

ENHANCING AQUATIC CONNECTIVITY RESILIENCY AND FLOOD CAPACITY IN THE BLACK RIVER WATERSHED

BLADEN AND PENDER COUNTIES, NORTH CAROLINA

**NOAA FY 2022 RESTORING FISH PASSAGE THROUGH BARRIER REMOVAL
GRANT APPLICATION**

BUDGET NARRATIVE

SUBMITTED BY:

CAPE FEAR RESOURCE CONSERVATION AND DEVELOPMENT



GRANT FUNDS, SOURCES, AND USES OF PROJECT FUNDS

I. NOAA FUNDING REQUEST

The Enhancing Aquatic Connectivity Resilience and Flood Capacity in the Black River Watershed Project will be implemented through a non-profit/public/private/state/federal partnership administered by Cape Fear Resource Conservation & Development (CFRCD). As described in the Project Narrative, the project implementation team includes grant and contract administrative and public outreach staff from CFRCD; and project management, environmental planners, permit specialists, and civil engineers from Moffatt & Nichol (M&N). Hydrographic and topographic surveys will be conducted by a local survey crew and a to-be-selected contractor to construct the five barrier replacements. All anticipated costs for surveying tasks are included.

A summary of the project costs by component and the grant request are shown in Table 1.

Table 1: Project Costs & Funding Sources

Project Component		Cost	Funding Allocation	
			CFRCD	NOAA
1	Project Management/Grant Administration	\$122,500	\$0	\$122,500
2	Engineering/Design/Permitting/Monitoring	\$777,000	\$0	\$777,000
3	Construction of 5 Barrier Replacements	\$1,623,000	\$0	\$1,623,000
5	Outreach and Education	\$60,000	\$0	\$60,000
TOTAL		\$2,582,500	\$0	\$2,582,500

II. PROJECT COSTS AND FUNDING SOURCES BY OBJECT CLASS (SF-424A)

Engineering (Design) and Construction costs have been updated from the 2019 Preliminary Engineering Report to better align with current year costs. Costs have been impacted due to COVID, supply chain struggles as well as recent inflation hikes. M&N has updated these costs based on the latest information from both local and national resources. In addition, M&N has provided sufficient cost based on projected permitting, possible utility relocations and proposed right of way / easement purchases to construct these projects.

Personnel (Federal Request): \$120,000

CFRCD commit staff, Board of Directors guidance, and local resources to ensure the completion of each task, manage contracts, project schedule and grant agreement. If grant is awarded it is the intent of CFRCD to hire a project manager dedicated to this project and engage with local government staff, the public, and manage regular website updates.

Danielle Darkangelo, Executive Director of CFRCD, will manage all NOAA grant reporting, administrative tasks, and attend regular project progress meetings during the project. Mrs. Darkangelo will coordinate directly with Pender and Bladen County staff to support landowner and public outreach and engagement. She will schedule and facilitate two community meetings at a minimum to present the project goals and outcomes. It is anticipated staff (Executive Director



and project manager) will spend up to 10-12 hours cumulatively per week on managing the project (600 hours per year X 4 years).

Personnel (Non-Federal Match): \$0

CFRCD staff are funded by previously awarded National Fish and Wildlife Foundation (NFWF) Emergency Coastal Resilience funds (federal in origin) to support ongoing barrier assessments and one barrier replacement project (BR-236) in the lower Black River basin. Previous federal funds awarded for personnel total \$17,336 and are included to leverage support. CFRCD's Executive Director, Danielle Darkangelo, has provided grant administration, project management, and communications liaison with Bladen and Pender County staff.

Fringe Benefits (Federal Request): \$0

Fringe Benefits (Non-Federal Match): \$0

Travel (Federal Request): \$2,500

CFRCD staff will travel to two community meetings in Year 1, and regularly occurring project site visits to the five barrier replacement sites during technical design and construction phases (years 2 – 4) totaling 1,000 miles/year X 4 years = 4,000 miles X .652/mile = \$2,500

Travel (Non- Federal Match): \$0

Equipment (Federal Request): \$0

Equipment (Non-Federal Match): \$0

Supplies (Federal Request): \$0

Supplies (Non-Federal Match): \$0

Contractual (Federal Request): \$777,000

CFRCD requests \$777,000 in federal funds through NOAA Fisheries to support the technical tasks necessary to complete the engineering, design, surveying, permitting, and post-construction monitoring of removing five barriers within the lower Black River Basin to restore aquatic connectivity and fish passage to nine miles of stream and improve coastal resilience within Pender and Bladen Counties. Summary of requested federal funds are provided in Table 2 below. Updated Opinion of Probable Costs for the 5 barrier/culvert sites is provided in Appendix/PDF 3: Project Designs.

CFRCD will contract technical design services with Moffatt & Nichol (M&N), a coastal and civil engineering firm, as a continuation of previously completed barrier assessments and ongoing current final engineering/design efforts on one barrier (BR-236) on Big Branch, lower Black River, within Pender County. Technical reports describing previously completed barrier assessments,



groundtruthing of top ranked severe and moderately severe barriers, preliminary design of five barriers, and final design of BR-236 is provided in Appendix/PDF 3: Project Designs.

M&N staff will work directly with CFRCD and Pender and Bladen Counties to implement all engineering, design and permitting tasks as well as provide plans and specifications and construction oversight services for the replacement of five barriers including BR-64, BR-152, BR-202, BR-376 and BR-236, as described in Appendix/PDF 3: Project Designs. Resumes for key staff from M&N, CFRCD, and Pender County are provided in Appendix/PDF 4: Supplemental Materials.

Contractual (Non-Federal Match): \$0

Through a previously awarded NFWF ECRF grant, CFRCD contracted with M&N to provide technical support services for the surveying, engineering, and permitting of one barrier removal/replacement (BR-236), a barrier on Big Branch in the lower Black River totaling \$130,919. These leveraged federal funds contribute to the completion of the project and do not contribute to non-federal match.

Construction (Federal Request): \$1,623,000

The construction costs projected in Table 1 are based on Opinions of Probable Cost (OPC) for construction as defined by the conceptual designs for the five barrier/culvert replacements designated as high priority by the SARP Barrier Prioritization Tool. As shown in Appendix/PDF 3: Project Designs, preliminary engineering was conducted in 2019, therefore updated OPCs were developed for this proposal. Engineering (Design) and Construction costs have been updated from the 2019 Preliminary Engineering Report to better align with current year costs. Costs have been impacted due to COVID, supply chain struggles as well as recent inflation hikes. M&N has updated these costs based on the latest information from both local and national resources. In addition, M&N has provided sufficient cost based on projected permitting, possible utility relocations and proposed right of way / easement purchases to construct these projects. The distribution of funding between Year 3 and Year 4 is based on having the barriers/culverts constructed simultaneously and/or overlapping.

Construction (Non-Federal Match): \$0

CFRCD has set aside approximately \$351,745 in previously awarded NFWF ECRF grant funds to be used for construction activities associated with replacement of BR-236, a four-barrel barrier in Big Branch in the lower Black River. These leveraged federal funds contribute to the completion of the project and do not contribute to non-federal match. CFRCD will follow NC Department of Transportation standard contracting protocols for bidding and contractor selection.

Other (Federal Request): \$60,000

CFRCD requests \$60,000 for community outreach and education activities to be conducted over the four-year timeframe, beginning in 2023 through 2026. CFRCD, M&N, and SARP have previously presented the Project at technical conferences, Cape Fear River Partnership quarterly meetings, and NC Aquatic Connectivity Team meetings (NCACT). These community outreach and education efforts will continue throughout the project timeframe and will allow CFRCD and partners to share project experiences, lessons, and restoration plans in communications,



marketing, and technical conferences. As each barrier is replaced, CFRCD will continue to promote and transfer barrier assessment concepts and lessons that are replicable in other Southern Atlantic coastal communities through engagement with the NC Division of Coastal Management's Coastal Resilience Community of Practice.

Specific community outreach and education deliverables include the following:

- Participate and facilitate two public information meetings. Provide regular progress updates on CFRCD's (<https://www.capefearrcd.org/aquatic-activity-project>) and Cape Fear River Partnership's website (Cape Fear River Partnership - Working to Restore the Cape Fear River).
- Present project results at two Annual Resource Conservation & Development Meetings.
- Engage up to ten local and state elected officials, including County Commissioners, on the results, outcome, and benefits of barrier replacements.
- Present project results at a quarterly Cape Fear River Partnership meeting and engage fifteen state and federal resource agencies and stakeholders.
- Present project results at two NC Aquatic Connectivity Team meetings in coordination with SARP.
- Develop a Storymap to share project information with the community and stakeholders.
- Attend and present project results at one technical conference.

Other (Non-Federal Match): \$0

Total Direct Costs:

Federal: \$0

Non-Federal: \$0

Total Indirect Costs:

Federal: \$0

Non-Federal: \$0

III. SUMMARY TABLES

Table 2: Summary of project costs for the design and construction of 5 barrier replacements over a 4-year period (2023 – 2026)

Cost Classification	Year 1 (2023)	Year 2 (2024)	Year 3 (2025)	Year 4 (2026)
Applicant – CFRCD (Project Administration)				
Personnel	\$30,000	\$30,000	\$30,000	\$30,000
Fringe Benefits	\$0.00	\$0.00	\$0.00	\$0.00
Travel	\$500	\$500	\$750	\$750
Equipment	\$0.00	\$0.00	\$0.00	\$0.00
Supplies	\$0.00	\$0.00	\$0.00	\$0.00
Total Applicant	\$30,500	\$30,500	\$30,750	\$30,750
Contractual – Engineering/Design Fees				
M&N (Permitting, Engineering/Design, Construction Administration, Monitoring)	\$150,000	\$350,000	\$250,000	\$27,000
Total Contractual	\$150,000	\$350,000	\$250,000	\$27,000
Construction of 5 Barriers (BR)				
BR-64	\$0	\$0	\$150,000	\$146,000
BR-152	\$0	\$0	\$200,000	\$195,000
BR-202	\$0	\$0	\$142,000	\$200,000
BR-236	\$130,000	\$0	\$0	\$0
BR-376	\$0	\$0	\$200,000	\$260,000
Total Construction	\$130,000	\$0	\$692,000	\$801,000
Other (Public Education and Outreach)				
Education & Outreach	\$15,000	\$15,000	\$15,000	\$15,000
Total Other	\$15,000	\$15,000	\$15,000	\$15,000
Total	\$325,500	\$395,500	\$987,750	\$873,750