



University of Michigan Policy On Minimum Standards for Housing Aquatic Vertebrate Species

The recently published eighth edition of the *Guide for the Care and Use of Laboratory Animals* addresses terrestrial and aquatic animals in separate sections, reflecting the growing role of aquatic animals in biomedical research. Investigators who house aquatic animals must establish written standard operating procedures (SOPs) to ensure compliance with *The Guide*.

The following minimum requirements must be met and documented regarding housing and husbandry of aquatic species:

1. **Daily** observation of all animals for general health, including weekends and holidays.
2. Species appropriate diet and feeding plan, including frequency of feeding.
3. **Daily** recording of the following housing parameters: water temperature, salinity (or conductivity), and pH.
4. **Weekly** recording of the following housing parameters: ammonia (NH₄).
5. For all aquatic systems, tanks **should** be cleaned and sanitized/disinfected at least monthly. Approved methods include: rinsing with 70% ethanol, rinsing with dilute bleach, or sanitizing in a standard cage washer using water temperatures of not less than 180°F.
6. If tanks are **not** cleaned and sanitized/disinfected monthly, nitrite (NO₂) and nitrate (NO₃) levels **must** be measured **weekly** and tanks cleaned and disinfected when concentrations of compounds correlated with water quality exceed generally accepted standards (NH₄ > 0.02 ppm, NO₂ > 0.2 ppm, NO₃ > 50 ppm).
7. For static systems, a 50% water change **twice weekly** is required.
8. Aquaria nets should be rinsed and air-dried after each use and one net per system or tank is strongly recommended. Nets must be disinfected using dilute bleach, Net Soak, and/or boiling water at least **monthly**.

Any exceptions to the minimum requirements listed above require scientific justification and prior approval by the IACUC.