Psittacine welfare institute



WELFARE ASSESSMENT

Last Updated: April 17, 2023 Version 1.1

> AUTHORED BY **GABE KAHSEN**

PRODUCED BY THE PSITTACINE WELFARE INSTITUTE

TABLE OF CONTENTS

In	troduction	2
Sc	orecards	7
1.	Resource Absorption	10
2.	Health Intervention	13
3.	Self-Maintenance	16
4.	Sensory Regulation	18
5.	Mental Regulation	22
6.	Behavioral Intervention	24
7.	Time Sensitive Assessment	26

Peer Reviewed By:

Christina Carlson-Hass Veronica Seawall Dan Powell

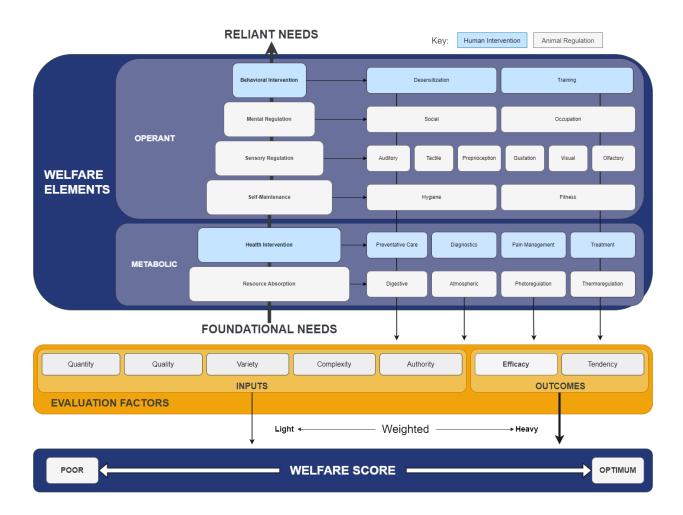
OBJECTIVE:

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.

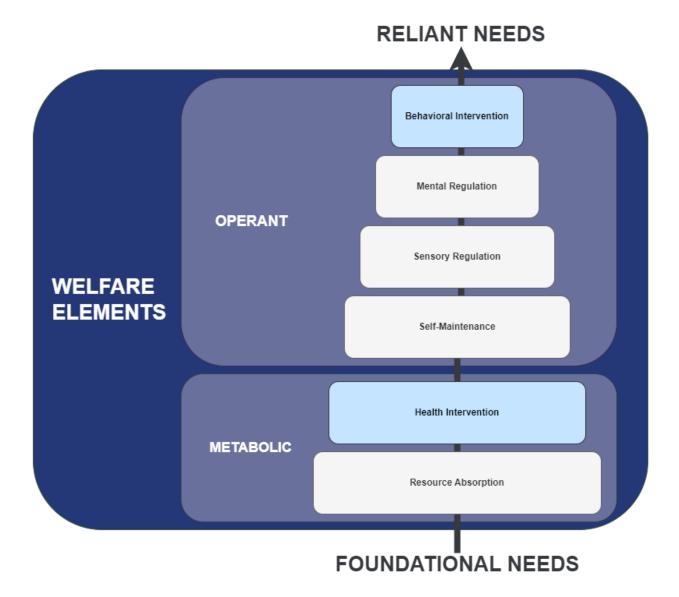
OUR WELFARE MODEL:

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

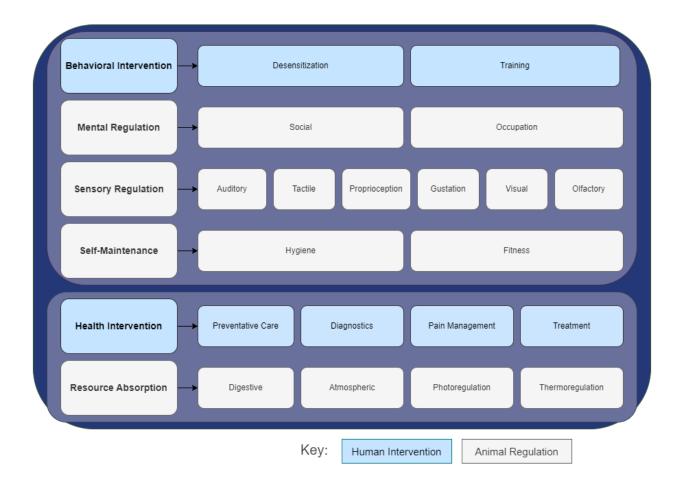
processes involved with satiating mental and emotional desires

- 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