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Resilient Communities Category 3 Full Proposal Project Narrative

Writing Instructions: Please provide a six-page narrative that answers these six questions.

Seeding Resilience Through Restoration and Education in Princeville (NC)
Conservation Trust for North Carolina

Long-Term Conservation and Community Outcome(s): *Elaborate on the long-term conservation and community outcome(s) summarized previously in the application; discuss what makes the outcome(s) address conservation needs and improve community resilience and well-being.*

"Seeding Resilience" will design and install green infrastructure on the grounds of the recently renovated and flood-proofed Princeville Elementary School building. This project is part of an ongoing, multi-faceted resilience engagement with and for the Town of Princeville, NC, the nation's first town chartered by African Americans following emancipation. In this proposal, project partners will build on their history of learning and cooperation with the people of Princeville to implement a series of green and gray infrastructure enhancements.

The specific project will reduce flood risks at the school and the adjacent 49-unit Asbury Park apartments, a Section 8, Project-based Rental Assistance complex for low-income families. It will also create an educational trail from the school toward the historic Waterfront Park along the Tar River. As important, it will help rebuild confidence in the town's future. Princeville Elementary is located within the heart of the town's civic core and is within short walking distance to other municipal buildings, communal points of interest, and multi-family residential developments. Princeville Elementary is a pivotal location for the Town of Princeville's rebuilding efforts.

Participating in designing and seeing to fruition this segment of a much larger plan for community resilience will encourage citizens to embrace a sustainable vision that connects social, economic, and environmental components. Residents have repeatedly made clear they do not want to be fully bought out and lose their historic town center, with all its national and personal significance. For the citizens of Princeville to embrace the expansion of their town into recently acquired 53 acres of new lands that provide higher ground, partners must show that core sections of the historic center will also be made resilient to future flooding. Likewise, investors who are needed to make the town's rebound and expansion viable must see a commitment to reinvigorating its most important assets.

The project supports larger goals to protect the natural assets of the town and the Tar River that wraps around it. The NC Natural Heritage Program evaluates the Tar River and floodplain habitats adjacent to Princeville as Natural Areas of "High" importance. The Tar River in this vicinity is known for supporting a range of listed or special concern species of fish (e.g., pinewood shiner) and mussels. Team members will examine stream restoration potential within the project area and determine feasibility of that work in conjunction with the main project. A consulting firm is currently completing a study of ditch and stream functions within the town.

Improvement of the landscape areas around the school provides opportunities for direct water management and storage for the center of the community and all housing surrounding it. It also will beautify an area that has long served as the communal hub for the town. For three years students living in Princeville were relegated to schools in nearby towns, fracturing their educational continuity and social bonds. With the reopening in January 2020, after a $6 million renovation and flood-proofing, the Princeville Elementary School has become a symbol of hope for revitalizing and reconnecting the community. Realization of a successful, collaborative project here, visible and tangible to residents and visitors, will encourage further engagements toward sustainability and resilience. As the community prepares to work with the Army Corps of Engineers and other entities focused on large-scale protection and restoration efforts, it must be prepared to advocate for the right balance of green and gray infrastructure. This project builds knowledge and confidence among the community to do just that. Princeville's people have proven their resilience. Through strategic investments in natural infrastructure, this project improves the resilience of the rest of the town's significant assets.

Engagement: *Who will be involved in the planning and implementation phases of the project? Describe community characteristics of the project area and identify any targeted audiences in underserved or high-need communities. Use poverty statistics, school lunch data or demographic records to articulate high-need or underserved communities and identify how the project increases community members' access to nature and decreases their potential risk of harm from potential environmental hazards.*

Princeville is located in one of North Carolina's most socially vulnerable counties (Edgecombe). The average individual income is $14,000 and household annual earnings are just over $35,000. One third of the residents live below the poverty line. Median prices for housing are $78,000, approximately $100,000 below state averages. Almost 98 percent of the 200 students at Princeville Elementary qualify for free or discounted lunches. More than 90 percent of the residents are African American. Due to the impacts of repeated flooding, the population of the area has fluctuated greatly, from more than 2500 in 1990 to a subsequent recent low of about 1000 just after Hurricane Floyd in 1999. Its current population hovers between the two. Resilience is key to stabilizing the future for the town.

The project will engage hundreds of citizens in community meetings, design charrettes, and volunteer workdays (potentially mixing students, community members, corporate employees, and corps members). Youth will be deeply involved in all phases of the project. Design students from NC State University will collaborate with youth work crews from Conservation Corps NC and local Princeville students in planning and construction.

The project team will work to engage with diverse groups to create synergies, build networks, and leverage resources to implement and provide for the long-term management of the project. Workshops will be developed and delivered to engage with three primary stakeholder groups:

- School administrators and teachers: to 1) educate decision makers about the importance of natural infrastructure and build consensus around sustainable stormwater management; 2) collaborate with key teachers on the development of curricular materials (to inform signage and ongoing student-teacher maintenance activities); and 3) determine district-wide and school-specific maintenance capacities for the grounds crew and create a sustainable management regime.
- Students: to collect feedback on design schemes, plants and signage graphics that are of greatest interest to children in grades K-5.
- PTA members and nearby residents: to understand how the school site can serve as a park-like amenity for local families. Feedback will be incorporated into the final site design, and relationships fostered through this process will be used to identify parents/families that are interested in ongoing volunteer maintenance activities.

In addition to the diverse expertise of the core project team and input from local stakeholders, allied professionals may be consulted throughout the project period.

CTNC will contract with Conservation Corps North Carolina (CCNC) (corpsnc.org) to recruit and train a crew of eight youth, preferably from the local region and/or the state, to provide eight weeks of on-site labor for implementation of the design plans. CCNC is a program of Conservation Legacy that engages motivated young adults, ages 16-27, to complete challenging and impactful conservation service projects. Conservation Legacy, now in its 23rd year, is a $30 million, multi-state organization that provides service, training, educational and employment opportunities for community members, including low income and disadvantaged youth and veterans. Each of its nine programs across 15 locations targets a diversity of participants, reflective of their community, to engage as participants and help connect youth and communities to nature while building more resilient communities.

The collective goals of all processes undertaken and products delivered by this project include:

- reducing the impacts of environmental hazards, specifically flooding and degraded water quality;
- increasing public access to the benefits of nature, recreation, and a re-envisioned, resilient place of public education;
- meaningfully engaging local and regional stakeholders, including the identified vulnerable community; and,
- implementing appropriate and high-performing landscape amenities.

Activities: *Elaborate on the primary activities that will be employed through the proposed grant. Describe how the proposed project will advance innovative and scalable solutions for community partnerships, affordable housing areas and small businesses in vulnerable communities.*

The implementation of the proposed sustainable stormwater, landscape, and trail enhancements at Princeville Elementary will advance previously completed planning and design activities in the Town of Princeville. Previous studies have focused on hydrologic analysis, trail route assessment and planning, wayfinding and interpretive signage, and environmental programming for school-adjacent vacant parcels. The team will compile these past design and planning studies, add in new site-specific analyses, and collaborate with stakeholders to develop a unified vision for the school site.

The engagement and design activities will create:

- a site plan to guide all construction and installation activities.
- a neighborhood-scale plan, inclusive of trail layout and design of all school-site improvements,
- a *Landscape Management Plan* to guide long-term management and functionality of the stormwater features.
- a *Site Curriculum Guide* to document and recommend methods of using the site that both enhance hands-on delivery of curriculum and contribute to student/teacher/parent participation in managing and maintaining the grounds.
- interpretive signage to connect the landscape improvements to the school curriculum and activities. Content of the signage will include aspects of the hydrologic cycle, soils, and fauna and flora.

The installation itself will result in:

- installation of 16,500 square feet of stormwater BMPs (such as bioretention cells, rain gardens, filter strips, level-spreaders, etc.) to service 75,684 square feet (or 1.74 acres) of existing impervious surface
- creation of 3,000 linear feet of trails with 10 installed educational signs
- planting of 50 trees and thousands of native and ecologically adapted ornamental plants

The work is also intended to seed a larger community-driven model where housing and land conservation needs are solved together through community-driven approaches. NC State's Coastal Dynamics Design Lab is working with partners in other NC communities (and in places like New Orleans) in similar ways. The goal is to contribute to larger national discussions on re-envisioning disaster recovery to be about true, holistic resilience. Conservation Trust for NC is deeply involved in state-level policy innovations that forward this new model.

The project's potential impact is disproportionate to its size. Multiple US presidents over the past 20 years have visited or made public mention of Princeville. State and congressional officials collaborated with the White House in January 2020 to earmark $40 million for levee improvements around the town. While the levee work will improve prospects for the town, it will not eliminate all underlying vulnerabilities. Storms like Hurricane Floyd (1999) and Hurricane Matthew (2016), both 500-year flood events, could still overwhelm the system. The town leaders recognize the need for the additional resilience elements partners have been working toward. If the current efforts are seen through to the end, the town for the first time could not just claim to be resilient; it also could show other under-resourced, vulnerable communities nationwide a path to follow for their own resilience.

Outcomes and Indicators: *Describe the general monitoring approach that will be used to assess progress on one or more of the indicators presented previously in the application. Please note any challenges or limitations you anticipate in conducting this monitoring or the interpretation of anticipated results.*

"Seeding Resilience" will measure success on multiple levels. All Conservation Legacy/Conservation Corps NC and Coastal Dynamics Design Lab projects require monitoring pre- and post-implementation. The teams will ensure the success of plantings, functionality of stormwater infrastructure, quality of trails created, and the suitability of educational

elements through surveys and input during future community planning meetings. Team leads will also assess the learning outcomes for participants.

Two indicators chosen for this proposal are the number of trees planted and the volume of stormwater captured as the result of new green infrastructure. Quantifying the number of trees planted is straightforward. But it is also important to look at the types of trees (genus/species), the size at planting, the average size at maturity, as well as the estimated ecosystem services, such as water uptake, edible fruits/nuts produced and other species supported. Over time, all these additional factors can be not just indicators of success but also elements of the educational curriculum. Similarly, post-installation modeling and measurements will verify the water volume collected. But additional factors -- such as pollutants absorbed, soil function and health, the collateral species supported by thousands of native plants, and even the carbon sequestering capacity of the whole system – are important to consider. Some of these concepts are too advanced for elementary students, so from the larger county school system, we would look to involve older students in understanding, tracking, and promoting the value of the site's green infrastructure. Additionally, though not a prime motive for the community leaders, the green infrastructure will also have economic benefits through lower stormwater fees. The installation is expected to capture almost 2 million gallons of stormwater annually. If allowed stormwater fee credits by Edgecombe County, this could lower utility fees for the site by $1,362 each year.

As communicated elsewhere in the proposal, the project's most important outcomes are the ways it engages and energizes this community. At least 200 volunteers are expected to participate in the processes, including 35 youth. This impact can be measured, though much more meaningfully qualitatively than quantitatively. At initial stages, the participation of community members will be tracked, along with the quality of engagements through feedback and the buy-in to design plans overall. Over time, continued engagement with the community will build on this initial success and test its impacts over and over during subsequent phases of implementing the larger community resilience plan.

Project Team: *List key individuals and describe their qualifications relevant for project implementation.*

While there will be many individuals and groups involved in designing, planning & implementing the project, including leadership from the Town of Princeville, the regional Council of Governments, and Princeville Elementary, primary grant delivery responsibilities lie with the following people.

Chris Canfield, Conservation Trust for North Carolina, Executive Director: "Seeding Resilience" Project Director

Chris brings more than two decades of conservation leadership and project direction to the Princeville engagement. CTNC's executive director for the past three years, Chris was previously the Vice President for the Mississippi Flyway for the National Audubon Society, leading that organization's response to the Deepwater Horizon oil spill disaster. In that role, he built out the $1 billion, five-state plan for coastal bird restoration and conservation, working with NFWF's Gulf Environmental Benefit Fund. He was also co-chair of a national nonprofit collaborative in Louisiana to guide statewide coastal restoration through one of the nation's largest commitments to resilience. Chris has led CTNC through a new strategic planning process now emphasizing community resilience, with special focus on the impacts of climate change as an issue of social and racial equity. He has been the key CTNC liaison with the Town of Princeville in developing its multi-tiered collaboration.

Andrew Fox, Coastal Dynamics Design Lab, NC State University, Co-founder: "Seeding Resilience" Design & Implementation Team Lead

Andy is a Professor of Landscape Architecture, University Faculty Scholar, Community Engaged Faculty Fellow, Center for Geospatial Analytics Faculty Fellow, and a co-founder of the Coastal Dynamics Design Lab at NC State University. As a licensed landscape architect with more than 20 years of experience designing and implementing high-performance civic landscapes, the goal of Andy's work is to enable tangible, actionable change in the public realm. His professional, scholarly, and public engagement activities focus on people/water relationships, with expertise in green infrastructure, resilient community design, and land planning. His projects have been published in professional journals, books and proceedings, presented at national and international venues, and received numerous national and international honors and awards. Andy has been a leader in collaborations with Princeville since 2017.

Travis Klondike, Coastal Dynamics Design Lab, NC State University, Research Associate:

Travis is an Assistant Professor of the Practice in the NC State University Department of Landscape Architecture. Much of Travis' scholarship focuses on the topics of hazard mitigation and conservation planning for low-resource communities. This specific type of analysis and land planning weaves together contemporary methods of geospatial analysis, community engagement, and visual narration as catalysts for public good. Travis has served as the project manager and production specialist for many of the CDDL's efforts in this realm, with outcomes spanning: municipally adopted plans, acres conserved, and built, in-the-ground environmental improvements. Travis, as part of the CDDL, has been working with the Town of Princeville on its current land planning and beautification efforts with a focus on the repurposing of vacant lots and underutilized land holdings.

Jan Pender, Conservation Legacy, Corps Director, Conservation Corps NC:

Jan joined Conservation Legacy in May 2019 to lead the collaboration between Conservation Legacy and Conservation Trust for NC (CTNC) to form Conservation Corps NC. The new corps was the result of her success in launching the North Carolina Youth Conservation Corps (NCYCC) in 2013 and serving as its Program Director while at CTNC. Prior to CTNC, Jan was the Director of Environmental Education for Legacy, Inc., an Alabama nonprofit that partnered with state agencies to deliver environmental education materials and training to K-12 teachers. Jan's love for education is rooted in teaching, especially middle school that she taught for five years. Jan has managed 48 AmeriCorps members on six different crews, including their onboarding, orientation, timesheets, project work, education, risk management, and evaluations.

Other (Optional): *Provide any further information important for the review of this proposal.*

The project comes out of and is complementary to larger planning efforts underway for years within the Town of Princeville. From 2017-2019, the Coastal Dynamics Design Lab worked with Princeville to develop deep understanding of the cultural and personal assets of the community and how the town was envisioning its future. Through a series of open discussions, the lab produced multiple reports showing resilience options for homeowners, public buildings and spaces. One result was "Greater Princeville" (coastaldynamicsdesignlab.com/princeville-heritage-walk).

Conservation Trust for NC and partners were so impressed with that seminal work that we found funding to launch a "Floodprint" project phase for Princeville. Floodprint (coastaldynamicsdesignlab.com/lumberton-floodprint) is a landscape planning approach guided by land-water relationships, including the powerful forces associated with flooding. The goal is to help increase social and physical resilience through recommending land-use strategies that reduce risk and improve public safety and long-term environmental function within historically flood-prone areas.
The floodprint for Princeville is scheduled to be completed in the fall of 2020. This specific project to build out green infrastructure adjacent to the elementary school flows from the broader plans the community has already embraced. Estimates for installations within the project have been established and informed the preliminary budget. But as a community-driven process, adjustments will need to be made as more detailed schematics are tested with community members.

About Conservation Trust for North Carolina (CTNC): CTNC carries the expertise of a direct land conservation organization that has protected more than 36,000 acres over 27 years into a broadened strategic focus that addresses community, equity and climate issues. Our engagement with Princeville is a uniquely strong example of how these priorities intersect (see: ctnc.org/conserving-whole-communities). Carefully earning the trust of the community and listening to a wide range of perspectives are key to finding workable and livable solutions to the vulnerabilities of places like Princeville. "Seeding Resilience" is an important step toward solidifying relationships that will foster natural solutions-based projects elsewhere throughout the state and region in the years to come. This work is at the core of our mission "to conserve land in ways that inspire and enable people to build resilient, just communities."