# Environment and Natural Resources Trust Fund

2027 Request for Proposal

## General Information

**Proposal ID:** 2027-041

**Proposal Title:** Fond du Lac Deer Study - Phase 2

## Project Manager Information

**Name:** Jacob Haus

**Organization:** Minnesota State Colleges and Universities - Bemidji State University

**Office Telephone:** (218) 755-4372

**Email:** jacob.haus@bemidjistate.edu

## Project Basic Information

**Project Summary:** Deer are important to the FDL Band and future elk reestablishment could alter deer population dynamics. Baseline data will better inform deer management by the RMD and Minnesota DNR.

**ENRTF Funds Requested:** $2,512,000

**Proposed Project Completion:** June 30, 2030

**LCCMR Funding Category:** Fish and Wildlife (D)

## Project Location

**What is the best scale for describing where your work will take place?**

Region(s): NE

**What is the best scale to describe the area impacted by your work?**

Region(s): NE

**When will the work impact occur?**

During the Project and In the Future

## Narrative

**Describe the opportunity or problem your proposal seeks to address. Include any relevant background information.**

Waawaashkeshi (white-tailed deer) are a species of social, cultural, and economic importance to the FDL Band as well as to non-tribal members within the region. The Fond du Lac Reservation and surrounding 1854 Ceded Territory are broadly representative of habitats, ecosystems, and deer hunting culture found throughout much of northern Minnesota. Deer population dynamics in northern Minnesota are influenced by hunter harvest, predation, winter severity, and habitat changes. Effective deer management requires an understanding of how these factors interact to affect annual survival, rates of juvenile recruitment, cause-specific mortality, and habitat use. Furthermore, efforts to restore elk to FDL and the surrounding area (Fig. 1) are planned for the near future. The potential impacts of the planned elk restoration effort on the white-tailed deer population are unknown. The presence of elk may directly or indirectly influence deer habitat use, disease dynamics, predator-prey interactions, and subsequently alter rates of deer survival and recruitment. An understanding of how elk restoration may impact deer, and how to mitigate such impacts through management activities, requires baseline demographic data for white-tailed deer in the region prior to interaction and range overlap with elk. This proposal would serve as a continuation of Phase I (2025-009).

**What is your proposed solution to the problem or opportunity discussed above? Introduce us to the work you are seeking funding to do. You will be asked to expand on this proposed solution in Activities & Milestones.**

We propose a continuation of our multi-phase study on deer demographics/health to inform management of deer populations on the FDL Reservation and surrounding areas. Phase I supports capture/collaring of deer in 2026 and 2027. This proposal would support Phase II; connecting deer habitat use and population health to survival and recruitment. Future phases would examine any change in deer demographics, health, and habitat use in the context of initial deer/elk interaction and eventual elk population establishment. As part of Phase II, we will capture and GPS collar 100 adult deer (50 males, 50 females) during each winter (Jan-April) of 2028-2030. Collars on adult deer will provide information on population survival rates, causes of mortality, movement rates, and habitat use. At the time of capture, pregnant females will receive transmitters capable of detecting birth events the following summer. We will locate birth sites to affix newborn fawns with an expandable tracking collar. We will collar 40-60 fawns each summer (May-July) in 2028-20230. We will monitor fawns for 6-12 months to determine survival rates and causes of mortality. The tracking data will be used to understand how habitat use and movement behavior impact survival for both adults and fawns.

**What are the specific project outcomes as they relate to the public purpose of protection, conservation, preservation, and enhancement of the state's natural resources?**

The project has two intended outcomes. First, demographic data for adults and fawns will inform RMD and local MN DNR deer and forest management on the FDL Reservation and the surrounding region. Second, the project provides baseline demographic, survival and health data (disease/physiology) for deer not yet interacting with a restored elk population. Future research can then compare deer demographic and disease presence/prevalence data collected from different phases of elk restoration to quantify any changes in deer resource use, survival, or disease dynamics. Results from this project will be valuable if elk population reestablishment continues in northern Minnesota.

## Activities and Milestones

### Activity 1: Collect data on annual survival, cause-specific mortality, and broad-scale habitat use for adult and juvenile white-tailed deer.

**Activity Budget:** $1,135,235

**Activity Description:**
We will continue the capture and monitoring activities outlined in our 'phase I' proposal (2025-009), to include capture and GPS collaring of 100 adult (>6 month old) and 50 neonate fawn white-tailed deer each year (2028-2030). Within the study area there exists a gradient of more privately-owned residential and agricultural land to the east, with a greater proportion of state, county, and tribal forested lands in the west open to public hunting. To capture the gradient in habitat and harvest pressure, we will capture 50 adult deer (25 males, 25 females) on each the east and west portions of the study area per year. Each adult deer will receive a GPS collar that records a location fix every 3 hours throughout the year, and fawns captured in the spring/summer will receive a collar recording one location fix per day. Cause-specific mortality rates will be determined for all deer. We will analyze seasonal home range and resource selection using Brownian bridge movement models and step-selection functions. We will analyze survival rates using Cox proportional hazard models. The outcome of activity one will be demographic data used to inform deer habitat management and harvest regulations.

**Activity Milestones:**

| Description | Approximate Completion Date |
|---|---|
| Identify areas for capture activities, with a focus on underrepresented habitats from Phase I. | November 30, 2027 |
| Conduct adult capture efforts during winters 2028, 2029, and 2030; 100x deer/winter. | March 31, 2030 |
| Conduct fawn capture and collaring efforts spring/summer 2028, 2029, 2030; 50 neonate fawns/summer. | June 30, 2030 |
| Collect and analyze movement and survival data from all collared deer until project completion. | June 30, 2030 |

### Activity 2: Develop data sets and analytical methods to examine the importance of fine-scale habitat metrics to deer demographic outcomes.

**Activity Budget:** $734,090

**Activity Description:**
Methods to analyze animal habitat use typically rely on broad-scale classification of habitat types using remote-sensed data (shrub, wetland, upland forest, etc.) Such broad-scale classifications provide useful data on deer home range composition and seasonal shifts in habitat use but are limited by an inability to describe more fine-scale habitat characteristics (vegetation density, species composition, stand age, etc.). The availability, use, or avoidance of these finer-scale habitat features by deer likely has implications for predator avoidance, winter survival, and population health. More course classifications of habitat types may mask these relationships. For this activity, we propose the identification of biologically relevant, fine-scale habitat metrics using existing deer movement data to identify priority habitat. We will work with state, federal, county, and tribal agencies to collate existing data habitat where practical. Furthermore, we will complement existing data sets with field-based habitat data collection as needed. These data will allow for a novel analysis including both broad- and fine-scale habitat measures that can inform targeted management of priority habitats for northern deer populations.

**Activity Milestones:**

| Description | Approximate Completion Date |
|---|---|

| | |
|---|---|
| Identify and collate available habitat data from different management agencies. | June 30, 2028 |
| Identify priority considerations for field-based collection of habitat data. | June 30, 2028 |
| Collection of in-field habitat data informed by seasonal GPS location data. | June 30, 2030 |
| Develop analysis methods to incorporate broad and fine-scale habitat data into models of resource use. | June 30, 2030 |

## Activity 3: Biological sample collection to examine spatial variability in deer disease and physiological condition prior to elk reintroduction.

**Activity Budget:** $592,807

**Activity Description:**
Disease transmission and physiological stress is a potential source of indirect interaction between deer and reintroduced elk. During this project, we will collect biological samples from captured deer to determine baseline prevalence of diseases affecting cervids and stress hormone levels. Future research phases involving collection of the same data would allow us to monitor changes in disease presence and prevalence within the study area. Furthermore, inclusion of disease and hormone data into our survival analysis (activity one) will better inform management. Sample collection during capture will include blood, feces, tissue, oral/anal swabs, and hair. Postmortem sampling will include collection of hair, hoof keratin, and lymphatic tissue when possible. With these samples we will screen general health parameters and hormones (e.g., serum biochemistry, stress hormones, complete blood cell counts) of study deer as well as specific pathogens such as chronic wasting disease, hemorrhagic diseases, bovine tuberculosis, brucellosis, liver flukes, P. tenuis, Borrelia burgdorferi and other vector-borne pathogens. We will use these data in a disease risk analysis to clearly identify and prioritize disease hazards to mitigate during the potential translocation of elk, as well as to inform future health and habitat analyses (e.g., survival, spatial risk analyses).

**Activity Milestones:**

| Description | Approximate Completion Date |
|---|---|
| Collect and process biological samples from new study animals captured in Yr 1 and 2 | June 30, 2029 |
| Pathogen screening and hormone analysis | December 31, 2029 |
| Complete a disease risk analysis informed by project data | June 30, 2030 |

## Activity 4: Share results with Minnesota's tribal and non-tribal publics, MNDNR, county land departments and Tribal natural resource management agencies.

**Activity Budget:** $49,868

**Activity Description:**
As a fully collaborative effort between Bemidji State University and the Fond du Lac Band of Lake Superior Chippewa, project partners will openly communicate with each other and the public. Researchers from Bemidji State University and FDL RMD staff will provide written or oral reports on project methodology, results, and plans with community members, natural resource advisory committees and the Reservation Business Committee at least annually, but as frequently as required. Furthermore, FDL will provide input and final approval for the dissemination of research results and specific management implications. Research findings will be shared to the tribal and non-tribal publics through local or regional media outlets and public presentations. More technical results and management recommendations will be shared to the broader scientific community via graduate student theses, conference presentations, and peer-reviewed publications.

**Activity Milestones:**

| Description | Approximate Completion Date |
|---|---|

| | |
|---|---|
| Share updates with FDL tribal council at least annually via oral or written reports. | June 30, 2030 |
| Share results with the public through community presentations, webinars, and media outlets. | June 30, 2030 |
| Share results with the broader scientific community through student theses, publications, and conference presentations. | June 30, 2030 |

## Project Partners and Collaborators

| Name | Organization | Role | Receiving Funds |
|---|---|---|---|
| Mike Schrage | Fond du Lac Resource Management Division | Mike Schrage is the wildlife biologist for the FDL Band's Resource Management Division (RMD). Mike will serve as a co-investigator on the project, and RMD staff will assist with fieldwork. Mike has past research experience with wood turtles, black bears and moose, and currently leads wolf research on the Reservation. | Yes |
| Tiffany Wolf | University of Minnesota | Dr. Wolf is a wildlife epidemiologist and an associate professor in the Department of Veterinary Population Medicine. Dr. Wolf will serve as a co-investigator on the project, will coordinate deer disease and health screening, and will advise a PhD graduate student. She will also advise on methodologies related to capture. | Yes |
| Makenzie Henk | Fond du Lac Resource Management Division | Makenzie Henk is the Elk Biologist for FDL Resource Management Division and will help to coordinate field work and project objectives. | Yes |
| Mandy Keogh | Bemidji State University | Dr. Keogh is an wildlife physiologist and an assistant professor at Bemidji State University. Dr. Keogh will coordinate the testing for hormones related to stress and reproduction from monitored deer. | Yes |

## Dissemination

**Describe your plans for dissemination, presentation, documentation, or sharing of data, results, samples, physical collections, and other products and how they will follow ENRTF Acknowledgement Requirements and Guidelines.**
Researchers from Bemidji State University and RMD staff will provide written or oral reports on project methodology, results, and plans with FDL natural resource advisory committees and the Reservation Business Committee at least annually, but as frequently as required. Furthermore, FDL will provide input and final approval for the dissemination of research results and specific management implications. Research findings will be shared to the tribal and non-tribal publics through local or regional media outlets, including land cover maps when appropriate. More technical results and management recommendations will be shared to the broader scientific community via graduate student theses, conference presentations, and peer-reviewed publications. We will acknowledge the Environment and Natural Resources Trust Fund through use of the trust fund logo or attribution language on project print and electronic media, publications, signage, and other communications and outreach.

## Long-Term Implementation and Funding

**Describe how the results will be implemented and how any ongoing effort will be funded. If not already addressed as part of the project, how will findings, results, and products developed be implemented after project completion? If additional work is needed, how will this work be funded?**
The results will inform tribal and non-tribal wildlife and forest managers, and their publics, how to more effectively manage northeast Minnesota deer populations and their habitats. The proposed project will be the second of multiple phases, which will provide a long-term, holistic understanding of northeastern deer population dynamics before, during, and after elk establishment. The eventual presence of elk is an opportunity for a robust 'Before-After Control' study design, which will serve as a nationally prominent work on the ecology, competitive exclusion, and management of deer. We will seek continued LCCMR support to fund work in future phases.

## Other ENRTF Appropriations Awarded in the Last Six Years

| Name | Appropriation | Amount Awarded |
|---|---|---|

| | | |
|---|---|---|
| Fond du Lac Deer Study - Phase 1 | M.L. 2025, First Special Session, Chp. 1, Art. 2, Sec. 2, Subd. 03a | $1,441,000 |

## Project Manager and Organization Qualifications

**Project Manager Name:** Jacob Haus

**Job Title:** Associate Professor

**Provide description of the project manager's qualifications to manage the proposed project.**
Dr. Haus is a Certified Wildlife Biologist® and an associate professor in the wildlife biology program at Bemidji State University. He specializes in the spatial ecology and applied management of white-tailed deer populations. He regularly coordinates field-based research projects in collaboration with state, federal, and Tribal wildlife agencies, advises graduate students, and publishes research in peer-reviewed journals. He currently serves as manager of the 'Fond du Lac Deer Study - Phase I' project.

Selected publications:
Webb et al. Forthcoming. Spatial Ecology. In 'Biology and Management of White-tailed Deer', 2nd Edition. CRC Press, Boca Raton, Florida.
Holland et al. 2024 Navigating motherhood: biological and landscape factors affecting postpartum movement in white-tailed deer. Movement Ecology 12:79.
Dion et al. 2021. Birth site selection by white-tailed deer in an area with low risk of predation. Northeastern Naturalist 28:94-105.
Dion et al. 2020. White-tailed deer neonate survival in the absence of predators. Ecosphere 11:e03122.
Haus et al. 2020. Interannual variability in survival rates for adult female white-tailed deer. Journal of Wildlife Management 84:675–684.
Haus et al. 2020. Individual heterogeneity in habitat use has implications for survival in adult white-tailed deer. Ecosphere 11:e03064.
Dion et al. 2019. An initial performance review of vaginal implant transmitters paired with GPS collars. Animal Biotelemetry 7:22.
Haus et al. 2019. Land use and dispersal influence mortality in white-tailed deer. Journal of Wildlife Management 83:1185–1196.
Haus et al. 2019. A spatially and temporally concurrent comparison of popular density estimators for white-tailed deer. Northeastern Naturalist 26:305–324.
Haus et al. 2018. Theileriosis identified in multiple neonatal white-tailed deer in Delaware, USA. Journal of Wildlife Diseases 54:885–888.
Haus et al. 2017. Hunter perception towards chronic wasting disease; implications for harvest and management. Wildlife Society Bulletin 41:294–300.

**Organization:** Minnesota State Colleges and Universities - Bemidji State University

**Organization Description:**
Bemidji State University is located amid the lakes and forests of northern Minnesota, along the shore of Lake Bemidji. Enrolling ~4,000 students, Bemidji State offers 70 undergraduate areas of study and 8 graduate degrees encompassing arts, sciences, and pre-professional programs. BSU's Shared Fundamental Values include civic engagement and leadership, international and multicultural understanding, belief in the power of liberal arts, and environmental stewardship. The Biology Department includes thirteen faculty and an average of 350 students annually. Majors include wildlife biology, aquatic biology, medical science, and life science. Students can pursue a Master of Science degree in biology. The wildlife biology program is supported by 5 faculty members and two fully equipped, state-of-the-art research laboratories.

Nagaajiwanaang, “Where the Water Stops,” is the name of the homelands of the Fond du Lac Band of Lake Superior Chippewa established under the Treaty of 1854. Today, the Band includes over 4,000 members. The Band’s Resource Management Division (RMD) is committed to the management, conservation, and sustainability of the Band’s natural resources to protect the environment on the Reservation and its treaty areas. The RMD uses the tools of research, education and outreach with Band Members, partners and stakeholders to accomplish these goals.

## Budget Summary

| Category / Name | Subcategory or Type | Description | Purpose | Gen. Ineligible | % Benefits | # FTE | Classified Staff? | $ Amount |
|---|---|---|---|---|---|---|---|---|
| **Personnel** | | | | | | | | |
| BSU Research Technicians | | 5x research technicians to assist graduate student with deer capture and monitoring (6 months/year at $24/hr) | | | 0% | 7.5 | | $401,143 |
| Haus Principal Investigator | | Manage, analyze data, write, outreach; 0.2 FTE/year; 2028 and 2029 | | | 22% | 0.4 | | $39,233 |
| Undergraduate Research Assistants | | BSU undergraduate students to assist with field work, equipment organization and maintenance, data entry. 250/hrs/year @ $15.50/hr | | | 0% | 0.36 | | $11,625 |
| Keogh lab work coordination | | Salary supplement for Dr. Keogh to coordinate the physiological analysis of stress hormones from hair and hoof samples. | | | 22% | 0.15 | | $15,098 |
| Graduate Student 1 | | Tuition remission (1 year) and stipend for (1.5 years) for a current graduate student to complete their thesis research. | | | 36% | 1.5 | | $69,533 |
| Graduate Student 2 | | Tuition remission (2 years) and stipend (2.5 years) for a graduate student starting Fall 2027 to conduct field work, analyze data, and complete a thesis relating to adult deer survival and habitat use. | | | 36% | 2.5 | | $118,878 |
| Graduate Student 3 | | Tuition remission (2 years) and stipend (2 years) for a graduate student starting Summer 2028 to conduct field work, analyze data, and complete a thesis relating to fawn survival and habitat use. | | | 36% | 2 | | $98,710 |
| | | | | | | | **Sub Total** | **$754,220** |
| **Contracts and Services** | | | | | | | | |
| Fond du Lac Resource Management Division | Subaward | 300 hours field support/year each for 2x FDL employees. Mileage reimbursement for use of FDL vehicles (trucks, snowmobiles) to assist with project activities (22,000 miles @ $0.79/mile). Purchase and repair of miscellaneous equipment ($5000). FDL employees will assist with equipment maintenance, deer capture, mortality investigations, and survival | | | | 0.72 | | $86,296 |
| University of Minnesota; Cloquet | Service Contract | House/ storage space lease agreement for field equipment and technicians working on the project (800/month for 36 months). Cabins are available to | | | | 3 | | $28,800 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Forestry Center | | rent as a discrete service according to a published fee schedule. | | | | | | |
| Vectronic, Inc | Service Contract | Vectonics manufacturers the collars and transmitters, which require an activation fee and data package for data acquisition beyond the base rate included with transmitters purchase. We are budgeting $15.00 per transmitter per deer-month average for activation fee and data overage charges using an estimated 1200 deer-months/year. | | | | 0 | | $54,000 |
| IDEXX labs | Service Contract | IDEXX labs will conduct blood chemistry analysis using their large mammal panel and a complete blood count using whole blood and serum samples collected from 100x deer/year for 3 years. Cost is $75/sample. | | X | | 0 | | $22,500 |
| Fond du Lac Resource Management Division | Subaward | Salary and fringe for Co-Investigator Makenzie Henk (312 hours/year). Makenzie will assist with field work, provide logistical support for technicians, and consult on study design in the context of planned elk reintroduction efforts. | | | | 0.45 | | $53,945 |
| Licensed pilot for telemetry flights | Service Contract | Contract with a local northern Minnesota-based pilot for flight hours (25 hours @ $400/hr) used to preform telemetry scans from a fixed-wing aircraft to locate radio signals of missing collars. | | | | 0 | | $10,000 |
| Website developer | Service Contract | We will hire a web developer to build a project outreach website that can share updates, results, publications, and photos/videos with the tribal and non-tribal public. Web site hosting fee ($500/year), web development ($5000), and annual maintenance/updates ($2,500/year). | | | | - | | $20,000 |
| University of Minnesota | Subaward | Dr. Tiffany Wolf and University of Minnesota PhD graduate student salary, PhD student tuition, Vet student hourly pay, Veterinary Diagnostic Lab disease testing, travel/lodging associated with field work. Full University of Minnesota budget attached as supplementary material. | | | | 1.74 | | $453,392 |
| Cellular trail camera data plan | Service Contract | We will use cellular trail cameras to monitor trap locations for real-time deer activity. Cellular trail cameras require a monthly data plan, which we will budget $20/month for 20 cameras in each of the 3 winter capture seasons (4 months each). | | | | 0 | | $4,800 |
| | | | | | | | **Sub Total** | **$733,733** |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Equipment, Tools, and Supplies** | | | | | | | | |
| | Equipment | GPS collars (300x) at $2500 per unit | Collars to collect data on adult deer movement and survival | | | | | $750,000 |
| | Equipment | VIT transmitters (120x) at $300 per unit | Transmitters to detect birth events in adult females, collar fawns | | | | | $36,000 |
| | Equipment | Neonate fawn collars (150x) at $700 per unit | Collars to collect data on neonate deer movement and survival | | | | | $105,000 |
| | Tools and Supplies | Pharmaceuticals for deer capture ($75/deer) | Drugs and pharmaceuticals used to safety immobilize adult deer during capture and handling | | | | | $22,500 |
| | Tools and Supplies | Miscellaneous capture/field and lab supplies (syringes, needles, ear tags, tag applicators, toolboxes, sample kits, hardware, tools, ELISA kits for hormone analysis, methanol, vials, etc.) | Supplies to safely capture, process, and sample deer | | | | | $32,172 |
| | Tools and Supplies | Bulk shelled corn (22,500 lbs @ $0.25/lbs) | Corn used to bait traps for deer capture | | | | | $5,625 |
| | Equipment | Cellular trail cameras | Cellular trail cameras for near real-time monitoring of deer traps during winter capture seasons. Cell cams will allow a more targeted, efficient approach to capture efforts in the field. 20x cameras at $200 per. | | | | | $4,000 |
| | | | | | | | **Sub Total** | **$955,297** |
| **Capital Equipment** | | | | | | | | |
| | | | | | | | **Sub Total** | **-** |
| **Acquisitions and Stewardship** | | | | | | | | |
| | | | | | | | **Sub Total** | **-** |
| **Travel In Minnesota** | | | | | | | | |
| | Other | Mileage reimbursement for in-state travel related to field work | Travel to, from, and within study area during field research activities; trucks, snowmobiles, ATVs. (75,000 miles @ 0.79/mile) | | | | | $59,250 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Conference Registration Miles/ Meals/ Lodging | Registration, travel, lodging, and food for 2 people to attend 2 professional conferences | Travel for graduate students to attend 2 conferences in Minnesota and present results of research | | | | | $6,000 |
| | | | | | | | **Sub Total** | **$65,250** |
| **Travel Outside Minnesota** | | | | | | | | |
| | Conference Registration Miles/ Meals/ Lodging | Registration, travel, lodging, and food for 1 person to attend 1 professional conference out of state | Travel for graduate students to attend 1 conferences outside Minnesota and present results of research | X | | | | $2,000 |
| | | | | | | | **Sub Total** | **$2,000** |
| **Printing and Publication** | | | | | | | | |
| | Publication | Page charges for 1x publication in a peer-reviewed wildlife journal | To disseminate early results of the project to the broader scientific community. | | | | | $1,500 |
| | | | | | | | **Sub Total** | **$1,500** |
| **Other Expenses** | | | | | | | | |
| | | | | | | | **Sub Total** | **-** |
| | | | | | | | **Grand Total** | **$2,512,000** |

## Classified Staff or Generally Ineligible Expenses

| Category/Name | Subcategory or Type | Description | Justification Ineligible Expense or Classified Staff Request |
|---|---|---|---|
| **Contracts and Services** - IDEXX labs | Service Contract | IDEXX labs will conduct blood chemistry analysis using their large mammal panel and a complete blood count using whole blood and serum samples collected from 100x deer/year for 3 years. Cost is $75/sample. | The in-state alternative for this testing is the University of Minnesota's Veterinary Diagnostic Lab (VDL), who we will use for all 'non-time sensitive' sample processing. IDEXX provided a fedex shipping account with overnight delivery of whole blood and serum samples, which is a service VDL does not provide. It would be too logistically difficult to drive whole blood samples from the study area to the VDL within 24 hours for every sample collected. Additionally, IDEXX provides a researcher discount which is not offered through VDL, making IDEXX the more affordable option. |
| **Travel Outside Minnesota** | Conference Registration Miles/Meals/Lodging | Registration, travel, lodging, and food for 1 person to attend 1 professional conference out of state | The main outlet to disseminate results of scientific wildlife research for graduate students is the national meeting of The Wildlife Society. Although out-of-state, it is the primary source for preliminary research results for Minnesota stakeholders as well as the broader scientific community. |

## Non ENRTF Funds

| Category | Specific Source | Use | Status | Amount |
|---|---|---|---|---|
| **State** | | | | |
| In-Kind | BSU owned equipment | Use of equipment already owned by BSU Wildlife Program (Polaris ATV, 2x skidoo snowmobiles, 2x utility trailers, 10x Clover traps, 5x drop nets, 6x rocket nets, 30x trail cameras, misc. capture equipment, telemetry equipment, etc.). | Secured | $99,650 |
| | | | **State Sub Total** | **$99,650** |
| **Non-State** | | | | |
| In-Kind | FDL owned equipment | Equipment already owned by FDL (snowmobiles, trailer, trail cameras) | Secured | $20,000 |
| In-Kind | FDL Staff salary in-kind | 0.3 FTE for FDL Wildlife Program Manager Mike Schrage (project coordination, outreach) | Secured | $60,000 |
| | | | **Non State Sub Total** | **$80,000** |
| | | | **Funds Total** | **$179,650** |

**Total Project Cost: $2,691,650**

**This amount accurately reflects total project cost?**

Yes

## Attachments

### Required Attachments

*Visual Component*

File: d2db9491-0a4.pdf

*Alternate Text for Visual Component*

A map showing the location of the study area for the FDL deer project, which encompasses the entire Reservation and surrounding areas of the 1854 Ceded Territory to the west, north, and northeast of the Reservation....

### Supplemental Attachments

*Capital Project Questionnaire, Budget Supplements, Support Letter, Photos, Media, Other*

| Title | File |
|---|---|
| Carlton County - Resolution of Support | 274d8d18-c19.pdf |
| Fond du Lac Band - Resolution of Support | 33ff25e9-492.pdf |
| UMN Budget Subrecipient Cover Letter | 85421a4c-5cc.pdf |
| UMN Budget Subrecipient Letter of Intent | 0f16b165-85b.pdf |
| Budget Supplement for University of Minnesota Disease coordination and research subaward | 4ae8c2b7-6d9.xlsx |
| Izaak Walton League - Support Letter | d5e1e33a-a36.pdf |
| Minnesota Wildlife Federation - Support Letter | 8d77d1a7-993.pdf |

## Administrative Use

**Does your project include restoration or acquisition of land rights?**

No

**Do you understand that travel expenses are only approved if they follow the "Commissioner's Plan" promulgated by the Commissioner of Management of Budget or, for University of Minnesota projects, the University of Minnesota plan?**

Yes, I understand the Commissioner's Plan applies.

**Does your project have potential for royalties, copyrights, patents, sale of products and assets, or revenue generation?**

No

**Do you understand and acknowledge IP and revenue-return and sharing requirements in 116P.10?**

N/A

**Do you wish to request reinvestment of any revenues into your project instead of returning revenue to the ENRTF?**

N/A

**Does your project include original, hypothesis-driven research?**

Yes

**Does the organization have a fiscal agent for this project?**

No

**Does your project include the pre-design, design, construction, or renovation of a building, trail, campground, or other fixed capital asset costing $10,000 or more or large-scale stream or wetland restoration?**

No

**Do you propose using an appropriation from the Environment and Natural Resources Trust Fund to conduct a project that provides children's services (as defined in Minnesota Statutes section 299C.61 Subd.7 as "the provision of care, treatment, education, training, instruction, or recreation to children")?**

No

**Provide the name(s) and organization(s) of additional individuals assisting in the completion of this proposal:**

Jenna Trisko, Grant Service Director (pre-award), Bemidji State University, jenna.trisko@minnesotanorth.edu. Kate Pearlson, Financial Reporting Specialist, Bemidji State University, katelyn.pearlson@bemidjistate.edu.

**Do you understand that a named service contract does not constitute a funder-designated subrecipient or approval of a sole-source contract? In other words, a service contract entity is only approved if it has been selected according to the contracting rules identified in state law and policy for organizations that receive ENRTF funds through direct appropriations, or in the DNR's reimbursement manual for non-state organizations. These rules may include competitive bidding and prevailing wage requirements**

Yes, I understand