I. CHESTER COUNTY COMMUNITY FOUNDATION
GRANT PROPOSAL SUMMARY SHEET

Date **September 27, 2018**

Contact Information

Organization Name: **Delaware Riverkeeper Network**
Address: **925 Canal Street, Suite 3701**
Bristol, PA 19007
Phone: **215-369-1188**
Website: **www.delawareriverkeeper.org**
Year Incorporated: **2008**

Executive Director Name: **Maya van Rossum**
Executive Director E-mail:
keepermaya@delawareriverkeeper.org
Board of Directors Chair Name: **Robert Meek**
Primary Contact Name: **Dr. Erik Silldorff**
Primary Contact E-mail:
erik@delawareriverkeeper.org

Has your nonprofit ever applied to the Community Foundation? Yes ___ No **X** Not Sure__
Has your nonprofit ever received funding from the Community Foundation? Yes **X** No__ Not Sure__
X Donor Advised Fund(s) ____Fund for Chester County ____Don't know/Not sure

Field/s of Interest:

___ Arts, Culture & Humanities **X** Environment/Animal Welfare ___Education
___ Health ___ Human Services ___ Religion

Organization Information:

Geographic Area Served *(If not all of Chester County, specify primary Chester County regions served):*

The Delaware Riverkeeper Network works throughout the four states of the Delaware River watershed, including almost all of Chester County, from White Clay Creek and the Brandywine River up to the Schuylkill River.

Describe Population Served and Annual Number of People Served:

The Delaware Riverkeeper Network plays a vital role in protecting the water quality and ecological health of the Delaware River and its tributaries, thus serving a population of over 17 million people.

Mission: **The Delaware Riverkeeper Network champions the rights of our communities to a Delaware River and tributary streams that are free-flowing, clean, healthy, and abundant with a diversity of life.**

Proposal Summary: **The Delaware Riverkeeper Network seeks matching grant support for an innovative collaboration with state, federal, and pri vate researchers to restore the ecological health of Pickering Creek by re-introducing native eels and controlling invasive crayfish.**

If Capacity Building Proposal, the focus is:

___Mission, Vision & Strategy ___Governance & Leadership ___Strategic Relationships
___Fundraising & Development ___ Technology Other: _____

Annual Budget $ **2,579,541**

21 # of Full-Time Equivalent Paid Staff
78.4 % of budget for program expenses
8 # of Board Volunteers
14.7 % of budget for administrative expenses
107 # of Active Non-Board Volunteers
6.9 % of budget for fundraising expenses
2,181 # of Volunteer Hours

100 % total

Top 3-5 funding sources: **Foundations (including the William Penn Foundation, the Wood-Tiger Foundation, 11th Hour Project of the Schmidt Family Foundation, Cedar Tree Foundation) individual tax-deductible donations, and Program Activities income**

Grant Amount Requested from the Community Foundation: **$ 5000 .00**

II. CHESTER COUNTY COMMUNITY FOUNDATION
GRANT PROPOSAL NARRATIVE

1. Organization's history, goals, key achievements and distinctiveness

The Delaware Riverkeeper Network (DRN) was founded in 1988 upon the concept of personal and community responsibility for river protection, as personified by the Delaware Riverkeeper. For over 20 years, the role of Delaware Riverkeeper has been held by Maya van Rossum. With van Rossum's guidance, DRN has become a regional leader in watershed protection through its reliance on independent advocacy, and the use of accurate facts, science, and law. DRN is recognized for passionate advocacy in support of constitutional environmental rights protections, at both the state and federal levels, to protect the rights of both present and future generations.

DRN undertakes work in six interrelated program areas: 1) Advocacy to protect water quality and habitats; 2) Awareness-to-Action to organize local communities into activists to protect local streams; 3) Habitat Restoration to restore damaged streams; 4) River Resources Law Clinic to enforce environmental laws; 5) River Tech to provide the technical expertise necessary for citizens, municipalities and water protection organizations to understand and address complex watershed issues; and 6) Water Watch to monitor the health of the River and its tributaries. Through these programs, DRN empowers communities with the engaged interaction and information needed to succeed in protecting our River and region, now into the future.

DRN works to ensure that 1) the Delaware River and its tributary streams are given high priority in all decision-making; and 2) that there is broad public recognition that our mutual greatest good comes from the protection and restoration of our Watershed's natural resources. To ensure a healthy River we need to be working to protect the water that is in rivers and streams, the riverside lands that are an integral part of healthy waterway function, and the watershed that is the source of it all.

Achievements by DRN have been numerous over the last 30 years, with some of the highlights including:

- Clean Water Act "anti-degradation" protections for the Upper, Middle, and Lower Delaware River;
- A robust volunteer monitoring program, first launched in 1991, which now evaluates water chemistry, macroinvertebrates, riparian buffer health, & pipeline construction, among others;
- NJDEP groundwater standard for PFNA, the most toxic of PFCs (perfluorinated compounds), that will require the removal of the toxic compound from drinking water and the cleanup of the pollutant from groundwater, soil, and other environmental mediums;
- A *de facto* moratorium on natural gas drilling in the Delaware Basin, with a proposal to permanently ban high volume hydraulic fracking;
- Numerous riparian, stream, and community restoration projects in communities spanning the cultural and economic diversity of our region.

As a watershed wide advocacy organization, DRN takes a strong stance on regional and local issues that threaten water quality and the ecosystems of the Delaware River and its watershed. In fact, DRN is the only advocacy organization working throughout the entire Delaware River Watershed. DRN works from the "bottom up," empowering communities and citizens to act and advocate for change. At the same time, DRN must work from the top down, engaging regulatory and policy makers in order to secure decisions and programs that protect and restore our river and watershed. DRN is known for taking positions on controversial issues that otherwise would be ineffectively addressed, if at all. These positions are always backed up with solid information,

documentation, and reason, informed by science, law, policy analysis, community need and genuine passion and commitment to the right outcome.

Our involvement on an issue often translates into a successful result, be it through our advocacy that is dedicated to informing and securing the right and better decisions; our restoration program which identifies and restores damaged stream ecosystems and riparian areas with a strong, hands-on involvement from the community; our River Resources Law Clinic which uses environmental protection laws to enforce legal protections of our waterways and at the same time educates law students interested in environmental and public interest law; or via our water quality monitoring program which, for over 25 years has helped citizens, communities and watershed organizations gather and utilize water quality and ecosystem health data to protect their local streams.

2. Funding request

DRN will be launching an innovative restoration and research effort in the Schuylkill watershed in collaboration with the Academy of Natural Sciences of Drexel University, the Western Pennsylvania Conservancy, the Pennsylvania Fish & Boat Commission, and the U.S. Geological Survey. Together, we will be re-introducing American Eels to streams where migratory fish blockages have effectively eliminated these unique migratory travelers from area streams. In addition to extending the reach of these eels for their own population benefit, this team's research indicates that far-reaching benefits for the stream biodiversity can be attained by re-establishing American Eels where dams have prevented their natural migration. We propose to experimentally test this possibility in Pickering Creek by re-introducing American Eels and conducting detailed research on the stream's response following re-introduction.

In many of Chester County's most important streams, including French, Pickering, and Valley Creeks as well as the Schuylkill and Brandywine Rivers, invasive crayfish have begun to transform these stream ecosystems and to monopolize resources to the detriment of the native biodiversity. Among the casualties is a new species of crayfish only found in streams of southeastern Pennsylvania and so new to science it remains to be named and placed within existing species and species groups. The new crayfish species, which can be currently referred to as *Cambarus (Puncticambarus)* sp. (*C.(P.)* sp.), was first discovered in Valley Creek in the year 2000, and surveys since then have shown a rapid contraction of its range in streams such as Valley Creek and Pickering Creek as invasive crayfish have established populations and dominated the streams' fauna.

In 2019, our team of researchers plan to re-establish approximately 1000 American Eels in the Pickering Creek watershed and to then monitor both the crayfish and fish community response to their reintroduction. Primary funding has been sought through the Delaware Watershed Restoration Fund of the National Fish & Wildlife Foundation (NFWF), and matching funds are needed to secure this NFWF grant. Although both cash and in-kind funds are available from all four partner organizations, additional funding is needed to support both the collection of American Eels, their transport to Pickering Creek, and the follow-up monitoring of the ecological response.

DRN seeks $5,000 in grant funding to support this project from the Chester County Community Foundation. The NFWF grant totals $88,885 in funding, with an additional $90,000 in match already identified for this grant. Yet additional non-federal funds are needed to secure a sufficient match, and the Chester County Community Foundation would close a significant component of the gap to finalize the NFWF match requirement.

Why it is important to fund this now:

While fish passage should be improving in recent decades through the removal of dams and the addition of fish passage structures, alarming trends in American Eels numbers have instead been observed since the 1970s. Where American Eels were present at nearly 70% of Schuylkill watershed sites sampled by the Pennsylvania Fish & Boat Commission during the 1970s, surveys during the last

decade have found American Eels at just 10% of streams through similar survey efforts (M.Kaufmann, PFBC, unpublished data). Thus, American Eel trends need to be reversed and their populations extended back into their native range. These extraordinary organisms have a reverse migration pattern compared to more commonly documented species such as shad and salmon. Instead of spawning in rivers and streams, the American Eel spawn south of Bermuda in the middle of the Atlantic Ocean, within the area known as the Sargasso Sea. Their larvae are then transported on currents back to North America, and the young eels move into streams and rivers to complete their growth and development for up to 30 years before making the return migration to the Sargasso Sea.

A key component in reversing the steep declines for American Eels in our region is to establish the vital role that American Eels play in the local ecology of our river and streams, thus accelerating the demand for improved eel passage throughout the region. Our emerging research showing that exotic crayfish have primarily invaded in areas lacking eel predators will help establish the role of American Eels. More important will be an experimental test where American Eels are re-introduced to a stream and the ecological declines arising from their absence are shown to be reversible with the return of eels to the system.

The current research therefore provides immediate restoration benefit for Pickering Creek and its many small streams and tributaries, including immediate benefits for the new and yet-to-be described endemic crayfish (*C.(P.)* sp.). More importantly, this first test of the power of eel reintroduction will provide us and other conservation groups in the region with the tools and the improved knowledge of the vital importance of American Eels, and will thus accelerate the pace of restoring migratory fish passage for our region, including both dam removal and low-cost eel ladders for dams serving vital functions.

3. How impact and results will be demonstrated

Central to the design of the proposed restoration project using American Eels is a rigorous multi-year monitoring program to evaluate both crayfish and the entire fish community response to the eel reintroduction. First, the project team will supplement nearly 20 years of existing data collected in Pickering Creek on fish and crayfish with quantitative surveys prior to eel release. Following release, the team will monitor crayfish and fish response through identical quantitative surveys in both the first and second year of the NFWF grant. Finally, the project team is committed to using both base funding and additional grant support to continue rigorous surveys of fish and crayfish in Pickering Creek for at least the 4 years following eel reintroduction.

The design of the project therefore explicitly centers on documenting the response and impact of the restoration effort for Pickering Creek and its aquatic ecosystem. The rate of invasive crayfish control will be documented by repeat surveys throughout the watershed. The return of the new crayfish species (*C.(P.)* sp.) will likewise be documented by the extensive crayfish monitoring. The cascading benefits for the entire fish community will be a third key impact that will be documented and recorded for this restoration project. Finally, the ultimate impact will be measured in our follow-up efforts to use these results to secure sustainable long-term restoration of American Eels to all of our streams and rivers through major improvements to migratory fish passage.

Although beyond the scope of this proposal to provide full details, the project team includes four PhD scientists across the four organizations, with specializations in ichthyology, crayfish ecology & biogeography, stream ecology, freshwater mussels, and ecosystem research. The extraordinary team, and their long-term commitment to restoring the region's streams through rigorous research and monitoring, will serve as one of the key strengths to the full success of this project.