

**University of Cincinnati
Animal Care and Use Program**

Satellite Housing

Satellite housing is housing of animals outside of the vivarium. PHS Policy and USDA Animal Welfare Act Regulations further define satellite housing areas as those:

1. Areas in which USDA covered species (e.g. guinea pigs) are held 12 hours or longer.
2. Areas in which non-USDA covered species (e.g. mice, rats, ectotherms, birds) are held 24 hours or longer.

A Standard Operating Procedure (SOP) must be provided regarding the daily operation of the satellite housing location and the provision of animal husbandry and care in accordance with federal, state, local and institutional regulations and guidelines. This SOP must address the following:

1. Macroenvironment (housing room)

- a. Room temperature and humidity ranges/controls, including 24-hour temperature monitoring and alarm system which alerts Facility Maintenance and LAMS. PI is alerted (if requested); or how monitored if not automated.
- b. Ventilation and air quality, including air source and filtration.
- c. Illumination control-Light measurement, light/dark cycle, on/off schedule (timer), and how monitored if not automated.
- d. Cleaning of room, chemical fume hoods, biosafety cabinets, bio-bubbles, racks/shelving units, support equipment, including specialized caging/housing equipment; including methods and frequency of cleaning and types of cleaning agents used.
Note: Periodic assessment of the efficacy of the sanitation process may be requested and/or conducted by Animal Care and Use Program (ACUP) to determine whether alteration of the sanitation procedure or practices is needed.
- e. Feed and bedding storage - all boxes must be stored off the floor. Refer to ACUP guideline for diet storage requirements.
- f. Pest control measures.
- g. The IACUC and Attending Veterinarian must have unrestricted independent access to the area.
- h. Area should be neat, organized, clean, and free of debris.

2. Microenvironment (primary animal enclosure)

- a. Housing density (individual or group housing, define number of individuals per group).
- b. Housing type (e.g. tank, cage, pen).
- c. Substrate (bedding) type.
- d. Methods and frequency of cleaning (e.g. hand wash, mechanical wash) and types of cleaning agents used (specific details are needed if the enclosure is not cleaned by LAMS).
Note: Periodic assessment of the efficacy of the sanitation process may be requested and/or conducted by ACUP to determine whether alteration of the sanitation procedure or practices is needed.
- e. Waste disposal-frequency of waste disposal/removal (housekeeping).
- f. Enrichment and social housing.

- Social animals must be pair or group housed and environment enrichment provided unless exception is justified and approved by IACUC.
- g. Aquatic species only: description of life support systems and water temperature monitoring.
 - Water quality parameters (e.g., temperature, pH, alkalinity, conductivity/salinity, nitrates, hardness).
 - Water system circulation type(s) (e.g., static, flow-through, recirculating)
 - Water type (e.g., fresh, brackish or marine).
 - Pretreatment-Chemicals routinely added to the water for homeostasis (e.g. dechlorinating agent), and initial filtration (e.g., reverse osmosis, distilled, charcoal-filtered municipal).
 - Filtration method (e.g. biological, chemical, mechanical, mechanical-bead filter) and replacement frequency.

3. Husbandry

- a. Food
 - Type of food, vendor, method of preparation, storage, and expiration date
 - Amount provided, frequency, and method of feeding.
- b. Non-aquatic species only: water source, treatment or purification process(es), and route of administration (e.g. bottles).
- c. Animal handling and restraint methods, including cleaning of capture equipment
- d. Animal receiving and unpacking procedures.
- e. Animal transportation according to ACUP policy.
- f. Identification of enclosures and/or animals according to ACUP policy.
- g. Carcass disposal.

4. Veterinary/Clinical Care

- a. Contact information for all personnel (including backups) responsible for routine/daily and weekend/holiday care.
- b. Identify and provide contact information for the Principal Investigator (PI) and/or knowledgeable designee(s) responsible for emergency situation decisions and actions, including but not limited to animal handling and care, identification/reporting of sick/injured animals, and performing any necessary procedures.
- c. Daily monitoring of animals is conducted by research personnel with at least quarterly monitoring provided by LAMS or LAMS designee.

5. Disaster Planning

- a. If evacuation must occur promptly, personnel must evacuate building.
- b. Animal care and support needs during and immediately following emergency (health checks, food/water, sanitation, environmental support, personnel).
- c. Evacuation for animals undergoing surgery or terminal procedures.
- d. Identification of critical/irreplaceable animals at the cage level.
- e. Transportation of animals if evacuation warranted.
- f. Specific instructions for USDA animals undergoing surgery – personnel must determine if risk to animal's welfare justifies delaying evacuation if cause of alarm is unknown.

6. Security, Safety, and Recordkeeping

- a. Housing area primary door must be locked when protocol personnel are not present.
- b. Hazard information (including EH&S-required signs) and safety data sheets (SDS) must be clearly posted or stored within the satellite area either on paper or electronic.
- c. Instructional signs listing LAMS emergency contact numbers, and for reporting animal welfare concerns, personal protective equipment (PPE) requirements, biosafety requirements, and animal housing room identification must be posted in a clearly visible area.
- d. Approved satellite housing SOP should be available in the housing area.
- e. Completed husbandry task logs and monitoring records must be maintained for all tasks performed and stored in a manner that is immediately available to ACUP staff. Labs may be requested to submit task logs and/or monitoring records to confirm compliance with SOP and policy.
- f. Records must be maintained according to the UC Record Retention Schedule.

References

- See *Guidelines for the use of Fish in Research by the American Fisheries Society* for additional guidelines on Aquatic species macro and microenvironments.