Components of an Animal Care Plan

The purpose of a written Animal Care Plan (ACP) is to describe how the requirements in IACUC policy 1 will be met and daily animal care provided by properly trained personnel.

1. The AWP office is available for guidance and can provide templates to help in developing these plans (IACUC@animal-eye-iowa.com).
2. Topics to include in the Animal Care Plan are described below.

A. Personnel Training (Staff, Students, Volunteers, Faculty, etc.)

1. All IACUC mandated training must be completed and documented prior to assuming responsibility for animal care. Information regarding training requirements and resources can be found at AEC IACUC webpage under AEC IACUC Policy #20 . Personnel providing animal care must complete the following training:
   a. Principles of Animal Care (PAC): online
   b. Occupational Health Training- Animals (OHT-A): online
   c. Satellite Animal Housing Location Training (SAHLT): online
   d. Training on appropriate animal handling and assigned tasks under the individualized ACP for the area: documented by PI or designee
2. Safety training must be included as mandated through the IBC, RSO and EHS if animal use is associated with use of a hazard
3. Training records need to be made available on request to the Animal Welfare Program, AEC Veterinary Staff and regulatory officials.

Daily Care of Animals

1. All animals must be cared for and observed at least daily, including weekends & holidays.
2. Daily animal care/observation must be documented and recorded in ink. Sample templates are available at https://animal-eye-iowa.com/forms/forms/ .
3. Abnormal (ill, injured, or abnormal behavior), deceased animals and facility issues that impact animal welfare that are identified during daily care must be promptly reported to AEC (see below and refer to the Notification Protocol detailed on the IACUC website.)

C. Environmental Monitoring

1. The area where the animals are housed should be suitable for that species. Indoor climate-controlled housing areas must be monitored daily to ensure proper

environmental parameters (i.e. temperature, humidity, water quality, etc.) are being maintained.

2. A minimum/maximum thermometer & hygrometer should be placed in each terrestrial animal room and the temperature and humidity readings recorded daily. Refer to *The Guide*, the AWA or *the Ag Guide* for species-specific requirements on environmental parameters or contact AEC.
3. For rodents, investigators should be aware of the effects of low relative humidity and mitigation. Please refer to AEC IACUC SOP #12 for more information.
4. Ventilation rates of indoor housing areas are measured as needed and at least every 3 years. Aquatic species housing is typically excluded from monitoring
5. Documentation of environmental monitoring is not required for livestock and wildlife housed in barns, pastures and other outdoor housing locations but adequate ventilation and housing must be provided as described in *the Ag Guide*.

D. Veterinary Care of Animals and abnormal animal reporting

1. The Attending Veterinarian & AEC designees must have access to all animals in all facilities approved for animal housing and use.
2. AEC Veterinary Staff must be informed of **all abnormal animals** at AEC. Use the Notification Protocol detailed on the IACUC website.
3. The PI or designee will have access to the AEC Animal Health Database located at MyResearch to log in all abnormal animals or if no new cases, to log in daily on weekdays to indicate ?No Change?. For training on the use of the AEC Animal Health Database ? please contact the AEC vet staff at 319-826-6217.
4. The management of animals for specific medical conditions may be provided by investigators, students or research staff following the instructions provided under the following AEC IACUC approved SOPs. All the IACUC SOPs are available on the IACUC website. Examples include:
    a. SOP #9: Common Minor Medical Conditions of Rodents and Treatments
    b. SOP#11: Management of Ulcerative Dermatitis in Mice
    c. SOP #12: Effects of Low Humidity and Treatment of Ringtail in Rodents
5. If a health issue is listed on an IACUC SOP, an approved Herd Health SOP or a protocol specific issue then proceed with treatment AND notify AEC.
6. Personnel involved in medical assessments and treatments should have documented training or experience through AEC or other source.
7. If the health problem is not listed on an AEC or IACUC approved SOP or protocol, a veterinarian must be called to assess and develop a medical treatment plan. All medical treatment plans must be documented in the animal health record.

E. Water, Feeding and Storage of Feed

1. Animals must receive non-expired, palatable, non-contaminated, and nutritionally adequate food daily or according to their species requirements.
2. Maintain a written SOP with feeding instructions including amount and frequency.
3. Open bags of feed must be stored in enclosed, vermin-proof containers. Label feed containers with type of feed and milling date (if feed is not milled, use the date of purchased/acquisition).
4. For agricultural animals & wildlife, feed storage should be maintained to prevent chemical, water and vermin contamination and to limit microbial growth
5. Environmentally controlled areas used for feed storage must be monitored using a minimum/maximum thermometer/hygrometer and documented daily
6. Animals should have access to potable, non-contaminated drinking water as required by the species.
7. Please refer to AEC IACUC Policy #35 of food, fluid restriction and diet manipulation if there are deviations to standard feeding practices.

F. Space Requirements and Environmental Enrichment

1. Housing space requirements are detailed in *The Guide*, the AWA and *the Ag Guide*. Space requirements vary by species, number in a group and sizes of animals.
2. Environmental Enrichment is needed to enhance animal well-being and encourage species specific behavior. Refer to *The Guide*, the AWA and *the Ag Guide* and to IACUC Policy #30.
3. Exceptions to the space requirements and enrichment must have prior approval by the IACUC unless covered under IACUC Policy #30

G. Illumination

1. Indoor animal housing areas should be equipped with controlled lighting systems that provide regular diurnal cycles. Inadvertent light exposure during the dark cycle should be avoided.
2. Illumination should be sufficient for the animal's well-being, while permitting for good housekeeping, adequate animal inspection, and safe working conditions.
3. Exceptions to illumination standards in *The Guide*, the AWA and *the Ag Guide* must have prior approval by the IACUC
4. Contact AEC for species specific recommendations and light measurements. Light levels are measured at minimum of every 3 years for all indoor housing areas.

H. Sanitation and Housekeeping

1. Cages/enclosures must be sanitized regularly to provide a healthy environment for the animal.
2. *The Guide* standard states that enclosures and accessories should be sanitized at least once every 2 weeks.
    a. *For rodents, s*olid bottom caging, bottles and sipper tubes usually require sanitation at least once a week and forced ventilation rodent caging is typically sanitized every 2 weeks. Other circumstances may require more frequent sanitation.
    b. Ammonia, temperature and humidity testing can be performed to help develop a sanitation schedule.
3. If in a laboratory or similar space, a specific location should be designated solely for animal housing and be free of clutter and hazards.
4. The location should have surfaces that are easily sanitized. These surfaces should be wiped clean daily and sanitized at least weekly.
5. The written Animal Care Plan must include the enclosure sanitation and room cleaning schedule for the location. Cleaning duties must be documented when performed.
6. Please refer to AEC IACUC SOP #5 for monitoring sanitation practices.

I. Pest Control

1. Please refer to AEC IACUC Policy #15 for additional information about pest control in animal facilities

J. Waste Disposal

1. Investigators are responsible for proper disposal of conventional and hazardous waste.
2. Hazardous waste containers (sharps, biohazard, chemical, flammable, radioactive) must be leak proof and adequately labeled.
3. Contact Waste Management for your campus for assistance. For off-campus locations – waste disposal should be in accordance with local regulations, ordinances and policy.

K. Animal Transportation, Acquisition, Disposition, and Identification

1. Please refer to the following AEC IACUC policies
    a. AEC IACUC Policy #5 Animal Acquisition and Disposition
    b. AEC IACUC Policy #33 Animal Transportation

2. Animals should be clearly identified that include name of responsible investigator(s), source, species/strain/breed, number of animals in cage/enclosure, approved IACUC protocol # (ASAF), and information such as birth/age, arrival, and surgery dates (where applicable). Fish, amphibians and rodents may be identified as group. If there is only one PI or ASAF housing in the room, there can be a posted notice in the room with all the common information (PI, ASAF, species, etc.) and then individual cage or tank identifiers.
3. Large Animal identification should follow IACUC SOP# 7: Large Animal Branding, Ear Tagging and Microchip Implanting.
4. Identification of rabbits and rodents should follow IACUC SOP #8

L. Acclimation and Stabilization of Animals

1. All approved protocols should follow the IACUC Policy #12 on Acclimation and Stabilization of Animals Used for Research or Teaching unless there is an IACUC approved exemption.
2. The standard minimum acclimation time for rodents is 3 days and for non-rodent mammals is 7 days.
3. Additional time may be advised to stabilize animals to the environment. Variables are animal type, source, transport conditions and nature of research.

M. Animal Numbers and Tracking Procedures

1. Federal regulations require that institutions account for all animals used or produced for research and teaching purposes. Refer to the IACUC Guideline for counting animals for additional information.
2. Investigators and facility management must track the number of animals used within each USDA pain category B, C, D, or E.
3. For satellite housing locations, animal numbers are collected on a semi-annual basis.

N. Signage, Emergency information and Security

1. All animal housing areas must have the AEC-IACUC Guidelines for Reporting Concerns About The Care and Use of Animals and the Office of the Campus Veterinarian abnormal animal reporting guidelines
2. Any signage required for existing chemical, biohazard and radiation hazards must be kept current. If the hazard status changes, the signage must be updated.
3. Emergency information must include office and after-hours phone contact numbers for PI, research staff, fire, ambulance, police, veterinarian contact if other than AEC and AEC Veterinary Staff.

4. The animal study area and satellite animal housing facilities should be secure with access restricted to authorized personnel only.
5. Adverse Event and Disaster Plan: All animal housing areas must have a written plan that addresses potential adverse events, emergencies and disasters. Individuals responsible for daily animal care must have access and be trained on this plan.