2025 Native American Research Assistantship Program

— Student Application Instructions —

Application Deadline: Monday, January 20, 2025

The Wildlife Society (TWS) is an international professional non-profit organization with a mission to inspire, empower, and enable wildlife professionals to sustain wildlife populations and their habitats. As part of this mission, TWS actively engages in supporting Native students who aim to become professional wildlife managers, biologists, scientists, and policy makers.

USDA Forest Service Research and Development (USFS R&D) works at the forefront of science to improve the health and use of our Nation's forests and grasslands. USFS R&D recognizes the importance and value of Indigenous Traditional Ecological Knowledge (ITEK) in enhancing approaches to maintain and restore ecosystems which sustain healthy wildlife populations.

Together, TWS and USFS R&D, are committed to enhancing and sharing the diversity of human experiences and backgrounds within the community of natural resource professionals and are excited to continue our partnership in 2025 through the **Native American Research Assistantship (NARA) Program**.

Description:

The NARA Program is intended to support Native undergraduate or graduate students and to expand our collective understanding of the natural world through elevating ITEK within federal research projects. The Program will facilitate student mentoring opportunities with USFS R&D scientists and promote student advancement and training for careers in natural resource and conservation-related fields. A paid stipend of at least $6,500 will be provided to participating students. Additional funding may be available to assist with professional development experiences.

Through the short-term research assistantships, Native students will have an opportunity to learn and work with an interdisciplinary team of researchers on projects related to wildlife ecology and natural resources. A list of the four 2025 proposed projects along with project descriptions is included at the end of this document. Only a limited number of projects will be funded and are dependent on a suitable student/mentor match.

Expectations:

The assistantships are for 3 months within the May-September 2025 calendar year. Starting dates are negotiable within the context of the needs of the research project. Provided housing is not guaranteed but may be offered at a USFS R&D facility or available in the surrounding area depending on the project. See the project descriptions for more timing, location, and housing information. The project team will assist the student in finding suitable housing options.

Applicants will participate virtually or in-person (see project description) in laboratory or field-based data collection, data entry, and analysis. The work experiences gained during the assistantship are intended to benefit the program participants and comprise one of the many facets of training and educational opportunities provided to the students during the assistantship.

During the assistantship, students will also improve their oral and written communication skills. The successful applicant may have the opportunity to assist in publishing a manuscript(s) in peer-reviewed journals, popular press, and/or present findings to local tribal partners and/or at scientific meetings along with federal scientists (dependent on travel funding).

The selected students will be given a brief orientation to TWS and USFS R&D prior to the start of the assistantship in addition to regular check-ins throughout the program. Applicants will be expected to work independently and as part of a research team. Some travel may be expected for the project.
Transportation and relocation to and from the project location will not be paid, but students may use their stipend to cover any transportation or living expenses not directly covered by the project.

Qualifications:
To participate in NARA, applicants must meet the following criteria:

- Applicants must be a U.S. citizen or national (residents of American Samoa and Swains Island).
- Applicants must be currently enrolled (or be a graduating senior) in an undergraduate or graduate program from an accredited institution of higher education in the United States.
- Applicants must identify as a member of a Native American, First Nations, Métis, Inuit, Alaska Native, Native Hawaiian, or Pacific Islander tribe or community, and provide proof of tribal affiliation or descendancy from a tribally enrolled parent or grandparent.
- Applicants must have a cumulative GPA of 2.5 or higher on a 4.0 scale. Preference will be given to students with a GPA of 3.0 or higher.
- Applicants must demonstrate an interest and commitment to conserving natural resources, working with Native communities, and elevating ITEK in federal scientific and policy processes.
- Applicants must be fluent in English and have excellent communication and interpersonal skills. Knowledge of a Native language or culture is an asset, but not required.
- Applicants must uphold and conduct their activities in accordance with the **Code of Ethics and Standards for Professional Conduct** as prescribed by The Wildlife Society.

Application Procedure:
To apply, please submit, as a single PDF:

- A cover letter (two pages or less) that includes -
  - Email address, phone number, and mailing address in your cover letter signature.
  - Research project you are applying for and your estimated availability. If more than one project is of interest, please list your preferences in the order of most to least interested.
  - Information highlighting your interest in NARA and applicable experience related to the project(s) you are applying for.
- Resume/CV
- Academic transcripts (official or unofficial transcripts will be accepted)
- Documentation of tribal affiliation or descendancy. For purposes of NARA, this may include:
  - Tribal Identification, Enrollment Card, Certificate of Degree of Indian or Alaska Native Blood, or letter from a Tribal official or Native Hawaiian Organization indicating your belonging to a state or federally-recognized tribe or community.
  - Proof of a parent or grandparent's enrollment in a tribe (Eligibility is not based on blood quantum or DNA test, and TWS will not accept or request this information as proof of eligibility).
- Two letters of recommendation.

The Wildlife Society will review all provided documentation and may request additional information, if needed, to determine sufficient qualifications. The NARA Program is administered by TWS. Students will receive compensation from TWS but there will be no employer-employee relationship between the Program participant and TWS or USFS. As such, all federal, state, and local taxes and withholdings are the responsibility of the applicant. Further, coverage under a medical insurance plan is required and the responsibility of the applicant.

In accordance with Federal law and U.S. Department of Agriculture policy, TWS is prohibited from discriminating on the basis of race, color, national origin, sex, age, or disability. (Not all prohibited bases apply to all programs.)

Application packages and questions should be emailed to Tricia Fry, tricia@wildlife.org no later than 11:59 pm ET on **Monday, January 20, 2025.** Applicants can expect to receive a decision in February 2025.

Project 1: Science to Support High Priority Data Needs at Stream Restoration Sites in the U.S. Forest Service Southwestern Region

Project Objectives: The objectives of this project are to provide science support to the Southwestern Region and the Carson and Santa Fe National Forests by collecting baseline, implementation, and/or post-implementation monitoring and assessment of stream restoration sites. The project leaders have collaborated with National Forest System staff to identify the effects of stream restoration on groundwater storage, habitat for migratory birds, cutthroat trout, and meadow jumping mouse, riparian soil carbon, and greenhouse gas emissions as high priority data needs.

Location: ***IN-PERSON*** - The duty station for this project will be the Rocky Mountain Research Station Albuquerque Forestry Sciences Lab. Field work for the project will occur on the Santa Fe, Carson, and Gila National Forests in New Mexico.

Duration: May – October 2025, with some flexibility

Housing: Affordable and local housing is available, and the student must identify, secure, and pay for their own housing. The project leaders will aid in the search for housing by soliciting the UNM biology student listserv, as well as connecting the student with other members of the field crew working on the project.

Job Description: The student will be participating in field and lab work. The student will participate in monitoring of shallow groundwater wells, collection of riparian botanical data to describe habitat for the New Mexico meadow jumping mouse, cutthroat trout, and migratory birds, collection and lab analysis of soil samples, and collection of greenhouse gas emissions data. The student will work with field teams consisting of other students, university staff, and USFS research ecologists. We will provide the student an opportunity to present his or her work at the Albuquerque Forestry Science Lab student symposium. We are willing to train the student for all technical skills, but experience with the following skills would be beneficial: botanical surveys, vegetation identification, soil sample collection, data entry and QA/QC, basic lab procedure and safety skills in addition to experience pipetting and operating an analytical balance. Field work for this project will involve hiking and camping at high elevations and in variable weather that include high heat, cold, thunderstorms, and snow. Additionally, the student will be expected to hike with a ~20lb backpack and help carry field gear. Field sites are all located within a 1.5 mile hike from parking locations.

Project 2: Drought Recovery in Northern Grasslands (DRyiNG): Understanding Mechanisms and Indicators of Flash Drought in Northern Grasslands to Inform Post-Drought Grazing

Objectives: The increasingly common occurrence of flash droughts in the water-sensitive grasslands of the Northern Great Plains ("northern grasslands") challenges land managers when deciding their seasonal and annual grazing practices. To sustain long-term forage production, rangeland managers are cautioned not to resume grazing on drought-stressed areas too quickly after the end of a drought. Translating this general guidance into concrete decision points for a specific grassland requires (1) understanding the processes behind dominant plant species' and plant communities' recovery from drought, (2) information on how grazing after a drought impacts these processes, and (3) a practical, robust indicator of grassland recovery following drought. We are addressing these needs for northern grasslands through field and greenhouse experiments that measure plant susceptibility to, and recovery from, drought occurring in different parts of the growing season and under different grazing conditions. We aim to help land managers make decisions about stocking levels following drought that will ensure long-term sustainability of their operations and the natural resources they rely on – a goal matching that of many of our regional tribes. Such decisions are made more challenging by growing climate variability. Our research will provide mechanistic, species-specific information needed to predict how northern mixed-grass prairie will respond to new climate circumstances, and therefore how rangeland management practices may need to change to maintain ecosystem health and productivity. The NARA intern could work on this larger project while focusing their study on an individual plant species we are sampling as part of the project.

Location: ***IN-PERSON*** - Rapid City, SD

Duration: Research Assistant would be hosted for 3 months from May 19 to August 15, 2025. There is flexibility to start earlier or later depending on needs. The intern gets the most benefit of learning plant species in May and June. We typically work four 10-hour days per week.

Housing: Affordable and local housing is available, and the student must identify, secure and pay for their own housing. The School of Mines and Technology offers their student apartments as summer housing options for seasonals. We are only able to offer USFS housing in Hill City (30-minute drive) if there is availability (which is determined in February 2025).

Job Description: A NARA intern would conduct field measurements for a drought and climate change study in the Northern Great Plains. Their primary responsibilities would be to 1) Identify grassland plants to the species level, 2) Use botanical key to identify plants encountered during fieldwork, 3) Measure plant community (cover, density) and demographic traits (stem development, leaf length, etc.), 4) Clip biomass to measure grassland productivity, 5) Monitor and maintain field equipment and infrastructure, including rainout shelters and weather and soil moisture data loggers, 6) Collect belowground plant specimens from the field and prepare them for laboratory dissection, 7) Record data electronically and on paper data forms, 8) Enter field data into electronic format and checks data for quality control, and 9) Report accomplishments and provide recommendations for program improvements, priorities, and future projects. A student should be able to lift up to 30-50 pounds, crouch, stoop, kneel,

stand, or bend for long periods of time, walk for long periods of time on uneven surfaces carrying equipment, be outside in extreme heat or cold (depending upon the season), and work for 8-11 hours while outside.

The student will be a part of our larger 4-person field crew which includes 3 seasonals/interns and a crew lead. The field crew works together the entire summer alongside the PIs. The student will have the opportunity to contribute to the team and learn how to overcome work and personnel challenges. As part of a team, the student will get to exercise verbal and written communication with crew members. The NARA intern would also have a great opportunity to learn the responsibilities of a Biological Science Technician from working with crew. As the RMRS lab is co-housed with the Mystic Ranger District of the Black Hills National Forest, there are many opportunities to see the inner workings of the USFS at staff meetings and spend a few days with FS employees exploring different jobs. The student would gain the skills to drive a government vehicle.

Project 3: Fulfilling Tribal Wildlife Research and Management Needs

Objectives: High severity, stand-replacing wildfire is currently the primary threat to Mexican spotted owl (MSO) nesting and roosting habitat in southwestern forested landscapes. A fundamental approach to reducing fire risk is to implement fuel treatments yet there is little information regarding the effects of fuel treatments on the nesting habitat and occupancy/reproduction rates for the Mexican spotted owl. This project will build upon existing long-term occupancy and reproduction datasets in treated and untreated Mexican spotted owl breeding territories on Mescalero Apache Tribal lands. Working relationships currently exist between the project leader and the cooperators and a tribal resolution for Mexican spotted owl research already exists (Tribal Resolution 12-50) as well as current FS-IACUC and USFWS permits for MSO research is held by the project leader (IACUC 2016-008 and USFWS permit #: TE26800b-0). The primary objectives of the long-term study are as follows:

1. Identify the composition of fuel loading in treated and untreated MSO breeding territories (preliminary assessments done)
2. Identify the degree to which wildfire risk is reduced in MSO territories that have experienced moderate to low intensity silvicultural treatments.
3. Identify general trends regarding the spatial arrangement of wildfire risk around MSO nest sites
4. Correlate MSO occupancy and reproduction rates to fuel loading and wildfire potential within breeding territories.

Location: ***Remote (if needed) with in-person fieldwork preferred.*** This is a flexible project with duties that can be adapted to interns interest/availability.

Duration: Three-months beginning in May 2025 with flexible start and end dates.

Housing: Affordable and local housing is available and will be secured or reserved by the Forest Service for fieldwork. The intern would pay for their housing in Ruidoso. Details about move in date, etc. need to be determined.

Job Description: Wildfire is currently the primary threat to Mexican spotted owl (MSO) nesting and roosting habitat and a fundamental approach to reducing fire risk is to implement fuel treatments yet there is little information regarding the effects of forest and fuel treatments on the habitat requirements of the MSO. This project will quantify fuel loading and occupancy/reproduction responses in treated and untreated forested Mexican spotted owl breeding territories on tribal lands in the southwest with the overarching goal of reducing fire risk and threats to MSO habitat on tribal lands. The NARA intern will do best if they have experience or an interest in wildlife and forestry monitoring techniques, ecology, botany and ornithology background/experience. General competency using Excel, GIS, and GPS units as well as hard copy maps and communication radios is preferred and the ability to convey knowledge and information both through oral and written formats. Most importantly the student must be able to hike long distances in steep, rugged terrain in adverse weather conditions at high elevations (7,000-9,000ft). This is equivalent to passing a pack or Work Capacity Test (WCT) required for USFS wildland firefighters.

Project 4: Mexican Spotted Owl (MSO) GPS Tagging and Camera Study

Objectives: This project aims to develop a data-driven framework for forest management in MSO protected areas in the American Southwest that safeguards owls while reducing fire risk. We capture, band, and fix GPS units to MSO to examine how they use vegetation features associated with forest fuels reduction treatments, and directly measure MSO responses to past fuels reduction and restoration. We have completed two years of our study (2023 and 2024), and in year three (2025) we will be identifying fine-scale MSO hunting habitats to gain a better understanding of the vegetation features associated with MSO's primary prey species – Mexican woodrats. The NARA student will assist the project leader and cooperators in the field conducting MSO research. This entails an opportunity to survey, attend and/or assist with captures of MSO, attend and/or assist with tree climbing to set up nest cameras, data input and educational outreach. If the NARA student prefers not to directly interact with the MSO, data input and educational outreach would be the main tasks. The NARA student will also have the opportunity to collaborate with Dr. Serra Hoagland and her prospective NARA student who will be assisting with building upon existing long-term Mexican spotted owl datasets in fuel treated and untreated breeding territories on Mescalero Apache Tribal lands. This would take place in central Arizona, along the Mogollon Rim and various locations in New Mexico based on the students' interests.

Location: ***IN-PERSON*** - field work primarily in Arizona (Coconino, Apache-Sitgreaves and Tonto National Forest) and partly in New Mexico (Lincoln National Forest)

Duration: Three-months beginning in May 2025 with flexible start and end dates.

Housing: Housing will be provided at no cost to the student. Both study areas have housing provided by the project. Rooms are shared with one technician. Transportation from airport to field site can be provided. If the NARA student has their own vehicle, there is space at the house for parking, but we cannot provide any gas/mileage compensation for their own personal vehicle.

Job Description: The NARA student will conduct surveys for spotted owls, assess reproductive status, locate nest trees, assist with spotted owl captures, assist with tree climbing and care for equipment/lures. A typical work week is 40 hours. Schedules will be irregular with potential for camping. For example, owl work will be primarily at dusk or dawn, but daytime work will often be required to set up and take down nest video cameras. Work will often require off-trail hiking in steep, forested terrain, during day or night ranging in elevations (5,000 – 9,000 ft). Temperatures vary greatly throughout the season ranging from the 30s – 90s. If the student is interested in some but not all field work, we can be accommodating. For example, if the student is not comfortable with the capturing/tagging/handling of the owl or any interaction with the owls, they do not have to be present or engage in those aspects of the project.

The NARA student will also record, transcribe, enter data into computer databases and validate data that was collected in the field.

Another main component of the position is educational outreach. The NARA student will be required to present their perspectives of the study and MSO conservation efforts. They will present to Dr. Gavin Jones lab, the MSO core study group (includes scientists from RMRS, USFS and F&W), and potentially USFS biologist within the region to educate and provide educational

insight. In addition, there may be opportunities to volunteer with nearby organizations such as The Grand Canyon Trust whose main objective is protecting the land while supporting the rights of its Indigenous people. The Grand Canyon Trust regularly schedules bird watching, forest restoration, and self-supported projects.

There is potential to coordinate with Dr. Serra Hoagland and interact with her prospective NARA student. The NARA student would have the opportunity to spend time assisting and learning what Dr. Hoagland's project entails. This could involve partaking in quantifying fuel loading and occupancy/reproduction responses in treated and untreated forested Mexican spotted owl breeding territories with the goal of providing insight to reduce fire risk and threats on tribal lands.

Qualified students will have or actively working towards a bachelor's degree in wildlife or related field, and/or have relevant experience conducting wildlife surveys, experience in tree climbing/rope systems, working in remote conditions, the ability to hike in a time efficient manner in steep terrain, and experience safely driving 4-wheel drive vehicles on backcountry roads. If interested in the field aspect, the student must be comfortable hiking off trail at times in adverse conditions. We recognize that potentially interested students may not have all of these qualifications; but as long as there is interest, we are willing to help students gain these skills through training.