

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

Responsible Office: Grants and Sponsored Projects Effective Date: February 28, 2013
Responsible Official: University Director, Grants and Sponsored Projects Last Revision:

I. Policy Statement

This policy covers the use of non-mammalian vertebrates (i.e., fishes, amphibians, reptiles, and birds) for research and teaching at Fairleigh Dickinson University (FDU). It addresses animal welfare with respect to compliance with federal and state legislation, acquisition and maintenance, animal care and use, and implications for funding and publication in peer-reviewed journals. Mammals (such as mice and rats) are specifically not included in the plan below, and are not currently being considered for use in research or teaching.

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.

In summary, the establishment and maintenance of an IACUC is not mandated by federal law for research and/or teaching involving fishes, amphibians, reptiles, or birds at FDU, unless those activities are funded by PHS. Furthermore, 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, and birds 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, and birds 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, and are not considered for scientific research herein.

IV. Acquisition and Maintenance

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.

V. Animal Care and Use

All animal care and use procedures should be in accordance with taxon-specific guidelines for fishes, amphibians, reptiles, and birds (see references in Section G below), and should include a means for euthanasia of unhealthy animals in accordance with American Veterinary Medical Association (AVMA) guidelines. The faculty investigator shall disclose all competencies and training received that conform with AVMA guidelines for the humane care of non-mammalian vertebrates. The Department Chair or School Director is to review and approve the investigator’s qualifications and determine if and when veterinary consult is required. In addition, each faculty member engaged in the care and use of non-mammalian vertebrates is required to complete online training in Collaborative Institutional Training Initiative and

provide a certificate of completion to the Department Chair or School Director and Grants and Sponsored Projects for record retention. The training certification shall be valid for a period of three years, at which time the faculty investigator must be re-certified. 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).

VI. Implications for funding and publication

The lack of an IACUC (OLAW-assured or otherwise) at FDU has important implications for faculty, namely the inability to apply for grants funded by the PHS. In addition, the National Science Foundation (NSF), though not a PHS funding agency, also requires compliance with PHS Policy for NSF-funded animal activities. Furthermore, peer-reviewed journals vary in their guidelines concerning the use of vertebrates in research, with many journals requiring IACUC approval for laboratory and field studies involving vertebrates. Faculty working with vertebrates at FDU will be restricted to submitting their work to journals mandating compliance with federal and state regulations but not explicitly requiring IACUC approval (e.g., Journal of Comparative Physiology B, Ecotoxicology, Journal of Ornithology). Faculty are also encouraged to contact journal editors to determine if they are willing to make exceptions for institutions that lack an IACUC but are able to demonstrate adherence to taxon-specific guidelines for the ethical care and use of vertebrates in research.

VII. Preparing an Animal Use Plan and Permit Applications

Any full-time faculty member of the University seeking to use non-mammalian vertebrates in research and/or teaching must submit an Animal Use Plan for approval by the Department Chair or School Director, College Dean and submission to the Grants and Sponsored Projects Office. The Plan must specify how compliance with sections A through D of the above plan will be met. This is considered a one-time application unless any changes are made to the animal plan, such as the requirement of new permits, changes in the species or numbers of animals from those included in previous requests, method of euthanasia, etc. Any initial or renewal permit applications required by federal or state law must 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 non-mammalian vertebrate. A statement documenting the value of the use of the proposed non-mammalian 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 G for publication references and Section H for NJ/NY permit applications. Faculty must contact their Department Chair or School Director about additional requirements and documentation.

VIII. 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. 2002. 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. (<http://www.asih.org/files/hacc-final.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.
(<http://www.nmnh.si.edu/BIRDNET/guide/index.html>)

Sikes RS, E Paul, and SJ Beaupre. 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. 2007. AVMA guidelines on

euthanasia.

(<https://www.avma.org/KB/Policies/Documents/euthanasia.pdf>)

IX. **Licensure and Permit Applications**

The following Animal Use form and relevant state permit applications are available on the Grants and Sponsored Projects website.

- 1) The FDU Animal Use Plan memo should be used as a faculty template
- 2) NJDEP Scientific Collecting Permit Application for Freshwater
- 3) NJDEP Scientific Collecting Permit Application for Marine Waters
- 4) NJDEP Scientific Collecting Permit Application for Exotic and Nongame Wildlife
- 5) NJDEP Scientific Collecting Permit Renewal Application for Exotic and Nongame Wildlife
- 6) NJDEP Scientific Holding Permit Application for Exotic and Nongame Wildlife
- 7) NJDEP Scientific Holding Permit Renewal Application for Exotic and Nongame Wildlife
- 8) New York State Department of Environmental Conservation License to Collect
or
- 9) Possess Application
- 10) New York State Department of Environmental Conservation License to Collect or
- 11) Possess Renewal Application