

Wild Resource Conservation Program

Grant Application Manual

Grant Round: June 26, 2023 – Sept. 1, 2023

4:00 pm



Commonwealth of Pennsylvania
Josh Shapiro, Governor
Department of Conservation and Natural Resources
Cindy Adams Dunn, Secretary

Commonwealth of Pennsylvania
Dept. of Conservation and Natural Resources
Wild Resource Conservation Program
P.O. Box 8552, Harrisburg, PA 17105-8552

WILD RESOURCE CONSERVATION PROGRAM

Grant Application Instructions

Mission Statement: Our mission, in partnership with agencies, organizations and concerned citizens, is to maintain, manage, enhance, and restore Pennsylvania's native wild flora and fauna and their habitats.

The Wild Resources Conservation Act was created in 1982 to aid in the conservation of the Commonwealth's flora and non-game fauna. It enabled citizens to support wild resources by creating a contribution opportunity through a tax check-off, license plate program, and sale of merchandise, furthering management and conservation. Each year, these funds support the survey, research, management, and conservation of wild resources through the Department of Conservation and Natural Resources' (DCNR's) Wild Resource Conservation Program (WRCP).

WRCP is charged with administering grants through funding from the Wild Resource Conservation Fund (WRCF) and a portion of the Environmental Stewardship Fund (ESF). WRCF funds include money from the Pennsylvania state income tax check-off, voluntary donations, purchase of WRCF specialty license plates, wild plant management permits, and ginseng commercial license fees. ESF funds are generated from fees collected from landfill tipping fees—a fee when garbage is deposited in landfills.

Eligible Applicants

Eligibility of applicants is dependent on the funding source. WRCP funding sources include both WRCF and ESF, with most the funds available through this solicitation from ESF. Therefore, applicants are strongly advised to seek a sponsoring organization that is eligible for ESF funding. The following applicant eligibility applies:

- Counties, municipalities, educational institutions, and tax-exempt 501(3) (c) organizations registered with the Bureau of Charitable Organizations are eligible to receive grants from ESF for projects intended to protect and conserve biological diversity.
- Conservation Districts and municipal authorities are also eligible for some types of projects funded by ESF.
- Individuals, state government agencies and for-profit businesses, in addition to the categories above, are eligible for WRCF funds but not ESF funds.

Note that the full legal name of the sponsoring organization must be used on the application form and for 501(3) (c) organizations must be the same name as is registered with the Bureau of Charitable Organizations and with the Internal Revenue Service.

2023 Targeted Grant Priorities

WRCP is soliciting grant applications for priorities for birds, mammals, plants, fish, reptiles, amphibians and invertebrates. The priority topics include surveys and elucidation on the conservation, management, and stewardship techniques. Detailed priorities within each of these categories are outlined below.

It is recommended that projects/grant applications address one of the priorities listed below. However, applications may be accepted that address priorities outlined in the Pennsylvania State Wildlife Action Plan and/or address the needs of plant species or plant communities of concern within the Commonwealth. The applicant should contact the WRCP Agency Coordinator to discuss the project, how it may fit into flora or fauna priorities and potential for funding. Please refer to the “Application Submission Information” section below for further information.

Mammal Priorities:

Mammal Species Genetics Clarification: These projects fill information gaps of regulatory significance and will help guide agency investments in conservation. Priority species include:

Maryland/Smokey shrew – clarifying questions regarding genetic differentiation. Long-term conservation actions, if warranted, may include habitat management focused on sustaining vulnerable populations. This project would include: 1) Assess feasibility of using museum specimens to look at historic genetic/speciation differences between species; 2) Collect samples of smokey shrew in areas beyond the purported Maryland shrew range; 3) Trap shrews within range of purported Maryland shrew; 4) genetic analysis to determine differentiation; 5) retain bodies/skulls for morphometrics if there is any indication of species/sub-species differentiation.

Northern/Southern flying squirrel – clarifying hybridization zones. This project would include: 1) live trapping flying squirrels in areas of known northern flying squirrel occurrence to assess extent of hybridization; 2) preserving fecal pellets and hair follicle samples for future genetics and dietary metabarcoding work; 3) conducting genetics work to confirm species vs hybrids; 4) metabarcoding of pellets to identify food consumed by volume and occurrence (*optional, if funding adequate*).

Bird Priorities:

MAPS Data Enhancement. This project supports the development of high-quality avian productivity and survival data for the national Monitoring Avian Productivity and Survivorship (MAPS) database and helps fill information gaps that can inform species and habitat management. The MAPS program is a function of the Institute of Bird Populations. Startup funds for an applicant to create an additional MAPS station(s) in PA. Funding would include an obligation to collect and submit data according to MAPS protocols. If establishing a new MAPS

station is not feasible for an applicant, this priority could alternately fund the data entry for those PA MAPS stations that have collected high quality data in the past but have not digitized and submitted that data to the MAPS program.

Full Annual Cycle Study for Selected Bird Species: These projects fill information gaps of regulatory significance, will inform best management practices for species and critical sites, and can guide agency investments in conservation. These studies would involve tagging adults and fledglings to identify new and important nesting and migratory stopover sites and seasonal movement patterns.

Priority species include: Night-herons; Great Blue Heron colonies near aquaculture facilities; Chimney swift, Northern harrier.

Plant Priorities:

Plant Conservation Genetic Studies: *Lycopodiella margueritae* is in need of both phylogenetic treatment as well as potential population genetics, though phylogenetic treatment is the priority. We would recommend collaborating with existing research groups working on the genus (contact DCNR for more information).

Vitis rupestris is thought to hybridize with more common species of *Vitis* along the Youghiogheny River. There is a need to determine if such hybridization is occurring. We encourage the use of genetic tools as well as morphology to examine if introgression has occurred between *Vitis rupestris* and congeners. Ideally, this work would result in guidance to where any non-introgressed *V. rupestris* occurs and morphologic characters to help determine the taxa.

We highly encourage the use of high throughput or next generation sequencing (eg. RADseq, ddRAD, GBS) for this work. Because this is publicly funded work, we ask that you deposit resulting data into a *National Center for Biotechnology Information* (NCBI) repository such as the Sequence Read Archive (SRA) or GenBank. The deposit date may be after any resulting manuscripts are accepted for publication, if applicable.

Resulting data will inform our understanding of the genetic structure and general genetic health (eg. gene flow, inbreeding, and genetic diversity) of these species which will inform future conservation and safeguarding decisions.

Research on the Conservation of Threatened and Endangered Plants: DCNR is interested in research proposals related to the conservation of Pennsylvania Threatened and Endangered plants, including information on the distribution, ecology, life history, genetics, and stewardship. Considerations of climate change on species and habitats should be incorporated where appropriate. This is a broad request to guide researchers to focus on highly G- and S-ranked species and provide key information the Department is lacking in forming recovery plans for

species. This priority is intentionally broad to capture allow researchers creativity and innovation in approaching the needs of rare flora in PA.

Plant Conservation Stewardship Studies: Species in need of propagation research include: *Agalinus auriculata* and *Taenidia montana*. These species have limited populations in Pennsylvania and long-term conservation action for them may include population augmentation and establishment of de novo populations. Propagation research will be essential in facilitating outplanting of these species for these purposes. We encourage utilizing seed from secure populations outside of PA if possible and in some cases congeners to hone propagation technique and complete initial germination trials. Work with DCNR PA Plant Conservation Alliance can facilitate PA seed procurement. These species would also benefit from habitat suitability research as their habitat in Pennsylvania is highly anthropogenic and not characteristic of the rest of the range.

Aquatic Invertebrate Priorities:

Determining the Distribution and Conservation Status of an Undescribed Freshwater Amphipod Species Recently Discovered in Pennsylvania. Recent studies have demonstrated significant cryptic species diversity in several freshwater amphipod crustacean species in the genus *Gammarus*. In 2022, a previously unknown *Gammarus* sp. was collected from three locations in Pennsylvania. Preliminary morphological and genetic analyses of these specimens strongly indicate that it is a new, undescribed species, which appears to be native to North America and could be a species of conservation concern in Pennsylvania. However, its conservation status and the status of other *Gammarus* species in Pennsylvania cannot be determined until additional distributional, taxonomic, and phylogenetic studies are completed. This project would provide the data necessary to determine the taxonomic, phylogenetic, and conservation status of the recently discovered species and any additional undescribed *Gammarus* species that are discovered, ultimately leading to a better understanding of the freshwater diversity of amphipod crustaceans in the state of Pennsylvania and conservation of rare and threatened members of the group.

Determining the Distribution and Conservation Status of Two Rare Burrowing Crayfish Species in Pennsylvania. Pennsylvania's crayfish fauna includes five primary burrowing species, all of which are highly sensitive to habitat destruction and water quality degradation and are extremely important components of the ecosystems in which they reside. Three of those species have been thoroughly surveyed and conservation assessments are complete. All three have limited distributions in the state and two are critically imperiled (S1) while the third is vulnerable (S3). Although some surveys have been conducted for the remaining burrowing species, the blue crayfish (*Cambarus monongalensis*) and the little brown mudbug (*Lacunicambarus thomai*), showing significant losses over the last century, rigorous conservation assessments await the completion of comprehensive targeted surveys across the

entire suspected ranges of the two species. This project would provide the data necessary to rigorously determine the conservation status of the blue crayfish and the little brown mudbug in Pennsylvania and develop conservation plans to conserve remaining populations.

Fish, Reptile, and Amphibian Priorities:

Effects of Dissolved Oxygen on Chesapeake Logperch, *Percina bimaculata*. The influence of dissolved oxygen on the distribution and habits of the Chesapeake Logperch (*Percina bimaculata*) is largely unknown. Chesapeake Logperch occupy a wide array of waterbodies ranging from medium creeks to large rivers, including man-made impoundments. Multiple electric utility operations and hydroelectric dams influence these waters at several locations. Understanding the dissolved oxygen requirements and tendencies of this species is critical for effective management. Research defining dissolved oxygen needs, avoidance, tolerance, and projected lethality is needed. Studies should include larval, juvenile, and adult life stages of Chesapeake Logperch.

Green salamander (*Aneides aeneus*) habitat use and management. Conservation actions in the Wildlife Action Plan for Green Salamanders include many recommendations for planning and implementing habitat management of occupied sites. But a better understanding of the habitats used by the salamanders is necessary in order to design general guidelines for protection and management. Determine habitat use by salamanders of forest habitats that surround occupied rock outcrops in Pennsylvania, including aspects of forest structure and condition that should be maintained to provide habitat corridors among occupied rocks. This project would also include inventory and searching for new occupied habitats. Understanding the use of these habitats will help develop best management practices, and conservation recommendations for the species

Measurable Results & Selection Criteria

WRCP grants contribute to valuable wild resource surveys, research, and conservation management. It is important that the application shows a clear indication of wild resources benefits, when they are expected and how the benefit will be measured or applied. Accomplishments directly beneficial to wild resources will be given a higher rating.

Project selection will be based on a combination of technical evaluation and programmatic relevance. Evaluation will be by a combination of agency staff and external technical reviewers. Applicants are advised to read the criteria carefully and design the project and write the application in a way that is responsive to both criteria and priorities in the next section. The reviewers will use the following criteria in judging the merits of proposals:

- Importance of the conservation issue being addressed and relevance to WRCF priorities (Note that proposals addressing important biodiversity issues, but not identified as priorities, will be given full consideration if they address the additional criteria below.)
- Importance of the knowledge to be gained and potential to improve or advance current conservation practices
- Statewide significance and/or potential for statewide application
- Technical soundness of the approach and potential for project success
- Innovativeness/creativity of approach
- Qualifications of the organization, principal investigator, technical staff, and sub-contractors
- Use of appropriate protocols and producing useful data
- Cost effectiveness, value of expected results compared to project cost
- Extent of matching funds, including in-kind services

Budget

To maximize the conservation impact of WRCF grant dollars and the number of grants provided, applicants must prepare accurate budgets that honestly reflect the level of effort necessary to complete the proposed work.

Overestimated budgets reduce the chances that other worthy projects will be funded. Additionally, successful applicants that leave grant money unspent at the end of the grant agreement jeopardize their chances for receiving future grants as well as WRCF's ability to secure adequate funding for future grant rounds.

Matching funds

WRCF grants require a 25% match (i.e. WRCF will fund no more than 75% of a project's total cost). Cash match and non-cash match will count equally toward the matching requirement. Cash match must be a source of funds other than ESF or WRCF. Non-cash match is the performance, at no cost to the grantee, of a portion of the approved scope of work.

The performance of this work must be documented and be in lieu of work otherwise charged to the grant. The two types of non-cash match are: (i) Donated service [professional service] (claimed at the firm's or individual's normal billing rate times the number of hours worked) and (ii) Volunteer service [non-specialized labor] (claimed at the normal hourly labor rate for the type of work performed times the number of hours worked).

Grant Size and Project Duration

New this year! The term of the grant has been extended from 18 mo. to **3 years** in an effort to streamline the process for grantees, reducing the need for extension requests. Grantees can apply for no-cost extension prior to the expiration of the grant period; the maximum grant agreement period is still five years, including extensions. Projects generally last for three years. While grant size varies, the average award size is \$30,000.

Fiscal Guidance, Eligible and Ineligible Costs

The general principle for allowable costs under Commonwealth grants is that the costs are reasonable and are directly attributable to the project being performed. For a listing of eligible and ineligible costs, as well as a description of budget categories, please refer to the *Fiscal Guidance document* on the WRCP web site.

PNDI Review, Collection Permits & Research Approvals

Copies of all necessary clearances, permits, approvals and PA Natural Diversity Inventory (PNDI) reviews must be provided prior to the issuance of a final grant agreement. For more information on PNDI, which permits may be required for work on state lands or to collect specimens, consult the following:

- PA Conservation Explorer: for access to Conservation Planning & PNDI Environmental Review info <https://conservationexplorer.dcnr.pa.gov/>
- PA Department of Conservation and Natural Resources
 - Research permits for State Forest and State Park lands: <https://research.dcnr.pa.gov/ResearchApplication/Application>
 - Wild Plant Management Permit: <https://forms.office.com/Pages/ResponsePage.aspx?id=QSiOQSGb1U2bbEf8Wpob3h81ogvi2hdKqsZq8-oTmPdUQONHUzAzTTRJU0ZWRkdZRjBINERQU1RXMC4u>
- PA Game Commission
 - Bird and Mammal surveys: Bureau of Wildlife Protection, Special Permit Enforcement Division, 717-783- 8164
 - State Game Lands: Bureau of Wildlife Habitat Management, Habitat Planning and Development Division 717-787-9613
- PA Fish and Boat Commission
 - Survey and Collection permits: <https://www.fishandboat.com/Resource/EnvironmentalServices/Pages/default.aspx>

APPLICATION SUBMISSION INFORMATION

Contact the WRCP director or the appropriate agency coordinator (see information below) prior to submitting a grant application. They can give valuable advice about the program's priorities, how to improve your project design and application content, and the probability of success for your application.

WRCP Director
Rebecca Bowen
Department of
Conservation and Natural
Resources
(717) 772-0258
rebbowen@pa.gov

Native wild plants
Chris Firestone
DCNR-Bureau of
Forestry
(570) 724-8149
cfirestone@pa.gov

**Non-game birds and
mammals**
Lisa Williams
PA Game Commission
717-787-5529
liswilliam@pa.gov

**Non-game fish, amphibians,
reptiles and aquatic fauna**
Chris Urban
PA Fish & Boat Commission
(814) 359-5113
curban@pa.gov

Grant Application Submission Instructions Deadline: Friday Sept. 1, 2023, 4:00 pm

All applications must be submitted electronically through DCNR's electronic grant application system, DCNR Grants, which standardizes the application process and provides an environmentally friendly way to submit a grant application through a secure internet connection. To access the online application, go to https://www.grants.dcnr.state.pa.us/default.aspx?rtn=pages/home_wrcp.aspx. The Department also has a Grants Customer Service Center that can provide help on the DCNR Grants system and direct callers with technical grant questions to the appropriate area for help. You can reach the customer service center by phone at 1-800-326-7734, by e-mail at DCNR-grants@pa.gov, or by clicking on the Get Help link in DCNR Grants.

The deadline for submitting your applications will be 4:00 pm, Friday September 1, 2023. Note that a Commonwealth SAP number is required on the application. It can take up to two weeks to get an SAP number, so plan accordingly. The Commonwealth of Pennsylvania's Central Vendor Management Unit can be reached at 1-877-435-7363 for help with obtaining or verifying an SAP number.

We strongly encourage you to start your application early. After creating your electronic application in DCNR Grants, click on the Download Forms link to see all the requirements for the application package.

Selection Process and Post-Selection Actions

Selection Process

Applications will be evaluated by external technical experts prior to evaluation by the agency coordinators and WRCP staff. The WRCP Board of Directors will recommend allocation of funds based on these evaluations at its Annual Meeting in the fall, and final selection will be made by the Secretary of DCNR shortly thereafter. Funded applicants will be notified after that time.

Data Submission

All grantees are required to submit grant results in a final report. Grantees doing research on rare or endangered species will also be expected to follow protocols acceptable to the PA Natural Heritage Program and submit data using a standard data submission format.

Specimen Collections

Specimens collected during any project supported by WRCP must be deposited in an institution that will curate the material in perpetuity per the archival standards for that group of organisms and make them available for study by scientists, conservationists, and other individuals with a legitimate interest. Preference must be given to (i) institutions within Pennsylvania, (ii) the nearest appropriate institution for the taxa involved or (iii) an institution that has an established collection of material from Pennsylvania. The grantee should include in the budget any curatorial fees to be charged to the grant.

Records

For certifying final project costs and for auditing purposes, grantees must retain records for three years

from date of final payment or three years from the date of an audit, whichever is later, including: detailed and auditable payroll, personnel fringe benefits, and organization operating cost records for costs charged to the grant and for match (such as time and attendance records for volunteer services), grant agreement documents, invoices and cancelled checks for all property, services, and materials purchased as part of the project.

Reporting

Grantees should provide the WRCP director annual progress reports on their projects. Final reports are required prior to final disbursement of grant funds (10% of funds will be held in reserve until final report is submitted).

New this year! In an effort to increase awareness of the WRCP program, researchers' findings, and wild resources in general, a **recorded presentation** is being requested as part of the final report. At close-out, grantees should also provide a recorded presentation on their project/findings, suitable for public sharing on the WRCP website. The presentation should be between 10-30 min. long, in a form accessible by the public (Powerpoint, video, walk-and-talk in the field, etc.) and content should be appropriate for all audiences. Do not disclose sensitive species location information during the presentation.