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Full Proposal Project Narrative - NFWF Coastal Resilience Fund
Building Adaptive Shorelines and Resilient Communities in the Lower James

1. Coastal Community Context:

The Hampton Roads region of Virginia includes both the metropolitan land areas and surrounding water bodies of southeastern Virginia. The body of water known as Hampton Roads is one of the world's largest natural harbors that incorporates the mouths of the Elizabeth River, Nansemond River, and James River among others and empties into the Chesapeake Bay near its mouth leading to the Atlantic Ocean. The surrounding metropolitan land areas of Hampton Roads include the populous cities of Norfolk, Virginia Beach, Newport News, and Hampton - all communities that are experiencing the highest rate of sea level rise (SLR) along the entire East Coast.[1] Among major metropolitan areas, Hampton Roads is second in the nation and tenth in the world in its vulnerability to SLR. The effects of SLR on this low-lying region are far-reaching and varied: flooding events are occurring more frequently, shoreline erosion is increasing, groundwater supplies are threatened, coastal wetlands and ecosystems are under siege, and the area's most vulnerable communities are facing disproportionate levels of risk. These profound impacts have interconnected ecological, economic, and social consequences. Cities in the region must act and adapt with limited resources, increasing the importance of leveraging partnerships and a strong understanding of ecosystem-community connections.

The James River is undergoing an ecological rebound, but SLR, as well as coastal flooding (both tidal and stormwater influenced), and coastal storms present serious, long-term challenges. The challenges can be categorized in terms of their effects on natural resources and humans. In coastal communities, impacts to natural resources are often the result of shoreline erosion - an ongoing problem which vastly increases sediment and nutrient pollution that then threatens ecosystems, fisheries and overall water quality. The James River Association's (JRA's) *2017 State of the James Report*[2] indicated ongoing ecosystem recovery in the James, but highlighted sediment pollution as a lagging water quality impairment and the largest contributor to degradation within the watershed. Additionally, water clarity is consistently poor in the lower James - a result of sediment pollution reducing submerged aquatic vegetation. After decades of effort with limited improvement, significant actions remain to reduce sediment loads to the Chesapeake Bay Cleanup Plan's targeted goal. Sediment reductions are also closely tied to reductions in nitrogen and phosphorous. While the flux of these nutrients has decreased in the James River by way of wastewater treatment upgrades, additional reductions are needed to meet 2025 targets for the overall Chesapeake Bay TMDL, especially given the anticipated challenges posed by climate change.[3]

Impacts from flooding, coastal storms, and sea level rise on humans are multi-faceted, often disproportionately affect underserved populations. However, there are a number of ways that communities can prepare and adapt to SLR, coastal flooding and storms to lessen the ultimate consequences. Some communities in Hampton Roads are using established science to better inform their zoning policies. Zoning ordinances can be written to maximize open space, limit development within sensitive areas, and establish setbacks based on flooding potential and erosion risks. In Norfolk, the community - comprehensively rewrote its zoning ordinance in an effort to make the city's codes the most resilient

[1] https://coast.noaa.gov/states/stories/sea-level-rise-adaptation-advances-on-multiple-fronts.html

[2] www.stateofthejames.org

[3] https://www.naturalresources.virginia.gov/media/governorvirginiagov/secretary-of-natural-resources/pdf/2025-Chesapeake-Bay-Climate-Change-Load-Projections.pdf

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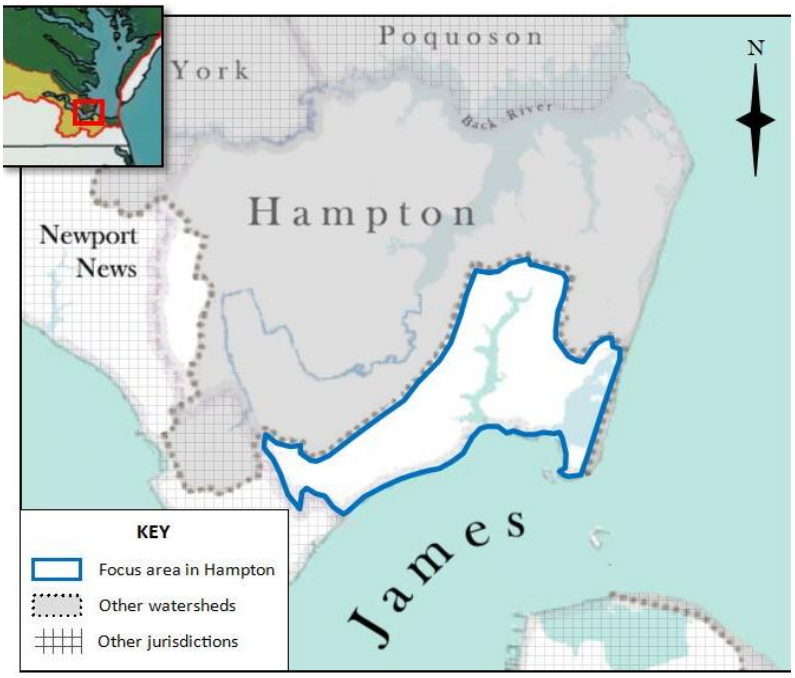
ordinance in the U.S.[4] Norfolk is creating safe growth areas in locations where capital improvements are already established, shifting future development away from low-lying areas that are prone to flooding or erosion in order to preserve ecological functions of open space. They are limiting the density of development within the floodplain, and ensuring new construction and redevelopment is built to minimize risk and vulnerability to recurrent flooding and other SLR impacts. In James City County, the zoning ordinance has been amended to specifically enable developers to earn density bonuses for development plans that utilize Low Impact Development (LID) and green infrastructure for stormwater management practices, as well as prioritize conservation areas adjacent to floodplains to improve ratings and reduce premiums through the Nation Flood Insurance Program's Community Rating System (CRS). And in Isle of Wight County, the community is incentivizing cluster developments (areas of increased density) in low-risk areas in exchange for open space preservation in higher-risk areas.

Other communities on the lower James are embarking on more comprehensive efforts, and at the forefront is Hampton. Hampton sits on a low-lying peninsula between the James and York Rivers and the Chesapeake Bay. The city's origins, continued growth, and economic vitality depend on the waterways that surround the community, but that often floods its streets, cripples its infrastructure, and inflicts millions of dollars of property damage on its already-vulnerable citizens. To co-exist with its waterways, Hampton has recognized the importance of leading by example. The city developed Resilient Hampton[5], an initiative designed to address various aspects of flooding and sea level rise that has culminated after more than eight years of community outreach, committee meetings, research, and planning efforts. In 2018, a draft report was released synthesizing years of data and community engagement. *Living with Water Hampton: A Holistic Approach to Addressing Sea Level Rise and Resiliency* harnesses community input that identifies Hampton residents' most important values,creates a set of guiding principles for the community to move forward in the most resilient manner and, establishes a project ranking system to ensure that funded projects meet these guiding principles.[6]



Hampton's proactive efforts place them at the forefront of the burgeoning urban shoreline resilience movement. Their experience with SLR, coupled with the existential threat it poses to their city, makes Hampton a great proving ground for new and creative collaborations. JRA believes that a successful partnership in this urban setting will complement our previous response to the 2018 NFWF-Resilient Communities Category 1: Regional Adaptation Grant[7] by bolstering each community's ability to adapt to rising waters by applying measures that are scalable and appropriate in each setting. By working in areas that are urban, rural, upstream, and downstream, we will bridge the gaps between Virginia's diverse populations and communities. Ultimately, we will develop a holistic, regional atmosphere of cooperation for tackling coastal resilience issues across all of the James's varied environments by building upon the foundation of an urban

[4] Wetlands Watch. Accessed August 5, 2018 at http://wetlandswatch.org/directors-blog/2017/10/19/innovative-resilient-zoning-proposal-in-norfolk

[5] Resilient Hampton. Accessed July 30, 2018 at https://hampton.gov/3459/Resilient-Hampton

[6] Waggonner and Ball. Living with Water Hampton: A Holistic Approach to Addressing Sea Level Rise and Resiliency, Hampton Dutch Dialogues Draft Report. (2018) Accessed July 30, 2018 at https://hampton.gov/DocumentCenter/View/20644/Resilient-Hampton-Phase-I-Report?bidId=

[7] James River Association response to NFWF-Resilient Communities 2018 RFP: *Building Adaptive Shorelines and Resilient Communities in Tidewater Virginia*

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community that is further along with resiliency work while simultaneously increasing the capacity of smaller rural communities.

2. Activities:

In the Commonwealth of Virginia, it has been well-acknowledged, not to mention supported by the years of scholarly and local government research, and continuous, real-word examples of flooding that Virginia has no choice but prepare and adapt to the inevitable impacts of flooding, storms and sea level rise within tidal communities. To combat erosion, reduce sediment and nitrogen loads, and improve water quality within the tidal areas of Virginia, the General Assembly adopted a policy that living shoreline techniques are the preferred stabilization method for tidal shorelines.[8] To catalyze this policy and set it into action within one of the most vulnerable areas in the U.S., JRA proposes the Living Shoreline Collaborative (LSC), as well as the implementation of three high-impact, priority projects on public land within the City of Hampton that are specifically tailored to the vulnerabilities and needs within the areas in which they will be implemented.

I. Living Shoreline Collaborative:

JRA will assemble partners with expertise in living shorelines to formalize a regional Community of Practice (CoP) that shares tactics and vision for a more resilient Hampton Roads by relating to common challenges across rural and urban localities. The overall goal of the LSC will be to scale up implementation of living shoreline and associated complementary resiliency and green infrastructure projects in the region by facilitating the sharing of technical knowledge, practical experience, and connecting community partners who are at various stages of building community resilience. Specific focus will be on multi-benefit projects in socioeconomically vulnerable communities which are most at risk to SLR. Simultaneous to this, JRA will also facilitate workshops with contractors and waterfront property owners on the south side of the James within the rural communities of Prince George, Surry, and Isle of Wight counties as specified in JRA's *Building Adaptive Shorelines and Resilient Communities in Tidewater Virginia* proposal in response to the NFWF-Resilient Communities RFP. However, the focus of the LSC will be to build capacity within local governments in the tidal James.

LIVING SHORELINE COLLABORATIVE MEMBERS:

James River Association
City of Hampton
Hampton Roads Planning District Commission (HRPDC)
Prince George County
Surry County
Isle of Wight County
Elizabeth River Project (ERP)
Virginia Institute of Marine Science (VIMS)
Wetlands Watch
Virginia Association of Soil and Water Conservation Districts

To address the barriers to implementing nature-based resilient shoreline strategies, like other green infrastructure programs, there is a need for trained professionals within local government and the private sector. For several years, the City of Hampton has been working to implement nature-based shoreline management strategies (living shorelines, buffer restoration, wetlands restoration) as the preferred management strategies in the City. In addition, the City has been a partner in the Chesapeake Bay Landscape Professional (CBLP) Certification program from inception, to development, to piloting, and now, as it expands. In the process, eight staff are CBLP-certified, applying the concepts of resiliency and sustainability in their various positions. However, more advanced staff training and team building is required and not enough private contractors are trained and certified for the city to recommend to private shoreline property owners. As most shoreline property in Hampton Roads is in private ownership - the lack of properly trained zoning and regulatory staff and private contractors to design,

[8] Code of Virginia, Living shorelines; development of general permit; guidance. § 28.2-104.1 (2011 and Supp. 2014).

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install and maintain the resilient nature-based strategies to clients is a barrier to the success of nature-based shoreline management solutions. Therefore, JRA, Hampton, Wetlands Watch, and VIMS will include several workshops to recruit and train local staff and private contractors in collaboration with the CBLP program.

Staff from Hampton will be instrumental to the LSC and provide an invaluable resource for Prince George, Surry, and Isle of Wight counties, as well as four area Soil and Water Conservation Districts (SWCD), by sharing knowledge and lessons learned. In the face of challenges presented by coastal storms, flooding, and sea level rise, Hampton has developed some of the best assets and resources for resilience and adaptation. And in doing so, Hampton has not sought a one-size-fits all approach, but instead has created solutions that reinforce the specific values of the community.

The LSC will undertake the following capacity building activities over the course of the three-year grant period:

a) Annual LSC Summits, held in Hampton, that will include field visits to demonstrate successes and lessons learned. The Summits will provide an opportunity for Hampton to speak specifically about local barriers to implementing resilient nature-based shoreline management strategies and expose other LSC members, particularly from rural counties, to a variety of projects in different settings. Included within the LSC Summits will be a specific focus on shoreline/best management practice regulatory compliance in the workshop held in the winter of 2019.
b) Field visits to potential project sites in Surry, Prince George, and Isle of Wight counties for the City of Hampton staff, ERP, and LSC partners to offer insight and understand what issues and SLR challenges they are facing upriver.
c) Chesapeake Bay Landscape Program (CBLP) Level 1 and 2 trainings including continuing education workshops which will be held in Hampton. In Summer 2020, CBLP and Hampton will run a Level 1 CBLP training. Throughout 2020, additional hands-on and advanced nature-based solutions workshops will be planned for continuing education opportunities for Level 1 and 2 CBLPs. CBLP and Hampton will continue to partner on workshops identified through a continuing needs assessment. CBLP professionals will be utilized in the project implementation as much as possible.

II. Living Shoreline and Green Infrastructure Project Implementation: The most significant portion of funds requested in this proposal will be put towards the implementation of high-impact green infrastructure and living shoreline projects at three locations within within the City of Hampton that will not just buffer low-lying areas from floods and erosion but also preserve and improve habitats. In Hampton, there are multiple factors that are threatening the level of resilience for people and natural resources to include: 1) surge, wave action, and high water levels associated with storms and low pressure weather systems; 2) tidal action, the fluctuation of water levels between low and high tide; 3) stormwater, water generated from rain and storms that can be difficult to infiltrate due to impervious surfaces, and can lead to runoff; and, 4) groundwater, the water that lies below the surface of ground, and which can impact the ability of the soil to infiltrate stormwater if the groundwater level is high.[9] Additionally, in terms of SLR, there is also a need to plan for permanent inundation in some areas of the city, while others areas - which may not currently experience flooding - may become periodically inundated over time. Each situation requires an understanding of several variables which include variables such as water table, soil conditions, and contributing stormwater flows. Fortunately, the City of Hampton has taken great strides to carefully plan each of the following three project sites so that appropriate measures are implemented to address the specific conditions at each site. All three project locations are located in or near Downtown and within the

[9] Waggonner and Ball. Living with Water Hampton: A Holistic Approach to Addressing Sea Level Rise and Resiliency, Hampton Dutch Dialogues Draft Report. (2018) Accessed July 30, 2018 at https://hampton.gov/DocumentCenter/View/20644/Resilient-Hampton-Phase-I-Report?bidId=

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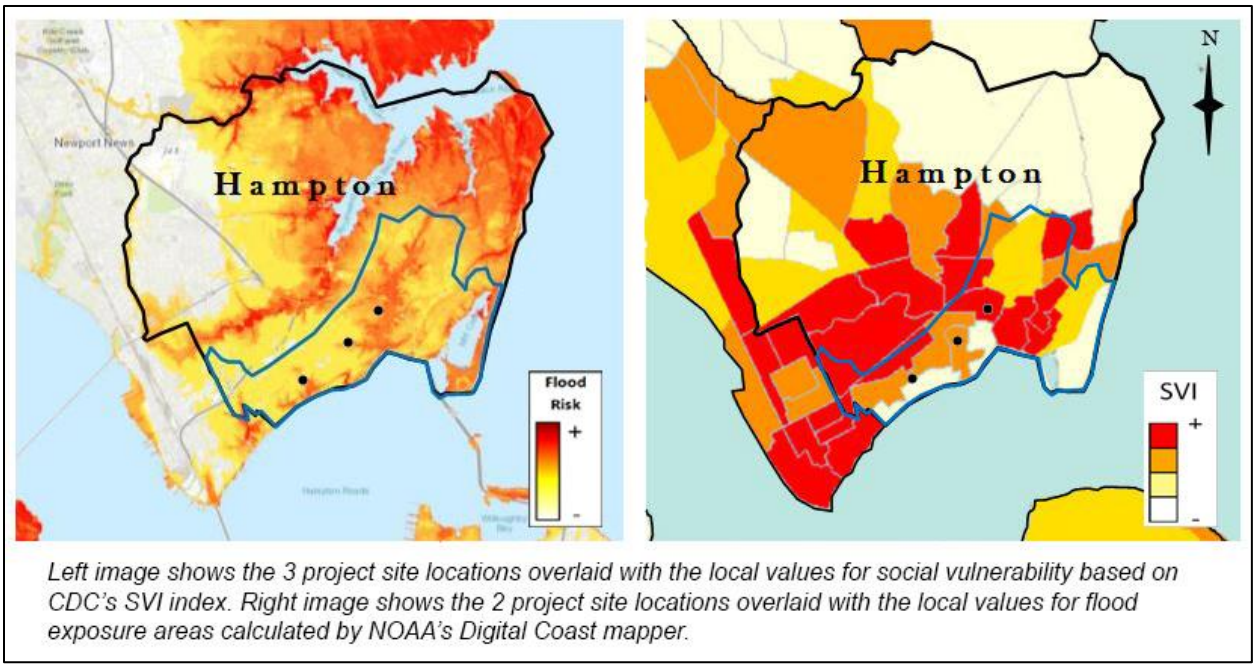
Hampton River drainage area. This part of Hampton is such that it is frequently impacted by stormwater runoff and backflow through existing infrastructure.



Left image shows the 3 project site locations overlaid with the local values for social vulnerability based on CDC's SVI index. Right image shows the 2 project site locations overlaid with the local values for flood exposure areas calculated by NOAA's Digital Coast mapper.

a) **Lincoln Street Landing** *270 Eaton Street*: The site is located adjacent to tidally influenced Hampton River and City Hall and will implement the Downtown Master Plan's Lincoln Street Landing, a waterfront park to serve as an entrance to the Pasture Point neighborhood and northern terminus of Downtown's waterfront promenade. This project will replace approximately 5,000 square feet of impervious parking surface that is frequently flooded by the tidally influenced Hampton River. Parking will be replaced with green infrastructure and pervious, open space to reduce stormwater runoff into the Chesapeake Bay and create a passive open space for the Downtown Community. The existing riprap shoreline will be replaced with an appropriate living shoreline and riparian buffer. An observation deck with educational signage will overlook the river and provide opportunities to educate the public about the community and natural resource benefits associated with the project, as well as demonstrate that funds from NFWF are being applied locally to benefit the public and environment. Sufficient street access for neighborhood and Hampton Roads Sanitation District will remain. This project supports the *Downtown Master Plan*[10], a document adopted into the *Hampton Community Plan* (2006, as amended) that provides detailed implementation recommendations for the important Downtown area. It also supports the Resilient Hampton initiative and policies to create multiple benefits, enhance quality of life, reduce flooding, and fit to the existing culture and place. This project has conceptual designs, and no property needs to be acquired.

b) **Kecoughtan Road Constructed Wetland Retrofit** *4315 Kecoughtan Road and Surrounding Properties:* This project will be located adjacent to Sunset Creek and will consist of improvements to a tidal stream and implementation of a series of wet ponds with floating wetlands adjacent to an existing channel. Currently, the channel is extremely narrow and lined with broken concrete. The project would involve removing impervious area along the ditch and on adjacent former industrial properties. The City controls property to both the north and south of the existing channel, which creates significant space for the project. In part, this project was selected because of the volume of water that comes through this channel, meaning there is opportunity to provide significant treatment. This project implements a recommendation

[10] https://hampton.gov/DocumentCenter/View/927/downtown_master_plan?bidId=

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from the *Hampton River West and Southampton Watershed Study* (2014).[11] Recent land acquisitions support introduction of further recreational and community benefits, and buffer enhancement with additional funding. While this project has preliminary designs, significant improvements in the design have been requested to integrate additional green infrastructure. As such, the scope of work for the next set of designs has been provided instead. All property has been acquired, and this project is also in the approved Capital Improvement Plan.

c) **Pochin Place/Indian River Creek** *2715 Kecoughtan Road and Properties North:* This project is located adjacent to the Indian River Creek and will include the installation of tidal wetlands benches, and stormwater quality basin in the Pochin Place/Indian River Creek area to address stormwater flow issues while achieving TMDL water quality benefits. Eleven homes have already been acquired and removed in the project area to reduce vulnerability in the floodplain. This project is informed by the *Pochin Place Drainage and Storm Water Management Study* (2007)[12]and is 100% designed and in the City of Hampton's approved Capital Improvement Plan.

3. <u>Outcomes:</u>

The project will achieve the following two overarching goals with the accompanying associated outcomes:

Goal 1: Through the LSC, build regional momentum for living shorelines as the preferred approach to stabilize shorelines and enhance resiliency by bolstering each community's ability to adapt to rising waters using measures that are scalable and appropriate for both rural and urban environments.

- ***Building Regional Momentum:*** The LSC will build upon the momentum that has already been generated in Hampton while linking partnerships with smaller rural counties from across the lower James watershed to pool knowledge and resources. The LSC will increase the availability of certified and properly trained public and private sector professionals through workshops and CBLP trainings to overcome common barriers to implementing green and nature-based infrastructure practices: lack of staff capacity, lack of qualified professionals, poor public perception/appreciation of practices. Measurable outcomes will include the number of workshops conducted, the number of field trips completed, the number of individuals reached, and the number of new and existing CBLP participants that take part in trainings.

- ***Community Engagement:*** JRA has a large base of volunteers which will be leveraged to maximize volunteer and community involvement in project installation. Each project provides an excellent teaching opportunity for the public to understand how natural systems can protect coastal communities from flooding, storms, and sea level rise. Outcomes will be tracked through the number of volunteers engaged in project implementation. Additionally, projects will be located on public property and will provide optimal opportunities to showcase the benefits of resiliency strategies to stabilize banks that are eroding or at-risk due coastal hazards. Outcomes will be tracked through the average number of visitors to project sites.

Goal 2: Accelerate reduction of shoreline erosion and increase resiliency by implementing nature-based shoreline management and green infrastructure projects in high-impact locations which have multiple community benefits

- ***Project Outcomes:*** Hampton is a community vulnerable to sea level rise and actively working to build a more resilient city. Nestled between both heavily populated and rural communities in Hampton Roads facing similar challenges, the City of Hampton is already striving to be a resiliency hub, where actions to prepare for rising waters can be showcased and a model can evolve for other localities to emulate. The three projects, each located

[11] https://hampton.gov/DocumentCenter/View/6251/Hampton-River-West-and-Southampton-Watershed-Study?bidId=

[12] https://hampton.gov/DocumentCenter/View/678/pochin-place-watershed-study-report?bidId=

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in Hampton, will enhance quality of life, fit with existing culture and place as identified by the referenced plans, reduce flooding, address stormwater flow issues, achieve TMDL water quality benefits, and enhance habitats for fish and wildlife populations. While these projects are not physically contiguous, they each exemplify the values and guiding principles found in *Living with Water Hampton: A Holistic Approach to Addressing Sea Level Rise and Resiliency*, the foundational planning document for the City's resilience work. First, our guiding principles call on Hampton to build upon existing assets. Each of these projects takes an existing asset and enhances it - in two cases by improving the floodplain surrounding an existing body, and in Lincoln Street Landing creating a true connection to the City's waterfront walkway and drawing attention to a lovely existing view. These projects also highlight the guiding principle of layering public benefits. Not only do these projects reduce impervious surface and provide water quality treatment, they provide aesthetic, recreational, and community value.

Each project is high-impact in a different way. The Lincoln Street Landing is very visible, and is directly across the street from Hampton City Hall. It will connect directly to another City amenity (downtown walkway) and is adjacent to a historic neighborhood. With such a drastic change from a parking area to a green, attractive park space and overlook, this project will be noticed and generate interest in other resilience efforts. The Kecoughtan Road project will also represent a major transformation. The land acquired for the project, and many of the properties across the street are industrial or former industrial sites. This project will renaturalize an area near single-family neighborhoods and provide green space for the community to enjoy. Finally, Pochin Place represents an important City acquisition project to implement water quality and management features. That this project is so embedded in a single family neighborhood has and will generate special interest in the importance of coastal resilience efforts, and how impacts can occur inland as well.

- ***Natural Resource Outcomes*:** LSC partners will capitalize on opportunities to incorporate multiple layers of living resources in designs that enhance biodiversity, such as low profile sills, submerged aquatic vegetation plantings, and installation of ribbed mussels within cordgrass marsh. In particular, living shorelines create natural habitat for oysters and other marine life while also supplementing the stabilization of the shoreline. To ensure resiliency in the face of sea level rise, living shoreline projects will include restoration of buffers in resource protection areas to ensure that habitat can migrate inland with rising water levels.

Additionally, LSC partner Elizabeth River Project (ERP) will play a key role in helping LSC members to understand possible options to fund resiliency projects beyond the grant period and over the long-term. ERP will provide guidance and share information about a unique contractual relationship they have been able to secure with four localities to receive long-term, dedicated funding for the annual implementation of living shoreline projects with the intention of creating similar arrangements with other localities along the lower James. If successful, these arrangements will create lasting outcomes outside of the grant period, as well as a long-term sustainable funding source.

4. <u>Tracking Metrics:</u>

JRA will work closely specifically with the City of Hampton for gathering Implementation and Community Benefit metrics, and Wetlands Watch for Capacity Building metrics, in order to track progress over the three years. This will be coordinated through quarterly team meetings and regular correspondence.

Implementation Metrics: The projects that will be implemented in the City of Hampton will address NFWF's standard metrics for Floodplain Restoration. The following are specific benefits from each of the three implementation projects with associated projects:

a) Lincoln Street Landing: Project will include 0.09 acre of tidal salt marsh wetlands with a living shoreline including an oyster habitat component. In the riparian area and floodplain adjacent to Hampton River, the project will replace approximately 10,000 square feet or 0.23 acre of impervious parking lot with a combination of vegetated (native, salt tolerant plants) open space and green infrastructure practices.

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b) Pochin Place/Indian River Creek: The project will create approximately 1.397 acres of tidal salt marsh floodplain within the upper reach of Indian River Creek.

c) Kecoughtan Road: The project will convert approx. 750 linear feet of an existing concrete channel while restoring 125,000 square feet or 2.91 acres of riparian and floodplain area along Sunset Creek.

Community Benefits Metrics: The projects implemented through this grant will also address the Community Benefits Metric that enhance protection of residential and commercial properties.

a) Lincoln Street Landing: This project will provide enhanced protection at 1 location that will allow for the relocation and removal of a vulnerable City vehicle fleet (~30 vehicles).

b) Pochin Place/Indian River Creek: This project will likely provide 211 properties with enhanced protection within a 1,000 of the approximate center of this project. Of those, 178 are single family residential, 2 are multi-family residential, and eight are commercial. The rest are vacant properties or some form of exempt property (e.g. owned by the Hampton Redevelopment and Housing Authority).

c) Kecoughtan Road: This project will likely provide 237 properties within enhanced protection within a 1,000 of the approximate center of this project. Of those, 171 are single family residential, 3 are two-family residential, and 14 are commercial. The rest are vacant properties or some form of exempt property (e.g. owned by the Hampton Redevelopment and Housing Authority).

Capacity Building Metrics: Through the LSC and general outreach to volunteers for project implementation, this project will also address the Capacity Building metrics for engaging organizations that contribute to the project goals, as well as the number of individuals reached by outreach, training, and other technical assistance activities. Specific metrics associated with the LSC and outreach activities will include:

a) Through the three annual LSC Summits in Hampton, 60 individuals will be reached. These will provide a space to learn from one another and include a field trip component to visit successful living shoreline and associated green infrastructure projects, as well as projects that needed troubleshooting.

b) Through the three field visits to Surry, Prince George, and Isle of Wight, 60 individuals will be reached. These will allow Hampton to learn about what challenges smaller rural communities are facing and provide a space for information sharing.

c) Through the Level 1 CBLP training held in Hampton, an additional 24 certified CBLPs will be added in the region to continue growing a green workforce. These projects will also support implementation of existing local resiliency planning efforts in each of the localities and match appropriate solutions with setting (urban, suburban, and rural).

d) In addition to CBLP trainings, there will be three workshops, with 35 participants, catered towards locality needs that could cover regulatory concerns and Best Management Practices for resilient shoreline management.

e) Through project implementation at three locations, 45 volunteers will be engaged. It is expected that a portion of these will be CBLPs to allow them to earn required six hours of hands-on experience.

5. <u>Project Team:</u>

James River Association: The James River Association (JRA) is a member-supported nonprofit organization founded in 1976 to serve as a guardian and voice for the James River. Throughout the James River's 10,000 square mile watershed, JRA works toward a vision of a fully healthy James River supporting thriving communities. With offices in Lynchburg, Richmond, and Williamsburg, JRA is committed to protecting the James River and connecting people to it. JRA has worked most recently on both school-aged and general public outreach and education activities with the City of Hampton. Within the last year, JRA conducted professional development days with Hampton public school teachers, as well as provided educational field trips with over 250 Hampton public school students. Additionally, JRA conducted a public

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outreach event which included the painting of educational murals on 23 storm drains within Downtown Hampton utilizing volunteers from the community. Core team members from JRA that will be involved with this project are:

- Amber Ellis, Watershed Restoration Manager: Amber is a Professional Landscape Architect in Virginia and a Chesapeake Bay Landscape Professional with over eight years with JRA. As Watershed Restoration Manager, Amber will serve as the project manager, provide general project oversight, manage the new Lower James Restoration Coordinator, and work with staff and partners for grant reporting.
- Lower James Restoration Coordinator (New position): This position will be located in JRA's Williamsburg office and will be the project leader. The role will include planning the LSC Summits, rural field visits, coordinating volunteers, and working with the City of Hampton on contracts for implementation.
- Emily Cope, Lower James Regional Outreach Coordinator: Emily is stationed in JRA's Williamsburg office and currently oversees JRA's education programs for the Lower James. Emily will assist with the LSC Summits, field visits, partner coordination, and volunteers.

Support team members from JRA will include:

- Jamie Brunkow, James Riverkeeper/Sr. Advocacy Manager - Jamie is based out of JRA's Richmond office and will assist with the LSC Summits and rural field visits.
- Ben Watson, Staff Scientist - As JRA's GIS and cartographic coordinator, Ben will assist with LSC Summit planning and provide any mapping or data needs for reporting and projects.
- Sophie Stern, Volunteer Coordinator: Sophie is based out of JRA's headquarter office and will oversee the coordination of volunteers, assist with volunteer days, and manage volunteer recruitment.
- Shawn Ralston, Program Director: Shawn oversees each of JRA's program areas and coordinates JRA's work amongst JRA's three offices. Shawn will assist with project oversight, project implementation, administration, and financial reporting.

Partners:

- **Elizabeth River Project:** The Elizabeth River Project, a community-based non-profit, has led the restoration of a major urban harbor since 1993. The Elizabeth River Project's 1996 watershed action plan was one of the first locally based watershed plans on the Chesapeake Bay and was adopted by the Commonwealth of Virginia. In 2008, the US EPA hired the Elizabeth River Project to produce a national guidebook, "Balancing Industry and the Environment: How to Achieve Win-Win on the Industrial Waterfront," showcasing the internationally recognized results of The Elizabeth River Project's grant-funded program, River Stars. In that program, 114 industries have voluntarily reduced pollution by 312 million pounds and created or conserved 1,390 acres of urban habitat, relying on The Elizabeth River Project for technical assistance and public recognition. ERP will play an important role in the LSC by sharing their knowledge on implementing living shorelines within the Elizabeth River Watershed. Additionally, ERP will play a unique role in increasing the likelihood in the long-term sustainability of resiliency funding in the watershed by sharing information about how ERP has been able to secure long-term, dedicated funding from four localities for the annual implementation of living shoreline projects.
- **City of Hampton, VA:** Hampton is located at the center of the Hampton Roads region, which is home to approximately 1.7 million residents. The city itself has a population of close to 140,000 people within its 50 square miles. Surrounded by water on three sides, there are over 124 miles of navigable waterfront, Hampton Roads harbor to the south, Chesapeake Bay to the east, and the Back River/York River to the north. Located where the James, York, Nansemond, and Elizabeth Rivers converge into the Chesapeake Bay, the Hampton Roads region is one of the world's largest natural harbors. The City of Hampton will be leading the project implementation and play a key role in the LSC by hosting the Annual Summits and being a mentor for other localities in the region.

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- **Hampton Roads Planning District Commission (HRPDC):** HRPDC is one of 21 regional planning districts in Virginia that represents 17 local governments including Hampton, Norfolk, Isle of Wight County, and Surry County. The HRPDC serves as a resource of technical expertise to its member local governments on local and regional issues pertaining to Economics, Emergency Management, Housing, Planning, and Water Resources.
- **Virginia Institute of Marine Science (VIMS):** The VIMS Center for Coastal Resources Management (CCRM) has a formal mission to support informed decision-making on resource management issues at all levels of government, including private and corporate citizens. To fulfill this mission, the Center undertakes research, provides advisory service in wetlands management, and conducts outreach education. Karen Duhring, Marine Scientist, currently serves as a shoreline expert and outreach training coordinator at the VIMS Center for Coastal Resources Management. Karen is nationally recognized as a living shoreline expert through her participation in regional training events, conferences, and technology transfer workshops. She is a co-author for Virginia's living shorelines design guidelines. She also plans workshops and teaches classes about shoreline management for the marine industry, regulatory agencies, non-governmental organizations, and the general public. Karen will work with JRA on content for the LSC Summits and provide feedback and guidance on project implementation.
- **Wetlands Watch:** Wetlands Watch works through state and federal policy advocacy, as well as grassroots education and activism to influence local government land use and regulatory decisions on wetlands in coastal Virginia. In recent years, Wetlands Watch has worked closely with local governments within the project area to create adaptation strategies for SLR through several different partnership efforts including the Sea Level Rise Collaboratory that links community resiliency design projects with college students seeking an applied learning experience using nature-based solutions to address sea level rise, flooding, water quality, and community character issues. Through their other work with VIMS, the Coastal Zone Management Program, and local governments, Wetlands Watch, has created innovative tools like AdaptVA.org, a local government adaptation guide, Community Rating System (CRS) guidance and the Sea Level Rise App, that promote actions and strategies with multiple benefits to protect wetlands, people and properties as seas rise, while also addressing flooding mitigation, and rising flood insurance premiums, conservation of open space and water quality goals through green infrastructure and local government planning, the Chesapeake Bay TMDLs Watershed Implementation Plans and the National Flood Insurance Programs CRS, Wetlands Watch conducts education and advocacy programs that educate and motivate citizen involvement and local government action towards building resiliency and has brought the private sector into resource conservation work, through the Collaboratory and the Chesapeake Bay Landscape Professional (CBLP) Certification Program (funded and piloted through a NFWF grant)- a certification of private landscape professionals in nature-based approaches to conservation landscapes and stormwater runoff reduction. Their role will be to recruit, train and expand the number of landscape professionals and local government staff certified as CBLPs and qualified to design, implement and manage resilient nature-based strategies like living shorelines, riparian buffer restoration, preservation of natural open space, and other green infrastructure projects. Wetlands Watch will also plan and co-host CBLP/local government workshops for continuing education to address skill gaps and barriers to resiliency identified by Hampton and other localities.
- **Virginia Association of Soil and Water Conservation Districts:** The Virginia Association of Soil and Water Conservation Districts (VASWCD) is a private nonprofit association of 47 SWCDs and is classified accordingly as a 501(c)(5). The VASWCD and its Foundation provides and promotes leadership in the conservation of natural resources through stewardship and education programs. The Association coordinates conservation efforts statewide to focus effectively on issues identified by local member districts. There are primarily two SWCDs that will be part of the LSC in this project including James River SWCD (Chesterfield and Prince George), Peanut SWCD (Surry, Suffolk and Isle of Wight).