

The RAFT: Maintaining Progress in Coastal Virginia

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Virginia Department of Environmental Quality, Coastal Zone
Management Program

The Resilience Adaptation Feasibility Tool (RAFT)

One-Year Virtual Progress Workshop for the Cities of Petersburg & Hopewell

Friday, April 12, 2024

Executive Summary

The Petersburg and Hopewell RAFT One Year Progress Review Workshop was held virtually on Friday April 12, 2024 and a full recording is available on The RAFT YouTube channel [at this link](#). The workshop was an opportunity for both the Cities of Petersburg and Hopewell as well as regional partners in the Crater Planning District Commission to come together to reflect on the past twelve months of implementation progress; share successes, lessons learned, and challenges from the implementation of their Resilience Action Checklist priorities; and explore opportunities for collaboration moving forward at the local and regional levels.

Presentations from Kelly Davis (Senior Planner of Development, City of Hopewell) and Naomi Siodmok (Director of Planning and Community Development, City of Petersburg) highlighted community achievements and the impact of The RAFT in each city. Flash presentations from faculty representing the University of Virginia (UVA) and Old Dominion University (ODU) demonstrated products from working with cities through RAFT and included work from Karen Firehock (Director, Green Infrastructure Center and Lecturer, UVA Urban & Environmental Planning and Landscape Architecture), Kun Xie (Assistant Professor, ODU Dept. of Civil & Environmental Engineering), Bev Wilson (Associate Professor, UVA Urban & Environmental Planning), and Leslie Hogle (Clinical Assistant Professor, ODU School of Community and Environmental Health). Presentations from Kit Friedman (Crater Planning District Commission), Heather Barrar (Friends of the Lower Appomattox River), and Lisa Homa (Petersburg Healthy Options Partnership) highlighted opportunities for continued resilience work with partners. The workshop ended with a facilitated session and discussion about next steps for RAFT implementation moving forward. A full participant list is included at the end of this summary.

Funding Acknowledgment:

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supported the implementation of resilience priorities for Hopewell and Petersburg under Grant #22-24, and will provide additional support through Grant #23-17 to extend implementation of specific resilience priorities through October 2024.

Welcome & RAFT Overview – *Tanya Denckla Cobb, IEN and Sierra Gladfelter, IEN*

Tanya Denckla Cobb of the Institute for Engagement & Negotiation (IEN) welcomed participants and highlighted the substantial work that the Cities of Petersburg and Hopewell have made in advancing their resilience goals over the past year. Tanya reviewed the purpose and goals of the workshop, including to reflect on the past twelve months of implementation progress; share successes, lessons learned, and challenges from the implementation of their Resilience Action Checklist (RAC) priorities; and explore opportunities for collaboration moving forward. She also acknowledged funding support from Virginia Department of Environmental Quality Coastal Zone Management (DEQ CZM) and Virginia Environmental Endowment (VEE), and that additional support from VEE will allow for implementation of specific RAC items through October 2024.

Introductions of the RAFT team made to attendees and participants were invited to share their name and affiliations in the chat. Next, Sierra Gladfelter of IEN provided an overview of The RAFT's three step process and a summary of the timeline of engagement with the Cities of Petersburg and Hopewell. Participants were also invited to complete a [RAFT Evaluation](#) reflecting on past year of implementation.

Locality Presentations: Community Achievements & Application of RAFT Tools – *Moderator, Sierra Gladfelter, IEN*

City of Hopewell: Kelly Davis, Senior Planner of Development

Kelly provided an overview of the Resilience Action Checklist (RAC) for the City of Hopewell and some of the root resilience issues they work to address, noting that she came to her role at the City and participation in RAFT after the RAC items had been set. Of the main RAC items, the priorities identified were to: address social determinants of health; increase educational opportunities on broad resilience strategies; redevelop the marina; and update the comprehensive plan.

Kelly noted that many of the goals that the City of Hopewell has on their RAC will require more than a one-year timeframe to achieve. She acknowledged that trying to achieve or complete all the goals in a one-year process particularly with the amount of staff turnover the City has experienced is difficult, and not necessarily the objective of RAFT. Having an in-person visit

from Jessica Whitehead, RAFT Team member from Old Dominion University, and discussion around strategic doing helped put the role and goals of The RAFT in perspective by allowing Kelly and the City of Hopewell to reflect on three questions: “what could we do,” “what should we do,” and “what will we do.” Answering these questions based on the assets already available to the City and within The RAFT network, including funding, staff, and capacity, helped provide a framework for advancing Hopewell’s RAC priorities. The challenge faced by Hopewell was that many of the assets needed to make significant progress have not been available.

A lesson learned from the Hopewell process is that who you have at the table at the initial RAFT workshop where the RAC is created, is critical to the continued success of The RAFT process and getting people to commit to tangible objectives. A challenge has been figuring out how to operationalize to achieve goals when resources are limited, and there is staff turnover and limited capacity.

City of Petersburg: Naomi Siodmok, Director, Planning and Community Development

The goals identified on the City of Petersburg’s RAC include: Incorporate all residents into resilience planning efforts; Develop landscape plans/standards to protect and expand urban green spaces while mitigating the water quality, air quality, and heat impacts of development; Diversify the economic base for the Petersburg community; Connect people to goods and services, as well as critical infrastructure through transit and broadband; Incentivize capital improvements for public infrastructure, including Petersburg city public schools and public safety. Successes for Petersburg have included the creation of new relationships, new perspectives and opportunities for the city developed by UVA students, and the facilitation of the RAFT process by IEN.

Naomi noted that relationships, particularly with students during courses taught by UVA Professors Karen Firehock and Bev Wilson, opened opportunities to grow networks for the city and get tapped into new funding resources, grants, and organizations to collaborate with. One particular example is the City of Petersburg’s partnership with the Green Infrastructure Center, directed by Karen Firehock, which was initially catalyzed and facilitated by IEN and The RAFT. The GIC has partnered with the City to apply for substantial funding from the Virginia Department of Forestry to do additional tree canopy mapping, ordinance development, and develop a Tree Master Plan and Maintenance Plan in the coming years. Another success has been getting feedback from students as they are willing to think outside the box regarding feasibility, cost-effective solutions, etc. in their project designs for the city. Students have also done a great job in centering equity in their ideas.

Some of the challenges that the City of Petersburg has faced include: incorporating residents in the resilience planning efforts beyond the existing Comprehensive Plan public input process;

moving from the brainstorming and planning phase around ideas to implementation; keeping the right players engaged and involved; and getting multiple implementation strategies going at once for each of the RAC items. Naomi noted for example that for some transit and green infrastructure goals, it has been challenging to get staff within other department of the City to engage and participate actively in implementation. Clarifying how this work benefits them and their roles in the City can be a way to encourage more engagement.

Some lessons learned from Petersburg's participation in The RAFT process are that it provides a good opportunity to get diverse groups together looking to achieve common goals and that local organizations are interested in resilience in Petersburg. Naomi emphasized that we should keep those relationships going after RAFT to sustain momentum and progress. There is also an opportunity for continued relationships to be built by advancing specific projects that students have presented by seeking funding and resources to translate them into reality.

Questions and Discussion – Following the locality presentations, meeting participants were invited to ask questions or share comments. Participants asked the following questions:

- A participant who is a resident of Petersburg noted that some of the student project ideas might be in locations ones that have already been tried in the community and haven't worked for various reasons. How can this be incorporated and considered in next steps.
- Naomi Siodmok with the City of Petersburg noted that this is important to consider as the City and RAFT partners determine which specific student project proposals they want to advance.

Faculty Flash Presentations – Moderator, Nicole Hutton, ODU

Next, a panel of faculty members representing the University of Virginia and Old Dominion University who provided technical assistance and support to the Cities of Petersburg and Hopewell during the implementation phase provided summaries of their work and outputs.

Karen Firehock, Director, Green Infrastructure Center and Lecturer, UVA Urban & Environmental Planning and Landscape Architecture

Karen Firehock provided a summary of work developed by students during her Fall 2023 “Green Cities” advanced graduate-level class in the Urban & Environmental Planning Department at UVA, which looked at the entire city of Petersburg through a green infrastructure lens. Over the course of the semester, students made site visits to Petersburg, met with the City and local partners, and collected data in the field to create a strategic green infrastructure plan for Petersburg centered around Parks & Recreation, Trees, Water, and Culture & History.

Karen noted that through the students' work, trees in particular, were highlighted as important resource in the urban environment and there is a great opportunity for Petersburg to create more "tree equity" in the city. Trees and green infrastructure investments can also address stormwater issues, through a decrease in impermeable surfaces and rethinking surfaces of parks, lots, and sidewalks in the city. Parks can also provide an opportunity for economic development. Students looked at where parks in the city currently are, and where they are not (deficient analysis), to provide some resources on which sites might be strategic. A goal might be for everyone in the City to have access to a park within a 10-minute walk, which could be incorporated into City plans.

The Green Cities students' final report is available on the Petersburg community page of The RAFT website [here](#).

Next steps include working with the City of Petersburg to incorporate this work into City plans and policies. Karen also noted that she is currently teaching a UVA "Green Sites" class also focused on Petersburg and has students developing site designs for four green infrastructure projects at four locations prioritized by the City of Petersburg and RAFT partners: Halifax Triangle, Legends Park Boat and Trail Access, Brickhouse Run Sinkhole, and RRTrack Park. These products will be available to the City and RAFT partners in May.

Kun Xie, Assistant Professor, ODU Dept. of Civil & Environmental Engineering

Next, Professor Kun Xie of ODU, highlighted work that he conducted for both the Cities of Hopewell and Petersburg looking at mapping pedestrian facilities with AI-powered systems. To conduct his analysis, Kun used AI to extract pedestrian information from satellite images of Hopewell and Petersburg. The work has generated shapefiles shared with Hopewell and Petersburg, and the Crater Planning District Commission, for use in mobility planning.

Overall, this work has demonstrated that AI can be a good future resource for addressing transportation issues. He noted that there are still a number of opportunities to improve this work and the AI model, including better aerial imagery data, using additional input data from OpenStreetMap, labeling more data for training, use of better AI models, and evaluating pedestrian accessibility. While neither city was able to integrate the data into planning immediately, Kun is interested in collaborating to improve his models and the data outputs to better inform the cities' needs.

Bev Wilson, Associate Professor, UVA Urban & Environmental Planning Department (pre-recorded video)

Bev Wilson, a professor at UVA who taught a Civic Technology: Principles & Practice course in Fall 2023, shared a pre-recorded video highlighting outputs of the semester that support

Petersburg's mobility, transit, broadband and economic development planning needs. The class is designed to connect graduate and undergraduate students at UVA with local government staff, community based organizations, and other stakeholders doing planning, or planning adjacent, work in communities around Virginia. The class in particular focuses on bringing data and technology to bear on issues of importance to our external partners and the people they serve. Links to all of the Civic Technologies students' final StoryMaps and presentations are available on the Petersburg community page of the RAFT website [here](#).

Students collaborated with the City of Petersburg's Director of Technology to develop a StoryMap visualizing what will be required for the City to extend equitable broadband access to all of its residents. This was in response to a specific request from the City to aid in the development of an equitable public broadband network city-wide. The final product, shared with the City in December 2023, is available online [here](#).

Students also provided technical assistance and mapping support to help the City of Petersburg plan for bridging the first and last mile on micro-mobility devices. At the time, the City of Petersburg was negotiating a contract with an e-scooter company and requested that The RAFT assist with mapping and analyzing strategic locations that would provide connectivity and access to downtown businesses, schools, VSU's campus, Fort Lee, and other locations. The students mapped activity centers and likely destinations in the City of Petersburg, compared these hotspots to demographic and economic data, and made recommendations for safe and accessible e-scooter siting. A link to the micro-mobility map developed for Petersburg is available online [here](#).

Additionally, the City of Petersburg and Petersburg Healthy Options Partnerships (PHOPs), a community group already working on walking and road safety audits, requested support in developing a StoryMap to highlight mobility challenges under-resourced residents of Petersburg face in relation to food access, green spaces, and the limited transportation networks that impact accessibility. The StoryMap developed by Professor Wilson's students is available online [here](#), and provides a visual representation of access challenges that will allow the City and partners to strategically prioritize new transit routes or site new parks, community gardens, food banks or farmers markets in a way that maximizes impact for under-resourced residents.

The final group of students worked closely with the McKinney Foundation and the Petersburg Public Library to document the City's Civil Rights history. Students digitized interviews with 10-12 Civil Rights leaders from Petersburg and developed a story map highlighting these interviews and how they are tied to specific locations in Petersburg that could inform the City's economic

development planning around its rich history. A site developed by the students sharing outputs from this effort is available [here](#).

Bev noted that without the support and involvement of the community members, they would not have made the same achievements. Also, because a university course only lasts about 15 weeks (about 3 and a half months), having The RAFT sustaining the involvement of community organizations is so critical to having a long-term impact.

Leslie Hoglund, Clinical Assistant Professor, ODU School of Community and Environmental Health (pre-recorded video)

Next, a pre-recorded video made by Leslie Hoglund sharing her collaborative research with the Cities of Hopewell and Petersburg was shared with attendees. In the video, Leslie described her work synthesizing seven previous assessments and reports conducted on food access between 2016 and 2023 in Petersburg into 21 recommendations on advancing food access and equity. This report was shared with the City of Petersburg and partners, and Leslie is available to provide additional implementation planning support if and when this would be useful to the City.

Currently, Leslie is working in Hopewell to conduct a Community Health Program Food Security Assessment of the 37 Healthy Families program participants residing in the City. As a part of this work, Leslie provided interview training to two community health workers from the program who reside in Hopewell who are leading a peer-to-peer interview process with mentoring and coaching from Leslie. Recruitment for interview participants began in early April and interviews are now underway with the plan to complete this process by the end of May. After this, they will host a Community Dialogue session for all program participants to inform action plan recommendations and implementation to begin in June.

Opportunities for Continued Resilience Work with RAFT Partners – Moderator, Jessica Rich, Virginia Tech

The next panel included several presentations by representatives from the Crater Planning District Commission (PDC) and local organizations working on resilience planning and implementation efforts. The goal of this session was to highlight long-term opportunities for coordination on resilience efforts after RAFT.

Kit Friedman, Planner II, Environment & Resilience, Transportation, GIS, Crater Planning District Commission

First, Kit Friedman, with the Crater PDC provided an update on their Regional Multimodal Mobility Plan and resilience planning processes. Kit began by providing some demographic information and perspective on transit and resilience planning challenges in the region, noting that roughly 20% of people in Petersburg do not have access to personal vehicles, with some

areas exceeding 50%. The Crater PDC has been working on developing a Regional Multimodal Mobility Plan since March 2024 and plans to have this process completed by spring 2025. Next steps for this include work include identifying 10 strategic locations and funding sources.

Kit shared that the Crater PDC is also working on a regional Resilience Plan, which is funded by the Community Flood Preparedness Fund, and is slated to kick off in summer 2024. It will encompass all eleven localities in the Crater PDC and will examine flooding, heat islands, water pollution, and wildland conservation and restoration. Kit noted that historically the Crater PDC's environmental program focused only on areas in the Chesapeake Bay Watershed (about 20% of the total area), but this plan will allow for the Crater PDC to provide consultation support to all localities. Finally, Kit shared some additional resources to localities, including the revival of the Albemarle- Chowan Watershed Roundtable and its coordination; providing Certified Floodplain Manager (CFM) services to localities, and grant administration for localities on specific projects. For questions or interest in working with the Crater PDC, Kit welcomes localities to reach out.

Heather Barrar, Regional Trails Program Director, Friends of the Lower Appomattox River

Next, Heather Barrar with the Friends of the Lower Appomattox River (FOLAR), provided an overview of their existing stewardship programs and opportunities for engagement. FOLAR has been serving the region for 24 years by developing a 25-mile park and greenway system through the region. Heather shared that the Appomattox River Trail Master Plan was developed by local groups and partners with funding from the Cameron Foundation and formally adopted in 2017.

Heather also summarized FOLAR's robust land conservation, invasive plant management, and trail development work, including the establishment of 3 miles of bike lanes in Hopewell in the past year and expansion of the Riverwalk. FOLAR will also be working with each locality in fall 2024 to develop an Invasive Plant Management Plan and then will leverage volunteers to help implement project work. Heather shared that FOLAR will be moving to 235 North Market Street in Petersburg and will have a ribbon cutting event and opening on May 31, 2024. Participants were invited to attend and connect with FOLAR directly.

Lisa Homa, Virginia Tech Center for Public Health Practice & Research and Petersburg Healthy Options Partnership (PHOPs) Lite team member *with input from:* Fancie Terrell, PHOPs Lite Local Project Director and HCAT Coordinator

Finally, Lisa Homa summarized the Petersburg Healthy Options Partnership (PHOPs) efforts underway in Petersburg and work that River Street Education is doing in the City to increase food access to residents. River Street currently hosts the year-round Saturday Farmers Market and fresh food distribution events at the Petersburg Public Library. All food is aggregated from 50 local growers.

Lisa also shared that PHOPs is working on a Petersburg Region Food Hub and Shared Use Commercial Kitchen Market Study to collect data and assess the requirements needed to shorten the local food supply chain and increase resilience. They are currently in the process of surveying food producers in the region and welcome participation in the survey available [here](#). Lisa also shared information about SNAP, Virginia Fresh Match, and Local Food Purchase Assistance Programs to increase residents' access to healthy, fresh food. Finally, Lisa shared that the Healthy Community Action Team or HCAT, led by Fancie Terrell, is continuing to work on updating curriculums for farm-to-school programming and sustain the Pleasants Lane Elementary School Learning Garden.

Discussion and Questions

Shereen Hughes with Wetlands Watch and the Chesapeake Bay Landscape Professionals (CBLP) shared a link to this guide for Virginia re: Selecting Trees and Shrubs for Riparian Buffers: <https://jamesriverconsortium.org/landowner-resources/plant-guide/> for individuals working on green infrastructure along waterways to consider in their projects. Shereen also noted that John Munsell at Virginia Tech has funding and does work on agriforestry.

Moving Forward Together: Virginia Environmental Endowment Supported Implementation

Sierra Gladfelter with IEN provided a brief overview of The RAFT's continued work with the Cities of Hopewell and Petersburg. Thanks to generous support provided by the Virginia Environmental Endowment (VEE), IEN and ODU will be supporting implementation through October 2024. The work will be focused on specific RAC goals, but will support critical work on resilience prioritized by both cities. For Petersburg, these resilience priorities will be: 1) RAC Priority #2 "Developing Landscape Plans and Standards to Protect and Expand Green Spaces," and 2) RAC Priority #4 "Connecting People to Goods and Services through Transit and Broadband." For Hopewell, these resilience priorities will be: 3) RAC Item #1 "Addressing Social Determinants of Health, and 4) RAC Item #4 "Update the Comprehensive Plan."

RAFT- Facilitated Session on Next Steps for Implementation- *Facilitator, Jessica Rich, Virginia Tech*

Following The RAFT partner presentations, meeting participants were invited to participate in a facilitated discussion reflecting on the past implementation process in Petersburg and Hopewell to inform work moving forward. Participants were invited to add their ideas to a shared google doc or share verbally around three key questions. Responses are documented below.

- **Question 1:** How has the implementation process been most useful for the work you are doing? What specific implementation activities or discussions have been particularly helpful in prompting action or growth for your locality?
 - **Petersburg:**
 - Coordination and support from UVA students for planning (Green Infrastructure, broadband)
 - Naomi Siodmok noted that the partnerships that The RAFT fostered have been the most helpful, especially with UVA faculty and students. Student ideas helped the city to think outside of the box of what might be typical and most cost effective and helped them to figure out alternative ways to move forward.
 - **Hopewell:**
 - Kelly Davis noted that Hopewell may have had less success than Petersburg, since some of the products that were generated were not completely unusable. They are really looking forward to seeing the outcomes of Dr. Hogland's work and are hoping that that will be a positive implementation step to come out of RAFT.
- **Question 2:** What has been the biggest challenge of implementing the resilience priorities identified over the past year?
 - **Regional/Crater PDC Level:** Delays in executed contracts, scope for funding to do work (i.e. transit, resilience plans)
 - Potential solutions: Coordination with state agencies
 - **Petersburg and Hopewell:**
 - Staff turnover and capacity challenges of City staff
 - Potential solutions: Institutional knowledge and process to inform/update new staff members; comprehensive list/resource of grants and opportunities at the beginning of process to be aware of opportunities
 - Facing issues in tree planting, funding and/or trees are secured but do not know where to plant
 - Potential solutions: Potential partnership with Green Infrastructure Center for coordinated planning and advising
 - **Hopewell:**
 - Lack of assets and a clear action plan to support the action items.
 - Potential solutions: Need to connect with other resources, capacities at other institutions and partners to meet goals

- Had hoped for a usable transportation map, but faced challenges in GIS
 - Potential solutions: Goal to have a usable transit layer for Comp Plan

After a robust discussion among participants, Jessica Rich wrapped up this segment of the workshop noting that this is valuable feedback to inform the continued implementation work through October 2024 and as The RAFT works with future localities moving forward.

Next Steps

Sierra Gladfelter with IEN expressed gratitude to all who attended today's workshop and provided feedback on The RAFT process in Petersburg and Hopewell over the past 12 months.

Shereen Hughes with Wetlands Watch shared that the Chesapeake Bay Landscape Professionals (CBLP) Program will be held in Richmond September 11 and 12 and that there is currently a discount to register early. Wetlands Watch also has a list of resilience related grants and funding opportunities developed by Ross Weaver that may be useful to participants. It is available on Adaptva.org under "Resilience Database: Plans and Funding" or accessible via this link:

<https://airtable.com/appcXue981GilsIY0/shr91EBgGnkhkLNEb/tblRcjVHTIGQesGvw/viwkoajCzJ4yWMv2i?blocks=bipBkTgLXFE0PGzd0>. Finally, Sierra welcomed any additional feedback through the RAFT Evaluation.

Many thanks to funders that have supported bringing The RAFT to the Crater Region!

Virginia Environmental Endowment

Virginia Coastal Zone Management Program National Oceanic and Atmospheric Administration



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Meeting Attendees:

1. Heather Barrar, Friends of the Lower Appomattox River
2. Theresa Caldwell, Crater Health District
3. Michael Cary, Research Assistant Professor, Virginia Tech
4. Kelly Davis, City of Hopewell
5. Karen Firehock, Green Infrastructure Center and University of Virginia
6. Andrew Franzysen, Crater Planning District Commission
7. Kit Friedman, Crater Planning District Commission
8. Melody Hackney, Hopewell Public School System
9. Carolyn Heaps-Pecaro, Virginia Department of Conservation and Recreation (DCR)
10. Lisa Homa, Virginia Tech and Petersburg Healthy Options Partnership (PHOPs)
11. Jessica Huang, Green Infrastructure Center
12. Shereen Hughes, Wetlands Watch and Chesapeake Bay Landscape Professional Program
13. Will Isenberg, Virginia Department of Environmental Quality Coastal Zone Management Program
14. Alexis Morris, Petersburg National Battlefield, National Park Service
15. Sharon Napper, The Balm in Gilead and Alzheimer's Association
16. Patrice Perry-Rivers, Virginia State University Center for Entrepreneurship
17. Naomi Siodmok, City of Petersburg
18. Ron Svejksky, Crater Planning District Commission
19. Kendall Topping, Green Infrastructure Center
20. Darryl Walker, City of Petersburg

RAFT Facilitation Team

1. **Tanya Denckla Cobb**, Director, Institute for Engagement & Negotiation (IEN), University of Virginia (UVA)
2. **Sierra Gladfelter**, Senior Associate and RAFT Project Manager, IEN, UVA
3. **Vince Hodges**, Institute for Coastal Adaptation and Resilience (ICAR), Old Dominion University (ODU)
4. **Nicole Hutton**, Assistant Director of Engagement for ICAR, ODU
5. **Sanika Mate**, Student Research Assistant, IEN, UVA
6. **Monica Nichta**, Student Research Assistant, IEN, UVA
7. **Jesse Palma**, PhD Student, ICAR ODU
8. **Jessica Rich**, Research Assistant Professor, Virginia Tech

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Virginia Environmental Endowment, Virginia Program, 2017- Present

University of Virginia Environmental Institute, formerly Environmental Resilience Institute, 2018- Present

Jessie Ball duPont Fund, 2019- Present

Agua Fund, 2022- Present

Virginia Sea Grant Adaptation and Resilience Program, 2017-2024

Natural Hazards Center, Public Health Disaster Research Award Program, 2022-2024

University of Virginia School of Architecture, Faculty Summer Research Program, 2018, 2022

Commonwealth Center for Recurrent Flooding Resiliency, 2021-2022

Anonymous, 2018-2019

National Fish and Wildlife Foundation, Restoration and Community Stewardship Grant, 2016- 2018

For more information visit The RAFT website: raft.ienvirginia.edu

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