

Policy: SC-35-800
Date: 7/15/2019
Enabled by: IACUC/AV/
ILAR

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.

UC Davis Office of the Attending Veterinarian Standards of Care

- 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.

UC Davis Office of the Attending Veterinarian Standards of Care

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.