



Date: October 15, 2019

To: Dr. Larry Clark
NWRC Director; Institutional Officer

From: NWRC Institutional Animal Care and Use Committee

RE: OLAW Semiannual Report: Program Review and Facility Inspections

The following is the detailed semiannual program review report of the USDA-APHIS-WS-National Wildlife Research Center's Animal Care and Use program for the period of **April 1, 2019 to September 30, 2019**.

In accordance with the USDA/APHIS Animal Welfare Regulations (9 CFR 2.31) and as required by the Public Health Service (PHS) Policy on Humane Care and Use of Laboratory Animals (Section IV.B.1.3.) the Institutional Animal Care and Use Committee (IACUC) must review, at least every six months, the research facility's program for the humane care and use of animals. Included in this evaluation are the reports of the semiannual inspections of NWRC animal facilities, important notes from any meetings or Committee actions conducted during this time period.

Composition of the NWRC IACUC:

Members of the NWRC IACUC are appointed to serve a three year term, with the exception of the Chairperson and the Attending Veterinarian who are appointed indefinitely. The following is the list of the members who currently serve on the Committee along with their appointment dates:

- (b)(6) **Chairperson** (appointed October 2018)
- (b)(6) **Attending Veterinarian** (appointed October 2018)
- (b)(6) **Non-scientist** (appointed February 2013, extended to January 2020)
- (b)(6) **Non-affiliated member** (appointed April 2017, ends May 2020)
- (b)(6) **Scientist** (appointed March 2015, extended March 2021)
- (b)(6) **Scientist** (appointed August 2013, extended indefinitely)
- (b)(6) **Scientist** (appointed March 2017, ends March 2020)
- (b)(6) **Scientist** (appointed October 2018, ends October 2021)

Changes in IACUC membership:

- (b)(6) **Scientist** (appointed January 2018, ends February 2021). (b)(6) retired from federal service effective Aug 2019, and thus has ceased to serve as a member of the NWRC IACUC from this point. We thank (b)(6) for her service to the NWRC IACUC. Please note that the above composition of the NWRC IACUC is fully compliant with both USDA and OLAW regulations.

Future IACUC membership:

- The appointment of several IACUC members is scheduled to conclude FY20. Thus, action is needed by the IO and NWRC management to determine their replacements.

This is especially critical for the "Non-affiliated member," as it may be difficult to fill this roll. Additionally, per recent meetings between the Chair, Attending Veterinarian, and Management, it was suggested that the role of the "Non-scientist" be filled by staff from the administrative or economics units.

Activities of NWRC Institution's Program for Animal Care and Use:

Proposed activities involving the care and use of animals are distributed to members of the NWRC IACUC for review. All new Study Protocols are disseminated to each IACUC member for their review/consideration. IACUC members return their questions, comments or suggested edits to the Chairperson for compilation. If any IACUC member identifies significant animal welfare issues, then a Committee meeting is convened to discuss the protocol as a group. The Chairperson interacts with the Study Director and serves as the final reviewer to ensure all IACUC concerns are adequately addressed by the Study Director prior to approval of the final study protocol. Proposed changes to on-going activities (Protocol Amendments) which are not considered to be significant with regards to animal welfare are reviewed and approved by the Chairperson and the Attending Veterinarian. If proposed changes are determined to be significant, amendments are sent to the entire NWRC IACUC for review. Annual and Three year Protocol Reviews are sent to the Study Director based upon the study start date and returned to the Chairperson/Attending Veterinarian for review.

IACUC Activity Summaries:

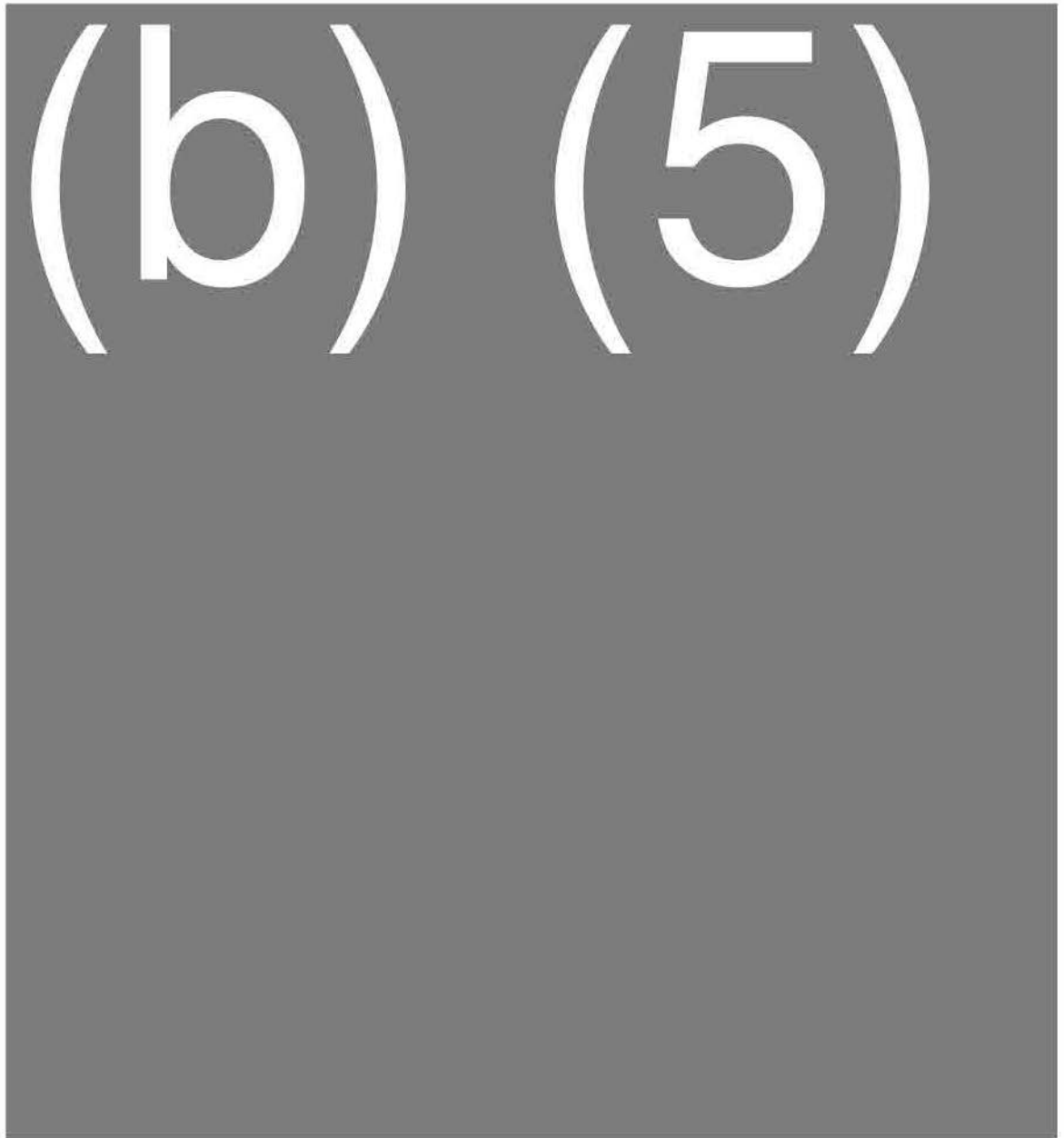
1. Protocol and SOP Review. During this time period, the following tasks were submitted to the NWRC IACUC for review and approval.
 - a. 28 New Study Protocols (24 approved 3 pending, 1 on hold)
 - b. 51 Protocol Amendments
 - c. 67 Annual Protocol Reviews
 - d. 6 Standard Operating Procedures
 - e. *0 Three-year SOP Reviews
 - f. 1 Policy
2. Note that the NWRC was delinquent in three-year reviews of SOPs (as detailed in the semiannual inspection report for NWRC HQ). In the summer of 2019, the NWRC IACUC along with the NWRC QAU formalized a procedure to streamline the three-year SOP review process. The review is currently in progress and is expected to be up-to-date / compliant in March, 2020. Additionally, please note that the applicable NWRC semiannual inspection report indicates that this deficiency should have been corrected by the end of 2019, but this was not possible due to integration of this review process with NWRC QAU.
2. Training. The Collaborative Institute Training Initiative (CITI) online program was renewed for use by NWRC personnel in FY19. Starting in 2017, the two year IACUC refresher training requirement was implemented.
 - a. Between April 1, 2019 and September 31, 2019, 31 individuals completed a total of 54 IACUC training modules in the CITI program.
3. Meetings.
 - a. Two Committee meetings were held: on 4-19-19 and 6-27-19.
4. Inspections of NWRC Animal Facilities. NWRC facilities which house mammals are required to be inspected every six months in accordance with the USDA Animal Welfare

Regulations. Please note that OLAW requires all facilities (including satellite facilities) by inspected at least once every six months by the IACUC as part of the semiannual evaluation. Institutions have discretion with regard to how they oversee areas, but should monitor such areas at random or fixed schedules to effectively oversee all animal care and use. NWRC facilities which house birds or other vertebrates will be inspected whenever possible until the Animal Welfare Regulations are revised to specify new requirements for these species. A copy of the facility inspection documentation has been added to this report (Appendix 1).

- a. NWRC Headquarters, Fort Collins, CO. This facility was inspected by (b)(6) on 4-16-19. Inspection was assisted/facilitated by (b)(6).
- b. Florida Field Station, Gainesville, FL. This facility was inspected on 5-15-19 by (b)(6).
- c. Hawaii Field Station, Hilo, HI. This facility was inspected on 7-9-19 by (b)(6).
- d. Utah Field Station, Millville, UT. This facility was inspected 7-10/11-19 by (b)(6).
- e. Mississippi Field Station, Starkville, MS. This facility was inspected on 9-25-19 by (b)(6). Note that this facility did not house mammals for research during the reporting period.
- f. Ohio Field Station, Sandusky, OH. This facility did not house mammals for research during this reporting period.
- g. North Dakota Field Station, Fargo, ND. This facility is inspected semi-annually by the North Dakota State University IACUC.
- h. Oregon Field Station, Corvallis, OR. This facility does did not conduct research using captive animals.

5.





6. Animal Care and Use Concerns or Reports of Non-compliance.
 - a. Major concerns or reports involving non-compliance during this period.

- i. (b) (5), (b) (7)(C), (b) (6)



(b) (5), (b) (6), (b) (7)(C)

- b. Minority reviews were submitted or expressed during this time period.
 - i. None.
- c. Informal complainants.
 - i. None.

7. Review and Approval of OLAW Semiannual Program Review: The Animal Welfare Regulations require that a minimum of two IACUC members conduct the semiannual program evaluation. The OLAW checklist for the semiannual program evaluation for the period of April 1, 2019 to September 30, 2019 was distributed to the Chairperson and the acting Attending Veterinarian for review.
 - a. The official semiannual report form was distributed to all IACUC members for comment and review (9/25/2019 to 10/14/2019, and submitted to the NWRC Director (Institutional Officer) per OLAW requirements (10/15/2019).
8. Recommendations to the Institutional Officer Regarding any Aspect of the NWRC Animal Program, Facilities or IACUC Training:

a.

(b) (5)

- b. The IO (and management team) was informed of OLAW requirements for semi-annual field inspections for satellite facilities on 7/29/2019 (via e-mail from (b)(6)). OLAW indicated that inspection intervals could potentially be negotiated with the inspector for satellite facilities that do not always have animals. Should the IO and management wish to proceed in this route, the IO (or their designee) should speak with the applicable OLAW inspector. The results of this discussion should then be communicated to the NWRC IACUC.



Prepared by:

(b)(6)

4101 Laporte Avenue

Fort Collins, Colorado 80521-2154

(b)(6)



APPENDIX 1 – FACILITY INSPECTIONS

NWRC Semi-Annual Animal Facility Inspection Report

Site Visited: USDA/APHIS/WS/NWRC
Insular Invasives Field Station, Hilo, Hawaii

Date Inspected: 07/08/2019

Persons Performing Inspection: (b)(6)

Person Responsible for Animal Care at This Facility: (b)(6)

Areas Inspected: See attached checklists

Items Noted: See attached checklists

Significant Deficiencies Noted: None

Minor Deficiencies Noted: None

Deadline for Correction of Deficiencies: N/A

Comments:

- The current census was detailed as:
 - 19 anoles (*Anolis carolinensis*)
 - 9 geckos (*Hemidactylus frenatus*)
- All animal areas looked very clean, orderly, and well maintained.
- No significant or minor deficiencies related to the facilities or the care and use of animals were noted.
- Facility construction, rooms/cages, enclosures, biosecurity, enrichment, outdoor housing, food, water, bedding, sanitation, waste disposal, pest control, weekend care, animal identification, recordkeeping, storage, personnel, cage wash, surgery, and pharmacy all appear to be acceptable and in good order.
- Overall, the entire facility appears to be in good condition, and the animals are adequately cared for. This facility appears to be in compliance with the USDA Animal Welfare Regulations and OLAW Assurance requirements.

1. X Facility is structurally sound. Animal areas separate from personnel areas. Premises clean and repaired sufficient to protect the health of the animals.
Recent improvements to animal rooms have been completed (epoxy floors and painting). Additional improvements being discussed with facilities staff on site during inspection.
2. X Electricity and potable water is reliable and adequate. Wash room and sink available
Water testing pending completion of maintenance.
3. X Indoor temperature, humidity, ventilation, illumination, and noise adequately controlled.
4. X Outdoor housing offers security and protection from the weather, and roundup/restraint procedures.
Not applicable, current outside housing area not in use.
5. X Food and bedding stored to prevent mold, deterioration, contamination, or vermin.
Some food items not dated with receive and expiration dates.
6. X Provisions for the collection, storage, and disposal of waste, bedding, trash and dead animals.
Food items noted in specimen storage freezer. Items will be moved to appropriate freezer.
7. X Sufficient means for identification of animals, cages/pens, and their proper records.
8. X Animals visually checked and accounted for at least once per day, or by best practical means.
9. X Sufficient space for postural and social adjustments with freedom of movement. Environmental enrichment provided as possible.
10. X Animals in same primary enclosure must be compatible or not close enough to cause discomfort.
11. X Specialized space for food preparation. Food receptacles clean and sufficient.
12. X Nutritive and uncontaminated feed appropriate for these species, age, and size. Feed at least once per day unless otherwise professionally practiced.
13. X Water provided ad libitum unless justified.
14. X Excreta removed as necessary (if hosed off, no direct spraying of the animal).
15. X Cages, rooms, and pens cleaned and sanitized with hot water and detergent, steam, or disinfectant. Dirt/gravel cleaned as directed by the Attending Veterinarian. Suitable drainage.
Discussed options for addition of outside sink and hosing area for cleaning large caging. Facilities staff will look into options available for this.
16. X Program for safe and effective control of vermin, insects and parasites.
17. X Sufficient number of adequately trained employees. Supervisor must have background in animal care.

18. X Medical materials properly stored. No expired materials detected.
No medical materials kept on site except for isoflurane and permethrin dust.
19. X Program of veterinary care (attending or consulting veterinarian). Provisions for emergency, weekend, and after-hours access and care. Medical records maintained as necessary.
20. X *Current veterinary contract appears to be adequate for intermittent animal research done on site.*
Proper procedures for quarantine, biosecurity, and disease containment as necessary.
21. X Standard operating procedures for animal handling, maintenance, euthanasia, etc.
22. X Method to report deficiencies in animal care.
Deficiency signs need updating. NWRC AV to provide current version with updated information for the newly hired AV.
23. X Approved protocols are available and being followed as stated.

Major Deficiencies Noted:

None noted

Minor Deficiencies Noted:

None noted

Comments:

It is recommended that all food items are marked with a receive date and expiration date.

It is suggested that specimen freezers be marked as such so food items are not placed in these areas.

Inspectors:

Print Name

(b)(6)

(b)(6)

Date

7/9/2019

NWRC Semi-Annual Animal Facility Inspection Report

Site Visited: USDA/APHIS/WS/NWRC
Mississippi Field Station
Mississippi Field Station PO Box 6099
Mississippi State, MS 39762

Date Inspected: September 25, 2019

Persons Performing Inspection: (b)(6)

Person Responsible for Animal Care at This Facility: (b)(6)

Areas Inspected: See attached checklists

Items Noted: See attached checklists

Significant Deficiencies Noted: None

Minor Deficiencies Noted: None

Deadline for Correction of Deficiencies: NA.

Comments:

- Overall, the entire facility appears to be in good condition. This facility appears to be in compliance with the USDA Animal Welfare Regulations and OLAW Assurance requirements.

1. ☒ Facility is structurally sound. Animal areas separate from personnel areas. Premises clean and repaired sufficient to protect the health of the animals.
2. ☒ Electricity and potable water is reliable and adequate. Wash room and sink available
3. ☒ Indoor temperature, humidity, ventilation, illumination, and noise adequately controlled.
4. ☒ Outdoor housing offers security and protection from the weather, and roundup/restraint procedures.
5. ☒ Food and bedding stored to prevent mold, deterioration, contamination, or vermin.
6. ☒ Provisions for the collection, storage, and disposal of waste, bedding, trash and dead animals.
7. ☒ Sufficient means for identification of animals, cages/pens, and their proper records.
8. ☒ Animals visually checked and accounted for at least once per day, or by best practical means.
9. ☒ Sufficient space for postural and social adjustments with freedom of movement. Environmental enrichment provided as possible.
10. ☒ Animals in same primary enclosure must be compatible or not close enough to cause discomfort.
11. ☒ Specialized space for food preparation. Food receptacles clean and sufficient.
12. ☒ Nutritive and uncontaminated feed appropriate for these species, age, and size. Feed at least once per day unless otherwise professionally practiced.
13. ☒ Water provided ad libitum unless justified.
14. ☒ Excreta removed as necessary (if hosed off, no direct spraying of the animal).
15. ☒ NA Cages, rooms, and pens cleaned and sanitized with hot water and detergent, steam, or disinfectant. Dirt/gravel cleaned as directed by the Attending Veterinarian. Suitable drainage.
16. ☒ Program for safe and effective control of vermin, insects and parasites.
17. ☒ Sufficient number of adequately trained employees. Supervisor must have background in animal care.
18. ☒ Medical materials properly stored. No expired materials detected.

19. ☒ Program of veterinary care (attending or consulting veterinarian). Provisions for emergency, weekend, and after-hours access and care. Medical records maintained as necessary.
20. ☒ Proper procedures for quarantine, biosecurity, and disease containment as necessary.
21. ☒ Standard operating procedures for animal handling, maintenance, euthanasia, etc.
22. ☒ Method to report deficiencies in animal care.
23. ☒ Approved protocols are available and being followed as stated.

Major Deficiencies Noted:

None noted ☒

Minor Deficiencies Noted:

None noted ☒

Comments:

Aviary netting has been replaced July 2019

Inspectors:

(b)(6)

(b)(6)

Date

9/25/19

NWRC Semi-Annual Animal Facility Inspection Report

Site Visited: USDA/APHIS/WS/NWRC
Outdoor Animal Research Facility (OARF)
Animal Research Building (ARB)
Invasive Species Research Building (ISRB)
4101 LaPorte Ave, Fort Collins, CO 80521

Date Inspected: April 16, 2019

Persons Performing Inspection: (b)(6)

Person Responsible for Animal Care at This Facility: (b)(6)

Areas Inspected: See attached checklists

Items Noted: See attached checklists

Significant Deficiencies Noted: None

Minor Deficiencies Noted: 3-year review of standard operating procedures (SOPs) is currently out of date. The NWRC IACUC communicated this issue with the NWRC Quality Assurance unit, which directs the SOP review process, on 4-8-19. This unit is developing a plan to ensure the NWRC IACUC receives the appropriate SOPs for 3-year review by 6-30-2019.

Deadline for Correction of Deficiencies: 12-31-2019.

Comments:

- Overall, the entire facility appears to be in good condition, and the animals are adequately cared for. This facility appears to be in compliance with the USDA Animal Welfare Regulations and OLAW Assurance requirements.
- The current census was detailed as:
 - OARF housed 57 raccoons, 30 skunks, 6 house sparrows, 6 domestic dogs, 12 mallards and 41 red-winged blackbirds
 - ARB housed 48 Wistar rats
 - ISRB housed 133 house mice
- Facility construction, rooms/cages, enclosures, biosecurity, enrichment, outdoor housing, food, water, bedding, sanitation, waste disposal, pest control, weekend care, animal identification, recordkeeping, storage, personnel, cage wash, surgery, pharmacy, and imaging areas all appear to be acceptable and in good order.
 - The minor exception is limited paint peeling on the external structure of

the outdoor aviary, but this is not likely to be an animal welfare issue given the scope of animal work performed in this area.

- It is recommended that certain items in the outdoor facilities be relocated, as they may provide rodent habitat.

Inspector Signatures:
Laurie Baeten

(b)(6)

Digitally signed by (b)(6)

(b)(6) Affiliate)

Date: 2019.05.02 09:36:38 -06'00'

(b)(6)

(b)(6)

Digitally signed by (b)(6)

Date: 2019.05.02 09:13:40 -06'00'

(b)(6)

Digitally signed by (b)(6)

(b)(6)

Date: 2019.05.02 09:15:19 -06'00'

NWRC IACUC Inspection Checklist

Locations:

ARB

ISRB

OARF

Date:

4/16/19

1. ☒ Facility is structurally sound. Animal areas separate from personnel areas. Premises clean and repaired sufficient to protect the health of the animals.
2. ☒ Electricity and potable water is reliable and adequate. Wash room and sink available
3. ☒ Indoor temperature, humidity, ventilation, illumination, and noise adequately controlled.
4. ☒ Outdoor housing offers security and protection from the weather, and roundup/restraint procedures.
5. ☒ Food and bedding stored to prevent mold, deterioration, contamination, or vermin.
6. ☒ Provisions for the collection, storage, and disposal of waste, bedding, trash and dead animals.
7. ☒ Sufficient means for identification of animals, cages/pens, and their proper records.
8. ☒ Animals visually checked and accounted for at least once per day, or by best practical means.
9. ☒ Sufficient space for postural and social adjustments with freedom of movement. Environmental enrichment provided as possible.
10. ☒ Animals in same primary enclosure must be compatible or not close enough to cause discomfort.
11. ☒ Specialized space for food preparation. Food receptacles clean and sufficient.
12. ☒ Nutritive and uncontaminated feed appropriate for these species, age, and size. Feed at least once per day unless otherwise professionally practiced.
13. ☒ Water provided ad libitum unless justified.
14. ☒ Excreta removed as necessary (if hosed off, no direct spraying of the animal).
15. ☒ Cages, rooms, and pens cleaned and sanitized with hot water and detergent, steam, or disinfectant. Dirt/gravel cleaned as directed by the Attending Veterinarian. Suitable drainage.
16. ☒ Program for safe and effective control of vermin, insects and parasites.
17. ☒ Sufficient number of adequately trained employees. Supervisor must have background in animal care.
18. ☒ Medical materials properly stored. No expired materials detected.

19. ☒ Program of veterinary care (attending or consulting veterinarian). Provisions for emergency, weekend, and after-hours access and care. Medical records maintained as necessary.
20. ☒ Proper procedures for quarantine, biosecurity, and disease containment as necessary.
21. ☒ Standard operating procedures for animal handling, maintenance, euthanasia, etc. *needs to be reviewed*
22. ☒ Method to report deficiencies in animal care.
23. ☒ Approved protocols are available and being followed as stated.

Major Deficiencies Noted:

None

Minor Deficiencies Noted:

- Paint peeling in outdoor animal housing.
- Repair equipment that provides animal habitat in outdoor facilities

Comments:

Inspectors:

Print Name

(b)(6)

(b)(6)

Date

4/16/19

NWRC IACUC Inspection Checklist

Locations: ARB ISRB OARF Date: 4-16-11

1. (b)(6) Facility is structurally sound. Animal areas separate from personnel areas. Premises clean and repaired sufficient to protect the health of the animals.
2. Electricity and potable water is reliable and adequate. Wash room and sink available
3. Indoor temperature, humidity, ventilation, illumination, and noise adequately controlled. *→ previous inspection indicated issue with animal level in vivarium*
4. Outdoor housing offers security and protection from the weather, and roundup/restraint procedures.
5. Food and bedding stored to prevent mold, deterioration, contamination, or vermin.
6. Provisions for the collection, storage, and disposal of waste, bedding, trash and dead animals.
7. Sufficient means for identification of animals, cages/pens, and their proper records.
8. Animals visually checked and accounted for at least once per day, or by best practical means.
9. Sufficient space for postural and social adjustments with freedom of movement. Environmental enrichment provided as possible. *→ some nice exhibiting typical behaviors but this is relatively common*
10. Animals in same primary enclosure must be compatible or not close enough to cause discomfort.
11. Specialized space for food preparation. Food receptacles clean and sufficient.
12. Nutritive and uncontaminated feed appropriate for these species, age, and size. Feed at least once per day unless otherwise professionally practiced.
13. Water provided ad libitum unless justified.
14. Excreta removed as necessary (if hosed off, no direct spraying of the animal).
15. Cages, rooms, and pens cleaned and sanitized with hot water and detergent, steam, or disinfectant. Dirt/gravel cleaned as directed by the Attending Veterinarian. Suitable drainage.
16. Program for safe and effective control of vermin, insects and parasites. *→ not just fruit flies evidence of rodent intrusion*
17. Sufficient number of adequately trained employees. Supervisor must have background in animal care.
18. Medical materials properly stored. No expired materials detected.

19. (b)(6) Program of veterinary care (attending or consulting veterinarian). Provisions for emergency, weekend, and after-hours access and care. Medical records maintained as necessary.
20. Proper procedures for quarantine, biosecurity, and disease containment as necessary.
21. Standard operating procedures for animal handling, maintenance, euthanasia, etc.
22. Method to report deficiencies in animal care. ↳ 3-year review has not been routinely performed
23. Approved protocols are available and being followed as stated. ↳ Communication with operations / study niches
↳ what is subject to review

Major Deficiencies Noted:

None

Minor Deficiencies Noted:

None

Comments:

- Potential reporting with injury to dog
- Move clutter from outdoor facilities

Inspectors:

Print Name

(b)(6)

(b)(6)

Date

4-16-19

Date: May 24, 2019

NWRC Annual Animal Facility Inspection Report

Site Visited: USDA/APHIS/WS/NWRC
Invasive/Bird Populations Field Station
Gainesville, FL 32641

Date Inspected: May 15, 2019

Persons Performing Inspection: (b)(6)

Person Responsible for Animal Care at This Facility: (b)(6)

Areas Inspected: All areas including laboratory spaces

Items Noted: See comments below

Significant Deficiencies Noted: None

Minor Deficiencies Noted: None

Deadline for Correction of Deficiencies: N/A

Comments:

- A total of 25 monk parakeets, 7 black vultures, 1 turkey vulture, and 14 Argentine tegus are currently housed at the facility in outdoor enclosures. Three Burmese pythons are housed in the quarantine room.
- The inspection was conducted using NWRC Semi-annual Field Station Inspection Checklist with reference to the Office of Laboratory Animal Welfare (OLAW) Semiannual Facility Inspection Checklist (v3/8/2012).
- No significant deficiencies related to the facilities or the care and use of animals were noted.
- Water test pending on well water used in the outdoor facilities.
- All animal areas observed looked clean, orderly, and well maintained.
- Upcoming maintenance plans were discussed for the unused aviary building (leaking roof) and Quonset hut caging (caging is reaching the end of its life span).
- Overall, the areas of the facility that were observed appear to be in good condition, and the animals are adequately cared for. This facility appears to be in compliance with the USDA Animal Welfare Regulations and OLAW Assurance requirements.

Inspector Signatures:

(b)(6)

5/21/19
Date

(b)(6)

5/23/19
Date

NWRC IACUC Inspection Checklist

Field Station: Gainesville, FL

Date: 5/15/2019

1. X Facility is structurally sound. Animal areas separate from personnel areas. Premises clean and repaired sufficient to protect the health of the animals.
2. X Electricity and potable water is reliable and adequate. Wash room and sink available
3. X Indoor temperature, humidity, ventilation, illumination, and noise adequately controlled.
4. X Outdoor housing offers security and protection from the weather, and roundup/restraint procedures.
5. X Food and bedding stored to prevent mold, deterioration, contamination, or vermin.
6. X Provisions for the collection, storage, and disposal of waste, bedding, trash and dead animals.
7. X Sufficient means for identification of animals, cages/pens, and their proper records.
8. X Animals visually checked and accounted for at least once per day, or by best practical means.
9. X Sufficient space for postural and social adjustments with freedom of movement. Environmental enrichment provided as possible.
10. X Animals in same primary enclosure must be compatible or not close enough to cause discomfort.
11. X Specialized space for food preparation. Food receptacles clean and sufficient.
12. X Nutritive and uncontaminated feed appropriate for these species, age, and size. Feed at least once per day unless otherwise professionally practiced.
13. X Water provided ad libitum unless justified.
14. X Excreta removed as necessary (if hosed off, no direct spraying of the animal).
15. X Cages, rooms, and pens cleaned and sanitized with hot water and detergent, steam, or disinfectant. Dirt/gravel cleaned as directed by the Attending Veterinarian. Suitable drainage.
16. X Program for safe and effective control of vermin, insects and parasites.
17. X Sufficient number of adequately trained employees. Supervisor must have background in animal care.
18. X Medical materials properly stored. No expired materials detected.

19. X Program of veterinary care (attending or consulting veterinarian). Provisions for emergency, weekend, and after-hours access and care. Medical records maintained as necessary.
20. X Proper procedures for quarantine, biosecurity, and disease containment as necessary.
21. X Standard operating procedures for animal handling, maintenance, euthanasia, etc.
22. X Method to report deficiencies in animal care.
23. X Approved protocols are available and being followed as stated.

Major Deficiencies Noted:

None noted

Minor Deficiencies Noted:

None noted

Comments:

1. Discussed plans for swamp pen improvements that are being budgeted. Use of these pens since last inspection has been minimized.
2. Watertesting is pending. Plans are being developed to improve hand washing station availability in outside animal enclosures and the 'quarantine room' area.
18. The FFS only has triple antibiotics on hand. AV to consider and provide other emergency medications to have on hand based upon the current species in use.
19. Improvements in communication on morbidity/mortality events with NWRC AV are suggested. Development of a reprieve/contract with a local veterinarian is highly encouraged to handle emergency situations and streamline acquisition of medical supplies.
20. Excellent training in biosafety/biosecurity provided to staff by H. Sullivan. This enhanced discussions for improvements to quarantine, biosecurity and disease containment protocols.
22. Updated signage will be provided by FC NWRC AC staff when new AV phone numbers are available.

Inspectors:

Print Name

(b)(6)

(b)(6)

Date

5/15/2019

5/29/19

NWRC Semi-Annual Animal Facility Inspection Report

Site Visited: USDA/APHIS/WS/NWRC
Predator Research Field Station, Millville, UT

Date Inspected: 07/010/2019 & 7/11/2019

Persons Performing Inspection (b)(6)

Person Responsible for Animal Care at This Facility: (b)(6)

Areas Inspected: See attached checklists

Items Noted: See attached checklists

Significant Deficiencies Noted: None

Minor Deficiencies Noted: None

Deadline for Correction of Deficiencies: N/A

Comments:

- The current census was detailed as:
 - 96 adult coyotes
 - 19 juvenile coyotes
 - 2 juvenile bears
- All animal areas looked very clean, orderly, and well maintained.
- No significant or minor deficiencies related to the facilities or the care and use of animals were noted.
- Facility construction, rooms/cages, enclosures, biosecurity, enrichment, outdoor housing, food, water, bedding, sanitation, waste disposal, pest control, weekend care, animal identification, recordkeeping, storage, personnel, cage wash, surgery, and pharmacy all appear to be acceptable and in good order.
- Overall, the entire facility appears to be in good condition, and the animals are adequately cared for. This facility appears to be in compliance with the USDA Animal Welfare Regulations and OLAW Assurance requirements.

NWRC IACUC Inspection Checklist

Field Station: Predator Research, Utah

Date: 7/10/2019
& 7/11/2019

1. X Facility is structurally sound. Animal areas separate from personnel areas. Premises clean and repaired sufficient to protect the health of the animals.
2. X Electricity and potable water is reliable and adequate. Wash room and sink available
Office and Animal Care building taps were tested and reported to be clear of coliforms and E.coli. Pie pen hydrant tested positive for coliforms (but negative for E. coli). All systems tested 7/2/19. System will be flushed and retested.
3. X Indoor temperature, humidity, ventilation, illumination, and noise adequately controlled.
4. X Outdoor housing offers security and protection from the weather, and roundup/restraint procedures.
5. X Food and bedding stored to prevent mold, deterioration, contamination, or vermin.
6. X Provisions for the collection, storage, and disposal of waste, bedding, trash and dead animals.
7. X Sufficient means for identification of animals, cages/pens, and their proper records.
8. X Animals visually checked and accounted for at least once per day, or by best practical means.
9. X Sufficient space for postural and social adjustments with freedom of movement. Environmental enrichment provided as possible.
10. X Animals in same primary enclosure must be compatible or not close enough to cause discomfort.
11. X Specialized space for food preparation. Food receptacles clean and sufficient.
12. X Nutritive and uncontaminated feed appropriate for these species, age, and size. Feed at least once per day unless otherwise professionally practiced.
13. X Water provided ad libitum unless justified.
14. X Excreta removed as necessary (if hosed off, no direct spraying of the animal).
15. X Cages, rooms, and pens cleaned and sanitized with hot water and detergent, steam, or disinfectant. Dirt/gravel cleaned as directed by the Attending Veterinarian. Suitable drainage.
16. X Program for safe and effective control of vermin, insects and parasites.

17. ☒ Sufficient number of adequately trained employees. Supervisor must have background in animal care.
18. ☒ Medical materials properly stored. No expired materials detected.
One bottle of expired drug was found on shelf in animal care building but not in current use (carprofen, expired 11/18).
19. ☒ Program of veterinary care (attending or consulting veterinarian). Provisions for emergency, weekend, and after-hours access and care. Medical records maintained as necessary.
Discussed current veterinary care contract. Services continue to be adequate. Medical records are maintained in excellent fashion.
20. ☒ Proper procedures for quarantine, biosecurity, and disease containment as necessary.
Discussed current vaccination program and review of processes is suggested. NWRC AV to evaluate current canine vaccination guidelines and make recommendations.
21. ☒ Standard operating procedures for animal handling, maintenance, euthanasia, etc.
NWRC AV to follow up with IACUC chair on triannual SOP reviews that might be needed.
22. ☒ Method to report deficiencies in animal care.
NWRC AV to provide updated deficiency signage. Additional NWRC AV contact information was recently included in NWRC facilities signage to reflect permanent status of the AV position in May 2019.
23. ☒ Approved protocols are available and being followed as stated.
Past approval monitoring was performed on the two active protocols. See PAM reports for QA-2967 and 3051.

Major Deficiencies Noted:

None noted

Minor Deficiencies Noted:

None noted

Comments:

One container of yogurt was found in the freezer (enrichment item) without a receive date.

This item, located in the animal care building was disposed of.

All other enrichment items in the animal care building were found to be dated correctly.

Inspectors:

Print Name

(b)(6)

(b)(6)

Date

7/12/2019

7/12/2019



Date: April 15, 2019

To: Dr. Larry Clark
NWRC Director; Institutional Officer

From: NWRC Institutional Animal Care and Use Committee

RE: OLAW Semiannual Report: Program Review and Facility Inspections

The following is the detailed semiannual program review report of the USDA/APHIS/WS/National Wildlife Research Center's Animal Care and Use program for the period of **October 1, 2018 to March 31, 2019**.

In accordance with the USDA/APHIS Animal Welfare Regulations (9 CFR 2.31) and as required by the Public Health Service (PHS) Policy on Humane Care and Use of Laboratory Animals (Section IV.B.1.3.) the Institutional Animal Care and Use Committee (IACUC) must review, at least every six months, the research facility's program for the humane care and use of animals. Included in this evaluation are the reports of the semiannual inspections of NWRC animal facilities, important notes from any meetings or Committee actions conducted during this time period.

Composition of the NWRC IACUC:

Members of the NWRC IACUC are appointed to serve a three year term, with the exception of the Chairperson and the Attending Veterinarian who are appointed indefinitely. The following is the list of the members who currently serve on the Committee along with their appointment dates:

- (b)(6) **Chairperson** (appointed October 2018)
- (b)(6) **Attending Veterinarian** (appointed October 2018)
- (b)(6) **Non-scientist** (appointed February 2013, extended to January 2020)
- (b)(6) **, Non-affiliated member** (appointed April 2017, ends May 2020)
- (b)(6) **, Scientist** (appointed March 2015, extended March 2021)
- (b)(6) **, Scientist** (appointed August 2013, extended indefinitely)
- (b)(6) **, Scientist** (appointed March 2017, ends March 2020)
- (b)(6) **, Scientist** (appointed October 2018, ends October 2021)
- (b)(6) **, Scientist** (appointed January 2018, ends February 2021)

Activities of NWRC Institution's Program for Animal Care and Use:

Proposed activities involving the care and use of animals are distributed to members of the NWRC IACUC by email by NWRC's QA Unit for review. IACUC members return their questions, comments or suggested edits to the Chairperson for compilation. If any IACUC member identifies significant animal welfare issues, then a Committee meeting is convened to discuss the protocol as a group. The Chairperson interacts with the Study Director and serves as the final reviewer to ensure all IACUC concerns are adequately addressed by the Study Director prior to approval of the final study protocol. Proposed changes to on-going activities (Protocol

Amendments) which are not considered to be significant with regards to animal welfare are reviewed and approved by the Chairperson and the Attending Veterinarian. If proposed changes are determined to be significant, amendments are sent to the entire NWRC IACUC for review prior to approval. Annual and Three year Protocol Reviews are sent to the Study Director based upon the study start date and returned to the Chairperson for review.

IACUC Activity Summaries:

1. Protocol and SOP Review. During this time period, the following tasks were submitted to the NWRC IACUC for review and approval.
 - a. 20 New Study Protocols
 - b. 35 Protocol Amendments
 - c. 56 Annual Protocol Reviews
 - d. 7 Standard Operating Procedures
 - e. 0 Three-year SOP Reviews
2. Training. The Collaborative Institute Training Initiative (CITI) online program was renewed for use by NWRC personnel in FY19. Starting in 2017, the two year IACUC refresher training requirement was implemented.
 - a. Between October 1, 2018 and March 31, 2019, 20 individuals completed a total of 44 IACUC training modules in the CITI program.
3. Meetings.
 - a. Two Committee meetings were held: 12/20/2018 and 3/4/2019.
4. Inspections of NWRC Animal Facilities. NWRC facilities which house mammals are required to be inspected every six months in accordance with the USDA Animal Welfare Regulations. NWRC facilities which house birds or other vertebrates will be inspected whenever possible until the Animal Welfare Regulations are revised to specify new requirements for these species. No compliance issues were identified during this time period.
 - a. Mississippi Field Station inspected by (b)(6) on 10/3/2018
 - b. The NWRC Outdoor Animal Research facility, Animal Research building, and Invasive Species Research buildings (Fort Collins, CO) was inspected by (b)(6) on 10/4/2018.
 - c. The NWRC North Dakota Field Station is inspected by the North Dakota State University IACUC.
 - d. The Predator Research Facility, Millville, UT, was not inspected. This should have been performed in January, 2019, but was impacted by the partial U.S. government shutdown. It is recommended that the IACUC perform an inspection of this facility as soon as possible in FY19.
 - e. The Florida Field Station has not been inspected recently (no mammals at facility); however an inspection is scheduled for May 2019.
 - f. The Ohio Field Station performs seasonal avian studies, inspection recommended in FY19.
 - g. The Hawaii Field Station performs seasonal work, with most mammalian studies having already completed. This station was last inspected in March 2018, inspection recommended in FY19.
5. Post-approval Monitoring Performed (Study and Date).

- a. QA-2809, 10/15/2018
- b. QA-2924, 10/3/2018
- c. QA-2955, 10/9/2018
- d. QA-2995, 2/5/2019 and 2/6/2019
- e. QA-3018, 10/19/2018

6. Animal Care and Use Concerns or Reports of Non-compliance.

- a. Major concerns or reports involving non-compliance during this period.

i.

(b) (5), (b) (7)(C)

- b. Minority reviews were submitted or expressed during this time period.

i. None.

- c. Informal complainants.

i.

(b) (5), (b) (7)(C)

7. Review and Approval of OLAW Semiannual Program Review: The Animal Welfare Regulations require that a minimum of two IACUC members conduct the semiannual program evaluation. The OLAW checklist for the semiannual program evaluation for the period of October 1, 2018 to March, 31, 2019 was distributed to the Chairperson and the acting Attending Veterinarian for review.

- a. The official semiannual report form was distributed to the IACUC members for comment and review (4/5/2019 to 4/12/2019), and submitted to the NWRC Director (Institutional Officer) per OLAW requirements (4/15/2019).

8. Recommendations to the Institutional Officer Regarding any Aspect of the NWRC Animal Program, Facilities or IACUC Training:

- a. No recommendations are suggested during this time period.

(b)(6)

4101 Laporte Avenue
Fort Collins, Colorado 80521-2154

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Digitally signed by

(b)(6)

Date: 2019.04.15
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