

POLICY ON THE HUMANE CARE AND USE OF VERTEBRATES IN RESEARCH AND TEACHING

Responsible Office: Grants and Sponsored Projects
Responsible Official: University Director, Grants
and Sponsored Projects

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I. Policy Statement

This policy covers the use of vertebrates (i.e., fishes, amphibians, reptiles, birds, and mammals) for research and teaching at Fairleigh Dickinson University (FDU). It addresses animal welfare with respect to compliance with federal and state legislation, the role of the Institutional Animal Care and Use Committee, animal acquisition and maintenance, animal care and use, and implications for funding and publication in peer-reviewed journals.

II. Federal compliance

All research and teaching exercises conducted with vertebrates at FDU must be in compliance with all applicable federal laws. The dominant piece of legislation governing such use of vertebrates is the Animal Welfare Act (AWA). The AWA specifies humane standards for the care of certain “warm-blooded” vertebrates (e.g., dogs, cats, monkeys, guinea pigs, hamsters, rabbits, some mice and rats, etc.). The AWA also requires the establishment of an Institutional Animal Care and Use Committee (IACUC) to oversee the ethical care of “warm-blooded” laboratory animals and to ensure the maintenance of adequate facilities for regulated animals. All *non-mammalian vertebrates* (i.e., fishes, amphibians, reptiles, and birds) are exempted from the AWA. However, research involving endangered species and many birds requires federally-issued permits (under the authority of the Endangered Species Act and Migratory Bird Treaty Act).

In addition, all work with vertebrates funded by the Public Health Service (PHS), under the authority of the Health Research Extension Act, requires an animal welfare assurance approved by the NIH’s Office of Laboratory Animal Welfare (OLAW). The purpose of obtaining an animal welfare assurance is to document the establishment of an IACUC and verify compliance with the National Research Council’s *Guide for the Care and Use of Laboratory Animals* for all PHS-funded vertebrate activities. PHS funding agencies include, but are not limited to, the National Institutes of Health (NIH), the Centers for Disease Control and Prevention (CDC), and the Food and Drug Administration (FDA). Research or teaching activities that are not funded by PHS are not regulated by PHS Policy. Neither the AWA nor PHS Policy applies to work with invertebrates.

III. State compliance

All research and teaching exercises conducted with vertebrates at FDU must also be in compliance with all applicable state laws. The New Jersey Department of Environmental Protection (NJDEP) regulates the use of fishes and non-game and exotic wildlife in scientific research within the state, requiring Scientific Collecting Permits for the field collection of freshwater and marine/estuarine fishes, and Scientific Collecting Permits and/or Scientific

Holding Permits for the field collection and laboratory possession, respectively, of non-game and exotic wildlife species (definitions: “non-game” wildlife species are defined as any non-endangered wildlife species indigenous to New Jersey for which a legal hunting or trapping season has not been established; “exotic” wildlife species are defined as any non-game species of vertebrate not indigenous to New Jersey). The purpose of such regulations is to prevent overharvesting of native vertebrates and to document the occurrence, and prevent the spread of, non-native species. Field collection of all native, non-game fishes, amphibians, reptiles, birds, and mammals for scientific research requires a valid Scientific Collecting Permit, under the authority of the New Jersey Endangered and Nongame Species Conservation Act. Except for certain exempt species identified by the NJDEP, laboratory possession of most native and non-native amphibians, reptiles, birds, and mammals also requires a valid Scientific Holding Permit; possession of fishes does not require a Scientific Holding permit. For the possession of non-game and exotic wildlife, Scientific Holding Permit approval by the NJDEP requires the contact information (name, address, and phone number) of a veterinarian who will be able to provide care for the non-game or exotic species possessed, and gives NJDEP personnel the authority to periodically inspect permitted animals and housing facilities to verify compliance with permit criteria (as set forth in N.J.A.C. 7:25-4.7). Animals may also be scientifically-collected in other states for use in laboratory research in New Jersey; in such cases, all relevant collecting permits from those states are required, in addition to any appropriate New Jersey Scientific Holding Permit. Game birds (including pheasant, chukar, quail, grouse, wild turkey, waterfowl, certain migratory birds, and crows) are subject to a distinct set of state regulations with which the investigator must comply.

IV. **Role of the IACUC**

As per PHS policy, the FDU IACUC shall consist of a minimum of five members, including an Attending Veterinarian, a practicing scientist with experience in animal research, a non-scientist, and a public member from outside the institution. The committee will meet at least biannually to review research protocols; to inspect all facilities where live vertebrates are housed using the *Guide for the Care and Use of Laboratory Animals: Eighth Edition*, as well as taxon-specific guidelines produced by professional societies, as a basis for evaluation; and to review any animal welfare concerns. The IACUC has the authority to suspend any research or teaching activity involving vertebrates that deviates from an approved protocol or fails to meet animal welfare standards. Reports of IACUC evaluations will be submitted by the IACUC Chair to the Institutional Official (IO, University Provost/VPAA) at least once every 6 months and made available to OLAW upon request. The IO and the IACUC will additionally fulfill reporting requirements to relevant agencies when required by federal regulations at least once every 12 months. The IACUC will generate all relevant reports to be reviewed and signed by the IO prior to submission.

V. **Acquisition and Maintenance of Animals**

All animals used in research and teaching at FDU shall be owned by the University, whether purchased or collected from the field in accordance with federal and state laws and as approved by the University. Furthermore, study animals should be selected such that they may be humanely housed and cared for using existing University facilities and equipment.

Animal acquisition, and ongoing housing and feeding costs, are to be pre-approved for coverage by the Department Chair or School Director.

VI. Animal Care and Use

All animal care and use procedures are subject to IACUC review and approval. Furthermore, all animal care and use procedures should be in accordance with taxon-specific guidelines for fishes, amphibians, reptiles, birds, and mammals (see references in Section IX below), and should include a means for euthanasia of unhealthy animals in accordance with American Veterinary Medical Association (AVMA) guidelines. As part of the IACUC protocol review process, the faculty investigator shall disclose all competencies and training received that conform with AVMA guidelines for the humane care of vertebrates. The IACUC is to review and approve the investigator's qualifications. In addition, each faculty member engaged in the care and use of vertebrates is required to complete online training in Collaborative Institutional Training Initiative (CITI) and provide a certificate of completion to the IACUC as part of the protocol review process. The training certification shall be valid for a period of three years, at which time the faculty investigator must be re-certified. The faculty investigator must consult with the Attending Veterinarian should any animals appear unhealthy or experience unanticipated pain/distress. Alternatively, AVMA-approved forms of euthanasia may be used as a humane and cost-effective alternative to seeking veterinary treatment for animals that appear unhealthy (note: euthanasia of unhealthy or injured research animals is approved under N.J.A.C. 7:25 4.11). Forms of euthanasia may only deviate from AVMA-approved methods when scientifically justified by the investigator and approved by the IACUC.

VII. Implications for funding and publication

The establishment of an IACUC at FDU enables faculty to apply for grants funded by the PHS and other federal agencies that adopt PHS policy. For example, the National Science Foundation (NSF), though not a PHS funding agency, also requires compliance with PHS Policy for NSF-funded animal activities. For such grants, the FDU IACUC must review and approve grant applications before the grant is awarded, and the University will maintain an assurance with OLAW if federal funding is secured. Maintaining an OLAW assurance will necessitate working with Facilities to develop a simple disaster plan for vertebrates housed on campus, and developing an Occupational Health and Safety Program (OHSP) that protects anyone working in the lab or field with vertebrates.

In addition, many peer-reviewed journals require IACUC approval for laboratory and field studies involving vertebrates.

VIII. Preparing an Animal Use Protocol and Permit Applications

Any full-time faculty member of the University seeking to use vertebrates in research and/or teaching must submit an Animal Use Protocol Review Form for approval by the IACUC. The completed Protocol Review Form will include mandatory sections documenting the following: the proposed vertebrate species and numbers of individuals to be used; a protocol narrative justifying the research or teaching activity (see next paragraph) and explaining in detail the proposed housing conditions and procedures and techniques,

including euthanasia methods; projected annual housing and feeding costs; training and experience with the proposed procedures and techniques described in the protocol; compliance with federal and state permitting regulations; and completion of appropriate CITI training modules. The FDU IACUC's Animal Use Protocol Review Form may be obtained by contacting the FDU IACUC Chair. Research protocols may be approved for a maximum of three years (but may be approved for shorter periods and/or subjected to annual review, at the discretion of the IACUC). Work on the procedures described in the protocol may not commence until a Notice of Approval is issued by the IACUC. Any proposed changes to an approved protocol must be reviewed and approved by the IACUC prior to implementation. To continue a project beyond the three-year approval period, it is the responsibility of the investigator to submit a new protocol and receive approval prior to the original expiration date to avoid an interruption in the research. Contact information for reporting animal welfare concerns must be posted in all animal facilities, and appropriate signage can be obtained by contacting the IACUC Chair. For teaching protocols, the investigator must submit the protocol to the Department Chair or School Director for review prior to submitting to the IACUC for review. Any initial or renewal permit applications required by federal or state law must also be pre-approved and retained on file by the Department Chair or School Director.

For proposed activities involving non-game or exotic wildlife, a justification must be provided as to why use of a state-regulated non-game or exotic species has been chosen over a species of unregulated vertebrate. A statement documenting the value of the use of the proposed vertebrate(s) in research and/or teaching must also be included (for example, how does the use of these animals benefit the faculty member's research program, mentoring of undergraduates in research, and/or undergraduate education in a teaching laboratory?).

Faculty are referred to Section IX for publication references and Section X for permit applications.

IX. Recommended reading and references

Federal Legislation

Animal Welfare Act. United States Code, 2009 edition, Title 7, Chapter 54.
(<http://www.gpo.gov/fdsys/pkg/USCODE-2009-title7/pdf/USCODE-2009-title7-chap54.pdf>)

Office of Laboratory Animal Welfare. 2015. Public Health Service Policy on Humane Care and Use of Laboratory Animals.
(<http://grants.nih.gov/grants/olaw/references/PHSPolicyLabAnimals.pdf>)

National Research Council. 2010. Guide for the Care and Use of Laboratory Animals, 8th Ed. (<http://grants.nih.gov/grants/olaw/Guide-for-the-care-and-use-of-Laboratory-animals.pdf>)

State Legislation

New Jersey Department of Environmental Protection. 2008. New Jersey Endangered and Nongame Species Conservation Act (N.J.S.A. 23:2A-1–15).
(http://www.animallaw.info/statutes/stusnj23_2A.htm)

New Jersey Department of Environmental Protection. 1995. N.J. Regulations – Possession of Nongame & Exotic Wildlife (N.J.A.C. 7:25-4.1–4.20). (<http://www.state.nj.us/dep/fgw/pdf/permregs.pdf>)

Taxon-specific Guidelines

Nickum JG, HL Bart Jr, PR Bowser, IE Greer, C Hubbs, JA Jenkins, JR MacMillan, JW Rachlin, JD Rose, PW Sorensen, and JR Tomasso. 2004. Guidelines for the use of fishes in research. Use of Fishes in Research Committee of the American Fisheries Society, American Institute of Fishery Research Biologists, and American Society of Ichthyologists and Herpetologists.
(http://fisheries.org/docs/policy_useoffishes.pdf)

Beaupre SJ, ER Jacobson, HB Lillywhite, and K Zamudio. 2004. Guidelines for use of live amphibians and reptiles in field and laboratory research, second edition. Herpetological Animal Care and Use Committee (HACC) of the American Society of Ichthyologists and Herpetologists.
(https://www.asih.org/s/IACUC_GuidelinesforUseofAmphibsReptiles2004.pdf)

Fair JM, E Paul, J Jones, AB Clark, C Davie, and G Kaiser. 2010. Guidelines to the use of wild birds in research, third edition. The Ornithological Council.
(<https://birdnet.org/info-for-ornithologists/guidelines-english-3rd-edition-2010/>)

Sikes RS and the Animal Care and Use Committee of the American Society of Mammalogists. 2016. 2016 Guidelines of the American Society of Mammalogists for the use of wild mammals in research and education.
(http://www.mammalogy.org/uploads/committee_files/CurrentGuidelines.pdf)

Sikes RS, E Paul, and SJ Beupre. 2012. Standards for wildlife research: taxon-specific guidelines versus US Public Health Service policy. *BioScience* 62:830-834. ([http://www.mammalsociety.org/uploads/committee_files/Sikes%20et%20al%202012%20\(BioScience\).pdf](http://www.mammalsociety.org/uploads/committee_files/Sikes%20et%20al%202012%20(BioScience).pdf))

American Veterinary Medical Association. 2020. AVMA guidelines on euthanasia. (<https://www.avma.org/resources-tools/avma-policies/avma-guidelines-euthanasia-animals>)

X. **Permit Applications**

Permit applications may be obtained by contacting the appropriate federal or state agency. For the state of New Jersey, exotic and non-game wildlife permit applications may be obtained at the following link: [NJDEP Division of Fish & Wildlife - Exotic and Nongame Wildlife Permit Applications \(state.nj.us\)](https://www.nj.gov/dep/wildlife/permits/)