

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

Stroud Water Research Center (hereafter "the Stroud Center") was established in 1967 as a field station of the Academy of Natural Sciences of Philadelphia with a mission to understand how natural streams and rivers work in order to guide the cleanup and restoration of polluted streams and rivers. Fifty years later, we are an independent 501(c) (3), not-for-profit, non-advocacy organization recognized worldwide for our freshwater research, education, and watershed restoration.

The Stroud Water Research Center is a leading hybrid environmental institution. We conduct highly advanced, cutting-edge science focused on understanding how freshwater ecosystems function. We collaborate with academic institutions to teach undergraduate courses, mentor and teach graduate students, and train interns to help develop the next generation of scientists and environmental managers. We are a teaching institution, contributing to curriculum development and education of adults and grade students. We describe and curate biological specimens by housing one of the largest collections of aquatic insects in eastern North America. Similar to an environmental consulting firm we work with corporations, individuals, and government agencies (local, state, and federal) to solve environmental obstacles and help manage and protect our fresh water resource. We develop and implement environmental restoration and mitigation projects that assist landowners, legislators, and environmental managers to improve water resources management practices to conserve, protect, and sustain clean fresh water for future generations.

During the past 50 years, the Stroud Center has influenced the focus and direction of freshwater science, education, and watershed restoration. Our original publication of the River Continuum Concept in 1980 remains the most cited and highly regarded foundational concept describing a stream's ecological functioning, worldwide. We are the new hosts of the Center for the North America Taxonomic Certification Program for identification of aquatic insects and other invertebrates, which underpins water-quality assessment in the United States. Our environmental education programs, like the Leaf Pack Network[®], www.Wikiwatershed.org, and their curricula, are used throughout the United States and globally.

2. Funding request: Infrastructure support is needed to sustain our cutting-edge programs (specifically, technical equipment, field vehicles, computing systems, archive facilities, visitor housing, etc.). Project-specific grants and contracts typically cover proof-of-concept research, time spent planning and writing grant funded projects, communication of our mission and research to the public, or covering our time to participate in outreach conferences and meetings. In the Stroud Center's current strategic plan, the board and staff concluded that one of the most critical elements to sustain the success of the Stroud Center is to increase our "capacity" to assure that the future of clean fresh water is sustainable. The goal is to increase the capacity of the Stroud Center to sustain and elevate our competitive advantage, to continue cutting-edge contributions to freshwater ecology, and to ensure that the center remains a third party, non-advocacy, not-for-profit organization. ***Funding from the Chester County Community Foundation will increase capacity in key major aspects of the Stroud Center:***

- ***Scientific Research:*** Credible scientific knowledge and data are the best advocates for sustaining clean fresh water for people and wildlife.
- ***Environmental Education:*** Our education department was created in 1992. Creating, refining and exporting new education programs and associated curricula is a major part of our staff's efforts. These programs are the best way to directly inform the public of the Stroud Center's new scientific findings.
- ***Watershed Restoration:*** A report from the U.S. Environmental Protection Agency in 2016 stated that 50 percent of the streams and rivers in the United States had poor water quality. This means that about 75 percent of the plants and animals that live in our streams and rivers cannot thrive because of documented pollution. The underlying philosophy of our watershed restoration program is to improve and protect our freshwater resources while efficiently utilizing land in our watersheds for housing, commerce, and growing

food. Our restoration programs assist landowners and government entities in reducing the flow of pollutants from human activities into our streams and rivers.

- **Unrestricted:** Our Unrestricted Fund affords institutional leadership the flexibility to apply funds where they are needed most such as capital projects, conferences and meetings, technology enhancements, etc.

Funding will sustain existing programs and help us develop new programs for diverse audiences, continue the successes of our award-winning boots-in-the-water stream studies, and engage new learners — particularly from underrepresented groups. Funding from the Chester County Community Foundation makes it possible to provide outreach programs that align with Pennsylvania, Delaware, and Next Generation Science Standards as well as Citizen Science Groups. **As of September 7, 2017**, the Stroud Center has achieved the following towards our \$20 million Future of Fresh Water Capacity Building Initiative. **In one year**, we have achieved **\$5,362,015.61** in secured cash and pledges toward our \$20 million goal for the Future of Fresh Water Initiative from **78** current, prior, and new supporters of the Stroud Center.

Sustaining clean fresh water requires a good working knowledge of freshwater systems (research) coupled with translating and sharing knowledge broadly with the public (education) and working hand-in-hand to restore damage done to our streams, rivers, and their watersheds related to poor environmental stewardship in the past (restoration). Strategies to implement the Stroud Water Research Center's mission include:

- share findings with peers in the scientific and educational communities and with businesses, landowners, policymakers, and individuals to help them make informed decisions affecting global water quality and availability.
- Conduct basic and applied scientific research and presenting educational programs serving audiences from elementary school children to adults.
- undertake applied research projects for public agencies and private corporations in order to provide solutions to global water resource problems.

Why it is important to fund this now: The Stroud Center needs to increase the capacity and sustainability of Stroud Water Research Center to produce science focused on fresh water, package and convey that knowledge to the public, and engage the public in day-to-day activities that will help sustain sources of clean fresh water for future generations. Access to clean freshwater should be available to everyone. It is a vital natural resource. Without it, business, recreation, and indeed life itself will cease. Lack of funding may mean the rejection rate on proposals will increase, the quality and quantity of programs may decline, and budget shortfalls may become more common. The need to draw down our supporting investments may be at unsustainable rates (greater than 5 percent), uncertainty of our programs, and fewer organizations may want to collaborate with us. The Stroud Center may gradually need to shift from proactive pursuits of new knowledge and innovative education and restoration programs to a more reactionary pursuit to secure funding that is primarily driven by priorities set by other funding agencies rather than meeting the needs of the public with regard to fresh water.

The Stroud Center will be financially equipped to enhance its mission and vision to better meet the needs of a growing population and stressed environment. Over the next 50 years, the Stroud Center's staff and facilities will be able to meet the ever increasing need for stewardship of our freshwater resources. We plan to invest and utilize the funds strategically to enable us to leverage our institutional funds for an indefinite period in conjunction with project-specific grants and contracts to assure continuity of a core team of scientists, educators, and restoration specialists. Direct measurements of success will be increased competitiveness on grants and contracts, increased output of deliverables.

4. Budget: Annually, there are research, education, and restoration budgets that include both project funding (grants and contracts) and institutional funds.

*We have a lot more to do and your assistance is vital to accomplish this initiative at a level deemed appropriate.
Thank you for your consideration.*