

Housing of Animals Best Practices

The IACUC Policy [Housing Requirements for Animals](#), detailing the Institutional and Regulatory requirements, should be reviewed prior to housing animals.

What are some examples of “*Guide Exceptions*”?

- *Single housing* would be considered an exception, as group housing is recommended for social animals. Single housing is sometimes required by researchers to track food or water intake.
- *Metabolic cages* would be a guide exception, as contact bedding is recommended for rodents. Metabolic cages might be needed for researchers to collect fecal or urine samples.
- *Sanitation* of microenvironment (cage or enclosure) less often than guide recommendations (*weekly for solid bottom caging, sipper tubes, and water bottles*)
- *Temperatures* that exceed or are below the guide range (e.g., *68-79 °F for rodents*) might be needed for specific study goals

Which facilities are currently approved by IACUC as Dedicated Housing Areas?

- ULAR vivaria ([ULAR Website](#))
- Facilities that are run by FAES (examples: ATI, OARDC, OSU Ag Facilities)
- Facilities that are run by FAHRP in Wooster (examples: Germ Free Facility, NIH Building)
- Finley Farm
- Large animal wards in the Veterinary Teaching Hospital

What are some examples of justification to house animals in a Satellite Housing Area?

- *Species-specific needs* that cannot currently be met within Dedicated Housing Areas
- Research requiring *altered light cycles* that cannot currently be met within Dedicated Housing Areas
- *Intensive post operative care* required for specific surgical models

What is the housing exception request in eProtocol asking for?

- *Primary Enclosures*: Refers to the cage, pen, or stall where the animal will live
 - The standard ULAR rodent cage is a microisolator cage with a filter top.
- *Secondary Enclosures*: Refers to the room, isolator, cabinet, environmental chamber, or countertop where the cage will be placed.
 - It is recommended that static rodent cages are housed within a fume hood or biosafety cabinet (if hard ducted) to minimize animal allergens circulating in the lab space.
- *Temperature and Humidity Ranges*: Recommendations for species specific ranges can be found on page 44 of the [Guide](#).
- *Composition of Ceiling, Floor, and Walls*: To show that rooms can be sanitized and are appropriate for animal housing. If you are unsure of composition (brick, plaster, tiling, etc.), then please contact your building coordinator for a description.
- *HVAC Data and Air Recirculation*: Page 46 of the [Guide](#) recommends 10-15 fresh air changes per hour. It is recommended that you contact EH&S to make arrangements for HVAC data: date last checked, air circulation per hour, and if the air is recirculated.

When requesting Satellite Housing, what should I include in my housing SOP?

- The following templates have been created for satellite housing areas to assist in developing your housing plan:
 - SOP Template: A template of written Standard Operating Procedures (SOP) has been created by the IACUC. It is recommended that you start with this template designed for static housing of mice and make modifications to fit the needs of your particular location. See [Investigator Guidance: Standard Operating Procedures for Satellite Housing \(Template\)](#)
 - Husbandry Check Sheet Template: It is required that you have a method to document those tasks included in your SOP. A template of a check sheet has been created by the IACUC that can be modified for your particular SOP. See [Investigator Guidance: Husbandry Check Sheet for Satellite Housing \(Example\)](#)
- Expected SOP Tasks: The following tasks must be listed in your SOP:
 - Daily observation of all animals for general health (including weekends and holidays)
 - Daily check of food and water
 - Daily recording of high, low, and current temperature
 - Monthly submission of census to ULAR (required when ULAR caging is used)
 - Monthly recording of humidity
 - Frequency of:
 - Microenvironment (primary enclosure, cage, etc.) and housing accessories (water bottle, enrichment, etc.) sanitization
 - Macroenvironment (rack, counter top, room, floor walls, etc.) sanitization; General housekeeping (sweeping floor, trash removal, etc.)
 - Validation of environmental monitoring
- Expected SOP Descriptions: The following descriptions must be included in your SOP:
 - Method of disinfection/sanitization including product used, dilution, contact time, etc.
 - Method of evaluating sanitation effectiveness for primary enclosures and accessories being manually cleaned by research staff (i.e., visual inspection, microbiologic and water temperature monitoring); see [Validate the Effectiveness of Manual Sanitation](#) policy for additional information
 - Process for disposal of animal waste (carcass, tissue, and bedding) including location
 - Arrangements with ULAR facilities for support, as appropriate (such as cage changing, sanitization, carcass, and waste disposal, etc.)
 - Description of the environmental alarm system used (e.g., Delta, Rees, etc.), including set points for alarms and frequency of verification
 - Additional items included for species specific housing needs (for Aquatic Animals, please see [Housing and Veterinary Care of Aquatic Species](#))
 - Address social housing and environmental enrichment being used

What do I do if the high/low temperatures are outside the *Guide* recommended range for my species (i.e. for mice >79°F or <68°F)?

- Must be reported to principle investigator, FOD, or building manager; may also require reporting to IACUC in the case of animal welfare concerns and/or if animals have to be moved
- See also [Reporting Temperature Excursions in Animal Housing Locations](#) policy

What should I include in my Emergency Plan?

- Information for the Emergency Plan: The following items should be listed or described on the emergency plan:
 - Non-OSU Phone Numbers for any key personnel that should be called during an emergency;
 - Both short-term and long-term plans to address animal welfare during emergencies such as power outages or loss of heating/cooling.
- For Satellite Housing Areas: The following template was created to ensure all emergency contact information is provided <Link to “Emergency Plan Template”>

What is meant by an environmental alarm system?

- Environmental alarm systems are required specifically to capture significant temperature excursions overnight when research staff is not present notifying key personnel when set points are reached.
- Set points should be designed specific to the housing location and to ensure that action can be taken prior to temperature excursions impacting animal welfare
- Recommendation is to contact OSU building automation/ Kelly Bloomfield regarding Delta sensors for housing areas <http://fml.osu.edu/building-automation/>
- Consultation with the attending veterinarian is also available

Some housing areas can be exempted from needing environmental alarm systems, does my area apply?

Justification (exemptions) for **not** needing environmental alarm systems in a housing location requires IACUC approval and might include:

- Housing of species that are acclimated to extreme temperatures (agriculture and/or cold blooded species)
- Aquatic animals housed in such a way that changes in ambient room temperature over a 12 hour period would not significantly impact the water temperature in the primary housing tank
- Increased monitoring of animals over the full 24 hour day (checking overnight)

How would I test/verify the Environmental Alarm System is working?

- Verification is specific to the system chosen.
 - In some cases, set points can be adjusted easily (drop high level temporarily from 75 to 65) so that the current room temperature would trigger an alarm and subsequent communication can be verified.
 - If temperatures are out of range on a given day during daily documentation, verify that an alarm was triggered and subsequent communication can be verified
 - Systems that have a battery backup must be checked monthly by unplugging the unit to trigger an alarm

If I get approved for Satellite housing how often will the IACUC visit me?

- Initial Approval Schedule: All new satellite housing will undergo monthly scheduled visits for at least the first 6 months and a Semi-Annual Inspection to ensure animal housing is appropriate in terms of animal welfare and safety.
- Six Month Evaluation: After the initial 6 month period, the IACUC will determine the needed frequency of site visits (minimum is semi-annually) based on the results of the previous 6 months' visits. Scheduled evaluations will be performed at least every 6 months.
- Anytime: The IACUC may make unscheduled visits to approved satellite housing spaces.

Is IACUC approval for Satellite housing good for life?

- Permission for satellite housing may be revoked by the full IACUC if the facility becomes unsuitable for continued housing of animals for any reason.
- Such reasons may include changes in regulations, non-compliance by research staff, deteriorating facilities, protocol termination, animal welfare concerns, or if rationale is no longer valid.

How do I provide the attending veterinarian with access to my satellite housing area?

- Access to satellite housing areas should be coordinated through IACUC staff
- Information must include card swipe access when applicable (contact information for granting access) and provision of keys

Do I need to maintain a census in my satellite housing area?

- When ULAR supplies for caging, food, bedding, etc. are being used, per diem charges still apply to satellite housing areas. If RFID tags remain on cages then a manual census does not need to be maintained. In some areas, ULAR staff will need access weekly to scan tags. If RFID tags are not present on the cages, then a paper room census (cage count) is needed and must be submitted to ULAR at the end of each month. Please contact Barb Comeaux, ULAR Data Information Specialist at comeaux.5@osu.edu or (614) 292-8541.

References:

[Guide for the Care and Use of Laboratory Animals](#)

Applicable [IACUC Policies](#)

Housing and Veterinary Care of Aquatic Species

Housing Requirements for Animals

Reporting of Environmental Problems in Animal Housing Locations

Validate the Effectiveness of Manual Sanitation

Documentation of Husbandry Procedures