed with access to areas of softer to | exture? |
| | | YES (| 1) | NO (0) | |
| • | Authority - | Does the animal hav | e opportunities t | to escape from aversive surfaces? | ? |
| | | Does the animal hav | e choice through | h training in their ability to be han | dled? |
| | | YES (| 1) | NO (0) | |
| • | Efficacy - | Is the animal free of | startle or stress l | behaviors related to handling? | |
| | | Are the animal's feet | , hands, or other | r contact surfaces healthy and op | timal? |
| | | Is the animal free of | injury related to | injurious tactile surfaces? | |
| | | Does the animal hav | e a normal gait? | | |
| | | YES (| 5) | NO (0) | |
| • | Tendency - | What is the overall t | rend for efficacy i | measures? | |
| | | POSITIVE | MAINTAIN | NEGATIVE | |

3.) Welfare Interaction: Proprioception

| • | Quantity - | Does the animal receive an optima | al amount of space for natural behaviors? |
|---|--------------|--------------------------------------|---|
| | | Does the animal receive an optima | al amount of enclosed hides for retreat? |
| | | YES (1) | NO (0) |
| ٠ | Quality - | Does the habitat include dynamic | features to encourage natural behavior? |
| | | Is the habitat free of features that | are fall or entrap risk considerations? |
| | | YES (1) | NO (0) |
| • | Variety - | Does the habitat provide a variety | of spatial opportunities for the animal? |
| | | YES (1) | NO (0) |
| • | Complexity - | ls the animal appropriately challer | nged by movement features in its habitat? |
| | | YES (1) | NO (0) |
| • | Authority - | Does the animal have opportunitie | es to escape from large open areas? |

| | | Does the animal h | Does the animal have opportunities to escape from narrow confined areas? | | | |
|---|------------|---|--|-------------------------------|---------|--|
| | | Does the animal h | Does the animal have choice through training in shifting between spaces? | | | |
| | | Does the animal have choice in utilization of dynamic habitat features? | | | | |
| | | YI | ES (1) | NO (0) | | |
| • | Efficacy - | Is the animal obse | erved using a full rar | nge of behavioral diversity? | | |
| | | Is the animal obse | erved using the full s | spatial range of its habitat? | | |
| | | Is the animal obse | erved using its habit | at's dynamic features? | | |
| | | Is the animal free | of stress symptoms | related to containment or ope | enness? | |
| | | YI | ES (5) | NO (0) | | |
| • | Tendency - | What is the overa | ll trend for efficacy r | measures? | | |
| | | POSITIVE | MAINTAIN | NEGATIVE | | |

4.) Welfare Interaction: Gustation

| • | Quantity - | Does the animal receiv | ve an optimal amount o | f opportunities for taste? |
|---|--------------|-------------------------|---------------------------|------------------------------|
| | | YES (1) | NO (0) | |
| • | Quality - | Are the taste stimuli a | n appropriate type for t | he species and individual? |
| | | YES (1) | NO (0) | |
| • | Variety - | Does the animal receiv | ve a wide variety of tast | e stimuli? |
| | | YES (1) | NO (0) | |
| • | Complexity - | Is the animal appropri | ately challenged by unio | que tastes? |
| | | YES (1) | NO (0) | |
| • | Authority - | Does the animal have | choice and control in th | e tasting of new substances? |
| | | YES (1) | NO (0) | |
| • | Efficacy - | Is the animal observed | l consuming a variety of | food items? |
| | | Does the animal displa | iy an appropriate eager | ness towards their diet? |
| | | YES (5) | NO (0) | |
| • | Tendency - | What is the overall tre | nd for efficacy measure | s? |
| | | POSITIVE | MAINTAIN | NEGATIVE |

5.) Welfare Interaction: Visual

- Quantity Does the animal receive an optimal amount of visual stimuli? Does the animal receive an appropriate intensity of visual light? YES (1) NO (0)
 Quality - Is the animal's light source at the correct visual Hz or FPS?
- **Quality** Is the animal's light source at the correct visual H2 or FPS? Are the animal's nearby visual stimuli non-aversive and appropriate? Are the animals reflective surfaces visually appropriate for the species?

| | | YES (1 |) | NO (0) |
|---|--------------|-------------------------|--------------------|--|
| • | Variety - | Does the animal rece | ve a wide variety | of visual stimuli? |
| | | YES (1 |) | NO (0) |
| • | Complexity - | Is the animal appropr | iately challenged | by the novel stimuli? |
| | | YES (1 |) | NO (0) |
| ٠ | Authority - | Does the animal have | choice and conti | rol in their ability to hide from stimuli? |
| | | YES (1 |) | NO (0) |
| ٠ | Efficacy - | Is the animal free of s | tartle behaviors i | related to aversive visual stimuli? |
| | | Is the animal free of s | ymptoms related | l to chronic stress? |
| | | Is the animal able to o | omplete an optir | mal continuous period of sleep or rest? |
| | | Is the animal free of s | ymptoms of slee | p deprivation? |
| | | YES (5 |) | NO (0) |
| • | Tendency - | What is the overall tre | nd for efficacy m | easures? |
| | | POSITIVE | MAINTAIN | NEGATIVE |

6.) Welfare Interaction: Olfactory

| • | Quantity - | Does the animal receive an appropriate intensity of scents? | | |
|---|--------------|---|------------------------|-------------------------------------|
| | | YES (1 |) NO | 0 (0) |
| ٠ | Quality - | Are the animal's nearl | by scents or fumes n | on-aversive and appropriate? |
| | | YES (1 |) NO | 0 (0) |
| • | Variety - | Does the animal recei | ve a wide variety of o | olfactory stimuli? |
| | | YES (1 |) NO | 0 (0) |
| • | Complexity - | Is the animal appropr | iately challenged by | the stimuli it smells? |
| | | Is the animal appropr | iately challenged dui | ring the tracking of scents? |
| | | YES (1 |) NO | 0 (0) |
| • | Authority - | Does the animal have | the opportunity to e | escape scents in their environment? |
| | | YES (1 |) NO | 0 (0) |
| • | Efficacy - | Is the animal observe | d smelling their envi | ronment? |
| | | Does the animal displ | ay an appropriate ea | agerness over a scent? |
| | | YES (5 |) NO | 0 (0) |
| • | Tendency - | What is the overall tre | nd for efficacy meas | ures? |
| | | POSITIVE | MAINTAIN | NEGATIVE |

Section 5 Assess Operant Needs: MENTAL REGULATION

Instructions:

Follow the list of questions for each *Welfare Interaction* and the corresponding *Evaluation Factors*, circling yes or no. If multiple questions are presented, circle yes only if the answer to all of the presented questions is yes. Once you've completed this section, return to the corresponding *Welfare Scorecard* and record your results.

1.) Welfare Interaction: Social

| • | Quantity - | Does the animal recei | ve an optimal amou | unt of socialization time? |
|---|--------------|-------------------------|-----------------------|-----------------------------------|
| | | Does the animal have | an optimal numbe | r of conspecifics? |
| | | Does the animal recei | ve an optimal numl | ber of training sessions per day? |
| | | YES (1 |) N | O (0) |
| ٠ | Quality - | Is the animal housed | with primarily prefe | erred non-aversive conspecifics? |
| | | Does the animal inter | act primarily with p | referred non-aversive humans? |
| | | YES (1 |) N(| O (0) |
| • | Variety - | Does the animal recei | ve socialization fror | m a variety of individuals? |
| | | YES (1 |) N(| O (0) |
| ٠ | Complexity - | Is the animal appropr | iately challenged by | y their social dynamic? |
| | | YES (1 |) N(| O (0) |
| • | Authority - | Does the animal have | choice and control | over participating in training? |
| | | Does the animal have | opportunities to es | scape conspecifics? |
| | | Does the animal have | opportunities to es | scape public viewing? |
| | | YES (1 |) N | O (0) |
| ٠ | Efficacy - | Does the animal displ | ay eagerness to par | rticipate in training? |
| | | Is the animal observe | d participating in ap | opropriate social behaviors? |
| | | Is the animal free of s | tereotypies associa | ted with loneliness? |
| | | Is the animal free of s | ymptoms related to | o sexual frustration? |
| | | Is the animal observe | d relaxed in close p | roximity to conspecifics? |
| | | YES (5 |) N | O (0) |
| • | Tendency - | What is the overall tre | nd for efficacy mea | asures? |
| | | POSITIVE | MAINTAIN | NEGATIVE |

2.) Welfare Interaction: Occupation

| • | Quantity - | Does the animal receive optimal opportunities for problem solving? | | | |
|---|--------------|--|--------------------|---------------|-------------------------------|
| | | Does the animal rece | ive optimal oppo | ortunities f | for investigation? |
| | | YES (1 |) | NO (0) | |
| ٠ | Quality - | Do opportunities pro | mote a diversity | of species | -specific behavior? |
| | | Do engaging stimuli o | ccupy an approp | oriate amo | ount of the animal's time? |
| | | YES (1 |) | NO (0) | |
| ٠ | Variety - | Do these occupation | opportunities pr | omote bel | havioral diversity? |
| | | Are a variety of occup | ational stimuli p | rovided da | aily? |
| | | YES (1 |) | NO (0) | |
| ٠ | Complexity - | Are problem solving of | opportunities op | timally cha | allenging for the individual? |
| | | Are occupational stim | uli appropriately | y complex | for the individual? |
| | | YES (1 |) | NO (0) | |
| ٠ | Authority - | Does the animal have | choice and cont | trol over h | ow they occupy their time? |
| | | YES (1 |) | NO (0) | |
| ٠ | Efficacy - | Is the animal free of s | tereotypical beh | avior relat | ted to boredom? |
| | | Does the animal show | v appropriate be | havioral d | liversity for the species? |
| | | Is the animal observe | d utilizing enrich | ment for | optimal amounts of time? |
| | | YES (5 |) | NO (0) | |
| ٠ | Tendency - | What is the overall tre | end for efficacy r | neasures? | , |
| | | POSITIVE | MAINTAIN | Ν | NEGATIVE |
| | | | | | |

Section 6 Assess Operant Needs: BEHAVIORAL INTERVENTION

Instructions:

Follow the list of questions for each *Welfare Interaction* and the corresponding *Evaluation Factors*, circling yes or no. If multiple questions are presented, circle yes only if the answer to all of the presented questions is yes. Once you've completed this section, return to the corresponding *Welfare Scorecard* and record your results.

1.) Welfare Interaction: Desensitization

| • | Quantity - | Is the animal receivin | g an optimal am | ount of desensitization to novel stimuli? |
|---|--------------|-------------------------|--------------------|---|
| | | YES (1 |) | NO (0) |
| ٠ | Quality - | Is desensitization occ | urring at small e | nough approximations for the animal? |
| | | Are caretakers priorit | izing relevant no | vel stimuli to desensitize? |
| | | YES (1 |) | NO (0) |
| ٠ | Variety - | Is the animal being de | esensitized to an | appropriate variety of stimuli? |
| | | YES (1 |) | NO (0) |
| • | Complexity - | Is the animal approp | iately challenge | d by their proximity to novel stimuli? |
| | | YES (1 |) | NO (0) |
| • | Authority - | Does the animal have | choice on parti | cipating in desensitization training? |
| | | Does the animal have | opportunities t | o escape from novel stimuli? |
| | | YES (1 |) | NO (0) |
| • | Efficacy - | Is the animal free of f | ear-based behav | viors during their daily routines? |
| | | YES (5 |) | NO (0) |
| • | Tendency - | What is the overall tre | end for efficacy r | neasures? |
| | | POSITIVE | MAINTAIN | NEGATIVE |

2.) Welfare Interaction: Training

| • | Quantity - | Does the animal receive an optimal amount of opportunities for training? | |
|---|---|--|---------------------------------------|
| | | YES (1) | NO (0) |
| ٠ | Quality - | Is the training program fear-free, least-aversive, and highly positive? | |
| | | Are individuals appropriately k | nowledgeable and skilled at training? |
| | | YES (1) | NO (0) |
| ٠ | Variety - Is the animal trained to complete a diverse array of behaviors? | | ete a diverse array of behaviors? |
| | | YES (1) | NO (0) |

| • | Complexity - | Are training opportunities optimally challenging for the individual? | | |
|---|--------------|--|-------------------|-------------------------------------|
| | | Are successive appro | ximations optima | ally sized for the individual? |
| | | YES (|) | NO (0) |
| • | Authority - | Does the animal have | e choice and cont | rol over participation in training? |
| | | YES (|) | NO (0) |
| ٠ | Efficacy - | Are an animal's established behaviors under stimulus control? | | under stimulus control? |
| | | Is the animal free of | undesired behavi | ors? |
| | | YES (| 5) | NO (0) |
| • | Tendency - | What is the overall trend for efficacy measures? | | neasures? |
| | | POSITIVE | MAINTAIN | NEGATIVE |

Section 7 Bonus Assessment: TIME SENSITIVE VERSION

Instructions:

You want to be thorough with your welfare, but you simply don't have time to plow through 25 pages of an assessment. If this sounds like you, our TL;DR Assessment may be more up your alley. We've taken the overlapping *Efficacy Measures* from the above assessment, and made a short exam to give you a more time sensitive and effective look into your animal's welfare.

| 0 | Is the animal an optimal v | veight and body condition? |
|---|------------------------------|--|
| | YES (1) | NO (0) |
| 0 | Is the animal free of symp | otoms of illness or deficiency? |
| | YES (1) | NO (0) |
| 0 | Is the animal consuming a | an appropriate amount of food? |
| | YES (1) | NO (0) |
| 0 | Is the animal observed ut | ilizing many areas in its habitat? |
| | YES (1) | NO (0) |
| 0 | Does the animal show ap | propriate behavioral diversity? |
| | YES (1) | NO (0) |
| 0 | Is the animal appropriate | ly bright, alert, and active? |
| | YES (1) | NO (0) |
| 0 | Is the animal free of beha | viors related to acute or chronic pain? |
| | YES (1) | NO (0) |
| 0 | Is the animal free of fear | or stress-based behaviors during their daily routines? |
| | YES (1) | NO (0) |
| 0 | Is the animal free of stere | otypical behavior related to boredom? |
| | YES (1) | NO (0) |
| 0 | Does the animal display e | agerness to participate in training? |
| | YES (1) | NO (0) |
| 0 | Is the animal observed pa | articipating in social behaviors, if appropriate? |
| | YES (1) | NO (0) |
| 0 | Is the animal's fur, coat, f | eather, or scale condition optimal? |
| | YES (1) | NO (0) |
| | | |

TOTAL

12