Title: Husbandry Care of Seahorses

I. Purpose:

The purpose of this policy is to outline the UC Davis minimum standards of care for seahorses.

II. Policy:

All units providing animal care for seahorses must meet or exceed these minimum requirements based on the ILAR Guide for the Care and Use of Laboratory Animals (Guide), and Public Health Service Policy (PHS). Deviations or exceptions must be approved by the Attending Veterinarian and the IACUC.

III. Procedure:

Daily (365 days a year without exception):

- Observe each animal and check for health concerns (Guide pg. 112).
- Ensure adequate feed is available, though depending on the species and life stage this may be done less frequently (Guide pg. 65-68).
- Record sick and dead animals, and report them to Campus Veterinary Services (CVS) or designated clinical veterinarian per standard operating procedure for reporting sick or dead animals.
- Record minimum and maximum water temperatures.
  - Temperature range varies by species, but general recommendations are 72-82°F for tropical seahorses, 68-75°F for subtropical seahorses, and 64-72°F for temperate seahorses.
  - It is recommended to record each individual tank water temperature daily, but for large subsets of tanks minimally 10% of the tanks must be recorded.
- Change any excessively saturated tanks (Guide pg. 70).
- Clean and organize room, anterooms, and surrounding premises (Guide pg. 72).
- Record daily completion of tasks, initial, and date log sheet

Weekly (not to exceed every 7 days):

- For static tanks, Record water quality (dissolved oxygen, ammonia/nitrite/nitrates, pH, and conductivity) at least weekly.
Ranges vary by species, but seahorse recommendations are: 6-7ppm dissolved oxygen, < 0.02 mg/L Ammonia (NH₃), < 0.1mg/L Nitrite (NO₂), and < 15ppm Nitrate (NO₃). pH (8.0-8.4), conductivity (1.020-1.026).

**Biweekly (not to exceed every 14 days):**
- Replace at least 25% of the tank water volume using conditioned water.
- For filtration system and pumps, clean all filters per manufacturer’s instruction.

**Monthly (not to exceed every 30 days):**
- Disinfect nets, shelves, racks, tank cleaning utensils, scrub brushes, and enrichment devices.
  - The use of certain disinfectants may be contraindicated for some aquatic species, as residues may be highly deleterious (Guide pg. 71).
- For flow-through and recirculating systems, record water quality (dissolved oxygen, ammonia/nitrite/ nitrates), pH (6.5-7.5), and conductivity (500-2500 µS) in a subset of tanks, such that each tank is checked at least every 3 months.
  - Ranges vary by species, but seahorse recommendations are: 6-7ppm dissolved oxygen, < 0.02 mg/L Ammonia (NH₃), < 0.1mg/L Nitrite (NO₂), and < 15ppm Nitrate (NO₃). pH (8.0-8.4), conductivity (1.020-1.026).

**As needed:**
- Disinfect the animal room including walls, floors, and ceilings (if possible) (Guide pg. 72).
- Remove and replace worn or damaged equipment from primary enclosures and surrounding facility (Guide pg. 72).
- Pelleted feed must be discarded after 6 months of the milling date unless manufacturer guidelines recommend a shorter or longer expiration (Guide pg. 66).
- Clean and sanitize feed storage containers (Guide pg. 67).

**Environmental Enrichment:**
- Refer to the Environmental Enrichment policy.
- Seahorses should be provided the opportunity to demonstrate species typical behavior. Examples of enrichment for seahorses include plastic plants and conspecifics (Guide pg. 83).
- Devices must be checked regularly for wear and discarded when safety hazards are observed.

**Facilities:**
- Temperature alarms must be installed in all rooms housing seahorses (Guide pg. 143).
- Adequate ventilation must be provided for the health and comfort of the animal at all times, governed by thermal and moisture loads (Guide pg. 81).
- Floors shall be moisture-resistant, non-absorbent, impact-resistant, and relatively smooth (Guide pg. 137). Refer to Physical Plant and Facilities Maintenance policy.
**Housing:**

- Whenever possible and depending on the species, seahorses should be socially housed in compatible groups *(Guide pg. 51).*

*When housing this species, please also refer to the Animal Care Program’s Standards of Care Policy on Pest Control, Identification and Labeling of Cages, Environmental Enrichment, Food Storage, House-Keeping in Facilities Housing Biomedical Research Animals, Physical Plant Facilities Maintenance, as well as the IACUC’s Policy on Social Housing of Social Species.*