Title: Physical Plant and Facilities Maintenance

I. Purpose:

The purpose of this policy is to ensure that animal facilities are in good working condition and support the overall animal care and use program. The Animal Welfare Act, the Public Health Service Policy, the ILAR *Guide for the Care and Use of Laboratory Animals*, and the Guide for the Care and Use of Agricultural Animals in Agricultural Research and Teaching require good working facilities as a component of the animal care program.

II. Policy:

Animal facilities must be maintained to promote appropriate animal care and use. Facility managers and/or Technicians in Charge are responsible for submitting and following up on work orders to Operations and Maintenance for repairs and maintenance.

III. Procedure:

Animal facility managers or designees can submit a work order to O&M by the following methods:


By Phone: 530-752-1655

Email: om-customers@ad3.ucdavis.edu

**Structural:** Animal facilities must be structurally sound and in good repair to contain animals and to prevent the entrance of other animals or pests (*Guide*, pg. 134). Interior building surfaces in laboratory animal housing areas must be constructed and maintained to be impervious to moisture and easily sanitized (*Guide*, pg. 134).

“Durable, moisture-proof, fire-resistant, seamless materials are most desirable for interior surfaces. Surfaces should be highly resistant to the effects of cleaning agents,
scrubbing, high-pressure sprays, and impact. Paints and glazes should be nontoxic if used on surfaces with which animals will have direct contact. In the construction of outdoor facilities, consideration should be given to surfaces that withstand the elements and can be easily maintained” (Guide, pg. 134). Examples of preferred building materials include epoxy or Methyl Methacrylate MMA floors. Tile floors with grout and vinyl floors should only be used in areas with minimal exposure to moisture.

HVAC: Secondary enclosures must maintain 10-15 fresh air changes per hour (Guide, pg. 139). HVAC systems and filters must be regularly evaluated and serviced. The ideal relative humidity range is 30-70% for animal rooms. Positive pressure airflow must be maintained in surgery rooms, animal rooms housing pathogen free animals and clean storage rooms. Negative airflow should be maintained in quarantine rooms, necropsy rooms, and rooms containing aerosolized, infectious agents (Guide, pg. 148-9).

Noise: Noise levels should be maintained below 85 dB to prevent stress and illness to animals and staff. Refer to Personnel Protective Equipment policy regarding PPE for areas when noise levels exceed 85 dB. Building construction should include insulation to help muffle sound between rooms. Animals that make more noise (dogs, swine, nonhuman primates) should not be housed near sound-sensitive animals (rabbits and rodents).

Lighting: Photoperiods and light intensity must be maintained based on species specific requirements. “Light fixtures, timers, switches and outlets should be properly sealed to prevent vermin from living there” (Guide, pg. 141). “Light bulbs and fixtures must have protective coverings to ensure the safety of animals and staff” (Guide, pg. 141). Departments must have an established program to ensure that timers are working properly. A staff member must come into the facility during the dark cycle at least quarterly to ensure the timers are working properly.

Temperature: The temperature in primary and secondary enclosures must be maintained based on the specific needs of the species being housed.

All animal rooms housing USDA covered species must have temperature alarms installed. If the temperature falls outside the specific range for the species for longer than a brief period O&M must be contacted

Vibration control: “Different species can detect and be affected by vibrations of different frequencies and wavelengths, so attempts should be made to identify all vibration sources and isolate or dampen them with vibration suppression” (Guide, pg 142).

Recommended Dry-bulb Temperatures for Common Laboratory Animals (Guide, pg. 44)

<table>
<thead>
<tr>
<th>Animal</th>
<th>Celsius</th>
<th>Fahrenheit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mouse, rat, hamster, gerbil, guinea pig</td>
<td>20-26</td>
<td>68-79</td>
</tr>
<tr>
<td>Rabbits</td>
<td>16-22</td>
<td>61-72</td>
</tr>
<tr>
<td>Cat, dog, nonhuman primate</td>
<td>18-29</td>
<td>64-84</td>
</tr>
<tr>
<td>Farm animals and poultry</td>
<td>16-27</td>
<td>61-81</td>
</tr>
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