



Jeffrey W. Cown, Director

EPD Director's Office

2 Martin Luther King, Jr. Drive
Suite 1456, East Tower
Atlanta, Georgia 30334
404-656-4713

Jun 25, 2024

Dr. Hameed Malik, Ph.D., P.E.
Director of Engineering
Augusta Engineering and Environmental Services Department
452 Walker Street, Suite 110
Augusta, Georgia 30901

RE: Executed NCTE Amendment to Contract for Section 319(h) FY2021 Grant - Element 12
Augusta, Georgia (Augusta-Richmond County)
Phase 2 Biota Improvement in an Urban Stream through Aquatic Habitat Restoration

Dear Dr. Malik:

Please find enclosed an electronic file of the executed NCTE Amendment for the above referenced project between your organization and the Georgia Environmental Protection Division. The contract amount remains \$117,058.00 and requires a minimum match of \$111,815.00. The Amendment extends the Contract through December 31, 2025, by which time all outputs required for the project must be complete. As delineated in the executed contract, all covenants, agreements and stipulations in Part 200 Chapter II of Subtitle A, Title 2, Code of Federal Regulations are applicable to this project.

If there are any questions concerning the project, please contact Mary E Gazaway with the NonPoint Source Program, Grants Unit at (470) 524-0556 or mary.gazaway@dnr.ga.gov.

Thank you for your participation in this Amendment. My staff and I look forward to continuing your work on this important project to control nonpoint source pollution.

Regards,

Jeffrey W. Cown
Director

JWC:meg

Enclosure (1 electronic version)

Cc: Garnett L. Johson, Mayor; Oscar P. Flite III, Ph.D., Associate Director for Stormwater and Environmental Services

AMENDMENT 1

WITH

AUGUSTA, GEORGIA (AUGUSTA–RICHMOND COUNTY)

FOR

**PHASE 2 BIOTA IMPROVEMENT IN AN URBAN STREAM THROUGH AQUATIC
HABITAT RESTORATION**

SECTION 319(h) FY21 GRANT - ELEMENT 12

THIS MODIFICATION made this 30th day of June 2024, to a pre-existing contract dated September 30, 2022, between the AUGUSTA, GEORGIA (AUGUSTA–RICHMOND COUNTY) hereinafter referred to as the “Contractor,” and the ENVIRONMENTAL PROTECTION DIVISION OF THE DEPARTMENT OF NATURAL RESOURCES, STATE OF GEORGIA, hereinafter referred to as the “Division.”

WITNESSETH

WHEREAS, the Contractor and the Division had previously entered into a contract on September 30, 2022, (a copy of which is attached) which they now desire to modify in certain particulars:

NOW, THEREFORE, it is mutually agreed that the attached contract shall be modified in the following manner:

1. In the contract, For Item 3, Term; Time of Performance, delete the date of June 30, 2024, and substitute in its place December 31, 2025.
2. In the contract, for Appendix A, Scope of Work, delete the existing Appendix A: Scope of Work and substitute in its place the attached Appendix A: Scope of Work – Revision 1

which extends the Project End Date.

3. In the Contract, for Appendix B, Project Schedule, delete the existing Appendix B: Project Schedule and substitute in its place the attached Appendix B: Project Schedule – Revision 1 which extends the contract term with additional quarters and reallocates quarterly federal grant drawdown and match amounts.

IN WITNESS WHEREOF, the parties have hereunto, and to a duplicate hereof of like tenor and effect acting by and through their duly authorized officers or agents, set their hands the day and year first above written.

**The Environmental Protection
Division of the Department of
Natural Resources, State of
Georgia**

**Augusta, Georgia (Augusta-
Richmond County)**

BY: *Jeffrey W. Cown*

Jeffrey W. Cown
Director

Date: 06/25/2024

BY: *Garnett L. Johnson*

Garnett L. Johnson
Mayor

Date: 06/21/2024

APPENDIX A – REVISION 1
Scope of Work
Section 319(h) FY2021 Grant – Element12

1. Project Title: Phase 2 - Biota Improvement in an Urban Stream through Aquatic Habitat Restoration

2. Lead Organization: Augusta, GA (AKA Augusta-Richmond County)
535 Telfair Street, Building 4000
Augusta, GA 30901
(706) 796-5040
(706)796-5045

Primary Contact: Hameed Malik, Ph.D., P.E.
Director of Engineering
Augusta Engineering Department
Engineering Administration
452 Walker Street, Suite 110
Augusta, GA 30901
(706) 796-5040
(706) 796-5045
hmalik@augustaga.gov

Project Start Date: August 2022

Project End Date: December 31, 2025

Federal Amount Requested: **\$117,058**

Match Amount to be Contributed: **\$111,815**

Total Project Amount: **\$228,873**

3. Project Goals:

Phase 2 of this project continues to implement a 2018 Nine-Element Watershed Management Plan (WMP) for the Augusta Canal (HUC-12 #030601060601)/Butler Creek (HUC-12 #030601060602)/Beaverdam Ditch (HUC-12 #030601060607) Watersheds in the Savannah River Basin by addressing Bio F and Bio M water quality impairments in an 8-mile portion of Rocky Creek (HUC-12 030601060607) in Augusta-Richmond County, Georgia. Project goals are to increase a fish Index of Biotic Integrity (IBI) to >16 (Very Poor) and a macroinvertebrate Multi-Metric Index (MMI) in a 100-point scale to >5 (Very Poor). Restoration of biological health may also decrease fecal coliform concentrations based on a well-supported scientific food web theory. These efforts will be documented through pre- and post-BMP monitoring using GAEPD/GADNR standard protocols for sampling fish and macroinvertebrates in streams. Habitat will be restored by directly adding Best Management Practices (BMPs) to the stream to encourage a more natural riffle-pool geomorphology over time and support habitat diversity.

The project supports sections of **Georgia's Statewide NPS Management Plan (2014)**: 319 Grants, Key Stakeholders, Funding, page 92; Water Quality Monitoring, Program Issues, Short Term Goal 1.1 page 64; Water Quality Monitoring, Program Issues, page 79; 319 Program, Short Term Goal 8.1, page 97; Water Quality Monitoring, Short Term Goal 2.4, Page 85; Urban, Short Term Goal 4.2, Page 105; and 319 Grants, Long Term Goal 13, Page 99.

4. Project Background:

Due to delays caused by the COVID-19 pandemic, project activities will be achieved in two phases. Contracted under a Section 319(h) FY2016 grant, Phase 1 resulted in the completion of the following Project Activities and Tasks plus quarterly, annual, and close-out reporting:

Project Activity: Reach out to representatives & convene 3 meetings of Watershed Partnership developed throughout the previous TMDL planning process

Task 1: Introduce project to appropriate watershed partners

Task 2: Convene 3 meetings to solicit input, encourage support, and publicize project

Project Activity: Survey and qualify assessment of existing habitat.

Task 3: Survey of existing habitat in 8-mile reach of Rocky Creek

Task 4: Pre-BMP installation assessment of macroinvertebrate and fish communities in observed habitats

Project Activity: Install BMPs from available options as determined by the assessment

Task 5: Survey of selected reach

Task 6: Engineering Design of Structures

Phase 2 will continue the project based on Project Activities and Tasks listed in **5. Project Activities** below. The BMP installation targets a minimum of 0.25 stream miles (1320 linear feet) along the 6-mile "Headwaters to SR56" reach, with a spacing of approximately one feature every 50-200 ft. Point Bar Formation/Stabilization Structure; Pipe Refugia; Widener/Woody Habitat/Low flow Concentrator; Pool Enhancer; and Cross-Channel Rock Vane BMPs have been evaluated and chosen based on in-stream assessment, project cost, ability to install, and six research/restoration priorities developed by the project team.

A 2016 Total Maximum Daily Load (TMDL) evaluated both a 6-mile segment (Headwaters to SR 56, formerly Headwaters to Phinizy Ditch) and a 2-mile reach (SR 56 to below New Savannah Road) of Rocky Creek in Augusta as Very Poor for diversity in fish and macroinvertebrate community populations. The TMDL does not call for further reduction in sediment loading from external sources into Rocky Creek:

https://epd.georgia.gov/sites/epd.georgia.gov/files/related_files/site_page/Savannah%20Biota%20Impacted%20TMDL%20Report%20%5B2016%5D.pdf

Reduction of sediment will be pursued as an ancillary benefit of habitat BMPs and may improve biotic health further. Therefore, the BMPs selected for this project are intended to stabilize the creek bed and banks so they provide long term habitat as opposed to unconsolidated stream bed and bank sediments.

A fecal coliform bacteria TMDL developed in 2000 for the 2-mile segment of Rocky Creek established an 80% load reduction to achieve state water quality standards:

https://epd.georgia.gov/sites/epd.georgia.gov/files/related_files/site_page/EPA_Rocky_Creek_Fecal_TMDL.pdf

By improving the fish and macroinvertebrate communities, this project will upgrade the overall food web, and help to create an environment that is less hospitable for fecal bacteria.

5. Project Activities:

Project Activity: Install BMPs from available options as determined by the assessment

Task 1: Install and provide for operations and maintenance of structures that create in-stream habitat for biota including fish and macroinvertebrates over a wide range of the food web and varying depth in the water column.

Deliverables: Installation of structural practices; Records of BMP inspections and maintenance kept and made available for review beyond the term of this contract.

Measures of Success: Completion of structural practice installations; BMPs operated and maintained for expected lifespan and in accordance with commonly accepted standards to ensure proper functioning of system as designed.

Project Activity: Targeted monitoring to track post-BMP water quality trends including improvement towards achieving stated goals

Task 2: Post-BMP sampling assessment of macroinvertebrates and fish above, in, and below the BMP installations, including the historic GAEPD monitoring sites, using GAEPD (2007)/GADNR(2005) protocols

Deliverables:

- Finalized QA/QC Water Quality Monitoring Plan for macroinvertebrate & fish assessments
- Post-BMP metrics for stream showing value of BMP compared to areas of stream without habitat restoration

Measures of Success:

- Finalized QA/QC Water quality Monitoring Plan approved by GAEPD
- Data showing an IBI >16 in fish and an MMI >5 in macroinvertebrate biometric values

Project Activity: Publicize study results to scientific and general audience

Task 3: Develop a Case Study paper to summarize the project and publicize through project partner websites and social media outlets

Deliverables:

- Completed paper and
- Presentation made accessible to general public

- Access to presentation through social media

Measures of Success: Documented views of presentation on social media outlets

Task 4: Develop a Case Study paper to summarize the project and present to scientific community at regional water conference

Deliverables:

- Completed paper and
- Presentation at Georgia Water Resources Conference or similar conference

Measures of Success: Acceptance of talk and paper at conference

Project Activity: Reporting Requirements

Task 5: Submit Quarterly Reports, including WBE/MBE reports and invoices, by the 15th of January, April, July, and October of each year during the grant period.

Deliverables: Quarterly deliverables, monitoring data reports, invoices and supporting documentation reporting progress on project and using template provided by GAEPD.

Measures of Success: Quarterly deliverables, monitoring data reports, invoices and supporting documentation reviewed and approved by GAEPD.

Task 6: Participate in project review meetings with GAEPD based on the following schedule: Six months and twelve months after the project start date, then annually through the project term.

Deliverables: Attendance at meetings and verbal or written responses to GAEPD.

Measures of Success: Full participation at all project review meetings.

Task 7: Submit Final Invoice and Closeout Report to GAEPD for review.

Deliverables: Final Invoice and Closeout Report

Measures of Success: Final Invoice and Closeout Report reviewed and approved by GAEPD.

6. Roles and Responsibilities of Participating Organizations:

Organization Name	Specific Responsibilities
City of Augusta	<ul style="list-style-type: none"> • Account for 40% of total project costs in matching funds or in-kind services • Pay funds to appropriate contractor(s) and vendor(s) • Request reimbursements from GAEPD on a quarterly basis • Track the progress of project activities completed, grant funds expended, and match values provided in accordance with the drawdown & implementation schedule • Complete and submit quarterly progress reports and

	<p>invoices to GAEPD by January 15th, April 15th, July 15th, and October 15th of each project year</p> <ul style="list-style-type: none"> • Participate in project review meetings with GAEPD each project year • Complete & submit close-out report at conclusion of project
GAEPD	<ul style="list-style-type: none"> • Provide 60% of total project costs • Review and approve project deliverables • Participate in meetings, as appropriate • Review and assist as needed with 319(h) Grant protocols • Provide project oversight and contract management • Provide monitoring guidance and training
Phinzy Center for Water Sciences	<ul style="list-style-type: none"> • Contract with City of Augusta to perform the following: • Sample, identify, and enumerate aquatic insect and fish species • Assist in report writing • Assist in BMP construction • Subcontract for the following services under an existing subagreement and with a previously approved professional: <ul style="list-style-type: none"> ○ Install and maintain rain gauges and water level loggers ○ Develop rating curves ○ Assist in report writing

7. Project Location:

Rocky Creek runs through and lies entirely within Richmond County. It is a tributary to the Savannah River.

a) Project Area Description and Map:

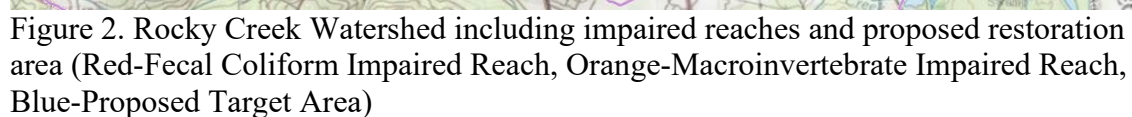
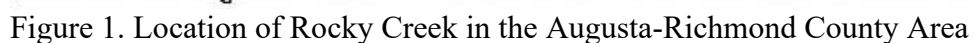




Figure 3. Aerial photo of the extent of proposed restoration area with Milledgeville Road bordering upstream on the left and Wheelless Road bordering downstream on the right

b) Project Area Size (Acres): 8,107 acres

c) County or Counties: Richmond

d) Land Uses within the Watershed(s) or Project Area (Percentages):

Agricultural	6%
Commercial Forestry	0%
Urban/Residential	78%
Mining/Extraction	1%
Forest/Natural Areas	13%
Water/Wetlands	2%
TOTAL	100%

***Data Source & Date:** Draft Total Maximum Daily Load Evaluation for Seven Stream Segments in the Savannah River Basin for Sediment, 2015*

e) Hydrologic Unit Code(s), Watershed Name(s) and Priority Watershed(s):

HUC-10: #0306010606 Name: Rocky Creek Priority: NA

8. Nonpoint Source Pollution Impairments and Healthy Waters:

a) Section 305(b)/303(d) List of Waters:

Water Body Segment Name (Segment Length (Miles) or Embayment Acreage)	County Location(s)	Criterion Violated or Water Quality Concern (Healthy Water)	Listing Status Category 4a, 5 or 1
Rocky Creek (2 miles)	Richmond	Bio M, Bio F, Fecal Coliform	4a
Rocky Creek (6 miles)	Richmond	Bio M, Bio F	4a

b) Secondary Pollutant(s):

In addition to the impairments already listed, there is evidence that sediment from the stream itself could be contributing to sediment load in the stream. Significant gully and

channel erosion can be observed in the channel as well as a great deal of bed movement. Higher flows cause significant movement of bed features.



9. Monitoring:

DRAFT QA/QC Water Quality Monitoring Plan as Attachment (*listed in Section 11.*)

GADNR, 2005-*Standard operating procedures for conducting biomonitoring on fish communities in wadeable streams in Georgia* at <http://www.georgiawildlife.com/node/913>

GAEPD, 2007-*Macroinvertebrate Biological Assessment of Wadeable Streams in Georgia; Standard Operating Procedures* at <http://epd.georgia.gov/macroinvertebrate-bioassessment-standard-operating-procedures-sop-and-metric-spreadsheets>

GAEPD is working on revising the multi metric index (MMI) used to assess the health of macroinvertebrate communities. See current assessment guidelines below:
http://epd.georgia.gov/sites/epd.georgia.gov/files/related_files/site_page/Guidelines%20for%20Listing%20and%20Delisting%20of%20Biological%20Data_Feb2016_Version1_2_Revised_August%202016.pdf

10. Project Budget:

Item	Item Class Category	319(h) Grant Funds (60% Maximum)	Non-Federal Matching Funds (40% Minimum)	Total
A	Personnel: One (1) AED Director – approximately 0.007 FTE (\$170,000/year) for 2 years Description of Duties: City Project Management, Project oversight, BMP decisions		2,380	2,380
	One (1) Stormwater Serv. Mgr. - approximately 0.15 FTE (\$122,000/year) for 2 years Description of Duties: Project Management, Project oversight, Fieldwork, BMP decisions		36,600	36,600
	One (1) Engineering Mgr. - approximately 0.01 FTE (\$109,900/year) for 2 years Description of Duties: Engineering Design, Permitting, Project Management, BMP decisions		2,198	2,198
	One (1) Stormwater Coordinator - approximately 0.01 FTE (\$60,672/year) for 2 years Description of Duties: Engineering Design, Permitting, Project Management, BMP decisions		1,213	1,213
	One (1) Staff Engineer - approximately 0.01 FTE (\$79,000/year) for 2 years Description of Duties: Engineering Design, Permitting, Project Management, BMP decisions		1,580	1,580
	One (1) AED Assist. Director – approximately 0.01 FTE (\$101,000/year) for 2 years Description of Duties: City Project Management, Project oversight, BMP decisions		2,020	2,020
	One (1) Asset Manager - approximately 0.01 FTE (\$106,000/year) for 2 years Description of Duties: GIS, Survey, BMP decisions		1,908	1,908
	One (1) GIS analyst - approximately 0.01 FTE (\$48,847/year) for 2 years Description of Duties: GIS, Survey, BMP decisions		977	977
	One (1) GIS analyst - approximately 0.01 FTE (\$58,532/year) for 2 years Description of Duties: GIS, Survey, BMP decisions		1,171	1,171
	Sub Total:	0	50,047	50,047
B	Fringe Benefits: Included in Item A @ a rate of 30%		0	0
	Sub Total:	0	0	0
C	Travel: Staff Position: Purpose of Travel: 833 Miles x Mileage Rate (\$.545 mile)		0	0
	Sub Total:	0	0	0
D	Equipment: Equipment: Purpose/Use:			
	Sub Total:	0	0	0
E	Supplies: Supplies: Purpose/Use:			
	Sub Total:	0	0	0

Item	Item Class Category	319(h) Grant Funds (60% Maximum)	Non-Federal Matching Funds (40% Minimum)	Total
	CONTRACTUAL: PHINIZY CENTER (NGO) Up to four (4) Aquatic Ecologists – approximately 0.125 FTE (\$35,000/year) for 2 years = \$35,000 Description of Duties: Assisting with BMP sites survey, aquatic sampling and subcontracting the following for BMP construction: <ul style="list-style-type: none"> One (1) Project Engineer- approximately 0.25 FTE (\$80,000/year) for 2 years = \$40,000 Description of Duties: BMP selection and engineering, assist with survey, report writing and project management <ul style="list-style-type: none"> One (1) Construction Contractor - TBD = \$103,826 Description of Duties: Install BMPs	117,058	61,768	178,826
	Sub Total:	117,058	61,768	178,826
G	Construction: (Does not apply to GAEPD Section 319(h) Grants)	N/A	N/A	N/A
H	Other:			
	Sub Total			
I	Total Direct Charges: (Sum of A-H)	117,058	111,815	228,873
J	Indirect Charges: (0% Eligible for Reimbursement with Federal Dollars)	N/A	Up to 100%	
K	Total: (Sum of I and J)	117,058	111,815	228,873

Narrative Justification for Item Class Categories:

Personnel (A): Personnel in this item class category are all Augusta-Richmond County employees within the Augusta Engineering Department (AED) and are all contributing time as Non-Federal matching contributions to the project. Since this project includes stream restoration efforts that have potential impacts on in-stream flows within one of the Richmond County streams, the AED will treat this as a submitted county construction project which will go through our plan review and permitting processes. In addition, this project requires more specialized elements that include engineering, buffer assessments and permitting, BMP installation and monitoring, aquatic ecology, project management, and water quality assessments. All necessary personnel to perform those necessary duties are included in this grant.

- AED Director: approximately (0.007 FTE @ \$170,000/year) will have project oversight duties, will be involved in planning, and will participate in draft and final report reviews.
- AED Stormwater Services Manager: approximately (0.15 FTE @ \$122,000/year), will oversee, manage and coordinate project, provide aquatic ecology and water quality technical advice, input on BMP decisions, and organize and participate in fieldwork.
- AED Engineering Manager: approximately (0.01 FTE @ \$109,900/year), will provide plan review oversight, engineering design support, permit writing support, input on BMP decisions and monitoring, and project management support.
- AED Stormwater Coordinator: approximately (0.01 FTE @ \$60,672/yr) will have BMP design input, fieldwork and project management responsibilities.
- AED Staff Engineer: approximately (0.01 FTE @ \$79,000/yr) will have BMP design input, engineering design support, fieldwork and project management responsibilities.

- AED Assistant Director-Maintenance: approximately (0.01 FTE @ \$101,000/yr) will have project management, project oversight, and site maintenance responsibilities.
- AED Asset Manager: approximately (0.01 FTE @ \$106,000/yr) will have GIS, survey, and BMP design input.
- AED GIS analyst: approximately (0.01 FTE @ \$48,847/yr) will have GIS, survey, and BMP design input.
- AED GIS analyst: approximately (0.01 FTE @ \$58,532/yr) will have GIS, survey, and BMP design input.

Fringe benefits (B): Personnel in this item class category are all Augusta-Richmond County employees within the Augusta Engineering Department (AED) and are all contributing time as Non-Federal matching contributions to the project. Fringe benefits rate for AED employees is 30% and fringe benefits are included in Personnel Line Item.

Supplies (E): Supplies have been reallocated to Contractual expenses

Contractual (F): Phinizy Center for Water Sciences will be the Contractual Manager for the project and will make use of an existing subcontract and approved professional relationship as well as subcontract with qualified companies, consultants, and institutions to outsource monitoring, engineering and construction services. See below Justification for scope of services.

- Phinizy Center for Water Sciences: Phinizy Center (0.125 FTE @\$35,000/year) includes at a maximum four (4) staff members experienced in aquatic ecology and geomorphology in urban streams. Personnel qualified for this function include aquatic ecologists, researchers, and other specialists to perform post-BMP implementation surveys, geomorphic characterizations, hydrologic analyses, and report writing. The team will also be involved in taking advantage of an existing subagreement and a previously approved professional relationship to outsource aquatic monitoring services. In addition, Phinizy Center will outsource for microelectronics, survey assistance, and report writing, where needed and subcontract the following for BMP construction:
- One (1) Project Engineer - approximately 0.25 FTE (\$80,000/year) for 2 years = \$40,000 for BMP selection and engineering, assist with survey, report writing and project management.
- One (1) Construction Contractor - TBD = \$103,826 to install BMPs.

Phase 2 of this project will install Bioengineering BMPs within Rocky Creek to increase available habitat for aquatic insect and fish populations. Most supplies have already been acquired in Phase 1. However, the budgets for BMP installation in this Line Item may include additional items for construction and live plants.

Planting

- Live Stakes: (\$1-\$4 each) assuming a minimum of 12 groups of 50 at \$4 each = \$2,400
- Herbaceous Plugs = \$3,000

Additional Items

- Temporary Construction Entrances (2) = \$4,000

11. Project Attachment(s):

Link: 2018 Nine-Element Watershed Management Plan for the Augusta Canal (HUC-12 #030601060601) / Butler Creek (HUC-12 #030601060602) / Beaverdam Ditch (HUC-12 #030601060607) Watersheds in Savannah River Basin
<https://epd.georgia.gov/document/document/augustacanalbutlercreekbeaverdamditchwmp0306010606y2018pdf/download>

Attachment 1: Post-BMP QA/QC Water Quality Monitoring Plan

Appendix B - REVISION 1: Phase 2 Biota Improvement in an Urban Stream through Aquatic Habitat Restoration																																														
	Initial	1st Quarter			2nd Quarter			3rd Quarter			4th Quarter			5th Quarter			6th Quarter			7th Quarter			8th Quarter			9th Quarter			10th Quarter			11th Quarter			12th Quarter			13th Quarter			14th Quarter			Final		
Grant Drawdown Amount	\$117,058	\$0			\$0			\$24,263			\$0			\$19,977			\$21,181			\$16,345			\$8,000			\$0			\$3,980			\$4,618			\$0			\$4,988			\$11,706			\$0		
Percent Federal Remaining	100%	100%			100%			79%			79%			62%			44%			28%			22%			22%			18%			14%			14%			10%			0%			0%		
Match Amount	\$0	\$0			\$723			\$11,207			\$534			\$15,201			\$17,156			\$15,926			\$11,500			\$4,817			\$5,791			\$7,478			\$6,800			\$3,500			\$11,182			\$111,815		
Percent Match Accrued	0%	0%			1%			11%			11%			25%			40%			54%			54%			54%			54%			54%			54%			54%			64%			100%		
Milestones/Tasks		Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25			
Execute Contract																																														
Task 1: Implement and install BMPs																																														
Task 2: Carry out post BMP sampling for fish and macros																																														
Task 3: Develop a case study paper or presentation for the project and publish to partner websites/social media																																														
Task 4: Develop a case study paper or presentation for the project and submit/present at water conference																																														
Task 5: Submit Quarterly Invoices & Status Reports																																														
Task 6: Participate in project review meetings with GAEPD												22-May Site Visit									29-Feb Email																									
Task 7: Submit Final Close-Out Report																																														

Color KEY			
Deliverable to EPD			
Data Produced			
Information Conveyed			
Design/Construction			

**Targeted Monitoring Plan under 319(h) Grant
for a portion of the
Rocky Creek Watershed**

Augusta-Richmond County, Georgia

**Submitted by Phinizy Center for Water Sciences
1858 Lock and Dam Road, Augusta, GA, 30906
November, 2016**

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1. Watershed Description and Reason for Monitoring

a. Size (HUC/acres/square miles) of watershed delineation or drainage area to be studied

- i. HUC12 - 030601060607
- ii. 8107 acres
- iii. 12.7 square miles

b. Name(s) of stream segment(s) and location descriptions

- i. The impaired reach is 2 miles of Rocky Creek from SR 56 to New Savannah Road for Fecal Coliform and Biota (Bio F and Bio M) and 6 miles of Rocky Creek from SR 56 to the Headwaters for just Biota (Bio F and Bio M).
- ii. The HUC12 subwatershed is entirely contained within Richmond County.
- iii. Targeted sampling will take place in the impaired section and upstream to the headwaters. The main focus of sampling will be within and downstream of the BMP

c. General watershed conditions and land use / coverage

- i. The area to be monitored is highly urbanized with the following land use percentages. A large percentage of the development is mature with older structures and infrastructure. There are large natural areas, especially near the stream. The overall condition of the watershed is highly impacted by urbanization.

1. Agricultural	6%
2. Commercial Forestry	0%
3. Urban/Residential	78%
4. Mining/Extraction	1%
5. Forest/Natural Areas	13%
6. Water/Wetlands	2%
7. TOTAL	100%

d. Water quality impairments

- i. This monitoring plan addresses the impairment of 8 miles of Rocky Creek for Biota Impairment (Bio F and Bio M) based on not supporting the criteria associated with its designated use of fishing
- ii. This impairment is described in the following document:
 - 1. 2016 Total Maximum Daily Load Evaluation for Seven Stream Segments in the Savannah River Basin for Sediment

e. Jurisdictions impacting watershed

- i. Augusta-Richmond County Consolidated Government

f. Reason(s) for monitoring

- i. The primary reason for monitoring is to verify the efficacy of the management practices to be installed in the overall project
- ii. A secondary reason for monitoring is to assess the ability to delist the stream after BMP implementation

2. Pollutants or Indicators to be Monitored

a. Indicators to be Monitored

- i. Turbidity or Total Suspended Solids (TSS)
- ii. Stream Stage/discharge
- iii. Temperature/Conductivity
- iv. Visual Assessment of Stream Conditions
- v. Macroinvertebrates
- vi. Fish Community

b. Installed BMPs

- i. This project will install a series of instream aquatic habitat restoration practices to overcome historic sedimentation and loss of habitat. These are described more fully in the proposal document.

3. Monitoring Locations

Table 1. Description of 7 monitoring sites

Sample Location #	Latitude (N)	Longitude (W)	Description
1 Milledgeville Road	33°26'53.22"	82° 3'14.74"	Just above BMP
2 Wheelless Road	33°26'50.31"	82° 2'46.75"	Within BMP
3 Dean's Bridge Road	33°26'17.30"	82° 1'31.85"	Below BMP

a. Site Selection

- i. Site selection was based on the ability to monitor the impact of the BMP on the noted impairments. It is also based on the ability to assess the post BMP condition of the impairments in the impaired reaches.

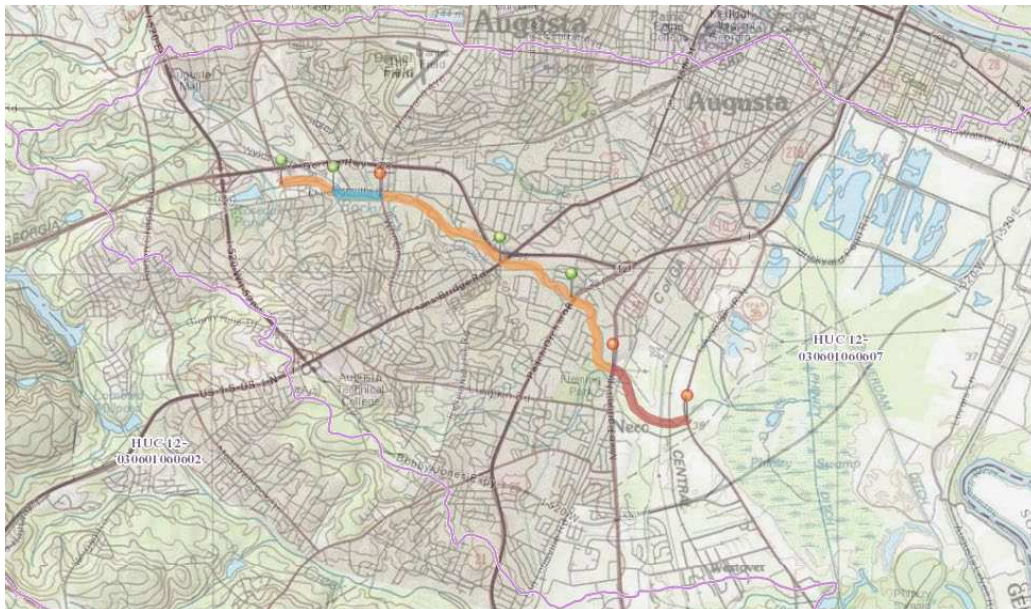


Figure 1. Map of target monitoring area including historic monitoring sites (pins), impaired biota reach (orange), and BMP installation reach (blue).

4. Quality Assurance/Quality Control

a. Field staff

- i. Damon Mullis and Matt Erickson– Phinizy Center
- ii. Augusta-Richmond County Technician
- iii. Additional Adopt-A-Stream Volunteers

b. Methodology and materials

- i. Standard operating procedures (SOP) will comply with EPD Surface Water Sampling (EPD-WPMP-2), the Georgia Adopt-A-Stream AAS Biological and Chemical Manual, and GAEPD/GADNR standard protocols for sampling fish (GADNR, 2005-Standard operating procedures for conducting biomonitoring on fish communities in Wadeable Streams in Georgia) and macroinvertebrates (GAEPD, 2007-Macroinvertebrate biological assessment of Wadeable Streams in Georgia; standard operating procedures)
- ii. Only trained personnel will be allowed to collect or process samples.

5. Training

a. Names and affiliation of GAEPD staff trainers

- i. Training will be performed by Ruth Mead, a Certified Adopt-A-Stream Trainer who is the Senior Education Specialist at Phinizy Center.
- ii. GAEPD/GADNR training will be conducted through the annual workshop offered by GADNR

b. Names and affiliations of field personnel being trained

- i. Phinizy and Augusta Engineering staff as well as additional Adopt-A-Stream Volunteers

c. Titles and dates of training workshops

- i. GA Adopt-A-Stream Biological and GAEPD/GADNR training will take place on a date TBD in 2017 for training in the assessment of Bio M and Bio F.

d. Description of the training sessions

- i. Sessions will follow the GA Adopt-A-Stream manuals for training in the designated areas
- ii. GADNR training of aquatic insect methodologies is offered once per year

6. Monitoring Schedule

a. General Schedule

- i. Sampling for fish and aquatic insects will be conducted before, during, and after BMP installation in order to assess BMP effectiveness. All sampling will be conducted, at a minimum, during Georgia's Index Period which is mid-September through February. Sampling will be conducted, at a minimum, of one time at each of the three proposed sites (upstream, within, and downstream of BMP installation) during the mid-September through February time period, during the pre-BMP, ongoing-BMP, and post-BMP installation phases. That is, at a minimum, of 3 sites (upstream, within, and downstream), during each of the 3 phases (pre-BMP, ongoing-BMP, and post-BMP installation).
- ii. All sampling will be conducted according to the GAEPD protocols identified in Section 4.b.

Contractor Affidavit under O.C.G.A. § 13-10-91(b)(1)

The undersigned contractor ("Contractor") executes this Affidavit to comply with O.C.G.A. § 13-10-91 related to any contract to which Contractor is a party that is subject to O.C.G.A. § 13-10-91 and hereby verifies its compliance with O.C.G.A. § 13-10-91, attesting as follows:

- a) The Contractor has registered with, is authorized to use and uses the federal work authorization program commonly known as E-Verify, or any subsequent replacement program;
- b) The Contractor will continue to use the federal work authorization program throughout the contract period, including any renewal or extension thereof;
- c) The Contractor will notify the public employer in the event the Contractor ceases to utilize the federal work authorization program during the contract period, including renewals or extensions thereof;
- d) The Contractor understands that ceasing to utilize the federal work authorization program constitutes a material breach of Contract;
- e) The Contractor will contract for the performance of services in satisfaction of such contract only with subcontractors who present an affidavit to the Contractor with the information required by O.C.G.A. § 13-10-91(a), (b), and (c);
- f) The Contractor acknowledges and agrees that this Affidavit shall be incorporated into any contract(s) subject to the provisions of O.C.G.A. § 13-10-91 for the project listed below to which Contractor is a party after the date hereof without further action or consent by Contractor; and
- g) Contractor acknowledges its responsibility to submit copies of any affidavits, drivers' licenses, and identification cards required pursuant to O.C.G.A. § 13-10-91 to the public employer within five business days of receipt.

46923

Federal Work Authorization User Identification Number

07/09/2007

Date of Authorization

Augusta, Georgia (Augusta-Richmond County)

Name of Contractor

**Phase 2 Biota Improvement in Urban
Streams through Aquatic Habitat
Restoration**

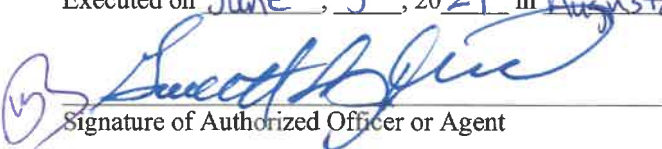
Georgia Environmental Protection Division

Name of Public Employer

Name of Project


I hereby declare under penalty of perjury that the foregoing is true and correct.

Executed on June 5, 2024 in Augusta (city), GA (state).


Signature of Authorized Officer or Agent

GARNETT L. JOHNSON, Mayor
Printed Name and Title of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME
ON THIS THE 5th DAY OF June, 2024.


NOTARY PUBLIC
My Commission Expires: 9/21/2027





GEORGIA

DEPARTMENT OF NATURAL RESOURCES

BRIAN KEMP
GOVERNOR

WALTER RABON
COMMISSIONER

Dear Sub-Awardee,

In 2006, the Federal Funding Accountability and Transparency Act (FFATA) was signed into law. This legislation requires information disclosure concerning entities receiving Federal financial assistance through Federal grants. As a result, our organization is required to report on each of the grants that we award (i.e., subawards, subcontracts). By answering the questions below, your organization will provide us the data needed to meet FFATA reporting requirements. **This form is to be returned within 15 days of the contract signature date.** Please don't hesitate to contact us if your organization has difficulty completing the questionnaire. Please contact:

Name: Denise Bowen Telephone Number: 404-463-2881

To be completed by Organization Receiving the Award

Subawardee Doing Business as Name: Augusta, Georgia (Augusta-Richmond County)

Unique Entity ID (SAM) #: ZH93N1J4TBE8

Address: 530 Greene Street City: Augusta State: GA Zip code 30901 + 4

Primary Place of Grant Performance: City: Augusta State: GA Zip code 30902 + 4

Highly Compensated Officers: Please list below your top 5 compensated officers if **all three** of the following conditions apply:

Yes No

- ☐ ☒ Your organization received 80% or more of its annual gross revenues from federal contracts, subcontracts, loans, grants, subgrants and cooperative agreements in the preceding fiscal year.
- ☐ ☒ Your organization received \$25,000,000 or more in annual gross revenue from federal contracts, subcontracts, loans, grants, subgrants and cooperative agreements in the preceding fiscal year.
- ☐ ☒ The public does not have access to information about the compensation of the senior executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 USC 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986.

Officer 1 Name:	Compensation: \$
Officer 2 Name:	Compensation: \$
Officer 3 Name:	Compensation: \$
Officer 4 Name:	Compensation: \$
Officer 5 Name:	Compensation: \$

To be completed by Awarding Agency: Georgia Department of Natural Resources Division: Environmental Protection

Federal Funding Agency Name: U.S. Environmental Protection Agency (U.S. EPA)

Federal Award Number (case, space and character sensitive): C9994458-21-1

Prime Recipient Unique Entity ID (SAM) #: KJ97XE5AFJC4

Subaward Amount: \$ 117,058

Subaward Date: September 30, 2022

Subaward Number: 751-230030

Subaward Project Title (Description): Phase 2 Biota Improvement in an Urban Stream through Aquatic Habitat Restoration (NCTE Amendment)



RICHARD E. DUNN, DIRECTOR

EPD DIRECTOR'S OFFICE

2 MARTIN LUTHER KING, JR. DRIVE
SUITE 1456, EAST TOWER
ATLANTA, GEORGIA 30334
404-656-4713

September 30, 2022

Dr. Hameed Malik, Ph.D., P.E.
Director of Engineering
Augusta Engineering Department
Engineering Administration
452 Walker Street, Suite 110
Augusta, GA 30901

RE: Executed Section 319(h) FY21 Grant - Element 12 Contract
Augusta, GA (Augusta-Richmond County)
"Phase 2 - Biota Improvement in an Urban Stream through Aquatic Habitat Restoration"

Dear Dr. Malik:

Please find attached to this email the electronic file of a fully executed Contract for the above referenced project between your organization and the Georgia Environmental Protection Division. The Contract amount is \$117,058.00 and requires a minimum match of \$111,815.00. The contract expires on June 30, 2024, by which time all outputs required for the project must be complete.

If there are any questions concerning the project, please contact Ms. Mary E Gazaway with the Nonpoint Source Program Grants Unit at (470) 524-0556 (Zoom phone) or mary.gazaway@dnr.ga.gov.

Thank you for your participation in this contract. My staff and I look forward to working with you on this important project to control nonpoint source pollution.

Regards,

Richard E. Dunn
Director

RED:meg

Enclosure (1 electronic fully-executed Contract Package)

STATE OF GEORGIA
COUNTY OF FULTON

CONTRACT BETWEEN

THE GEORGIA ENVIRONMENTAL PROTECTION DIVISION (EPD)

AND

AUGUSTA, GEORGIA (AUGUSTA-RICHMOND COUNTY)

FOR

PHASE 2 BIOTA IMPROVEMENT IN AN URBAN STREAM THROUGH
AQUATIC HABITAT RESTORATION

This contract ("Contract") is made and entered into as of the date of the last signature hereunder (hereinafter called "Effective Date"), by and between the Georgia Environmental Protection Division; (hereinafter called "Division"), and Augusta, Georgia (Augusta-Richmond County) (hereinafter called "Contractor"). The persons executing this Contract on behalf of the Contractor have authority to bind the Contractor to the terms of this Contract. The Director of the Division is authorized by law to execute this Contract.

WHEREAS, the Division desires to engage the Contractor to render certain services hereafter described in connection with an undertaking (hereinafter referred to as the "Project") which will be financed through grants authorized under Section 319 of the Federal Water Pollution Control Act Amendments of 1987 and administered by the Division; and

WHEREAS, Contractor desires to perform such services for the Project.

NOW, THEREFORE, in consideration of the valuable and mutual benefits flowing to each party as described below, the parties hereto mutually agree as follows:

1. **Employment of Contractor.** The Division hereby agrees to engage the Contractor and the Contractor hereby agrees to perform these services hereinafter as set forth in fulfillment of this Contract.
2. **Scope of Work.** In performance of the Project, the Contractor shall conduct the work described in the Scope of Work identified in the attached Appendix A, hereby made a part of this Contract by reference.
3. **Term; Time of Performance.** The term ("Term") of this Contract shall commence upon the Effective Date and shall terminate upon the earlier of: i) the completion of the tasks identified in Appendix A: Scope of Work; or ii) June 30, 2024 (hereinafter referred to as "Termination Date"), unless sooner terminated by the Division or renewed by the Division in accordance with the provisions of this Contract. The services of the Contractor are to commence as soon as practicable after the Effective Date and shall be undertaken in accordance with the timeline for completion of tasks included in the attached Appendix B: Project Schedule, hereby made a part of this Contract by reference.

4. **Compensation.** Division agrees to pay Contractor compensation for the services performed under this Contract not to exceed One Hundred Seventeen Thousand Fifty-Eight dollars, \$117,058.00. Said compensation shall be paid in accordance with the budget described in the Scope of Work. Any changes to the amount of compensation to be provided by the Division to Contractor shall be made in a writing executed in accordance with the terms of Paragraph 23.
5. **In Kind Match.** The Contractor will contribute a minimum of the equivalent of 40% of the total project cost, in services or cash contributions, toward the performance of services described in Appendix A: Scope of Work.
6. **Method of Payment.** Division will pay Contractor for work performed under this Contract not to exceed the compensation described in Paragraph 4, and in accordance with the terms described in this Paragraph:
 - a. Payment will only be made for the services described in Appendix A: Scope of Work; and
 - b. Contractor shall be paid quarterly. No later than the 15th day of the month following close of the immediately preceding quarter, Contractor shall submit to the Division contact specified in Paragraph 36 an invoice for services rendered in that immediate preceding quarter, accompanied by a progress report describing the services performed and identifying the related items or tasks in the Scope of Work, specifying that the services have been performed in accordance with this Contract, and accompanied by any documentation, outputs, deliverables, or close-out reports; and
 - c. The Contractor shall certify in writing the accuracy of each invoice. All invoices from the Contractor should show detailed line items referencing the costs of labor, materials, property, equipment, installation, services, incidentals, etc. All invoices should be signed and dated by authorized personnel as evidence of review and approval prior to submission to the Division for reimbursement; and
 - d. The Division will review and approve or deny invoices within 30 days of receipt. Payment shall be made upon determination by the Division that Scope of Work items required by the Contract, including deliverables and reporting requirements of various categories and kinds of information for the period, are sufficient. Any invoice not approved by the Division shall not be paid; and
 - e. Payment of the final 10 percent (%) shall not be due and payable until all Scope of Work items are completed and the Division has accepted and approved the final products, reports, and invoices.
7. **Credit.** Notwithstanding any other provision of this Contract, the Contractor acknowledges that the Division, as an agency of the State of Georgia, is prohibited from pledging the State's credit.
8. **Funding.** The Contractor acknowledges that this Contract is funded with a grant from the U.S. Environmental Protection Agency ("USEPA"). In the event that the Division determines that the source of payment no longer exists or is insufficient with respect to the Services, the Division shall terminate this Contract in accordance with the provisions of Paragraph 13.
 - a. In the event of such termination, the Division shall remain obligated to pay for Services performed and accepted by the Division prior to such termination. All finished or unfinished documents, data, studies, surveys, drawings, maps, models,

photographs, and reports prepared by the Contractor under this Contract shall become the property of the Division. Any use of incomplete documents shall be at the sole risk of the Division. The determination of the Division of the events stated above shall be conclusive.

- b. The Division shall provide notice in writing to Contractor as soon as practicable after the Division determines that the source of payment no longer exists or is insufficient with respect to the services.

9. **Fair Share**. This Contract is being funded with a grant from the USEPA. It is the policy of the USEPA to ensure to the fullest extent possible that at least a negotiated “Fair Share” percentage of federal funds awarded to prime and subcontractors in support of USEPA programs be made available to Disadvantaged Business Enterprises (“DBE”).

- a. The Contractor agrees to ensure to the fullest extent possible that at least 4% Minority Business Enterprises (MBE) and 4% Women Business Enterprises (WBE) of federal funds for contracts or subcontracts for supplies, construction, equipment or services are made available to organizations owned or controlled by socially and economically disadvantaged individuals, women and historically black colleges and universities.
- b. The Contractor agrees to include in its bid documents this 4% “Fair Share” percentage.
- c. To evaluate compliance with the “Fair Share” policy, the Contractor agrees to comply with the following six affirmative steps as appropriate:
 - i. Including qualified minority and women businesses on solicitation lists;
 - ii. Assuring that minority and women’s businesses are solicited whenever they are potential sources;
 - iii. Dividing total requirements, when economically feasible, into small tasks or quantities to permit maximum participation of minority and women’s businesses;
 - iv. Establishing delivery schedules, where the requirements of the work permit, which will encourage the participation by minority and women’s businesses;
 - v. Using the services and assistance of the U.S. Small Business Administration and the Office of Minority Business Enterprise of the U.S. Department of Commerce;
 - vi. Requiring each party to a subagreement to take the affirmative steps outlined in paragraphs (i) through (ii) of this section.
- d. The Contractor must submit to the Division a certification that the six steps have been followed, along with documentation of the six steps that is sufficiently detailed to allow for satisfactory review and should document the efforts of solicitation taken such as; the name and address of MBE’s/WBE’s solicited, if advertised in newspaper show proof and indicate name of paper.
- e. The Contractor is required to submit semiannual reports of total Contract expenditures to the Division, which includes a separate total for MBE/WBE utilization.

10. **Taxes**. The State is exempt from Federal Excise Taxes, and no payment will be made for any taxes levied on Contractor’s employee’s wages. The Division is exempt from State and Local Sales and Use Taxes on the services. Tax Exemption Certificates will be furnished upon request. Contractor or an authorized subcontractor shall provide the Division with a sworn verification regarding the filing of unemployment taxes or persons assigned by

Contractor to perform Services, which verification is incorporated herein by reference.

11. **Certification Regarding Sales and Use Tax.** By executing the Contract, the Contractor certifies it is either (a) registered with the State Department of Revenue, collects, and remits State sales and use taxes as required by Georgia law, including Chapter 8 of Title 48 of the Georgia Code; or (b) not a “retailer” as defined in O.C.G.A. Section 48-8-2. The Contractor also acknowledges that the Division may declare the Contract void if the above certification is false. The Contractor also understands that fraudulent certification may result in the Division or its representative filing for damages for breach of contract.
12. **Termination of Contract for Cause.** If, through any cause other than force majeure, the Contractor shall fail to fulfill in a timely and proper manner its obligations under this Contract, or if the Contractor shall violate any of the covenants, agreements, or stipulations of this Contract, the Division shall thereupon have the right to terminate this Contract by giving written notice to the Contractor of such termination and specifying the effective date thereof, at least fifteen (15) days before the effective date of such termination.
 - a. In that event, all finished or unfinished documents, data, studies, surveys, drawings, maps, models, photographs, and reports prepared by the Contractor under this Contract shall become the property of the Division, and the Contractor shall be entitled to receive just and equitable compensation for any satisfactory work completed on such documents and other materials in which funds were accrued or encumbered up to the actual date of termination.
 - b. Notwithstanding the above, the Contractor shall not be relieved of liability to the Division for damages sustained by the Division by virtue of any breach of this Contract by the Contractor, and the Division may withhold any payments to the Contractor for the purpose of setoff until such time as the exact amount of damages due the Division from the Contractor is determined.
13. **Termination of Contract for Convenience.** The Division may terminate this Contract at any time for good reason by giving at least thirty (30) days written notice to the Contractor of such termination and specifying the effective date.
 - a. In that event, all finished or unfinished documents, data, studies, surveys, drawings, maps, models, photographs, and reports prepared by the Contractor under this Contract shall become the property of the Division, and the Contractor shall be entitled to receive just and equitable compensation for any satisfactory work completed on such documents and other materials in which funds were accrued or encumbered up to the actual date of termination.
 - b. If this Contract is terminated as provided herein, the Contractor will be paid an amount which bears the same ratio to the total compensation as the services actually performed bear to the total services of the Contractor covered by this Contract, less payments of compensation previously made.
14. **Release of Materials Pursuant to the Georgia Open Records Act.** All products, reports, information, data, etc., given to, derived from, prepared by, or assembled by the Contractor (the “Materials”) in the performance of this Contract shall be governed by the Georgia Open Records Act. Unless otherwise required by applicable law, the Contractor shall not release or deliver any Materials to the general public or to local officials pursuant to a written or oral request under the Georgia Open Records Act. Division expressly acknowledges and agrees that Contractor is an “agency” as defined in O.C.G.A. § 50-18-70 and is consequently subject to the Georgia Open Records Act. Contractor shall inform the Division in writing if

it receives any requests for the Materials pursuant to the Georgia Open Records Act.

15. **Assignability.** Contractor shall not transfer or assign all or any of its right, title or interest in this Contract or delegate any of its duties or obligations hereunder without the prior written consent of the Division. The Division may transfer or assign all or any of its right, title or interest in this agreement to another agency or authority of the State of Georgia without written notice to Contractor.
16. **Interest of Contract.** The Contractor covenants that it presently has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance required under the Contract. It is specifically agreed and understood that for the purposes of this Contract, the Contractor shall be an independent contractor and nothing in this Contract shall be construed as creating a joint venture, partnership or employment relationship between the parties.
17. **Copyrights.** No reports, maps, or other documents produced or derived in whole or in part under this Contract shall be the subject of an application for copyright by or on behalf of the Contractor. Any such reports, maps and other documents shall constitute a “work made for hire” pursuant to the U.S. Copyright Act of 1976, as amended, and Contractor agrees that the Division is the original and sole owner of all rights, including without limitation copyright, in and to such reports, maps and other documents. If for any reason such reports, maps, and other documents are found not to be “works made for hire,” then Contractor hereby assigns to the Division all right, title and interest in and to such reports, maps and other documents without further consideration of any kind. Contractor agrees to execute all further documents and to take all further steps deemed advisable by the Division to secure and protect the Division’s rights as stated herein.
18. **Documents.** Provided that Contractor has been paid for the Services, the Division shall have the right to use the documents, maps, photographs, drawings and other materials (including but not limited to models, software or other digital work products) resulting from Contractor efforts on this Contract. Contractor acknowledges that, in accordance with the Contract, the Division is the original and sole owner of all rights in and to such documents, maps, photographs, drawings and other such materials including but not limited to models, software or other digital work products. Division acknowledges that the reuse of any such materials by Division on any extension of this project or any other project shall, with the exception of the obligations of Contractor, be at Division’s sole risk unless otherwise agreed to in writing by all parties. Contractor shall have the right to retain copies of all such materials.
19. **Identification of Documents and Projects.** All construction or demonstration projects, reports, maps, signage, and other documents completed as a part of this Contract, other than documents exclusively for internal use within the Division, shall give the Contractor recognition and carry the following notation on a conspicuous sign or the front cover or a title page (or in the case of maps, in the same block as the legend):

“The preparation of this (report, map, document, project, etc.) was financed in part through a grant from the U.S. Environmental Protection Agency under the Provisions of Section 319(h) of the Federal Water Pollution Control Act, as amended.”

and give credit to the Environmental Protection Division of the Department of Natural Resources, State of Georgia together with the month and year of completion.
20. **Intellectual Property.** The Contractor agrees it will not use the name or any intellectual

property, including but not limited to, the Division's trademarks or logos in any manner, including commercial advertising or as a business reference, without the express prior written consent of the Division.

21. **Personnel.** The Contractor represents that it has, or will secure, all personnel required in performing the Services under this Contract. Such personnel shall not be employees of or have any contractual relationship with the Division.
 - a. All the Services required hereunder will be performed by the Contractor or under its supervision, and all the personnel engaged in the work shall be fully qualified and shall be authorized under state and local law to perform such services.
 - b. None of the work or Services covered by this Contract shall be subcontracted without the prior written approval of the Division contact specified in Paragraph 36.
 - c. The Division, or its authorized representatives, shall have the right to enter into the premises of Contractor and/or all subcontractors, or any places where duties under this Contract are being performed, to inspect, monitor, or otherwise evaluate the performance under this Agreement.
22. **Right to Audit and Access to Records.** The Contractor shall maintain books, records and documents in accordance with generally accepted accounting principles and procedures and which sufficiently and properly document and calculate all charges billed to the Division throughout the term of the Contract for a period of at least five (5) years following the date of final payment or completion of any required audit, whichever is later. Records to be maintained include both financial records and service records. The Contractor shall permit the Auditor of the State of Georgia or any authorized representative of the State, and where federal funds are involved, the Comptroller General of the United States, or any other authorized representative of the United States government, to access and examine, audit, excerpt and transcribe any directly pertinent books, documents, papers, electronic or optically stored and created records or other records of the Contractor relating to orders, invoices or payments or any other documentation or materials pertaining to the Contract, wherever such records may be located during normal business hours. The Contractor shall not impose a charge for audit or examination of the Contractor's books and records. If an audit discloses incorrect billings or improprieties, the Division reserves the right to charge the Contractor for the cost of the audit and appropriate reimbursement. Evidence of criminal conduct will be turned over to the proper authorities.
23. **Entire Agreement; Modification.** This Contract represents the sole and complete understanding of the terms of the Contract between the parties hereto with respect to the subject matter contained herein and supersedes all prior agreements and understandings, oral or written, with respect thereto. No modification or amendment to this Contract will be binding on either party hereto unless such modification or amendment is reduced to a writing executed by both parties. Any changes in the scope and/or duration of this Contract shall be mutually agreed upon by and between the Division and the Contractor in a writing executed in accordance with this Paragraph.
24. **Warranty.** The Contractor warrants to the Division that the Services will be performed in a workmanlike manner, consistent with that level of care and skill ordinarily exercised by other providers of similar services and with sound principles commonly used by similar professionals under similar circumstances at the time the Services are provided and further warrants that the work will be performed as intended and described in the Scope of Work.
 - a. Contractor warrants that he has not employed or retained any company or person, other

than a bona fide employee working solely for him, to solicit or secure this Contract and that he has not paid or agreed to pay any person, company, corporation, individual, or firm, other than a bona fide employee working solely for him, any fee, commission, percentage, gift, or other consideration contingent upon or resulting from the award or the making of this Contract.

25. **Indirect Damages.** Each party hereby waives its rights to recover from the other party any consequential, indirect, or incidental damages (including but not limited to, loss of use, income, profits, financing, or reputation), arising out of, or relating to, this agreement of the performance of the services or both.
26. **Use of Third Party Data.** The Division has requested that the Contractor obtain certain facts, information, data, assumptions, opinions and representations (collectively, “Items”) from third parties as part of its scope of services. The Division understands and agrees that (i) the products of its services that the Contractor provides (collectively, “Products”) may be based in part or in whole on Items that have not been verified by the Contractor, (ii) the Contractor has no obligation or duty to verify the accuracy or completeness of the Items and (iii) the Contractor makes no representation(s) or warranty(ies), express or implied, with respect to the Items or the Products (other than the Products were prepared in accordance with the standard of care to which the contractor is subject, as set forth elsewhere in this contract), all of which representation(s) and warranty(ies) are hereby disclaimed, including, without limitation, the warranties of merchantability and fitness for a particular purpose. The Division hereby releases the Contractor from any and all claims, damages, losses, expenses and liabilities of every kind and nature whatsoever, including reasonable attorneys’ fees and defense costs, arising out of the use of Items by the Contractor in performing its services under this contract, including, without limitation, the preparation and delivery of the Products to the Division.
27. **Compliance with the Georgia Security and Immigration Compliance Act.** Contractor Certifies that it will comply with O.C.G.A. § 13-10-91 relating to the verification of the status of newly hired employees as incorporated herein by reference.
28. **Federally-Mandated Certifications and Disclosures.**
- a. **Lobbying**
- i. Disclosure Regarding Lobbying: Contractor hereby warrants as a condition of this Contract that if it is an organization described in Section 501(c)(4) of the Internal Revenue Code of 1986, it will not engage in lobbying activities prohibited by the Lobbying Disclosure Act of 1985.
 - ii. Certification Regarding Lobbying: Contractor certifies to the best of its knowledge and belief that:
 1. No Federal appropriated funds have been paid in full or will be paid, by or on behalf of Contractor, to any person for influencing or attempting to influence an officer or employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
 2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an

officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this contract, then Contractor shall fully disclose same to the Division, and shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying", in accordance with its instructions.

- b. **Drug Free Work Place:** Contractor certifies that, in accordance with the provisions of O.C.G.A. § 50-24-1, *et seq.*, a drug-free workplace will be provided to Contractor's employees during the performance of this contract; and it will secure from any subcontractor hired to work in a drug-free workplace the following written certification: "As part of any subcontracting agreement (Subcontractor's Name), certifies to Contractor that a drug-free workplace will be provided for the subcontractor's employees during the performance of this Contract pursuant to paragraph 7 of subsection (b) of Code 50-24-3."

c. **Debarment, Suspension, and Other Responsibility Matters:**

i. The Contractor certifies that it and its principles:

1. Are not presently debarred, suspended, proposed for debarment, and declared ineligible or voluntarily excluded from covered transactions by any Federal department or agency.
2. Have not, within a three-year period preceding this contract, been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public transaction or contract under a public transaction; violation of Federal or State antitrust statutes; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property.
3. Are not presently indicted for or otherwise criminally or civilly charged by a government entity with commission of any of the above offenses.
4. Have not within a three-year period preceding this contract had one or more public transactions terminated for cause or default.

ii. Where the Contractor is unable to certify to any of the statements in this certification, such Contractor shall attach an explanation to this contract.

- d. **Equal Employment Opportunity:** The Contractor will not discriminate against any employee for employment because of race, color, religion, sex or national origin. The Contractor will comply with all sections of Executive Order 11246 - Equal Employment Opportunity.

- e. **Audit Requirement:** A non-Federal entity that expends \$750,000 or more during the non-Federal entity's fiscal year in Federal awards must have a single or program-specific audit conducted for that year in accordance with the provisions of Subpart F, Part 200, Chapter II of Subtitle A, Title 2, Code of Federal Regulations.

29. **General Federal Grant Conditions.** All covenants, agreements and stipulations in Part 200 Chapter II of Subtitle A, Title 2, Code of Federal Regulations, are incorporated herein by reference. The parties acknowledge those general grant conditions and intend that all those covenants, agreements, and stipulations between the U.S. Environmental Protection Agency

and the Division, with the exception of the provision for compliance with the Davis-Bacon Act, are applicable to and enforceable against the Contractor. Allowable costs will be determined in accordance with the cost principles in the hereto referenced Code of Federal Regulations.

- a. The Contractor will assure the continued proper operation and maintenance of all nonpoint source management practices that have been implemented for projects funded under this agreement. Such practices shall be operated and maintained for the expected lifespan of the specific practice and in accordance with commonly accepted standards. The Contractor shall include a provision in every applicable sub-agreement (contract) awarded under this grant requiring that the management practices for the project be properly operated and maintained.
 - b. The Contractor agrees to ensure that all necessary permits (such as Clean Water Act § 404) are obtained prior to implementation of any grant funded activity that may fall under applicable federal, state or local laws. The Contractor project implementation plan must identify permits that may be needed to complete activities identified in Appendix A: Scope of Work. The Contractor must keep documentation regarding necessary permits in the project file.
30. **Israel**. The Contractor certifies that the Contractor is not currently engaged in, and agrees for the duration of this Contract not to engage in, a boycott of Israel, as defined in O.C.G.A. § 50-5-85.
31. **Applicable Law**. The parties agree that this agreement and all rights, privileges and responsibilities shall be interpreted and construed according to the laws of the State of Georgia.
32. **No Waiver**. The failure of the Division at any time to require performance by the Contractor of any provision hereof, shall in no way affect the right of the Division thereafter to enforce that same provision or any part of the Contract, nor shall the failure of the Division to enforce any breach of any provision hereof be taken or held to be a waiver of such provision, or as a waiver, modification or rescission of the Contract itself.
33. **Counterparts; Electronic Signature**. This Contract may be executed in two (2) counterparts each of which is deemed an original of equal dignity with the other and which is deemed on and the same instrument as the other. The Division and Contractor agree that any electronic signatures on this Contract hereto constitute original, valid signatures pursuant to the Uniform Electronic Transactions Act, O.C.G.A. § 10-1-21 *et seq*.
34. **Severability**. If any one or more of the provisions of this Contract are for any reason held by any court of competent jurisdiction to be invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability will not affect any other provision, and this Contract will be construed as if such invalid, illegal, or unenforceable provision had never been contained herein.
35. **Notice**. All notices, correspondence requests, demands, waivers and other communications required or permitted to be given under this Contract shall be made in writing and shall be deemed to have been duly given if delivered by U.S. Mail, postage paid, sent by nationally recognized overnight courier, or by electronic-mail to the contacts as follows:

If to the Division:

Mary E Gazaway

Grant Administrator

Georgia EPD Watershed Protection Branch

Nonpoint Source Pollution Program Grants Unit

Suite 1462 East Tower

2 Martin Luther King, Jr. Drive

Atlanta, Georgia 30334

470-524-0556 (Zoom phone)

mary.gazaway@dnr.ga.gov

If to Contractor:

Hameed Malik, Ph.D., P.E.

Director of Engineering

Augusta Engineering Department

Engineering Administration

452 Walker Street, Suite 110

Augusta, GA 30901

(706) 796-5040

hmalik@augustaga.gov

IN WITNESS WHEREOF the Division and the Contractor have executed this Contract on the day and year below written.

**The Environmental Protection Division of
the Department of Natural Resources,
State of Georgia**



Richard E. Dunn
Director

Date:09/30/2022

**Augusta, Georgia (Augusta-Richmond
County)**



Hardie Davis, Jr.
Mayor

Date: 09/27/2022

APPENDIX A
Scope of Work
Section 319(h) FY2021 Grant – Element12

1. Project Title: Phase 2 - Biota Improvement in an Urban Stream through Aquatic Habitat Restoration

2. Lead Organization: Augusta, GA (AKA Augusta-Richmond County)
535 Telfair Street, Building 4000
Augusta, GA 30901
(706) 796-5040
(706)796-5045

Primary Contact: Hameed Malik, Ph.D., P.E.
Director of Engineering
Augusta Engineering Department
Engineering Administration
452 Walker Street, Suite 110
Augusta, GA 30901
(706) 796-5040
(706) 796-5045
hmalik@augustaga.gov

Project Start Date: August 2022

Project End Date: June 30, 2024

Federal Amount Requested: **\$117,058**

Match Amount to be Contributed: **\$111,815**

Total Project Amount: **\$228,873**

3. Project Goals:

Phase 2 of this project continues to implement a 2018 Nine-Element Watershed Management Plan (WMP) for the Augusta Canal (HUC-12 #030601060601)/Butler Creek (HUC-12 #030601060602)/Beaverdam Ditch (HUC-12 #030601060607) Watersheds in the Savannah River Basin by addressing Bio F and Bio M water quality impairments in an 8-mile portion of Rocky Creek (HUC-12 030601060607) in Augusta-Richmond County, Georgia. Project goals are to increase a fish Index of Biotic Integrity (IBI) to >16 (Very Poor) and a macroinvertebrate Multi-Metric Index (MMI) in a 100-point scale to >5 (Very Poor). Restoration of biological health may also decrease fecal coliform concentrations based on a well-supported scientific food web theory. These efforts will be documented through pre- and post-BMP monitoring using GAEPD/GADNR standard protocols for sampling fish and macroinvertebrates in streams. Habitat will be restored by directly adding Best Management Practices (BMPs) to the stream to encourage a more natural riffle-pool geomorphology over time and support habitat diversity.

The project supports sections of **Georgia's Statewide NPS Management Plan (2014)**: 319 Grants, Key Stakeholders, Funding, page 92; Water Quality Monitoring, Program Issues, Short Term Goal 1.1 page 64; Water Quality Monitoring, Program Issues, page 79; 319 Program, Short Term Goal 8.1, page 97; Water Quality Monitoring, Short Term Goal 2.4, Page 85; Urban, Short Term Goal 4.2, Page 105; and 319 Grants, Long Term Goal 13, Page 99.

4. Project Background:

Due to delays caused by the COVID-19 pandemic, project activities will be achieved in two phases. Contracted under a Section 319(h) FY2016 grant, Phase 1 resulted in the completion of the following Project Activities and Tasks plus quarterly, annual, and close-out reporting:

Project Activity: Reach out to representatives & convene 3 meetings of Watershed Partnership developed throughout the previous TMDL planning process

Task 1: Introduce project to appropriate watershed partners

Task 2: Convene 3 meetings to solicit input, encourage support, and publicize project

Project Activity: Survey and qualify assessment of existing habitat.

Task 3: Survey of existing habitat in 8-mile reach of Rocky Creek

Task 4: Pre-BMP installation assessment of macroinvertebrate and fish communities in observed habitats

Project Activity: Install BMPs from available options as determined by the assessment

Task 5: Survey of selected reach

Task 6: Engineering Design of Structures

Phase 2 will continue the project based on Project Activities and Tasks listed in **5. Project Activities** below. The BMP installation targets a minimum of 0.25 stream miles (1320 linear feet) along the 6-mile "Headwaters to SR56" reach, with a spacing of approximately one feature every 50-200 ft. Point Bar Formation/Stabilization Structure; Pipe Refugia; Widener/Woody Habitat/Low flow Concentrator; Pool Enhancer; and Cross-Channel Rock Vane BMPs have been evaluated and chosen based on in-stream assessment, project cost, ability to install, and six research/restoration priorities developed by the project team.

A 2016 Total Maximum Daily Load (TMDL) evaluated both a 6-mile segment (Headwaters to SR 56, formerly Headwaters to Phinizy Ditch) and a 2-mile reach (SR 56 to below New Savannah Road) of Rocky Creek in Augusta as Very Poor for diversity in fish and macroinvertebrate community populations. The TMDL does not call for further reduction in sediment loading from external sources into Rocky Creek:

https://epd.georgia.gov/sites/epd.georgia.gov/files/related_files/site_page/Savannah%20Biota%20Impacted%20TMDL%20Report%20%5B2016%5D.pdf

Reduction of sediment will be pursued as an ancillary benefit of habitat BMPs and may improve biotic health further. Therefore, the BMPs selected for this project are intended to stabilize the creek bed and banks so they provide long term habitat as opposed to unconsolidated stream bed and bank sediments.

A fecal coliform bacteria TMDL developed in 2000 for the 2-mile segment of Rocky Creek established an 80% load reduction to achieve state water quality standards:

https://epd.georgia.gov/sites/epd.georgia.gov/files/related_files/site_page/EPA_Rocky_Creek_Fecal_TMDL.pdf

By improving the fish and macroinvertebrate communities, this project will upgrade the overall food web, and help to create an environment that is less hospitable for fecal bacteria.

5. Project Activities:

Project Activity: Install BMPs from available options as determined by the assessment

Task 1: Install and provide for operations and maintenance of structures that create in-stream habitat for biota including fish and macroinvertebrates over a wide range of the food web and varying depth in the water column.

Deliverables: Installation of structural practices; Records of BMP inspections and maintenance kept and made available for review beyond the term of this contract.

Measures of Success: Completion of structural practice installations; BMPs operated and maintained for expected lifespan and in accordance with commonly accepted standards to ensure proper functioning of system as designed.

Project Activity: Targeted monitoring to track post-BMP water quality trends including improvement towards achieving stated goals

Task 2: Post-BMP sampling assessment of macroinvertebrates and fish above, in, and below the BMP installations, including the historic GAEPD monitoring sites, using GAEPD (2007)/GADNR(2005) protocols

Deliverables:

- Finalized QA/QC Water Quality Monitoring Plan for macroinvertebrate & fish assessments
- Post-BMP metrics for stream showing value of BMP compared to areas of stream without habitat restoration

Measures of Success:

- Finalized QA/QC Water quality Monitoring Plan approved by GAEPD
- Data showing an IBI >16 in fish and an MMI >5 in macroinvertebrate biometric values

Project Activity: Publicize study results to scientific and general audience

Task 3: Develop a Case Study paper to summarize the project and publicize through project partner websites and social media outlets

Deliverables:

- Completed paper and
- Presentation made accessible to general public

- Access to presentation through social media

Measures of Success: Documented views of presentation on social media outlets

Task 4: Develop a Case Study paper to summarize the project and present to scientific community at regional water conference

Deliverables:

- Completed paper and
- Presentation at Georgia Water Resources Conference or similar conference

Measures of Success: Acceptance of talk and paper at conference

Project Activity: Reporting Requirements

Task 5: Submit Quarterly Reports, including WBE/MBE reports and invoices, by the 15th of January, April, July, and October of each year during the grant period.

Deliverables: Quarterly deliverables, monitoring data reports, invoices and supporting documentation reporting progress on project and using template provided by GAEPD.

Measures of Success: Quarterly deliverables, monitoring data reports, invoices and supporting documentation reviewed and approved by GAEPD.

Task 6: Participate in project review meetings with GAEPD based on the following schedule: Six months and twelve months after the project start date, then annually through the project term.

Deliverables: Attendance at meetings and verbal or written responses to GAEPD.

Measures of Success: Full participation at all project review meetings.

Task 7: Submit Final Invoice and Closeout Report to GAEPD for review.

Deliverables: Final Invoice and Closeout Report

Measures of Success: Final Invoice and Closeout Report reviewed and approved by GAEPD.

6. Roles and Responsibilities of Participating Organizations:

Organization Name	Specific Responsibilities
City of Augusta	<ul style="list-style-type: none"> • Account for 40% of total project costs in matching funds or in-kind services • Pay funds to appropriate contractor(s) and vendor(s) • Request reimbursements from GAEPD on a quarterly basis • Track the progress of project activities completed, grant funds expended, and match values provided in accordance with the drawdown & implementation schedule

	<ul style="list-style-type: none"> • Complete and submit quarterly progress reports and invoices to GAEPD by January 15th, April 15th, July 15th, and October 15th of each project year • Participate in project review meetings with GAEPD each project year • Complete & submit close-out report at conclusion of project
GAEPD	<ul style="list-style-type: none"> • Provide 60% of total project costs • Review and approve project deliverables • Participate in meetings, as appropriate • Review and assist as needed with 319(h) Grant protocols • Provide project oversight and contract management • Provide monitoring guidance and training
Phinizy Center for Water Sciences	<ul style="list-style-type: none"> • Contract with City of Augusta to perform the following: • Sample, identify, and enumerate aquatic insect and fish species • Assist in report writing • Assist in BMP construction • Subcontract for the following services under an existing subagreement and with a previously approved professional: <ul style="list-style-type: none"> ○ Install and maintain rain gauges and water level loggers ○ Develop rating curves ○ Assist in report writing

7. **Project Location:**

Rocky Creek runs through and lies entirely within Richmond County. It is a tributary to the Savannah River.

a) **Project Area Description and Map:**

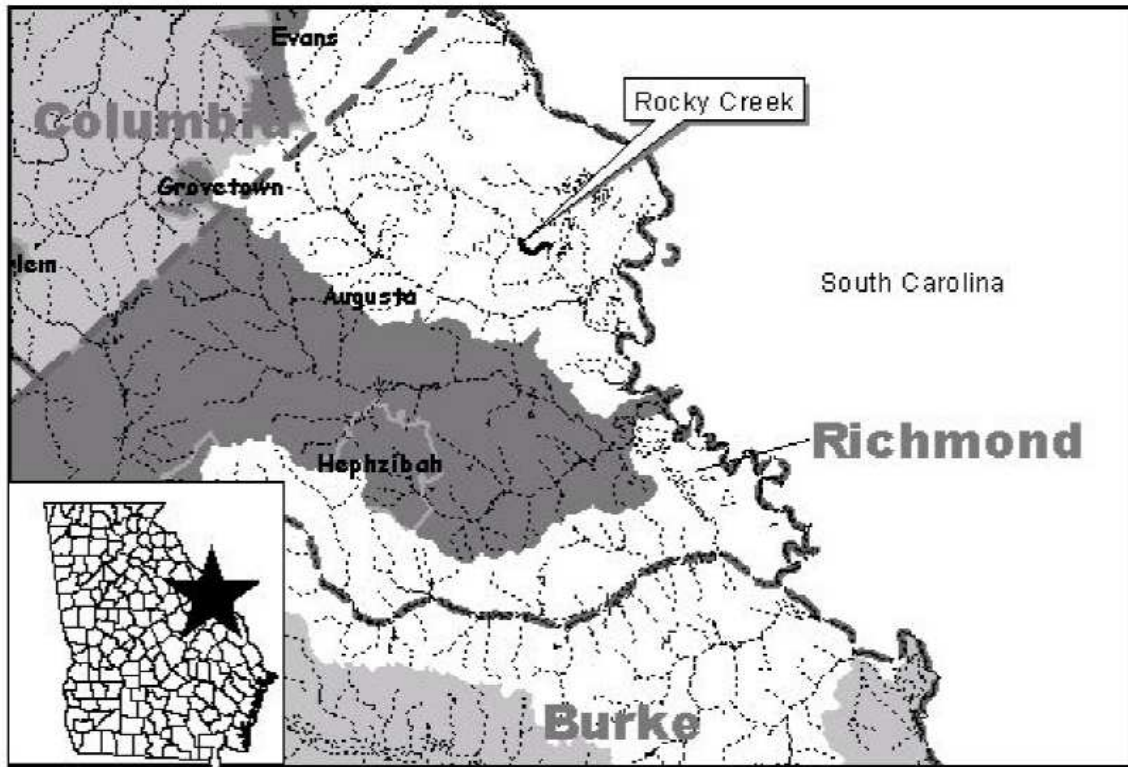


Figure 1. Location of Rocky Creek in the Augusta-Richmond County Area



Figure 2. Rocky Creek Watershed including impaired reaches and proposed restoration area (Red-Fecal Coliform Impaired Reach, Orange-Macroinvertebrate Impaired Reach, Blue-Proposed Target Area)



Figure 3. Aerial photo of the extent of proposed restoration area with Milledgeville Road bordering upstream on the left and Wheelless Road bordering downstream on the right

b) Project Area Size (Acres): 8,107 acres

c) County or Counties: Richmond

d) Land Uses within the Watershed(s) or Project Area (Percentages):

Agricultural	6%
Commercial Forestry	0%
Urban/Residential	78%
Mining/Extraction	1%
Forest/Natural Areas	13%
Water/Wetlands	2%
TOTAL	100%

***Data Source & Date:** Draft Total Maximum Daily Load Evaluation for Seven Stream Segments in the Savannah River Basin for Sediment, 2015*

e) Hydrologic Unit Code(s), Watershed Name(s) and Priority Watershed(s):

HUC-10: #0306010606 Name: Rocky Creek Priority: NA

8. Nonpoint Source Pollution Impairments and Healthy Waters:

a) Section 305(b)/303(d) List of Waters:

Water Body Segment Name (Segment Length (Miles) or Embayment Acreage)	County Location(s)	Criterion Violated or Water Quality Concern (Healthy Water)	Listing Status Category 4a, 5 or 1
Rocky Creek (2 miles)	Richmond	Bio M, Bio F, Fecal Coliform	4a
Rocky Creek (6 miles)	Richmond	Bio M, Bio F	4a

b) Secondary Pollutant(s):

In addition to the impairments already listed, there is evidence that sediment from the stream itself could be contributing to sediment load in the stream. Significant gully and

channel erosion can be observed in the channel as well as a great deal of bed movement. Higher flows cause significant movement of bed features.



9. Monitoring:

DRAFT QA/QC Water Quality Monitoring Plan as Attachment (*listed in Section 11.*)

GADNR, 2005-*Standard operating procedures for conducting biomonitoring on fish communities in wadeable streams in Georgia* at <http://www.georgiawildlife.com/node/913>

GAEPD, 2007-*Macroinvertebrate Biological Assessment of Wadeable Streams in Georgia; Standard Operating Procedures* at <http://epd.georgia.gov/macroinvertebrate-bioassessment-standard-operating-procedures-sop-and-metric-spreadsheets>

GAEPD is working on revising the multi metric index (MMI) used to assess the health of macroinvertebrate communities. See current assessment guidelines below.
http://epd.georgia.gov/sites/epd.georgia.gov/files/related_files/site_page/Guidelines%20for%20Listing%20and%20Delisting%20of%20Biological%20Data_Feb2016_Version1_2_Revised_August%202016.pdf

10. Project Budget:

Item	Item Class Category	319(h) Grant Funds (60% Maximum)	Non-Federal Matching Funds (40% Minimum)	Total
A	Personnel: One (1) AED Director – approximately 0.007 FTE (\$170,000/year) for 2 years Description of Duties: City Project Management, Project oversight, BMP decisions		2,380	2,380
	One (1) Stormwater Serv. Mgr. - approximately 0.15 FTE (\$122,000/year) for 2 years Description of Duties: Project Management, Project oversight, Fieldwork, BMP decisions		36,600	36,600
	One (1) Engineering Mgr. - approximately 0.01 FTE (\$109,900/year) for 2 years Description of Duties: Engineering Design, Permitting, Project Management, BMP decisions		2,198	2,198
	One (1) Stormwater Coordinator - approximately 0.01 FTE (\$60,672/year) for 2 years Description of Duties: Engineering Design, Permitting, Project Management, BMP decisions		1,213	1,213
	One (1) Staff Engineer - approximately 0.01 FTE (\$79,000/year) for 2 years Description of Duties: Engineering Design, Permitting, Project Management, BMP decisions		1,580	1,580
	One (1) AED Assist. Director – approximately 0.01 FTE (\$101,000/year) for 2 years Description of Duties: City Project Management, Project oversight, BMP decisions		2,020	2,020
	One (1) Asset Manager - approximately 0.01 FTE (\$106,000/year) for 2 years Description of Duties: GIS, Survey, BMP decisions		1,908	1,908
	One (1) GIS analyst - approximately 0.01 FTE (\$48,847/year) for 2 years Description of Duties: GIS, Survey, BMP decisions		977	977
	One (1) GIS analyst - approximately 0.01 FTE (\$58,532/year) for 2 years Description of Duties: GIS, Survey, BMP decisions		1,171	1,171
	Sub Total:	0	50,047	50,047
B	Fringe Benefits: Included in Item A @ a rate of 30%		0	0
	Sub Total:	0	0	0
C	Travel: Staff Position: Purpose of Travel: 833 Miles x Mileage Rate (\$.545 mile)		0	0
	Sub Total:	0	0	0
D	Equipment: Equipment: Purpose/Use:			
	Sub Total:	0	0	0
E	Supplies: Supplies: Purpose/Use:			
	Sub Total:	0	0	0

Item	Item Class Category	319(h) Grant Funds (60% Maximum)	Non-Federal Matching Funds (40% Minimum)	Total
	CONTRACTUAL: PHINIZY CENTER (NGO) Up to four (4) Aquatic Ecologists – approximately 0.125 FTE (\$35,000/year) for 2 years = \$35,000 Description of Duties: Assisting with BMP sites survey, aquatic sampling and subcontracting the following for BMP construction: <ul style="list-style-type: none"> One (1) Project Engineer- approximately 0.25 FTE (\$80,000/year) for 2 years = \$40,000 Description of Duties: BMP selection and engineering, assist with survey, report writing and project management <ul style="list-style-type: none"> One (1) Construction Contractor - TBD = \$103,826 Description of Duties: Install BMPs	117,058	61,768	178,826
	Sub Total:	117,058	61,768	178,826
G	Construction: (Does not apply to GAEPD Section 319(h) Grants)	N/A	N/A	N/A
H	Other:			
	Sub Total			
I	Total Direct Charges: (Sum of A-H)	117,058	111,815	228,873
J	Indirect Charges: (0% Eligible for Reimbursement with Federal Dollars)	N/A	Up to 100%	
K	Total: (Sum of I and J)	117,058	111,815	228,873

Narrative Justification for Item Class Categories:

Personnel (A): Personnel in this item class category are all Augusta-Richmond County employees within the Augusta Engineering Department (AED) and are all contributing time as Non-Federal matching contributions to the project. Since this project includes stream restoration efforts that have potential impacts on in-stream flows within one of the Richmond County streams, the AED will treat this as a submitted county construction project which will go through our plan review and permitting processes. In addition, this project requires more specialized elements that include engineering, buffer assessments and permitting, BMP installation and monitoring, aquatic ecology, project management, and water quality assessments. All necessary personnel to perform those necessary duties are included in this grant.

- AED Director: approximately (0.007 FTE @ \$170,000/year) will have project oversight duties, will be involved in planning, and will participate in draft and final report reviews.
- AED Stormwater Services Manager: approximately (0.15 FTE @ \$122,000/year), will oversee, manage and coordinate project, provide aquatic ecology and water quality technical advice, input on BMP decisions, and organize and participate in fieldwork.
- AED Engineering Manager: approximately (0.01 FTE @ \$109,900/year), will provide plan review oversight, engineering design support, permit writing support, input on BMP decisions and monitoring, and project management support.
- AED Stormwater Coordinator: approximately (0.01 FTE @ \$60,672/yr) will have BMP design input, fieldwork and project management responsibilities.
- AED Staff Engineer: approximately (0.01 FTE @ \$79,000/yr) will have BMP design input, engineering design support, fieldwork and project management responsibilities.

- AED Assistant Director-Maintenance: approximately (0.01 FTE @ \$101,000/yr) will have project management, project oversight, and site maintenance responsibilities.
- AED Asset Manager: approximately (0.01 FTE @ \$106,000/yr) will have GIS, survey, and BMP design input.
- AED GIS analyst: approximately (0.01 FTE @ \$48,847/yr) will have GIS, survey, and BMP design input.
- AED GIS analyst: approximately (0.01 FTE @ \$58,532/yr) will have GIS, survey, and BMP design input.

Fringe Benefits (B): Fringe amounts are included in the Personnel Line Item and are not broken out in this Line Item. Fringe Benefits rate for AED employees is 30% and are included in Personnel Line Item.

Supplies (E): Supplies have been reallocated to Contractual expenses

Contractual (F): Phinizy Center for Water Sciences will be the Contractual Manager for the project and will make use of an existing subcontract and approved professional relationship as well as subcontract with qualified companies, consultants, and institutions to outsource monitoring, engineering and construction services. See below Justification for scope of services.

- Phinizy Center for Water Sciences: Phinizy Center (0.125 FTE @\$35,000/year) includes at a maximum four (4) staff members experienced in aquatic ecology and geomorphology in urban streams. Personnel qualified for this function include aquatic ecologists, researchers, and other specialists to perform post-BMP implementation surveys, geomorphic characterizations, hydrologic analyses, and report writing. The team will also be involved in taking advantage of an existing subagreement and a previously approved professional relationship to outsource aquatic monitoring services. In addition, Phinizy Center will outsource for microelectronics, survey assistance, and report writing, where needed and subcontract the following for BMP construction:
- One (1) Project Engineer - approximately 0.25 FTE (\$80,000/year) for 2 years = \$40,000 for BMP selection and engineering, assist with survey, report writing and project management.
- One (1) Construction Contractor - TBD = \$103,826 to install BMPs.

Phase 2 of this project will install Bioengineering BMPs within Rocky Creek to increase available habitat for aquatic insect and fish populations. Most supplies have already been acquired in Phase 1. However, the budgets for BMP installation in this Line Item may include additional items for construction and live plants.

Planting

- Live Stakes: (\$1-\$4 each) assuming a minimum of 12 groups of 50 at \$4 each = \$2,400
- Herbaceous Plugs = \$3,000

Additional Items

- Temporary Construction Entrances (2) = \$4,000

11. Project Attachment(s):

Link: 2018 Nine-Element Watershed Management Plan for the Augusta Canal (HUC-12 #030601060601) / Butler Creek (HUC-12 #030601060602) / Beaverdam Ditch (HUC-12 #030601060607) Watersheds in Savannah River Basin
<https://epd.georgia.gov/document/document/augustacanalbutlercreekbeaverdamditchwmp0306010606y2018pdf/download>

Attachment 1: Post-BMP QA/QC Water Quality Monitoring Plan

Appendix B: Project Schedule - Phase 2 Biota Improvement in an Urban Stream through Aquatic Habitat Restoration																										
	Initial	1st Quarter			2nd Quarter			3rd Quarter			4th Quarter			5th Quarter			6th Quarter			7th Quarter			8th Quarter			Final
Grant Drawdown Amount	\$117,058	\$10,400			\$25,000			\$25,000			\$15,607			\$13,000			\$10,000			\$6,345			\$11,706			\$0
Percent Federal Remaining	100%	91%			70%			48%			35%			24%			15%			10%			0%			0%
Match Amount	\$0	\$10,400			\$25,000			\$25,000			\$15,607			\$10,700			\$8,000			\$5,926			\$11,182			\$111,815
Percent Match Accrued	0%	9%			32%			54%			68%			78%			85%			90%			100%			100%
		Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	
Milestones/Tasks																										
Execute Contract																										
Task 1: Implement and install BMPs																										
Task 2: Carry out post BMP sampling for fish and macros																										
Task 3: Develop a case study paper or presentation for the project and publish to partner websites/social media																										
Task 4: Develop a case study paper or presentation for the project and submit/present at water conference																										
Task 5: Submit Quarterly Invoices & Status Reports																										
Task 6: Participate in project review meetings with GAEPD																										
Task 7: Submit Final Close-Out Report																										

Color KEY	
Deliverable to EPD	
Data Produced	
Information Conveyed	
Design/Construction	

Contractor Affidavit under O.C.G.A. § 13-10-91(b)(1)

The undersigned contractor ("Contractor") executes this Affidavit to comply with O.C.G.A § 13-10-91 related to any contract to which Contractor is a party that is subject to O.C.G.A. § 13-10-91 and hereby verifies its compliance with O.C.G.A. § 13-10-91, attesting as follows:

- a) The Contractor has registered with, is authorized to use and uses the federal work authorization program commonly known as E-Verify, or any subsequent replacement program;
- b) The Contractor will continue to use the federal work authorization program throughout the contract period, including any renewal or extension thereof;
- c) The Contractor will notify the public employer in the event the Contractor ceases to utilize the federal work authorization program during the contract period, including renewals or extensions thereof;
- d) The Contractor understands that ceasing to utilize the federal work authorization program constitutes a material breach of Contract;
- e) The Contractor will contract for the performance of services in satisfaction of such contract only with subcontractors who present an affidavit to the Contractor with the information required by O.C.G.A. § 13-10-91(a), (b), and (c);
- f) The Contractor acknowledges and agrees that this Affidavit shall be incorporated into any contract(s) subject to the provisions of O.C.G.A. § 13-10-91 for the project listed below to which Contractor is a party after the date hereof without further action or consent by Contractor; and
- g) Contractor acknowledges its responsibility to submit copies of any affidavits, drivers' licenses, and identification cards required pursuant to O.C.G.A. § 13-10-91 to the public employer within five business days of receipt.

46923

Federal Work Authorization User Identification Number

July 9, 2007

Date of Authorization

Augusta, Georgia

Name of Contractor

Phase 2 Biota Improvement in Urban Stream through Aquatic Habitat Restoration

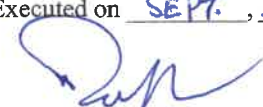
Name of Project

Georgia DNR EPD

Name of Public Employer

I hereby declare under penalty of perjury that the foregoing is true and correct.

Executed on SEPT. 29, 2022 in AUGUSTA (city), GA (state).


Signature of Authorized Officer or Agent

HAMEED MALIK, DIRECTOR ENGINEERING
Printed Name and Title of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME
ON THIS THE 29th DAY OF September, 2022.

Forrest M. Hensley Jr.
NOTARY PUBLIC

My Commission Expires: 4-2-2023





BRIAN KEMP
GOVERNOR

MARK WILLIAMS
COMMISSIONER

Dear Sub-Awardee,

In 2006, the Federal Funding Accountability and Transparency Act (FFATA) was signed into law. This legislation requires information disclosure concerning entities receiving Federal financial assistance through Federal grants. As a result, our organization is required to report on each of the grants that we award (i.e., subawards, subcontracts). By answering the questions below, your organization will provide us the data needed to meet FFATA reporting requirements. **This form is to be returned within 15 days of the contract signature date.** Please don't hesitate to contact us if your organization has difficulty completing the questionnaire. Please contact:

Name: Denise Bowen Telephone Number: 404-463-2881

To be completed by Organization Receiving the Award

Subawardee Doing Business as Name: Augusta, Georgia (Augusta-Richmond County) DUNS #: 07-3438418

Address: City: 530 Greene Street, Augusta State GA Zip code 30901 + 4

Primary Place of Grant Performance: City: Augusta State GA Zip code 30901 + 4

Highly Compensated Officers: Please list below your top 5 compensated officers if **all three** of the following conditions apply:

Yes No

- ☐ ☒ Your organization received 80% or more of its annual gross revenues from federal contracts, subcontracts, loans, grants, subgrants and cooperative agreements in the preceding fiscal year.
- ☐ ☒ Your organization received \$25,000,000 or more in annual gross revenue from federal contracts, subcontracts, loans, grants, subgrants and cooperative agreements in the preceding fiscal year.
- ☐ ☒ The public does not have access to information about the compensation of the senior executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 USC 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986.

Officer 1 Name:	Compensation: \$
Officer 2 Name:	Compensation: \$
Officer 3 Name:	Compensation: \$
Officer 4 Name:	Compensation: \$
Officer 5 Name:	Compensation: \$

To be completed by Awarding Agency: Georgia Department of Natural Resources Division: Environmental Protection

Federal Funding Agency Name: U.S. Environmental Protection Agency (U.S. EPA)

Federal Award Number (case, space and character sensitive): C9994458-??-0

Federal Funding Agency Code (4 digits): 6800

Catalog of Federal Domestic Assistance Number (CFDA): 66.460

Prime Recipient DUNS number (9 digits): 146985544

Prime Recipient City and State: Georgia

Program Source (Treasury Account Symbol – TAS for contracts): 68-0102

Activity Code (10 NAICS, NTEE-NTPC code): 924110

Subaward Amount: \$? Subaward Date: ? Subaward Number: ?

Subaward Project Title (Description): Phase 2 Biota Improvement in an Urban Stream through Aquatic Habitat Restoration

**Targeted Monitoring Plan under 319(h) Grant
for a portion of the
Rocky Creek Watershed**

Augusta-Richmond County, Georgia

**Submitted by Phinizy Center for Water Sciences
1858 Lock and Dam Road, Augusta, GA, 30906
November, 2016**

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1. Watershed Description and Reason for Monitoring

a. Size (HUC/acres/square miles) of watershed delineation or drainage area to be studied

- i. HUC12 - 030601060607
- ii. 8107 acres
- iii. 12.7 square miles

b. Name(s) of stream segment(s) and location descriptions

- i. The impaired reach is 2 miles of Rocky Creek from SR 56 to New Savannah Road for Fecal Coliform and Biota (Bio F and Bio M) and 6 miles of Rocky Creek from SR 56 to the Headwaters for just Biota (Bio F and Bio M).
- ii. The HUC12 subwatershed is entirely contained within Richmond County.
- iii. Targeted sampling will take place in the impaired section and upstream to the headwaters. The main focus of sampling will be within and downstream of the BMP

c. General watershed conditions and land use / coverage

- i. The area to be monitored is highly urbanized with the following land use percentages. A large percentage of the development is mature with older structures and infrastructure. There are large natural areas, especially near the stream. The overall condition of the watershed is highly impacted by urbanization.

1. Agricultural	6%
2. Commercial Forestry	0%
3. Urban/Residential	78%
4. Mining/Extraction	1%
5. Forest/Natural Areas	13%
6. Water/Wetlands	2%
7. TOTAL	100%

d. Water quality impairments

- i. This monitoring plan addresses the impairment of 8 miles of Rocky Creek for Biota Impairment (Bio F and Bio M) based on not supporting the criteria associated with its designated use of fishing
- ii. This impairment is described in the following document:
 - 1. 2016 Total Maximum Daily Load Evaluation for Seven Stream Segments in the Savannah River Basin for Sediment

e. Jurisdictions impacting watershed

- i. Augusta-Richmond County Consolidated Government

f. Reason(s) for monitoring

- i. The primary reason for monitoring is to verify the efficacy of the management practices to be installed in the overall project
- ii. A secondary reason for monitoring is to assess the ability to delist the stream after BMP implementation

2. Pollutants or Indicators to be Monitored

a. Indicators to be Monitored

- i. Turbidity or Total Suspended Solids (TSS)
- ii. Stream Stage/discharge
- iii. Temperature/Conductivity
- iv. Visual Assessment of Stream Conditions
- v. Macroinvertebrates
- vi. Fish Community

b. Installed BMPs

- i. This project will install a series of instream aquatic habitat restoration practices to overcome historic sedimentation and loss of habitat. These are described more fully in the proposal document.

3. Monitoring Locations

Table 1. Description of 7 monitoring sites

Sample Location #	Latitude (N)	Longitude (W)	Description
1 Milledgeville Road	33°26'53.22"	82° 3'14.74"	Just above BMP
2 Wheelless Road	33°26'50.31"	82° 2'46.75"	Within BMP
3 Dean's Bridge Road	33°26'17.30"	82° 1'31.85"	Below BMP

a. Site Selection

- i. Site selection was based on the ability to monitor the impact of the BMP on the noted impairments. It is also based on the ability to assess the post BMP condition of the impairments in the impaired reaches.

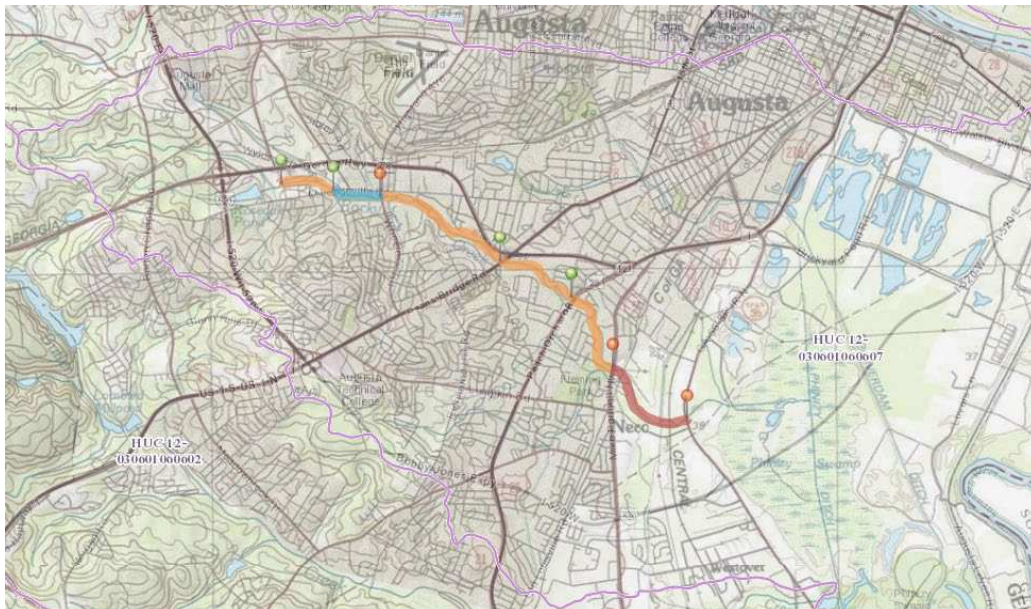


Figure 1. Map of target monitoring area including historic monitoring sites (pins), impaired biota reach (orange), and BMP installation reach (blue).

4. Quality Assurance/Quality Control

a. Field staff

- i. Damon Mullis and Matt Erickson– Phinizy Center
- ii. Augusta-Richmond County Technician
- iii. Additional Adopt-A-Stream Volunteers

b. Methodology and materials

- i. Standard operating procedures (SOP) will comply with EPD Surface Water Sampling (EPD-WPMP-2), the Georgia Adopt-A-Stream AAS Biological and Chemical Manual, and GAEPD/GADNR standard protocols for sampling fish (GADNR, 2005-Standard operating procedures for conducting biomonitoring on fish communities in Wadeable streams in Georgia) and macroinvertebrates (GAEPD, 2007-Macroinvertebrate biological assessment of Wadeable streams in Georgia; standard operating procedures)
- ii. Only trained personnel will be allowed to collect or process samples.

5. Training

a. Names and affiliation of GAEPD staff trainers

- i. Training will be performed by Ruth Mead, a Certified Adopt-A-Stream Trainer who is the Senior Education Specialist at Phinizy Center.
- ii. GAEPD/GADNR training will be conducted through the annual workshop offered by GADNR

b. Names and affiliations of field personnel being trained

- i. Phinizy and Augusta Engineering staff as well as additional Adopt-A-Stream Volunteers

c. Titles and dates of training workshops

- i. GA Adopt-A-Stream Biological and GAEPD/GADNR training will take place on a date TBD in 2017 for training in the assessment of Bio M and Bio F.

d. Description of the training sessions

- i. Sessions will follow the GA Adopt-A-Stream manuals for training in the designated areas
- ii. GADNR training of aquatic insect methodologies is offered once per year

6. Monitoring Schedule

a. General Schedule

- i. Sampling for fish and aquatic insects will be conducted before, during, and after BMP installation in order to assess BMP effectiveness. All sampling will be conducted, at a minimum, during Georgia's Index Period which is mid-September through February. Sampling will be conducted, at a minimum, of one time at each of the three proposed sites (upstream, within, and downstream of BMP installation) during the mid-September through February time period, during the pre-BMP, ongoing-BMP, and post-BMP installation phases. That is, at a minimum, of 3 sites (upstream, within, and downstream), during each of the 3 phases (pre-BMP, ongoing-BMP, and post-BMP installation).
- ii. All sampling will be conducted according to the GAEPD protocols identified in Section 4.b.