**Snowshoe Hare Husbandry and Care**

Last Reviewed: January 26, 2024

**I. Purpose**

The purpose of this Standard Operating Procedure (SOP) is to outline the animal care requirements associated with snowshoe hares housed within the outdoor enclosures or Snowshoe Hare Phenotron at the Research Field Station at Fort Missoula.

**II. Policy**

It is LAR policy to meet or exceed all federal, state, and local regulations and guidelines and to comply with all institutional policies and procedures as they apply to the use of animals in research. Personnel must attend any applicable training in animal care and use, occupational health and safety, equipment operation, and SOPs prior to performing activities outlined in this SOP or work under the direct supervision of trained personnel.

**III. PPE**

PPE required for outdoor housing consists of nitrile gloves when handling the hares or their feces. N95 face masks should be used by staff sensitive or allergic to the hares.

**IV. Procedures**

1. The hares, their communal housing area, and feeding stations will be visually
inspected daily for signs of illness, injury, or death
2. Clinical signs may include abnormal bodily secretions, alopecia (hair loss),
diarrhea, ptyalism (excess salivation), anorexia (lack of appetite), loss of body
condition, weight loss, head tilt and/or shaking of the head

**V. Identification**

Each hare possesses a metal ear tag with an individual identifying number. In addition to the ear tags, hares will either be identified with a cage card or by fur dye of varying colors placed on ears, back or the fur on the bottom of the feet.

**VI. Husbandry**

1. Outdoor Enclosure or Phenotron – on-ground communal housing
	1. Individual cage cards identifying the hares housed in the enclosure are
	attached to the chain link adjacent to the entrance of the enclosure
	2. Hares are fed ad libitum Sherwood Forest Adult Premium Rabbit Food
	(approximately 4 ounces per hare per day) in multiple covered feeding
	stations (small animal carriers and open housing cages)
	3. Feed barrels are labeled with feed type, milling date, and expiration date
	4. Timothy hay is provided ad libitum in multiple feeding stations (as described
	above) to protect the hay from rain and snow
	5. Soiled timothy hay will be removed daily and replaced with fresh hay
	6. Hares are provided with fresh vegetables and fruit (ex. kale, cabbage, parsley,
	sweet potatoes, apples) weekly
	7. Hares are to have free access to clean potable water at all times
	8. Water bottles or heated water dishes are to be checked twice daily. Refill if
	bottle/dish is less than ½ full
	9. Water bottles/water dishes are heated in the winter and must be checked
	daily to ensure that they are functioning properly and that the water is not
	freezing
	10. Feeders and water bottles/dishes are replaced with clean bottles/dishes and bowls once a week
	11. Feeding stations (carriers) are swapped out twice monthly while open caging
	is cleaned as described below in *Individual Housing in Caging*
	12. Hares are given fresh tree branches and Vitamin C blocks twice a week
	13. Enrichment in the form of toys are provided within the aviaries and replaced
	with clean toys bi-weekly
	14. Enrichment devices are examined weekly for sharp edges, burrs, cracks in the
	plastic, etc. and any that may be a safety hazard are discarded
	15. The enclosure and/or Phenotron are raked/swept daily to remove feces
	16. Hares that are housed on the concrete of the Phenotron will be provided with
	a kiddie pool with sand or soil to facilitate dust bathing
	17. The Phenotron concrete is rinsed with copious amounts of hot water once a
	week to remove urine
	18. Urine stains on the concrete will be sprayed with Nature’s Miracle™ to remove
	scaling and scrubbed with a stiff brush, if needed, followed by a copious
	water rinse
	19. The entire concrete and approximately 2 feet of the chain link fencing will be
	sprayed (with a garden sprayer) with Rescue for disinfection (manufacturer's
	report that Rescue is completely safe for animals to come in direct contact or
	lick)
	20. When ambient temperatures are at or below freezing the concrete will be
	dried with a portable shop heater to prevent ice formation
	21. A visual health inspection will be performed monthly and documented with
	the appropriate form
2. Individual Housing in Caging (in the event the hares require housing in individual caging)
	1. A complete cage change is performed monthly (as per the Exception to the
	Guide)
	2. The soiled cage collection pan papers are changed weekly
	3. The cage pan is washed with soap and water, any urine staining or scaling is
	cleaned with Nature’s Miracle™ followed by hot water rinsing, and then
	sprayed with Rescue every two weeks
	4. Soiled timothy hay will be removed daily
	5. Timothy mats will be shaken free of any feces daily
	6. Each hare housed in a cage will have a cage card identifying the animal
	7. Hares are fed 4 ounces of Sherwood Forest Adult Premium Rabbit Food at the
	beginning of each workday and a handful of timothy hay
	8. Hares are provided with fresh vegetables and fruit (ex. kale, cabbage, parsley,
	sweet potatoes, apples) twice a month
	9. Hares are to have free access to clean potable water at all times
	10. Water bottles are to be checked twice daily. Refill if bottle is less than ½ full
	11. Water bottles are heated in the winter and must be checked daily to ensure
	that they are functioning properly and that the water is not freezing
	12. Feeders and water bottles are replaced with clean bottles and bowls once a
	week
	13. Hares are given fresh tree branches and Vitamin C blocks twice a week
	14. Enrichment in the form of toys are provided within the home cage and
	replaced weekly
	15. Enrichment devices are examined weekly for sharp edges, burrs, cracks in the
	plastic, etc. and any that may be a safety hazard are discarded
	16. A visual health inspection will be performed monthly and documented with
	the appropriate form

**VII. Preventative Care**

1. Individual fecal samples (if housed individually) or group fecal samples (if housed
communally) will be tested for parasites three times a year
2. If individual samples are positive for parasites that hare will be treated (see Hare
Parasite Control SOP)
3. If a group sample is positive all hares within the housing area will be treated (see
Hare Parasite Control SOP)

**VIII. Sanitation**

1. All garbage cans in the Hare Husbandry areas will be checked daily and if trash is
present, and placed in the dumpster
2. Ledges, fixtures, supply carts, etc. are to be wiped down daily, Monday through
Friday, to remove any dust or debris, more often if necessary
3. Feed barrels are sanitized monthly and documented

**IX. Veterinary Care**

Snowshoe hares are regulated by the USDA and require documented health checks on a routine basis

1. Apart from the daily visual health inspection: A monthly visual health inspection will be performed monthly and documented with the appropriate form
2. In the event a hare requires capture for any reason, a physical examination will be performed by the AV (annually, at a minimum)
3. Health check logs are located in a loose-leaf binder in the FRSFM Hare
Management Area
4. These logs should be dated, filled out with physical examination findings (including
body weight on an annual basis), and initialed by the staff performing the
examination

**X. Predator Surveillance**

Camera traps will be placed along the line of sight of each side of the enclosure and Phenotron and checked weekly, or sooner as needed, to check for the presence of nocturnal predators. The presence of nocturnal predators can cause significant stress to the snowshoe hares and may necessitate predator control measures with Custom West Pest Control to relocate any recurring, nocturnal, wildlife that might be harassing the snowshoe hares during the night