

ASSOCIATION
OF ZOOS &
AQUARIUMS

Welfare Webinar Wednesdays: What to assess, when, and why

Presented on behalf of AZA Animal Welfare Committee

AZA | Learn

Monthly series- Welcome!

- Welfare Webinar Wednesdays: Defining Welfare and Wellbeing
 - Webinars will explore compelling and relevant topics in Animal Welfare and Wellbeing, feature subject matter and species experts, offer varied industry perspectives, and time for conversation in the community
- Second Wednesday of the month
 - Follow up the conversation the next day at Animal Welfare Committee virtual “Office Hours” which are the second Thursday of the month at 1pm EST (ongoing since 2022)
 - The Zoom link is <https://us06web.zoom.us/j/82093090810?pwd=BVWrYSn29R8yCc5oaI0sSSyz1DeR8o.1>
 - Meeting ID: 820 9309 0810
 - Passcode: 855950



Preview of upcoming webinars: Series on focused welfare topics

Month	Topic
all past topics	https://www.pathlms.com/aza-learn/courses/56110/sections/119622
Feb 11, 2026	Water Quality https://www.pathlms.com/aza-learn/courses/56110/sections/119622/webinars/84099
Feb 25, 2026	Animal welfare assessment types https://www.pathlms.com/aza-learn/courses/56110/sections/119622/webinars/89562
Mar 11, 2026	Exhibit Design https://www.pathlms.com/aza-learn/courses/56110/sections/119622/webinars/84100
Apr 2, 2026	Weaponizing Welfare https://www.pathlms.com/aza-learn/courses/56110/sections/119622/webinars/90568
Apr 8, 2026	Underrepresented taxa assessments https://www.pathlms.com/aza-learn/courses/56110/sections/119622/webinars/84101

Interested in a welfare/wellbeing topic?

- If you are interested in learning more about a topic, and/or sharing your knowledge and expertise about a topic (whether or not you see it on the calendar)– please get in touch!

Katie Hall, PhD

Director of Animal Behavior and Wellbeing
Minnesota Zoo

katie.hall@state.mn.us

Animal Welfare Committee

Behavior Scientific Advisory Group

Research and Technology Committee



Webinar Objectives

Inform animal care professionals about different welfare assessment types, when to complete them, and how data impacts decision making for positive welfare outcomes.



For a recap on “Annual assessments,” see our webinar from August 2025
<https://www.pathlms.com/aza-learn/courses/56110/sections/119622/webinars/84093>

1

Significant
Events



Betsy Herrelko, PhD
Curator, Animal Welfare & Research
Smithsonian's National Zoo & Conserv Bio Institute

2

Quarantine



Stephanie Norton
Animal Behavior and Well-Being Program Leader
Reid Park Zoo

3

Quality of Life



Katie Hall, PhD
Director of Animal Behavior and Wellbeing
Minnesota Zoo

4

Individualized



Kendle Enter
Curator
South Carolina Aquarium

5

Environmental
Assessment



Mike O'Neill
Associate Curator of Aquatic Collections
New England Aquarium

6

Data &
Decisions



Kimberly Leser
Behavioral Husbandry and Welfare Manager
Oklahoma City Zoo and Botanical Garden



Significant Events

Betsy Herrelko PhD

AZA | Learn

AZA Standards

1.5.0. The institution must have a process for assessing animal wellbeing via welfare assessments.

Explanation: This process must be both proactive and reactive, transparent, and include staff or consultants knowledgeable in assessing quality of life for animals showing signs of physical or mental distress or decline.

Welfare assessments for all animals must be conducted at least annually. **The process must also include a mechanism to identify and evaluate the impacts on animal wellbeing of significant life events or changes in the animal's environment as identified by the individual institution. Examples of life events/changes could include construction events, unusual weather events, noise intrusion, change in housing, changes in animals exhibited/housed with or nearby, change in an animal's role within the collection, or involvement in informal or structured presentations/programming as an ambassador animal, involvement in research projects, etc.**

Further information on the establishment of an animal welfare assessment process is 2026 Accreditation Standards & Related Policies 15 available from AZA, and online in AZA's Accreditation Resource Center at <https://www.aza.org/accred-resource-center> (you will be requested to log in using your individual membership user name and password).

Inspector's Handbook

Required for the institution to meet Standard 1.5.0:

- The institution is following a written process for assessing animal wellbeing.
- The following aspects of the welfare assessment process must be documented:
 - Welfare assessment strategy/plan
 - Welfare assessment framework that is used for assessments (e.g., Five Domains, Five Opportunities to Thrive, your own framework)
 - Results of welfare assessments and a summary of resultant actions
- The wellbeing of all animals residing at the institution is considered and assessed at least once annually.
- The welfare assessment process is both proactive and reactive.
- Individuals performing welfare assessments must have at least a baseline knowledge of animal welfare science.
- **The assessment process must include a mechanism to identify and evaluate the impacts on wellbeing of significant life events or changes to the animal's environment. Examples of life events/changes include construction events, unusual weather events, noise intrusion, change in housing, changes in animals exhibited with or nearby, etc.**

https://assets.speakcdn.com/assets/2332/inspectors_handbook.pdf

ASSOCIATION
OF ZOOS &
AQUARIUMS

The Inspector's Handbook

2026 Edition

Inspector's Handbook

Plain language: Annual welfare assessment of every individual in your collection is for most an impractical and unachievable goal. That being said, every animal should be represented as an individual or as part of a group during your holistic annual collection assessment. Your annual assessment process should result in identification of individual animals and groups that may need to be assessed more frequently and/or in greater detail than the collection-level assessment. It is also recommended that you develop criteria for more detailed assessments that are triggered by significant life events (such as introduction of a new exhibit mate or reaching a geriatric age milestone) or significant changes at your institution (such as construction or an unusual weather event).

ACCREDITATION

- ABOUT AZA ACCREDITATION
- HOW TO APPLY
 - ACCREDITATION MATERIALS
 - ACCREDITED MEMBERS
 - HALF CENTURY AWARD
 - QUARTER CENTURY AWARD
 - UPCOMING REVIEWS
 - ACCREDITATION COMMISSION
- INSPECTORS
- ACCREDITATION RESOURCE CENTER
 - REPORT A CONCERN

HOME / ACCREDITATION / ACCREDITATION RESOURCE CENTER

Accreditation Resource Center

Welcome to the AZA Accreditation Resource Center! Here you will find examples of institutional documents and policies that are required for AZA accreditation as well as guidelines and information that may be useful in developing and/or revising your institution's programs and policies. The Resource Center is intended to serve as a tool in helping currently accredited AZA institutions (as well as new applicant facilities) to develop protocols, programs, and policies at their own institutions that, at minimum, are in line with accreditation expectations.

The sample documents that are required for accreditation were selected by the **Accreditation Commission** as representing good examples for use by institutions in developing similar documents. **Institutions are advised, however, not to simply "cut and paste." It is the responsibility of each institution to make certain that their own policies and procedures fully reflect and address the particular needs and challenges at their own individual institutions.**

This Resource Center is regularly updated, so please be sure to check back periodically for new information and examples. It is our goal to eventually have several examples of every single document required for AZA accreditation, as well as other helpful information. We extend our sincere gratitude to our **AZA-accredited institutions** and **Related Facilities** for the use of the documents in this Resource Center.

[Guidelines & Sample Documents, Programs, and Policies Required for Accreditation](#)

Any questions can be directed to AZAAccreditation@AZA.org.

RELATED INFORMATION

[ACCREDITATION STANDARDS & RELATED POLICIES](#)

English

ACCREDITATION

- ▼ ABOUT AZA ACCREDITATION
- ▼ HOW TO APPLY
 - ACCREDITATION MATERIALS
 - ACCREDITED MEMBERS
 - HALF CENTURY AWARD
 - QUARTER CENTURY AWARD
 - UPCOMING REVIEWS
 - ACCREDITATION COMMISSION
- ▼ INSPECTORS
- ▼ ACCREDITATION RESOURCE CENTER
 - REPORT A CONCERN

HOME / ACCREDITATION / ACCREDITATION RESOURCE CENTER / GUIDELINES & SAMPLE DOCUMENTS, PROGRAMS, AND POLICIES

Guidelines & Sample Documents, Programs, and Policies



Animal Welfare, Care, & Management

- [Ambassador Animal Policy](#)
- [Animal Enrichment & Training Program](#)
- [Animal Handling Training Program](#)
- [Animal Training Program](#)
- [Animal Transaction Protocol and Forms](#)
- [Animal Welfare Reporting Process](#)
- [Animal Welfare Assessment Process](#)
- [Elephant Management Protocols and Policies](#)
- [Institutional Collection Plan](#)

English

Cleveland Metroparks Zoo (2018)



Description of the Daily Monitoring Process

Each Animal Keeper is responsible for initiating the official animal record, in the form of the Keeper's Daily Report, which chronicles **significant events** that impact the animals under their AC-21 care during a specific work day. **Significant events include any observations, discussion items, action steps, or events (e.g. social structure changes, construction, after-hours events) that foreseeably impact welfare.**

https://www.aza.org/assets/2332/cleveland_metroparks_zoo_animal_welfare_process_standard_operating_procedure.pdf

3) EVENT-DRIVEN ASSESSMENTS

Short-term or long-term event-related welfare evaluation is initiated based on events that could significantly impact animal welfare (e.g., intense weather, change in housing, noise intrusion, construction, introductions, breeding, birthing, research, etc.). As event-based welfare assessments may be proactive or reactive in nature, the alert for the need to conduct such an assessment can be identified by any CMZ staff member and relayed to the appropriate animal manager for the animal of interest.

Number and type of welfare indicators measured for each event-driven welfare situation can vary, but may include: daily monitoring of specific behaviors, food consumption, activity, fecal consistency, as well as intense monitoring and data collection of multiple physiological and behavioral welfare indicators.

Methods of Initiation

Any CMZ staff member can identify a potential opportunity for the event-driven welfare monitoring process by notifying an Animal Care Manager. Need can also be established by a welfare topic being selected as part of the Ongoing/Daily Welfare Assessment Process (see accompanying policy for details). Lastly, research projects coordinated by the Conservation & Science Team can be proactively identified and designed to monitor animal welfare through or after specific events. Relatedly, welfare monitoring in response to an animal manipulation for research projects (e.g., stress hormone monitoring through reproductive rectal ultrasounds in rhinos) also qualify as part of the Event-Driven Assessment Process.



Determining Welfare Indicators to Evaluate

The specific welfare indicators to be evaluated are determined by 1) perceived concern for the animal(s) involved, as designated by appropriate Animal Managers, and 2) available resources and staff time for more in-depth assessments involving many welfare indicators. Length of these assessments is either identified at the time of initiation by the Animal Manager and staff monitoring individual metrics in the case of proactive evaluations or determined by the appropriate Animal Manager through meetings with involved parties in the case of reactive evaluations.

Documentation of Results and Any Related Action

Specific welfare indicators and the frequencies at which they are monitored determines how results are documented. Documentation can either be through Keeper's Daily Reports in the section referring to welfare, or summaries of results of behavioral and/or physiological indicators monitored by the Veterinary Programs or Conservation & Science Teams, which will be reported out and captured in the monthly area meeting notes or more frequently if needed. Any changes in management due to results of this monitoring will also be discussed and captured in monthly area meeting notes.



APPROACH TO MONITORING ANIMAL WELFARE ASSOCIATED WITH SIGNIFICANT LIFE EVENTS



In addition to annual welfare assessments facilitated by the Lincoln Park Zoo Welfare Discussion Tool, Lincoln Park Zoo also assesses welfare associated with “significant life events.”

Defining a Significant Life Event

A **significant life event (SLE)** is defined as any change experienced by an animal that is reasonably likely to correspond with an appreciable change in the animal’s welfare state. Although an SLE may improve an animal’s welfare state, for practical purposes, at this time, LPZ will prioritize monitoring an animal following an SLE for which the direction of welfare change is expected to be negative, trending toward the left side of the welfare continuum shown below.



https://assets.speakcdn.com/assets/2332/lincoln_park_zoo_monitoring_significant_life_events.pdf



LINCOLN PARK ZOO.

FOR WILDLIFE. FOR ALL.

The following are **always** considered to be SLEs that warrant monitoring:

1. A social or pair-bonded animal becomes singly housed and will remain that way for longer than a brief duration.
2. An animal acutely loses a critical adaptation (e.g. one of their senses, a full appendage, etc.) that significantly affects the animal's stability, mobility, typical behavior, or perception of their environment.
3. One or more previously established QOL parameters are met.
4. An animal arrives in quarantine from another institution.



LINCOLN PARK ZOO.

FOR WILDLIFE. FOR ALL.

Additionally, SLEs may include, but are not limited to:

1. There are changes to social composition that may impact the welfare of the animal, considering the individual or natural history of the species. For social animals, this could include integrations, first births, deaths in the social group, or solitary housing of any social species.
2. There are exhibit changes, such as a move to a new exhibit, a new neighboring species, or a significant and/or prolonged increase or decrease in access to portions of exhibit or holding space.



LINCOLN PARK ZOO.
FOR WILDLIFE. FOR ALL.

3. There are disruptions inside or outside of exhibit, such as major or contiguous (repetitive) zoo events, or construction of a nearby habitat.
4. There is any other event that is identified by a Curator, Zoological Manager, Veterinarian, VP, Animal Welfare Scientist, Nutrition Manager, or Behavioral Husbandry Manager to have an appreciable impact on welfare.

Note that events that are likely to be significant will differ across individuals and taxa. For example, introduction of a new bird into an expansive free-flight aviary that is home to dozens of others may not be a significant life event for some resident birds, while introduction of a new potential mate to a pair-bonding avian species would likely be significant for both individuals. Considering species biology and individual histories can help determine whether an event should be considered a potential significant life event. When unsure, be conservative and consider events potentially significant.

Significant Life Events:

Animals respond to life events in various ways where the same event may negatively impact the wellbeing of one individual and not another. Therefore, curators (in consultation with the senior curator and/or director of Animal Care) will determine which events warrant assessment based on species or individual needs. We focus on certain events, which are often significant in the lives of our animals:

- (1) Major medical event or decline in health
 - a. An injury or loss of a critical adaptation that significantly affects their stability, mobility, behavior, or perception of environment
- (2) Significant animal birth, death, location transfer, or social group changes
 - a. Social animal becomes singly housed for a significant period, ostracized from group, etc.
- (3) Prolonged confinement to part of an enclosure
 - a. May be due to environmental danger, predator concerns, etc.
- (4) Prolonged loud noise or excessive visual distractions
 - a. May be due to construction or public events
- (5) Research manipulations with TAMER restraint

Curators and their teams assess their animals daily to personalize care practices, address challenges, and understand when an activity or event should prompt written assessments. To do this, they focus on identifying behavioral and/or physical changes in animals. Examples include, pacing, appearing to be agitated, hiding, odd behavior, changes in fecal output, or other indicators of changing welfare.

If changes are noted, staff should discuss the scenario with their supervisor, modify the activity or event when possible, and conduct written welfare assessments to track how the animal is responding until they return to their baseline behavior, or a new baseline is agreed upon by the area curator (e.g., locomotion changes in relation to loss of limb).



Smithsonian

National Zoological Park

Conservation Biology Institute



Smithsonian
National Zoological Park
Conservation Biology Institute

Animal Welfare Assessments

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 (AZA Animal Welfare Committee). In the pursuit of elevating welfare, animal care staff assess collection animals in multiple ways. Our processes are both proactive and reactive and include staff knowledgeable in assessing quality of life for animals. We focus on three methods: welfare assessments, daily reports, and welfare inspections.

Assessing Welfare Everyday

Every interaction with an animal is an opportunity to assess animal welfare. Curators and their teams assess their animals daily to personalize care practices and proactively address challenges. Initial observations focus on how the animal is presenting behaviorally and physically and transition into action appropriate for the scenario (e.g., direct changes that may alleviate challenges to an animal, group discussions, veterinary consultations, and more).

Each animal care unit is responsible for completing daily reports to document observations of each

Significant Life Events (SLEs)

- SLEs must be accounted for
- Examples: [AZA Accreditation Resource Center](#)
- Institution decides what SLEs means for them
 - Clarify guidelines (what happens when)
 - Be consistent across teams



Linh Mai (born 2/2/26)

ASSOCIATION
OF ZOOS &
AQUARIUMS



Quarantine

Stephanie Norton

AZA | Learn

AZA Standards

The institution must have a process for assessing animal wellbeing via welfare assessments.

The process must also include a mechanism to identify and evaluate the impacts on animal wellbeing of significant life events or changes in the animal's environment as identified by the individual institution.

All animals must be housed in habitats/environments which are safe for the animals and promote their physical, social, and psychological wellbeing.

Areas of Focus

- Space use - maximize what you have
- Social needs
- Choice and decision making
- Physical and psychological needs - enrichment, training, and more
- Frequency of key behaviors
 - What do you want to see? How often?
 - What do you **not** want to see?



What to do with the results

- Which indicators will be flagged as major concern?
 - How are they reported?
- How will concerns be addressed if they come up?
- Can you compare to historical data from outgoing facility for reference?



Not one size fits all

- Regular welfare/wellbeing assessments
- Focal assessments
- Quarantine experience assessments

Do what works, and be consistent.

But don't be afraid to adapt as you go!

Its okay to take a smaller bite!



Helpful Tool from BSAG

- Quarantine Behavior-Based Husbandry Planning Tool
- Document Purpose: This document is intended to be used as a guide to facilitate communication, planning, and implementation of behavior-based husbandry for animals while in a quarantine setting.

What We're Working On	
ANIMAL TRAINING	▼
ENRICHMENT	▼
BEHAVIOR-BASED HUSBANDRY	▲
Increase understanding in the field of how to use animal natural behaviors to guide husbandry programs and improve animal welfare.	
• Quarantine Behavior-Based Husbandry Planning Tool	
BEHAVIOR RESEARCH	▼
COMMUNICATION	▼
CULTURE	▼

<https://www.aza.org/behavior-scientific-advisory-group>

Quarantine Behavior-Based Husbandry Planning Tool

Arrival Preparation

- Staff experience and facility requirements
- Length of quarantine planning
- Behavior concerns
- Social considerations
- Additional considerations based on history or life stage
- Behavioral goals in quarantine
- Enrichment considerations
- Training considerations
- Dietary/nutrition considerations

Beginning of Quarantine Period

- Welfare and quality of life monitoring
- Training plan
- Behavior goals

End of Quarantine Period

- Training plan
- Extension of quarantine

Post Quarantine Period

- Unanticipated behavioral or medical events
- Post quarantine – wrap up

<https://www.aza.org/behavior-scientific-advisory-group>



Quality of Life

Katie Hall PhD

AZA | Learn

Triggers

- to monitor chronic cases and update medical management, to sustain high quality of life

Quality of Life Assessment

- Indicators jointly developed between Health, Care, and Behavior staff
- Assessments done at intervals determined by Health staff, depending on severity of case (eg weekly, monthly, quarterly)
- Assessments completed by Care and Health staff
- Weekly opportunity to review at Health rounds
- All indicators anchored at 0= worst, 5= best/no concerns present
- Excel formulas calculate score as (raw score) / (total available points based on number of questions answered)

My soapbox

- Treat zeros and blanks the same!
- Subtract from a total number of points available, don't add up
- If anchored with 0 as best, the consequences are:
 - if a question is irrelevant/left blank, it is treated the same as "best", points in the total are not affected
- If anchored with 5 as best, the consequences are:
 - if a question is left blank *and then a problem arises* and it is scored, eg 3 / 5, the final score *improves* despite the new problem



Rubric

- 51-79% Quality of Life is significantly compromised. New husbandry/treatment recommended/continued.
- 41-50% Quality of Life is severely compromised. Prognosis doubtful. Euthanasia should be considered if more aggressive treatment options are not available/feasible.
- 1-49% Quality of Life is poor. Euthanasia should be seriously considered.
- *These are meant to be guidelines to inform conversations around objective evidence.*

Husbandry Medical

- Body condition assessment
- Muscle atrophy/ Wasting
- Mobility
- Evidence of pain/discomfort on WORST day
- Evidence of pain/discomfort on BEST day
- Limb lameness
- Fecal consistency
- Appetite
- Difficulty eating
- Exercise intolerance
- Treatment compliance

Species specific

- Vomiting
- Colic episodes
- Ability to fly
- Ability to swim
- Regurgitation
- Molting abnormality
- Shedding abnormality
- Change in hierarchy
- Limiting social interactions

Social/Psychological welfare

- Grooming behavior
- Self-injurious behavior
- Use of environment/ Access to indoor/outdoor
- Managing accommodations (input)
- Aggression target
- Human interactions/training
- Engagement with enrichment
- General attitude/demeanor/engagement

Clinical problems

- Anemia
- Hepatopathy
- Nephropathy
- Reproductive abnormality
- Endocrinopathy
- Cardiac disease
- Glaucoma/Ophthalmic disease
- Pulmonary disease
- Neoplasia
- Gastrointestinal
- Musculoskeletal
- Treatment efficacy
- Veterinary prognosis

Example: Evidence of Pain on best/worst day

- 5 = No pain perceived, no concerns present
- 4 = Slightly unsettled/restless, less interested/easily distracted
- 3 = Appears uncomfortable during rest, not eager to interact with surroundings/people/conspecifics
- 2 = Appears unsettled. Biting, licking, chewing. Guarded gait/stance. Unlikely to move if left alone
- 1 = Unlikely to move voluntarily, reacts aggressively to prompts to move and/or will not move when prompted. Uninterested in surroundings/people/conspecifics
- 0 = Difficult to distract from pain, potentially unresponsive to surroundings

Raw Score	123	52	137	140	158	166	118	0	0
Number of Questions Answered	26	13	37	37	37	37	24	0	0
QOL Percent	95%	80%	74%	76%	85%	90%	98%	#DIV/0!	#DIV/0!
Entered into ZIMS, with Plan in the Notes?									
Blackout the column before next meeting									
Plan									
Medications	gabapentin,	gabapentin/r	Not taking Bl	Gabapentin d	Gabapenti	gabapentin and meloxicam			
Adjunctive Treatment	none	historically non responsive to tramadol				n/a			
Additional Diagnostics	none at this t	none at this t	none at this t	no	no	none			
Enclosure Modifications	none at this t	recommend heat lamp if g	consider mov	moved to	doing better being out of	below freezing temps			
Enrichment	none at this t	none at this time		none at this t	none at th	none			
Next Evaluation Date	1/22/2024	22-Dec	12/31/2024	1/7/2028	1/7/2028	#####			
Specific concerns to trigger immediate QOL re-evaluation	foot lesions,	wing droop,	wing droop,	wing droop,	wing droo	wing droop, holding up leg, holding wing abnormrally ,			



Individualized

Kendle Enter

AZA | Learn

Individualized Specific Assessments

Tailored evaluations provide:

Deeper insights

Informed decisions

Actionable assessments



Questionnaire Type

- What do we want to look at for this animal?
 - Appetite
 - Body condition
 - Scale/Skin condition
 - Shedding/Molt
 - Engagement/Activity
 - Environment
- Adjust questions.



Snake Assessments

South Carolina Aquarium

Eastern Indigo Snake - Exhibit/Ambassador

Welfare Assessment

Date: _____ Time: _____ Snake ID: _____

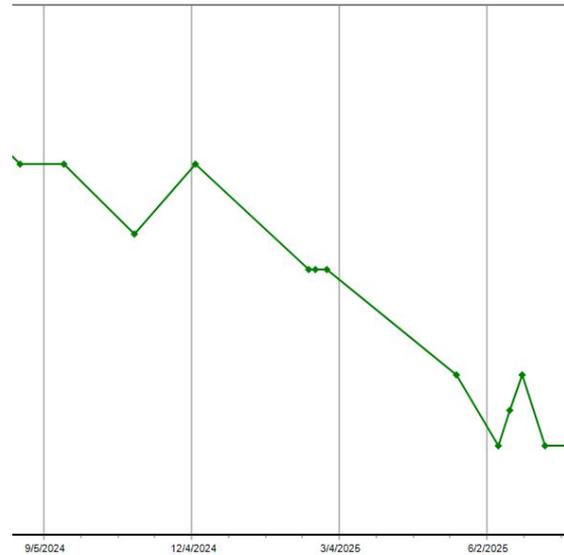
Assessor Name: _____

Please put a rating for each category (by the =) using a scale of -1, 0, 1. With 1 = great and -1 = awful.

<u>Appetite =</u>	Yes	No	N/A	Notes
Is the snake eating regularly and accepting appropriate prey without signs of distress?				
Are there any behaviors during feeding that suggest stress or discomfort, such as striking at the prey but not eating it, or retreating from the prey?				
Is the snake acting ravenous at feeding times?				
<u>Body Condition =</u>	Yes	No	N/A	Notes
Is the snake's body in good condition, with no signs of emaciation or obesity?				
Does the snake have a healthy muscle tone and show no signs of weakness or difficulty moving?				
Are there any lumps, swelling, or unusual masses along the body?				
<u>Scale/Skin Condition =</u>	Yes	No	N/A	Notes

How does the snake react to being handled? Does it seem calm, or does it exhibit stress responses, such as flinching, defensive postures, or musking?				
How is the snake reacting to someone coming up to the enclosure or opening the door to the enclosure? Staying relaxed, posturing, moving away or towards the door? Explain.				
<u>Normal Behavior Exhibited =</u>				
Is the animal exhibiting normal behaviors? Explain.	Yes	No	N/A	Notes
Is the animal showing normal activity levels? If not, explain.				
Have there been any undesirable behaviors occurring? If yes, explain.				
<u>Environment =</u>	Yes	No	N/A	Notes
Does the animal use its space appropriately?				
Is the animal in appropriate parameters in its environment? Temperature, lighting, ect.				
Does the animal have the ability to exhibit choice and control in a variety of situations?				

Other Option



30 Day Form



South Carolina Aquarium

Species: Eastern Newt - *Notopthalmus viridescens* Situation: Checking up on
 House Id: Biggie (600415) Age: Unknown
 Start Date: 2/9/2026 Acquired: 11/11/2016
 Current Medical Issues: n/a

Current Treatments: n/a

Scoring = 1, 0, -1 See species guide for clarification of scoring for each in

Date	Appetite	Movement	Hunting	Water
2/9/2026				
2/10/2026				
2/11/2026				
2/12/2026				
2/13/2026				
2/14/2026				
2/15/2026				
2/16/2026				
2/17/2026				
2/18/2026				
2/19/2026				
2/20/2026				
2/21/2026				
2/22/2026				
2/23/2026				
2/24/2026				
2/25/2026				
2/26/2026				
2/27/2026				
2/28/2026				
3/1/2026				
3/2/2026				
3/3/2026				
3/4/2026				
3/5/2026				
3/6/2026				
3/7/2026				
3/8/2026				
3/9/2026				
3/10/2026				
3/11/2026				
Total				

Species Welfare Guide

Species: Eastern Newt (*Notopthalmus viridescens*)

House IDs: Biggie

This guide outlines key welfare indicators to assist in individual assessments and monitoring. Each indicator is scored using a 3-point scale. Use observational and behavior trends to inform scoring and note any changes over time.

Scoring System

- 1 = Normal (No concerns observed)
- 0 = Mild concern (Behavior is altered but not absent)
- 1 = Significant concern (Expected behavior is absent or abnormal)

Appetite

Consistent appetite is a primary indicator of general health and wellbeing. Changes in behavior can be early signs of illness, stress, poor husbandry, or environmental issues that is not eating may be experiencing discomfort or metabolic disruption.

Is the animal eating normally? A normal amount of food?

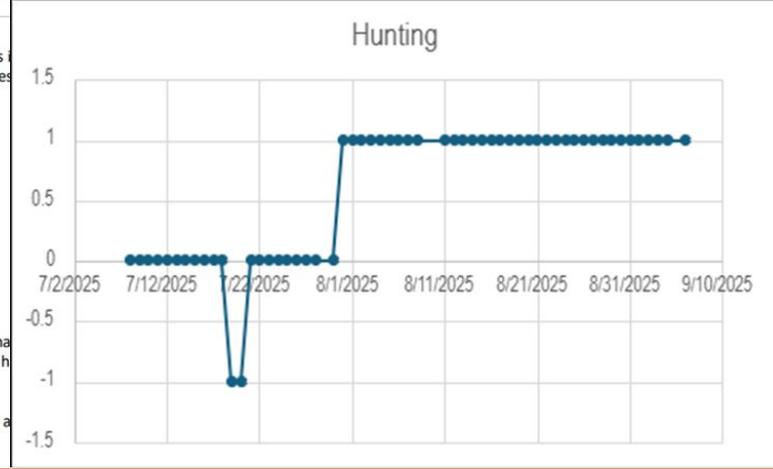
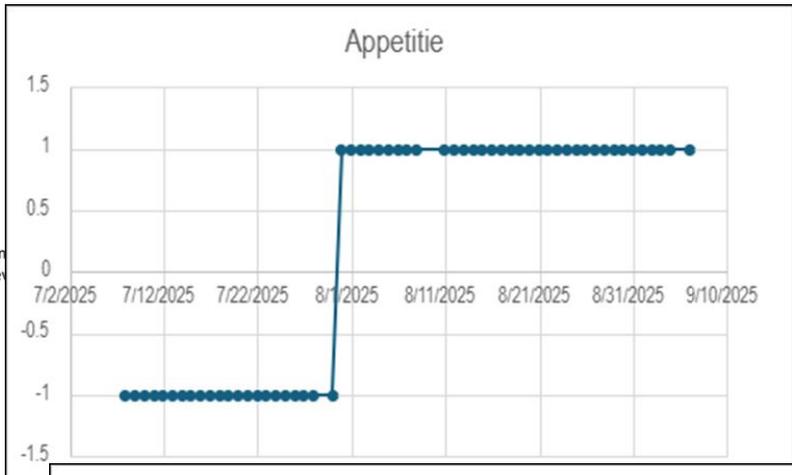
- 1 = Ate offered food; behavior aligns with normal feeding habits.
- 0 = Inconsistent eating; may have ate some food but not reliably or fully.
- 1 = No observable eating.

Movement & Locomotion

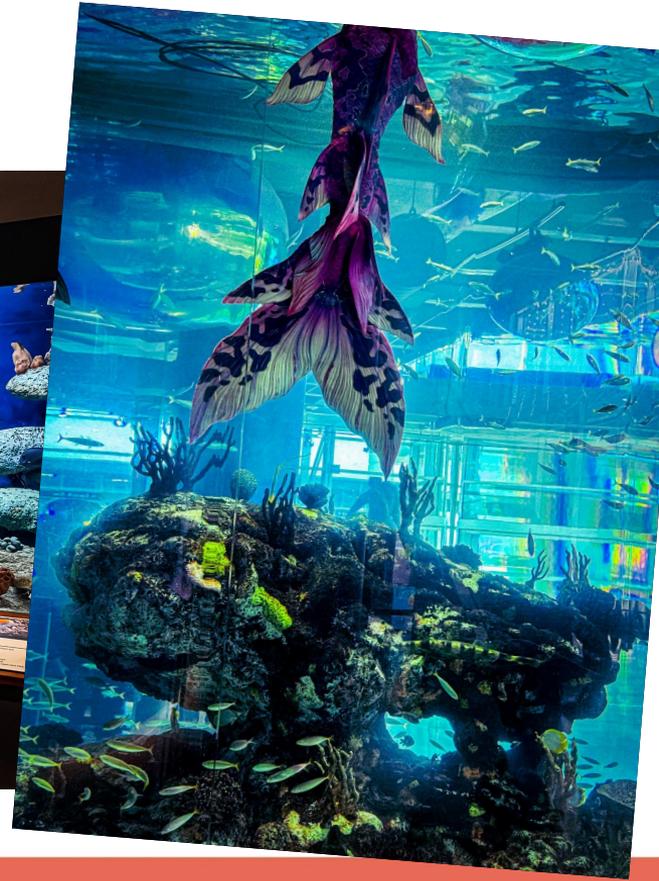
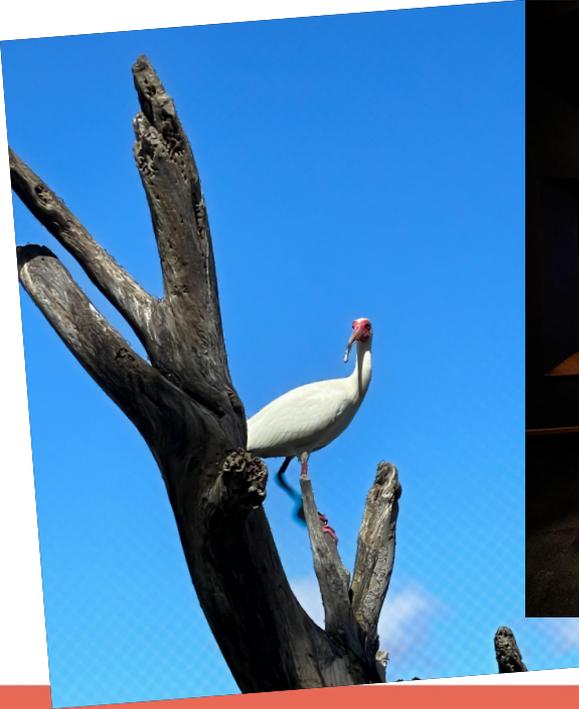
Movement reflects both physical health and environmental suitability. Limping, lethargy of movement may signal injury, illness, poor temperature regulation, or unsuitable housing features (e.g., too dry, slippery surfaces).

Is the animal moving in a way that's typical for the species? Moving normal for this animal?

- 1 = Moves normally, climbs appropriately, responds to stimuli.



Adapted to Others



Adapted to Others

South Carolina Aquarium						
Species: Rocky Reef Exhibit - multiple species	Situation: Construction happening near by.					
House Id: Rocky Reef						
Start Date: 1/7/2026						
Current Medical Issues:						
Current Treatments:						
Scoring = 1, 0, -1 See taxa guide for clarification of scoring for each indicator						
Date	Appetite	Body Cond.	Gilling	Activity	Social	Notes

South Carolina Aquarium	
Species: Carolina Seas Exhibit - multiple spcs.	Situation: Mermaids in tank - 2/28-3/1. And then Buffing of the acrylics the nights of 3/1 - 3/5.
House Id: Carolina Seas	
Current Medical Issues: N/A	
Current Treatments: N/A	

Appetite & Feeding

Are the fish eating with interest in food and

Respiration Rate & Gill Appearance

Is respiration normal? Do the gills appear healthy and free from discoloration or damage?

1 = Actively approach amount for the species
0 = Mild changes in intake, but the fish
-1 = Refuses food, displays abnormal

1 = Normal, steady breathing with smooth opercular movement; gills appear healthy and evenly colored.
0 = Slightly largely nor
-1 = Rapid darkened,

Scoring System

1 = Normal (No concerns observed for all of the animals in the group)
0 = Mild concern (Behavior is altered but not absent in just a few animals of the group)
-1 = Significant concern (Expected behavior is absent or abnormal in many animals of the group)

Indicator	
Notes	Initials

Total									
-------	--	--	--	--	--	--	--	--	--

Assessment Development

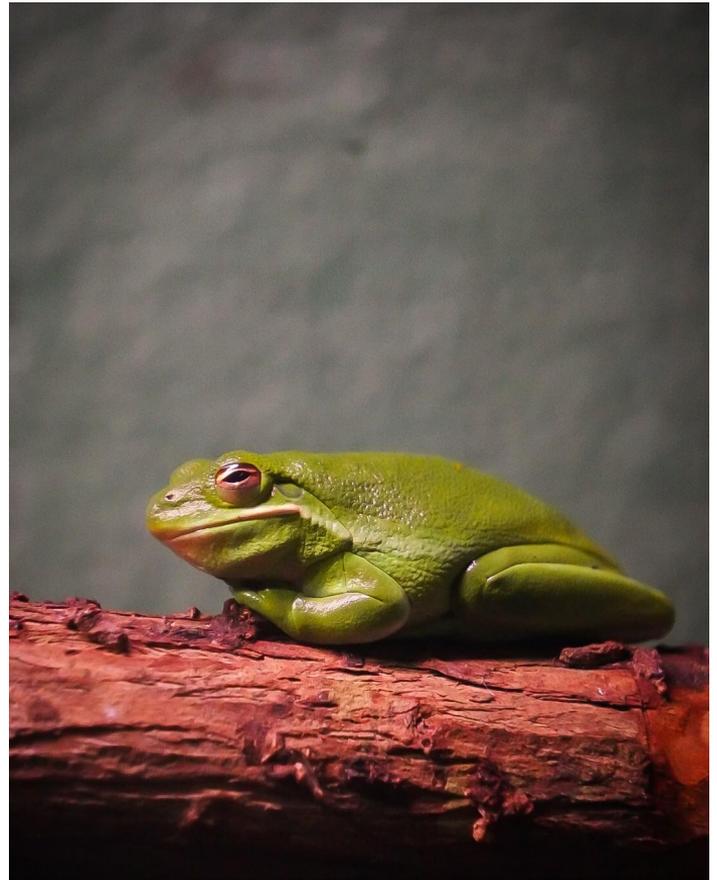
Start with the Purpose of the Assessment

Work back from what you know

Keep Efficient

Keep Valuable

Stay Flexible - adjust when needed





Environmental Assessment

Mike O'Neill

AZA | Learn

Environmental Assessments Circumstances

- Environmental assessments are conducted annually at minimum, and more frequently based on any significant enclosure changes
- Environmental Assessments at NEAq are comprised of inputs (vs. the outputs assessed in animal welfare)

Environmental Basic Assessment

Ambient noise levels

Basking sites

Complexity (features, furnishings, habitat, etc.)

Containment (barriers, doors, gates, latches, etc.)

Enclosure cleanliness

Light intensity and spectrum

Photoperiod

Shelter/hiding locations

Space

Temperature

Variability in food type/presentation

Water quality

Enrichment

Basic Environmental Assessments

- 13 indicators describing conditions and features of the target enclosure with rating values from -1 (unacceptable) to 1 (optimal)
- Example of a basic assessment along with notes of justification for assessment value

Observation Type	Weight	Assessment	Comment
Ambient noise levels	1.00	1 Optimal	
Basking sites	1.00	NA	
Complexity (features, furnishings, habitat, etc.)	1.00	1 Optimal	
Containment (barriers, doors, gates, latches, etc.)	1.00	1 Optimal	
Enclosure cleanliness	1.00	1 Optimal	
Light intensity and spectrum	1.00	0 Acceptable	no UVA/UVB options
Photoperiod	1.00	-0.5 Marginal	no seasonality and longer photoperiod than recommended
Shelter/hiding locations	1.00	1 Optimal	
Space	1.00	1 Optimal	
Temperature	1.00	1 Optimal	lower end of spectrum
Variability in food type/presentation	1.00	1 Optimal	
Water quality	1.00	0.5 Good	consistently high nitrates
Enrichment	1.00	1 Optimal	

Score: 0.75

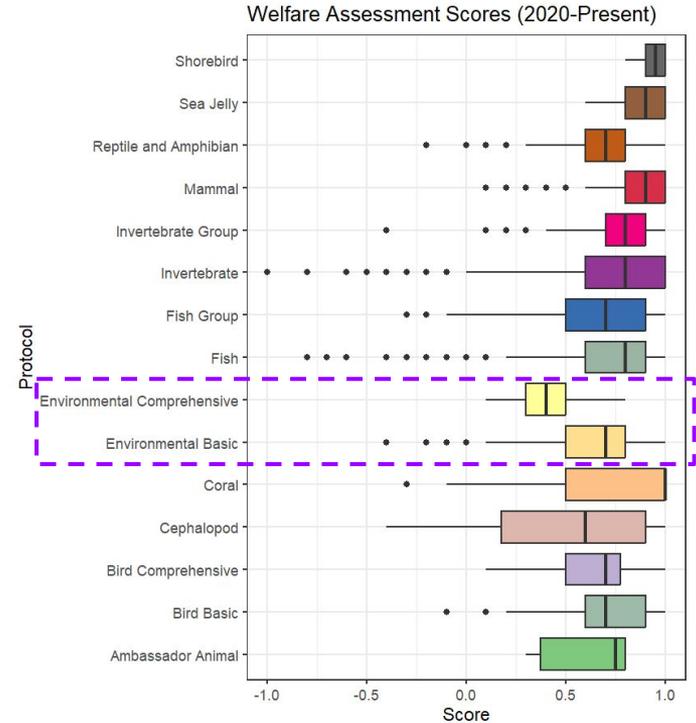
Comprehensive Environmental Assessments

- Comprehensive assessments are available for more detailed evaluation of target enclosures
- In addition to the 13 indicators of the basic assessment, comprehensive assessments have 19 additional indicators
 - Comprehensive adds:
 - Ability to avoid/interact with con/allospecifics
 - Access to drinking water
 - Enclosure maintenance
 - Guest proximity/viewing
 - Humidity
 - Illumination (re visibility & monitoring)
 - Influence of adjacent animals
 - Landscape
 - Opportunities for natural locomotion
 - Opportunities for swimming, bathing, wading
 - Pest control
 - Shade
 - Social Structure
 - Substrates/surfaces
 - Ventilation
 - Temperature (Air, Water, AZA recommendation, native range)
 - Air Quality
 - Foreign Objects
 - Reproductive environment

Comparing Assessment Values Across Types

How Environmental Assessments stack up against other protocols?

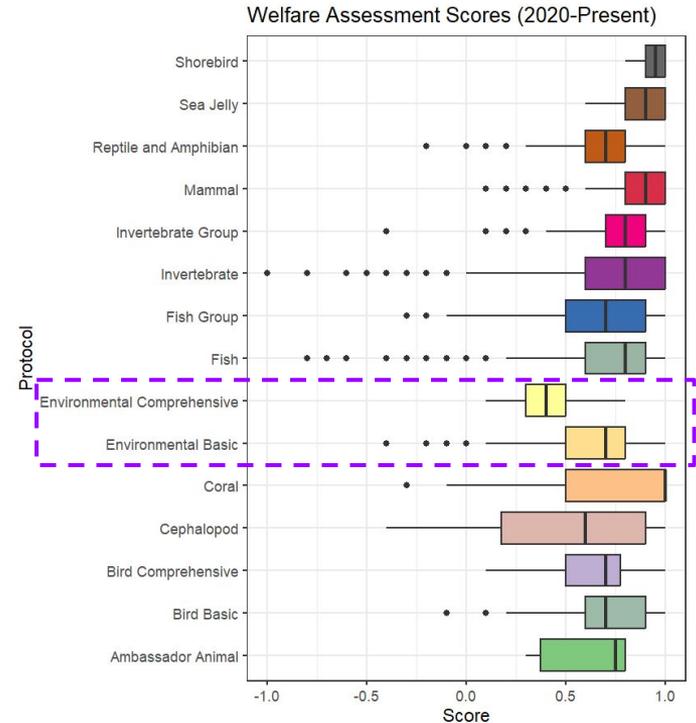
- Comprehensive Environmental Assessments tend to have the lowest score distribution of all protocol types
 - Situational use - conducted when significant event triggers evaluation
 - Input vs. output evaluations - easier to critique inputs?



Future Pursuits

How Environmental Assessments stack up against other protocols?

- Consider diversification of EAs based on enclosure types as we have done with taxonomic groups for WAs
- Formalize triggering event criteria for comprehensive assessment
- Weighting of score formula
- Explore input vs. output evaluation and observer bias





Data Driven Decisions

Kimberly Leser

AZA | Learn

Month	Date	Obs Time	Initials	Behavioral Goal	Behavioral Category	Measurement Goal	Parameters	Enrichment Item/ Strategy	Rating	Comments
January	1	1-5	MY	Food-locating/obtaining	Resource Acquisition	Duration	6-10 min	PM broadcast	5	Betty plus cownose really enjoyed
January	2									
January	3	0	KT	Self-care	Self-Maintenance	Frequency		Mussels with lunch	2	Indirect - all mussels broken up after lunch
January	3	0	KT	Food-locating/obtaining	Resource Acquisition	Frequency		Mussels with lunch	2	Indirect - all mussels broken up after lunch
January	4									
January	5	6-10	MY	Locomotion	Environmental Change	Duration	15-20 min	Moved Shark hide to opposite end of pool Painting: 1 canvas. Maggie engaged 2x well, Stella engaged 2x very well, otherwise not much engagement.	5	0.1 888 Swan was active for nearly 20 mins after moving shark hide. WSB Di and all Stringrays seemed unphased by environmental change. Painting lasted less than 10mins, only 2 animals engaged with. Overall gen pop avoided well.
January	6	6-10	KT/MY	Food-locating/obtaining	Resource Acquisition	Duration	6-10 min			
January	7									
January	8									
January	9									
January	10									
January	11									
January	12									
January	13									
January	14									
January	15									

16

What is the visibility status of the **species of giraffe**?

Visible = Front half of the animal, including the head, can be seen. Do not try to guess if a guest could see it or not.

Obstructed = Some part of the animal can be seen, but the front half and head of the animal cannot be seen.

Not Visible = No part of the animal can be seen.






Giraffe
Indoor Exhibit
Savannah Middle/Upper
Savannah Lower

Visible

Obstructed View

Not Visible

17

What is the visibility status of **ostrich species in the savannah**?

Visible = Front half of the animal, including the head, can be seen. Do not try to guess if a guest could see it or not.

Obstructed = Some part of the animal can be seen, but the front half and head of the animal cannot be seen.

Not Visible = No part of the animal can be seen.



Visible

Obstructed View

Not Visible

Event Animal Wellbeing Monitoring Survey



Use the QR code above to report any animal wellbeing concerns related to Events and Experiences outside of normal operation hours

Questions
Responses 1

OKC Zoo Animal Wellbeing Assessment Form

🔍

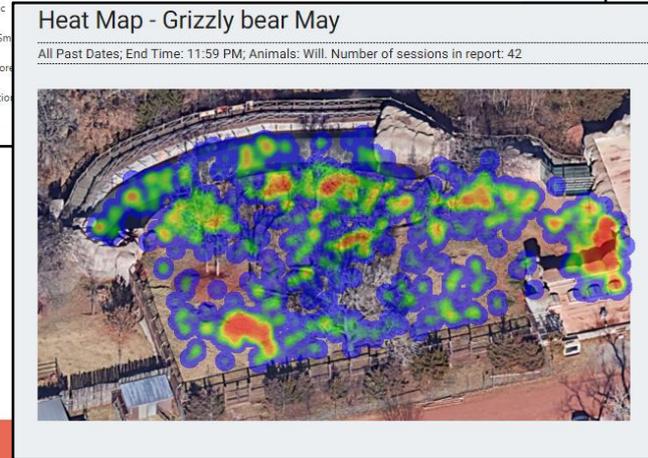
This form is used to assess the wellbeing of the taxa under our care. Assessments are completed annually and may also be event driven or requested.

Date of assessment *

Please input date (M/d/yyyy)

Animal Team *

- Aquatic
- Birds/Small Mammals
- Carnivores
- Education
- Herps



So much data!!!

Welcome to the Animal Wellbeing Analytic Dashboard!

This dashboard offers a clear and interactive overview of **essential information, metrics, and data insights** focused on **animal wellbeing** at the **OKC Zoo**. Drawing from completed **animal wellbeing assessments** and **discussion forms**, it is tailored specifically for **OKC Zoo staff**. The dashboard serves as a vital tool for **monitoring, evaluating, and developing actionable strategies** to enhance the **care and wellbeing** of our animals. We encourage all staff to actively engage with this **resource** to make **informed decisions**, identify **areas for improvement**, and collaborate in upholding the **highest standards** of **animal wellbeing**.

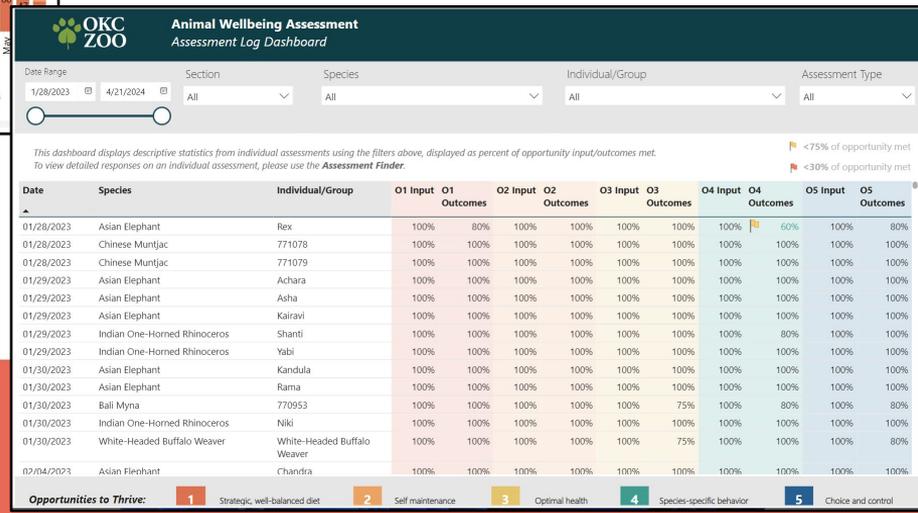
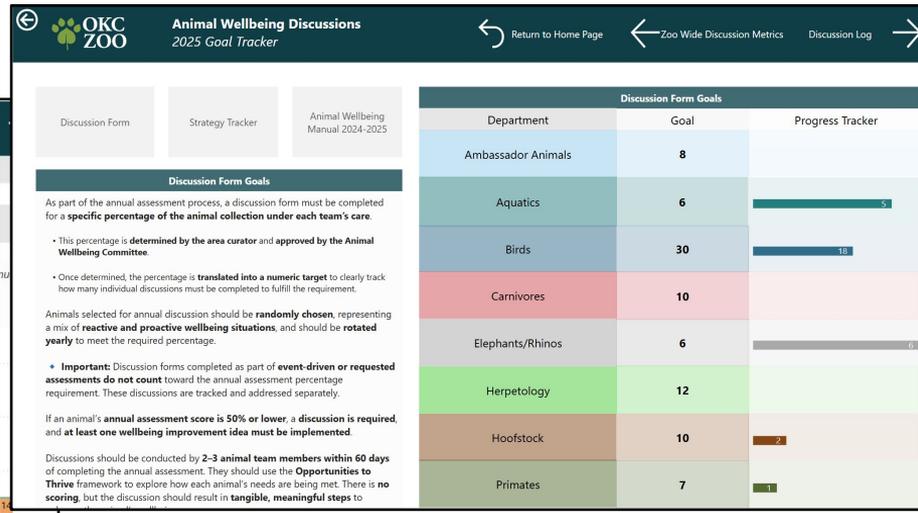
Animal Wellbeing Analytic Dashboard Page Navigator

Introduction to Assessments	Assessment Questions	Assessment FAQ
Zoo Wide Assessment Metrics	Assessment Log	Assessment Finder
Assessment Analytics	Assessment Comparison	Intro to Discussions
Zoo Wide Discussion Metrics	Department Discussion Goal Tracker	Discussion Log
Discussion Finder	Animal Wellbeing Strategy Tracker Metrics	Animal Wellbeing Strategy Tracker Log

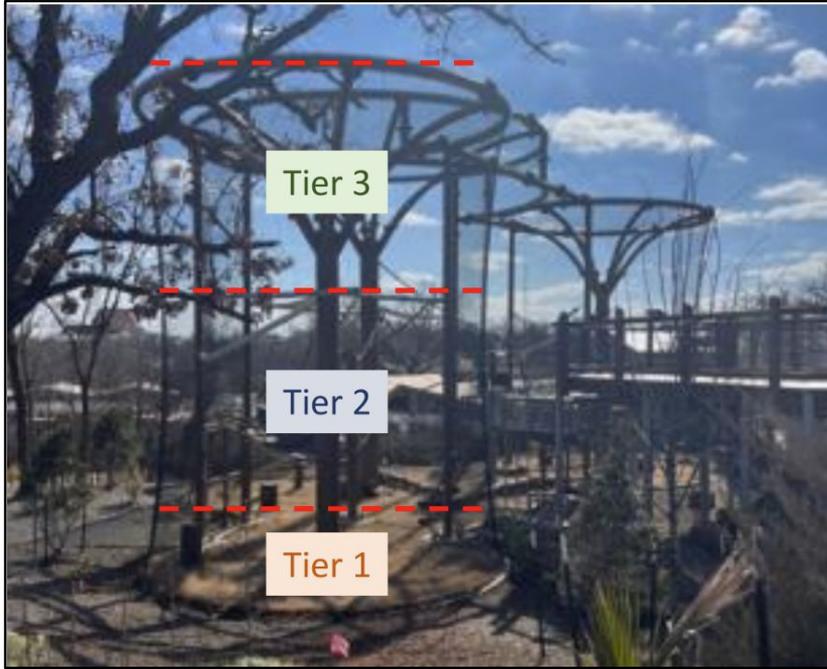
Additional Resources

Assessment Form	Discussion Form	Animal Wellbeing Strategy Tracker	Animal Wellbeing Committee SharePoint
Animal Wellbeing Program Manual	Animal Welfare and Whistleblower Policy		

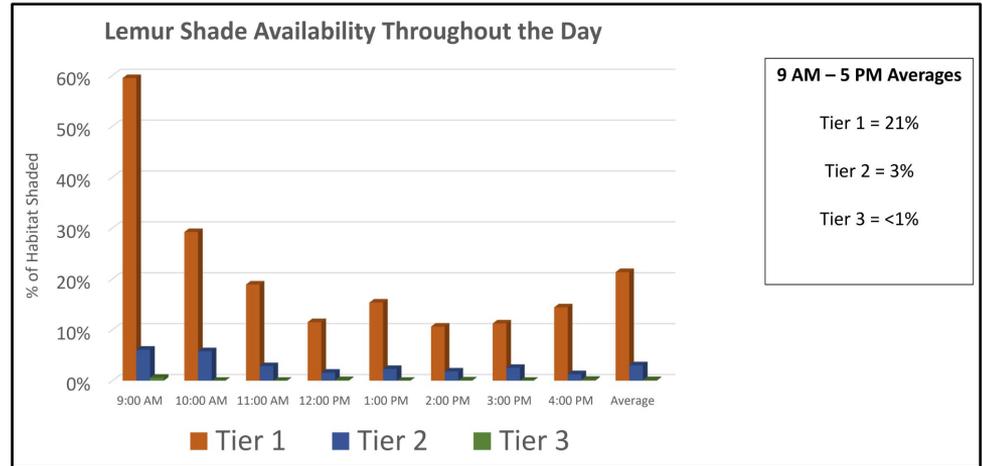
Data is only usable if it is viewable!



Dashboards allow data to be tracked and evaluated in multiple ways as well as greater accessibility to all staff



Study was launched to evaluate shade and access

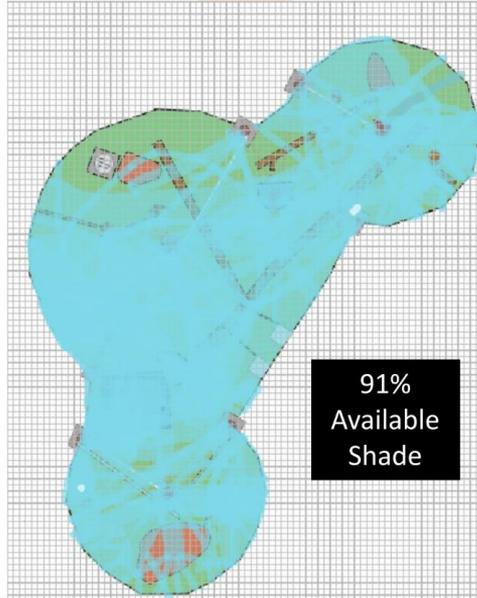


Results

9 AM – 5 PM

 = Available Shade

Tier 1



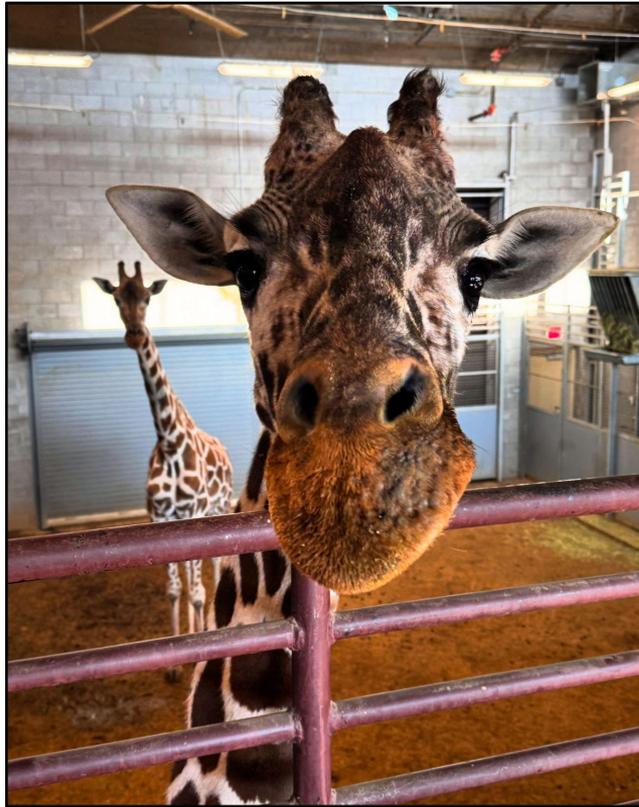
Tier 2



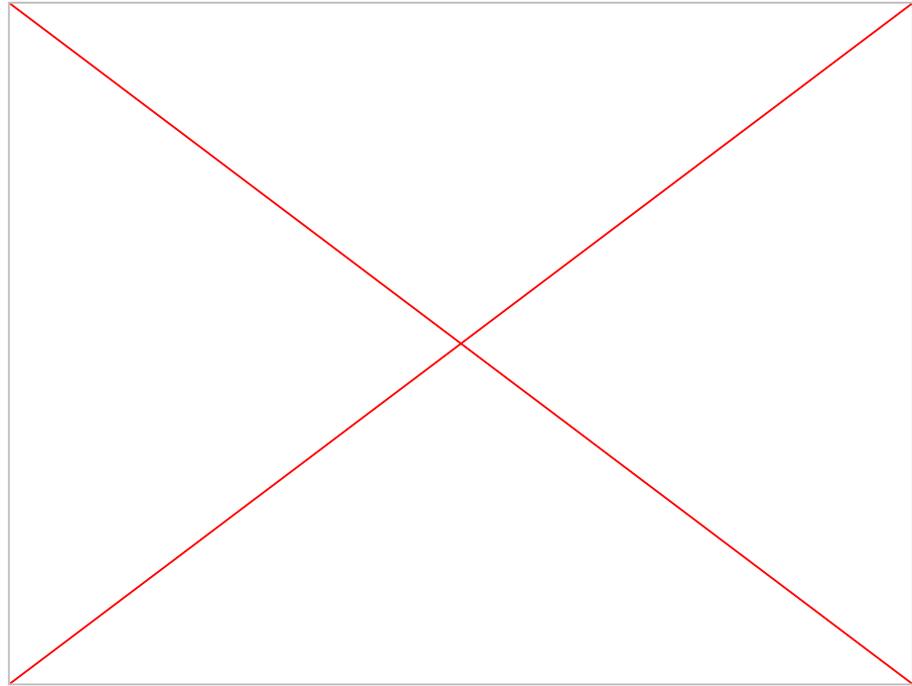
Tier 3







Case study #2: Solstice



Holistic Animal Management

Solstice Pain Management Dashboard

Return to Previous Page

Introduction Overview Scoring Rubric Survey Logs Physical Therapy (PT) Medication Impacts

Background

Beginning in July 2025, the Veterinary, Hoofstock, and Behavioral Husbandry teams planned a data collection protocol to compile and structure targeted care information for Solstice. The goal is to gain deeper insights into specific care practices and assess the effectiveness of different treatments and management approaches to support proactive care.

Data Collection

Each day, a Hoofstock care team member will complete a **Microsoft Form** containing a series of questions about Solstice's daily care. Through **Power Automate**, each new submission is automatically added to a **Microsoft Excel** spreadsheet stored on the **Vet & Hoofstock SharePoint site**. The data is then cleaned, transformed, and visualized in this **Power BI** dashboard, which refreshes up to eight times per day due to licensing constraints.

Survey Link

[Solstice Pain Management Survey](#)

Survey Questions

Q1: Date of observation
Q2: Medication she was compliant with taking today
Q3: Was she involved in physical therapy
Q4: Select the physical therapy she was involved in this day?
Q5: Did she get a hoof trim today?
Q6: Which hoof was trimmed?
Q7: Select the am shift compliance score
Q8: Select the score that matches the intensity of abnormal licking during am shift compliance
Q9: Estimated delay in am shifting from breaking fixation on abnormal licking
Q10: Is she showing uniform weight distribution on legs?
Q11: Which foot is bearing less weight?
Q12: Briefly describe her weight bearing
Q13: Was she observed leaning on the feed pole/other structure for support?
Q14: Select the score that matches her mobility/gait
Q15: Additional comments on mobility/gait
Q16: If you took any photos or videos of her posture or mobility/gait. You can upload them here/
Q17: Any additional comments on observations on Solstice for this day?

Solstice Pain Management Dashboard

Return to Previous Page

Introduction Overview Scoring Rubric Survey Logs Physical Therapy (PT) Medication Impacts

Date: All | Physical Therapy?: All | Medications: All | Hoof Trim?: All | Delay in Shifting: All | Leaning on Feeder?: All

Survey Logs

Assessor	Date	Medication compliance	Physical Therapy Compliance	PT Type	Hoof trim?	Which hoof trimmed?	AM shift compliance score	AM shift abnormal licking intensity score	Delay in AM shifting from licking (minutes)	Uniform distribution
KCraven@okczoo.org	8/30/2025	Gabapentin,Phenylbutazone, Consequin	Without PT		No		4	3	5-15	Yes
KCraven@okczoo.org	8/31/2025	Gabapentin,Phenylbutazone, Consequin	Without PT		No		2	1	15+	Yes
JQuinnett@okczoo.org	9/1/2025	Gabapentin,Phenylbutazone, Consequin	Without PT		No		5	5		No

Solstice Pain Management Dashboard

Return to Previous Page

Introduction Overview Scoring Rubric Survey Logs Physical Therapy (PT) Medication Impacts

Date: All | Physical Therapy?: All | Medications: All | Hoof Trim?: All | Delay in Shifting: All | Leaning on Feeder?: All

Shift Compliance

Score Distribution (Shift Compliance)

Low	32	39
Moderate		
High		

% Change in Average Score (Shift Compliance)

7 Days	30 Days	90 Days
-14.29%	22.58%	
High	High	

Shift Licking Intensity

Score Distribution (Shift Licking Intensity)

Low	10	45	21
Moderate			
High			

% Change in Average Score (Shift Licking Intensity)

7 Days	30 Days	90 Days
15.00%	18.75%	
Moderate	Moderate	

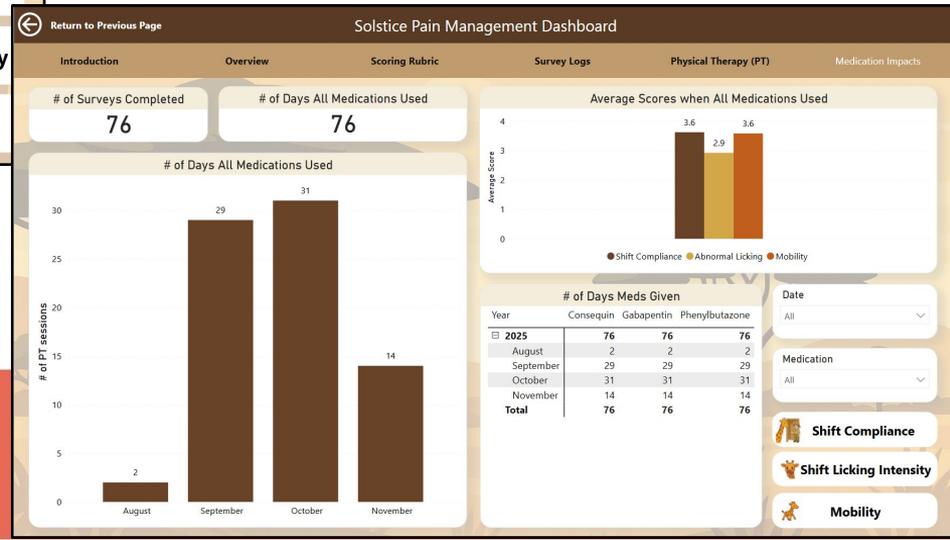
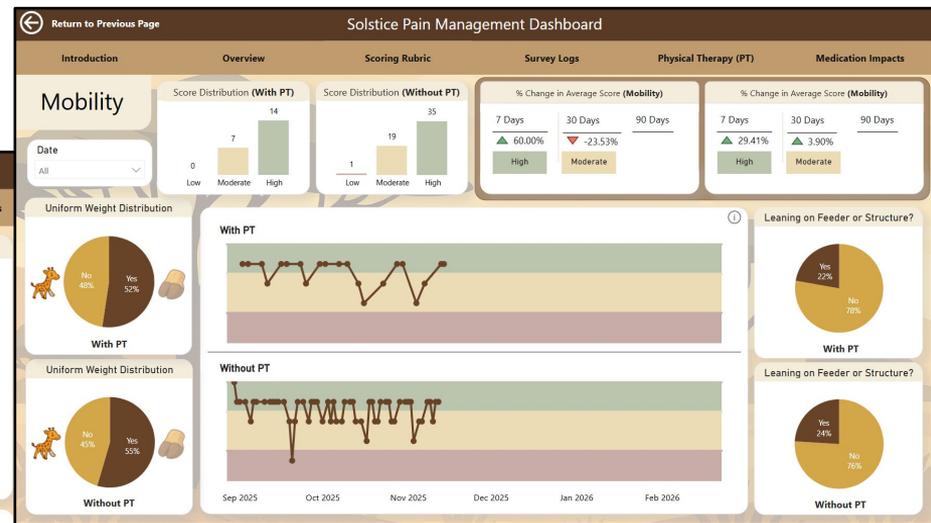
Mobility

Score Distribution (Mobility)

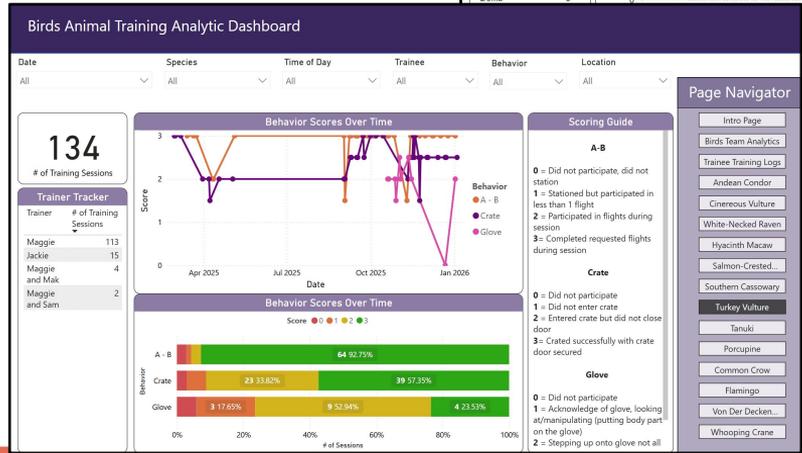
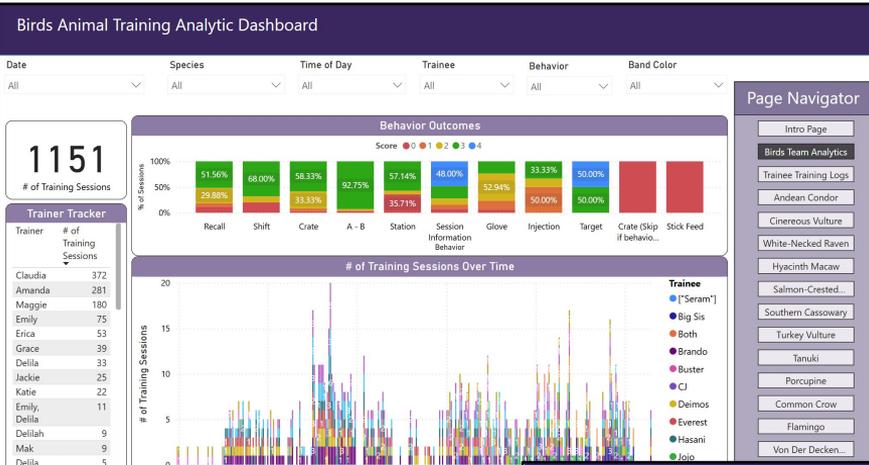
Low	1	26	49
Moderate			
High			

% Change in Average Score (Mobility)

7 Days	30 Days	90 Days
28.57%	-2.83%	
High	Moderate	



Having data all in one place allowed us to track treatments and adjust for maximum effectiveness



Birds Animal Training Analytic Dashboard

Date: All | Species: All | Time of Day: All | Band Color: All | Behavior: All | Location: All

Training Log

Session ID	Trainer	Date	Time of Day	Trainee	Species	Behavior	Score	Reinforcement	Location	Weather	Impact Engagem [®]
19	Amanda	Tuesday, April 01, 2025	9:00 - 10:00 AM	Hasani	White-Necked Raven	Recall	2	Mice	Animal holding door 6		
16	Amanda	Tuesday, April 01, 2025	9:00 - 10:00 AM	Lady	Andean Condor	Recall	0	Rats	Top of habitat		
29	Amanda	Wednesday, April 02, 2025	2:00 - 3:00 PM	Brando	Andean Condor	Recall	3	Rats,Feline	Animal holding		
25	Amanda	Wednesday, April 02, 2025	2:00 - 3:00 PM	Deimos	Cinereous Vulture	Recall	3	Canine,Rats	Middle - Mulch level		
26	Amanda	Wednesday, April 02, 2025	2:00 - 3:00 PM	Everest	Cinereous Vulture	Recall	3	Canine,Rats	Middle - Mulch level		
20	Amanda	Wednesday, April 02, 2025	9:00 - 10:00 AM	Hasani	White-Necked Raven	Recall	1	Mice	Animal holding door 6		
30	Amanda	Thursday, April 03, 2025	2:00 - 3:00 PM	Brando	Andean Condor	Recall	3	Rats,Feline	Animal holding		
27	Amanda	Thursday, April 03, 2025	2:00 - 3:00 PM	Deimos	Cinereous Vulture	Recall	3	Canine,Rats	Middle - Mulch level		
28	Amanda	Thursday, April 03, 2025	2:00 - 3:00 PM	Everest	Cinereous Vulture	Recall	3	Canine,Rats	Middle - Mulch level		

Page Navigator

- Intro Page
- Birds Team Analytics
- Trainee Training Logs
- Andean Condor
- Cinereous Vulture
- White-Necked Raven
- Hyacinth Macaw
- Salmon-Crested...
- Southern Cassowary
- Turkey Vulture
- Tanuki
- Porcupine
- Common Crow
- Flamingo
- Von Der Decken...
- Whooping Crane

Possibilities are endless!





AZA | Learn

**ASSOCIATION
OF ZOOS &
AQUARIUMS**

NEXT STEPS

- Follow up the conversation at Animal Welfare Committee virtual “Office Hours” which are the second Thursday of the month, 1pm EST (ongoing since 2022)
 - The Zoom link is
<https://us06web.zoom.us/j/82093090810?pwd=BVWrYSn29R8yCc5oal0sSSyz1DeR8o.1>
 - Meeting ID: 820 9309 0810
 - Passcode: 855950
- Download the resources on the AZA Learn page (bibliography, links, etc)
- Please join us again on March 11!
 - Exhibit design

AZA | Learn

**ASSOCIATION
OF ZOOS &
AQUARIUMS**



AZA | Learn

**ASSOCIATION
OF ZOOS &
AQUARIUMS**