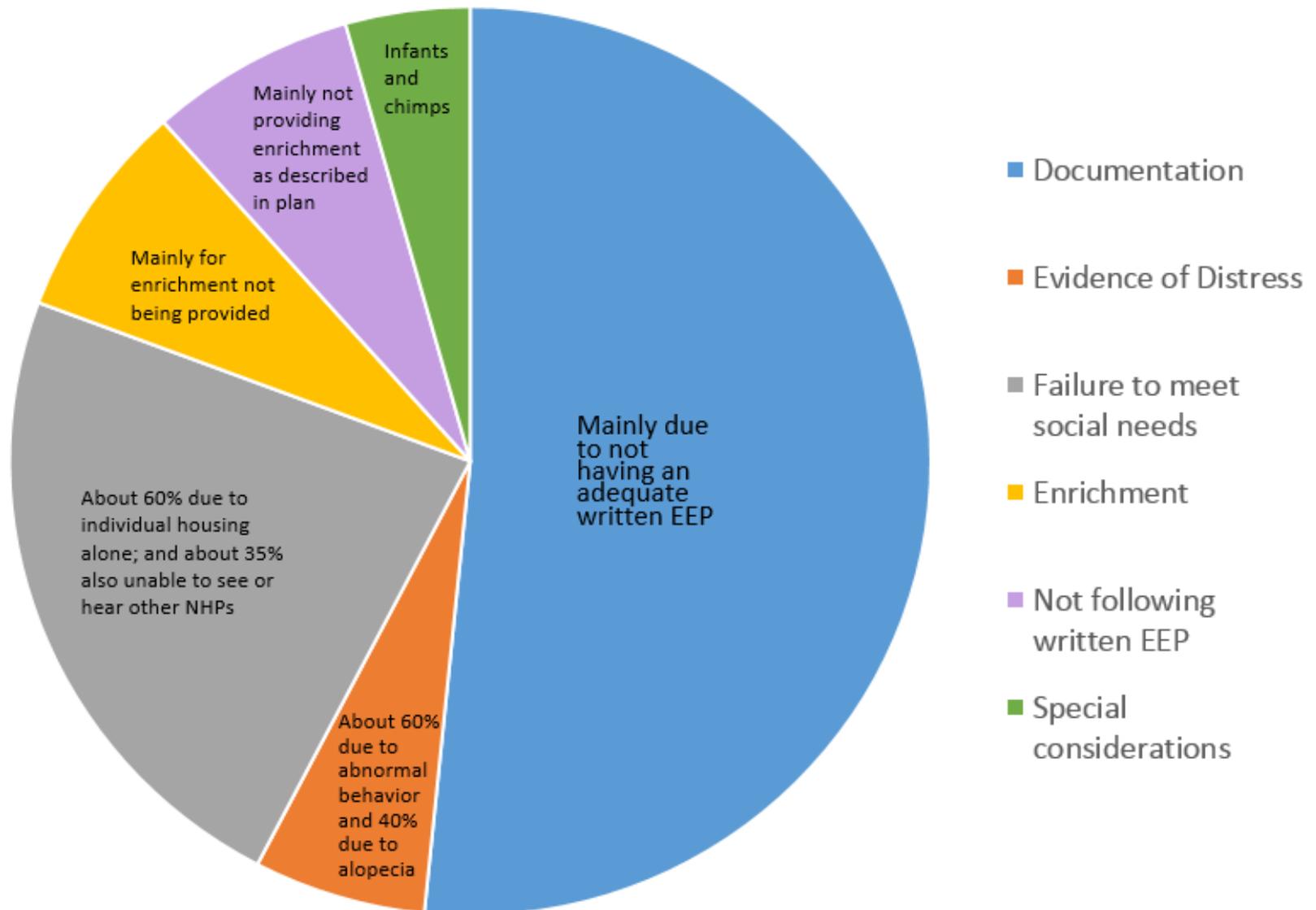


# Developing an Environment Enhancement Plan

**Gwendalyn M. Maginnis, DVM**  
Nonhuman Primate Specialist  
Center for Animal Welfare

### 3.81 Citations for Exhibitors 2007 - 2015 (595 total)

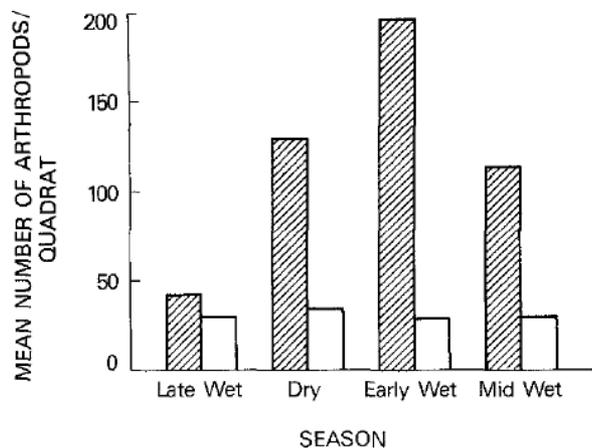


# Regulatory Challenge of 3.81

- Performance Standard
  - Outcome: psychological well-being
- Currently Accepted Professional Standards
  - Professional standards evolve and change over time



# The Science and Art of Psychological Wellbeing



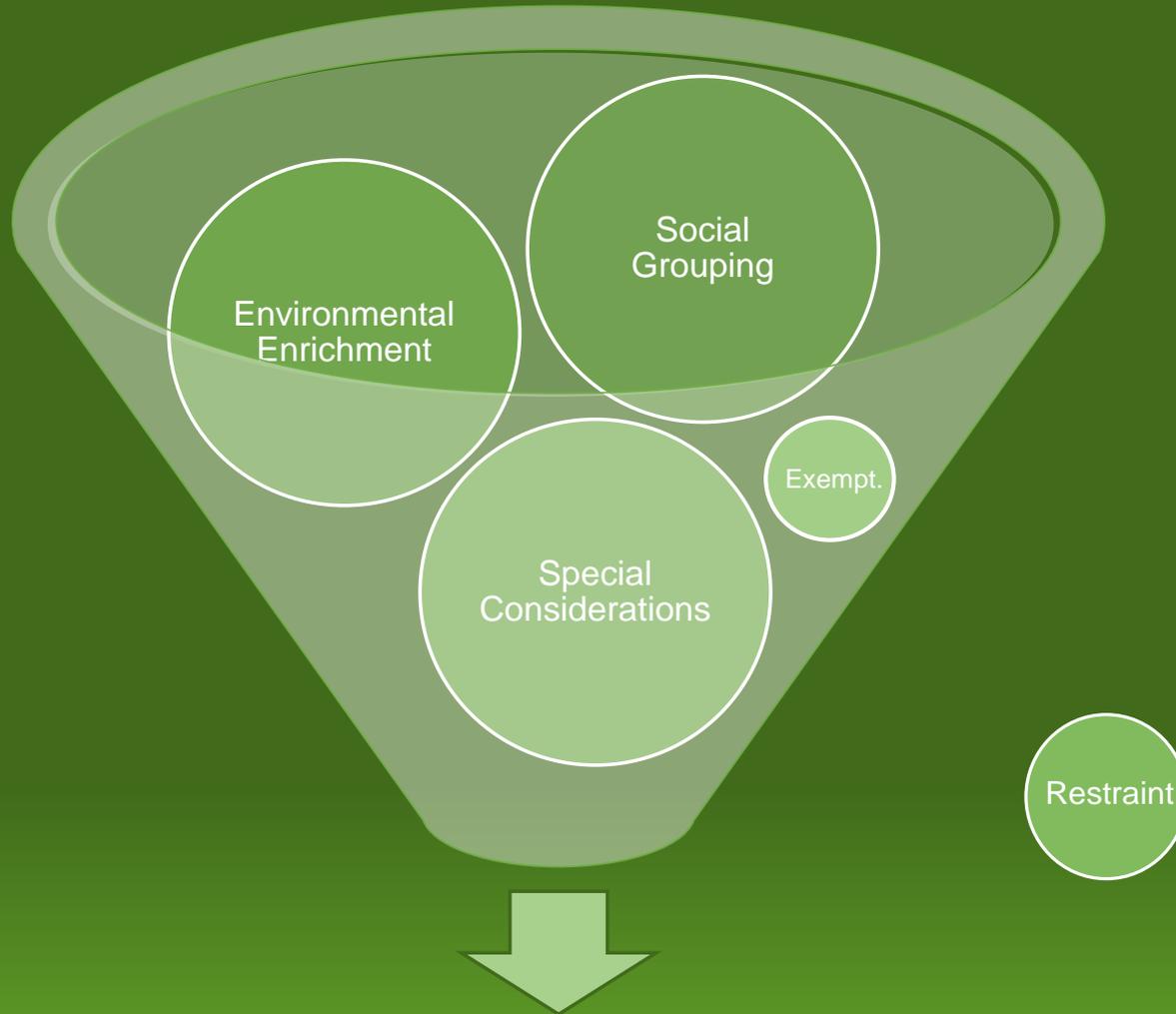
**Fig. 1.** Seasonal abundance of arthropods in sweep (▨) and dead foliage (□) measures in the the sample quadrats



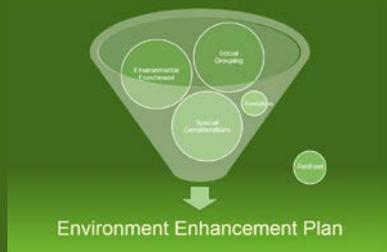
Our primates don't read the scientific papers on how they are supposed to behave

# General Comments in the Regulations

- Must “develop, document, and follow” a plan
  - A written plan
  - Facility is doing what is in the plan
- “in accordance with the currently accepted professional standards”
  - Needs to be up to date
- “and as directed by the attending veterinarian”
  - Documentation, veterinary sign-off



# Environment Enhancement Plan



# Social Grouping

- “plan must include specific provisions to address the social needs of nonhuman primates of species known to exist in social groups in nature”

# Social Housing with Conspecifics



# Social Housing with Other Primate Species

- “Nonhuman primates may not be housed with other species of primates or animals unless they are compatible, do not prevent access to food, water, or shelter by individual animals and are not known to be hazardous to the health and well-being of each other.”

# Social Housing with Other Animals

- Nonhuman primates can also experience companionship with many different non-primate species
  - Some facilities are successfully cohousing primates and rabbits
    - BE AWARE: Regs prohibit their housing with other species unless it is for scientific purposes
    - A variance can be requested

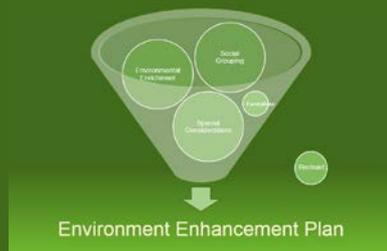
# Positive Human Interaction



- Should aspects of their occupation be considered environment enhancement?

# Be Prepared

- What is your plan if a social group becomes unstable?
  - Socially housed primates must be compatible
  - Should separately house if
    - “vicious”
    - “overly aggressive”
    - “debilitated”
    - “suspected of having a contagious disease”
- What is your plan if a member of a stable pair dies?
- Individually housed animals must be able to see and hear other primates\*



# Environmental Enrichment

- “The physical environment in the primary enclosures must be enriched by providing means of expressing noninjurious species-typical activities.”
- Examples
  - Perches
  - Swings
  - Other increased cage complexities

# Species Specific Movement







# Species Specific Resting Behavior



# Scent Marking



# Environmental enrichment

- “The physical environment in the primary enclosures must be enriched by providing means of expressing noninjurious species-typical activities.”
- Examples
  - providing objects to manipulate
  - varied food items
  - using foraging or task-oriented feeding methods



Photo Credit: Mehgan Murphy, National Zoo





Michael Blatherwick



# Resources

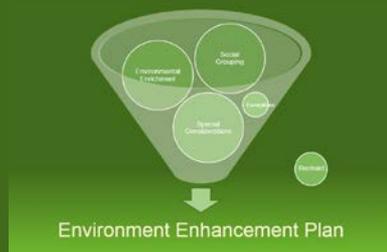


# The Specifics

- Enrichment offered
  - **Not specific enough:** Various enrichment is provided to support species specific behaviors
  - **Very specific:** An exhaustive list of every single enrichment item ever created or offered
  - **Balanced approach:** Categories of enrichment based on function, with examples
- Frequency
  - **Not specific enough:** Occasionally
  - **Very specific:** Tuesdays and Thursdays
  - **Balanced approach:** Twice weekly

# Noninjurious Also Means Safe

- Condition of enrichment
  - Sharp edges
  - Holes/entrapment
  - Ability to clean
- Toxicity
  - Poisonous plants
  - Pesticides
  - Treated wood



# Special Considerations

“Certain nonhuman primates must be provided special attention regarding enhancement of their environment, based on the needs of the individual species and in accordance with the instructions of the attending veterinarian.”

# Who Needs Special Attention

- “Infants and young juveniles”
- “Those that show signs of being in psychological distress through behavior or appearance”
- “Those used in research for which the Committee-approved protocol requires restricted activity”
- “Individually housed nonhuman primates that are unable to see and hear nonhuman primates of their own or compatible species”
- “Great apes weighing over 110 lbs.”

# Infants and Young Juveniles

- The psychological well-being of nonhuman primate infants depends on appropriate infant development
  - psychological and social development
- Optimally maintained with care giving parent(s) of their own species until an age that approximates the age of infant independence in nature

# Hand Rearing

- Criteria for removal from parent(s) if necessary
- Specific details of any hand-raising or fostering practices
  - Nutritional support
  - Stimulation similar to what would be received under normal circumstances
    - Sensory
    - Motor
    - Psychological
    - Social



# Hand Rearing

- Program to develop and maintain species-typical social competence
  - peers and/or adults
  - same or compatible species.



# Psychological Distress

- Be prepared
  - Caretakers should be able to recognize
  - Who is to be contacted
  - Strategy for assessment
    - Attending Veterinarian
- Intervention and assessment of response
- RECORDS

# Research Related Exemption

- Based on IACUC review and approval
  - Justification- especially for individual housing
- Alternative enrichment offered



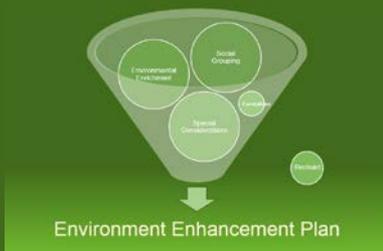
# Individual Housing

- Specifically, animals without the ability to see and hear other primates
- Section on Social Grouping states that provisions must be made for social needs



# Great apes

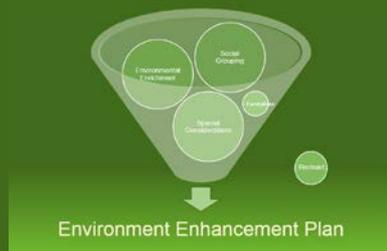
- “additional opportunities to express species specific behavior”
- 3.80 Primary Enclosures (b)(ii)
  - “additional volume of space in excess of that required for Group 6 animals”
- Policy 7
  - chimpanzees, bonobo, and young gorillas and orangutans are also brachiators



# Restraint

- Not *typically* included in the environment enhancement plan
- If you use methods of restraint, policies and procedures should be documented
  - Most have a separate policy, SOP, or other documentation

# Exemptions



- Attending Veterinarian
  - “health or condition, or in consideration of its well-being”
  - “must be recorded by the attending veterinarian for each exempted nonhuman primate”
  - “Unless the basis for the exemption is a permanent condition, the exemption must be reviewed at least every 30 days by the attending veterinarian”
- IACUC
  - “for scientific reasons set forth in the research proposal”
  - “documented in the approved proposal”
  - reviewed at least annually

## Acknowledgments

This presentation was  
adapted by the  
USDA Center for Animal  
Welfare.

Kansas City, Missouri

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### 3.81 Citations for Research Facilities 2007 - 2015 (161 total)

