Emerging Contaminants in Small or Disadvantaged Communities (EC-SDC) Grant Program

SC DEPARTMENT *of* ENVIRONMENTAL SERVICES

2026 Application Form

Application Form Deadline
March 31, 2026 at 5:00 PM ET
Submission Email: EC-SDC@des.sc.gov

The Emerging Contaminants in Small or Disadvantaged Communities (EC-SDC) Grant Program is a drinking water program aimed at reducing the risk of exposure to PFAS and other emerging contaminants listed on an EPA Contaminant Candidate List (CCL) via the drinking water within small or disadvantaged communities. These contaminants may be addressed at the public water system (PWS) or within the source waters for a public water system. Applicants may propose a project aimed at accessing or quantifying the extent of the concern, developing a source water protection plan, designing treatment processes to reduce or eliminate exposure risks, implementing remediation or mitigation treatment processes or best management practices, engaging and educating the public, or any combination thereof to address PFAS or other emerging contaminants within one or more small or disadvantaged communities.

Funding under this program has no match or cost share requirements and will be awarded to successful applicants via a grant agreement with the South Carolina Department of Environmental Services (SCDES). Grant funds will be issued to successful applicant organizations to cover eligible expenses on a reimbursement basis. No funding will be distributed to cover anticipated costs or costs incurred outside of the project period designated within the grant agreement.

Additional information on the EC-SDC Grant Program, including eligibility requirements, examples of eligible project types, and federal grant requirements, can be found within *Guidance for the Implementation of the Emerging Contaminants in Small or Disadvantaged Communities (EC-SDC) Grant Program in South Carolina*.

To apply, complete this form with the requested information, following the prompts provided along the way. Supplemental tables, charts, maps, images, and other documentation may be included as an attachment to this form in addition to the requirements listed below in Section 12. Submittal Requirements. Email the completed application form and all attachments by the deadline listed above to EC-SDC@des.sc.gov. Attachments to emails are limited to combined total size of 20 MB. A file sharing link may be utilized in situations where the total file size of attachments to be submitted exceeds 20 MB.

1. Project Title and Length

Project Title: Town of Blacksburg Ground Water Source Evaluation

Project Length (max 24 months): 15 Months

2. Applicant Information

Lead Organization Name: Town of Blacksburg, SC

Federal Employer ID Number: 57-6001002

Federal UEI Number (Issued via SAM.gov): WR6LW8EJ14F3

Project Manager *(Responsible for overseeing project progress)*

Name & Title: Shane Childers, Town Administrator

Mailing Address: 105 S Shelby Street, Blacksburg, SC 29702

Telephone: 864-839-2332 Fax: _____ Email: shane@townofblacksburg.com

Primary Contact *(Responsible for reporting & grant correspondence, if different than the Project Manager)*

Name & Title: Same As Above

Mailing Address: _____

Telephone: _____ Fax: _____ Email: _____

Legal Contact *(Officer legally authorized to sign the Grant Agreement)*

Name & Title: Same as Above

Mailing Address: _____

Telephone: _____ Fax: _____ Email: _____

Financial Contact *(Responsible for invoice reporting and grant funds)*

Name & Title: Same as Above

Mailing Address: _____

Telephone: _____ Fax: _____ Email: _____

Alternate Contact(s) *(Additional project team members that should be included on all correspondence)*

Name & Title: _____

Mailing Address: _____

Telephone: _____ Fax: _____ Email: _____

Name & Title: _____

Mailing Address: _____

Telephone: _____ Fax: _____ Email: _____

3. Funding Request

The EC-SDC Grant Program has no cost share or match requirements.

EC-SDC Grant Program Federal Request: $ 1,077,000.00

Additional Project Funds *(if applicable)*: $

Total Project Amount: $ 1,077,000.00

Additional Funding Sources *(if applicable)*:

The EC-SDC Grant Program is a federally funded grant program. EC-SDC Grant Program funds cannot be utilized as match or cost share for any other federally funded program.

4. Basic Project Information

Project Location

Name and SC PWSID of PWS Impacted: Town of Blacksburg Water System
SC1110002

Number of Homes Served by the Above PWS: 1,657

Small or Disadvantaged Communities (SDCs) Impacted: Blacksburg, SC

Population Impacted by this Project (list per SDC): Blacksburg Water System - 4,496

US Congressional District(s) of the Project Area: District 05

Watershed Name(s) of Surface Water Source Waters: Broad River Basin

12-Digit HUC(s) of Surface Water Source Waters: 030501051603 - Lake Whelchel (Gaffney BPW)
030501050502 - Broad River (Gaston Shoals Res.)

Major River Basin Containing Project Area: Broad River Basin

PFAS / Other Emerging Contaminant(s) to be Addressed:

(List all that apply & each applicable EPA CCL.)

PFAS: Yes *"Yes" or "X" is sufficient if addressing PFAS; EPA CCL is not required for PFAS.*

Emerging Contaminant: _____ EPA CCL: <select one>

Emerging Contaminant: _____ EPA CCL: <select one>

Emerging Contaminant: _____ EPA CCL: <select one>

Emerging Contaminant: _____ EPA CCL: <select one>

Emerging Contaminant: _____ EPA CCL: <select one>

Emerging Contaminant: _____ EPA CCL: <select one>

5. Project Summary

a. Provide a concise outcome statement for the proposed project that includes the intended benefit(s) to the drinking water / source waters, public health, and the impacted small or disadvantaged community or communities.

Outcome Statement:

The Town of Blacksburg will mitigate public health risks associated with elevated PFAS concentrations in its current purchased water supply by developing a localized, sustainable groundwater source. This project will transition the Town from the conceptual phase through the completion of a certified Preliminary Engineering Report (PER), providing a comprehensive quantification of available groundwater assets and a robust evaluation of treatability and blending compatibility. The successful outcome of this study will provide the small, disadvantaged community of Blacksburg with a clear, engineered roadmap to achieve water independence and long-term protection from emerging contaminants by transitioning to a safe, PFAS-free primary drinking water source.

b. *In 200 words or less, provide a brief description of the proposed project that would be suitable for a press release. This summary should be able to stand alone from the rest of the proposal. This section should summarize the PFAS and/or other emerging contaminant concerns, proposed work, stakeholder involvement, and how the project will help achieve the desired drinking water and/or source water outcome(s) within the small or disadvantaged community or communities benefitting from this work.*

Project Summary:

The Town of Blacksburg is launching a proactive "Groundwater Source Evaluation" to secure a safe and resilient water future for its residents. Currently, the Town relies entirely on water purchased from Gaffney BPW, which has been impacted by elevated levels of Per- and Polyfluoroalkyl Substances (PFAS). To mitigate this public health risk, this project utilizes a three-phase approach to transition the Town toward an independent, clean groundwater supply.

Phase 1 consists of a preliminary hydrogeologic assessment to map available groundwater and identify high-yield drilling targets. In Phase 2, the Town will conduct physical test, well drilling and draw-down testing, to confirm a sustainable "safe yield." Finally, Phase 3 will evaluate water quality and treatability, specifically focusing on the compatibility of blending new groundwater with the existing system.

By moving from a conceptual framework to a fully vetted Preliminary Engineering Report (PER), this project provides the Town with the necessary data to design and construct a permanent solution. This initiative ensures that the small, disadvantaged community of Blacksburg is no longer vulnerable to emerging contaminants, providing long-term health protection and improved water quality for all 4,496 citizens served by the system.

6. Background

Within this section, provide relevant background information for this project, focusing on the following bullet points:

- *Discuss key features and the significance of either the drinking water system (for PWS projects) or the source water (for source water projects) as it relates to the small or disadvantaged community or communities impacted by the proposed project and their public health;*
- *Identify the PFAS or other emerging contaminant concern(s) (suspected or known) and any existing sampling data;*
- *Relate the PFAS or other emerging contaminant concern(s) to exposure risks, public health, and drinking water quality as it applies to the impacted small or disadvantaged communities; and*
- *Create a map that, at minimum, displays important features related to the proposed project – the extent of the drinking water service area (for PWS projects) or the extent of the source waters (for source water projects), identifies the impacted small or disadvantaged communities, highlights the target area(s) where work is expected to be conducted, and indicates the location of the source water intake / public water supply well(s) for the impacted PWS. This map will serve as Attachment A-1. Please refer to Section 12. Submittal Requirements for additional information.*

Attach additional background information as needed.

See Attached

7. Detailed Project Description

Project Description

All EC-SDC Grant Program grantees are strongly encouraged to include public education and outreach activities to raise awareness about PFAS and/or the other emerging contaminant(s) being addressed utilizing this funding. Please incorporate these activities into the proposed project.

Propose the intended project, ensuring that detailed information is included to…

- *Fully convey the types and amounts of all proposed project activities to be conducted, including any study, planning, design, engineering services, construction, and maintenance plans for project components, where applicable;*
- *Provide an explanation of the benefit(s) of each proposed project activity on the impacted small or disadvantaged community or communities;*
- *Justify each proposed project activity as the best use of EC-SDC Grant Program funding to achieve the desired outcome of reducing exposure within small or disadvantaged communities to PFAS and other emerging contaminants via drinking water; and*
- *Sufficiently demonstrate the location(s) where proposed activities are expected to occur via one or more maps displaying priority areas for the project (see Attachment A-2 under Section 12. Submittal Requirements).*

Attach additional documentation to describe the proposed project as needed.

See Attached.

8. Permitting

The process for obtaining permits can be lengthy and time consuming. Please plan any proposed work requiring a permit accordingly to ensure completion within the project timeline.

a. If the proposed work does not require a permit, provide a sentence stating as such in this section.
b. If the proposed project requires a permit, discuss what permit(s) will be required, anticipated timeline(s) for permit approval(s), and who will be responsible for the permit acquisition(s).

The Town of Blacksburg is located within a groundwater non-regulated capacity use section of the state. Because this grant application only covers the evaluation, testing, and preliminary engineering phases, the regulatory burden for the proposed work is minimal and will not delay the project timeline.

Permits Required for Proposed Work: The physical drilling of the three (3) test wells in Phase 2 will not require a formal Groundwater Withdrawal Permit. Instead, a simple Notice of Intent (NOI) to drill the test wells is the only state requirement.

Responsibility and Timeline: The project's consulting engineer will be responsible for preparing and submitting the NOI to SCDES. This document will be submitted approximately 30 days prior to the mobilization of the drilling contractor, ensuring there are no administrative delays to the Phase 2 schedule.

Future Permitting (Post-Grant): While the current scope of work requires minimal permitting, the final deliverable of this project (PER) will identify and outline all future permitting requirements. The PER will detail the necessary SCDES Construction Permits, Source Water Approvals, and Public Water System (PWS) modifications the Town will need to secure during the subsequent design and construction phases to officially utilize this groundwater as a permanent drinking water source.

9. Project Budget

Budget Summary

Provide a summary of the proposed budget in the table below.

Please note: Personnel related expenses are allowable only for staff working directly on the grant project and can only be billed for the portion of their time spent performing functions essential to the grant project. Any and all costs that can be categorized as operations and maintenance for an organization are ineligible for reimbursement through the EC-SDC Grant Program.

	EC-SDC Grant Program Funds	Additional Project Funds	Total Project Funds
Personnel – Salary	$	$	**$** 0.00
Personnel – Fringe	$	$	**$** 0.00
Travel	$	$	**$** 0.00
Equipment	$	$	**$** 0.00
Supplies	$	$	**$** 0.00
Contractual	$ 1,077,000.00	$	**$** 1,077,000.00
Construction	$	$	**$** 0.00
Other	$	$	**$** 0.00
Indirect *(Additional Documentation Required)*	$	$	**$** 0.00
TOTAL	**$** 1,077,000.00	**$** 0.00	**$** 1,077,000.00

Budget Narrative:

Explain and justify all costs included within the proposed budget. Discuss, in detail, how EC-SDC Grant Program funds will be spent for each category. Complete all categories, using "N/A" for categories not included in the proposed budget. Attach additional supporting documentation as needed.

Personnel – Salary: N/A

Personnel – Fringe: N/A

Travel: N/A

Equipment: N/A

Supplies: N/A

Contractual: The Town of Blacksburg will utilize 100% of the requested EC-SDC grant funds to contract with a qualified engineering firm to execute the three-phase Ground Water Source Evaluation.

Construction: N/A

Other: N/A

Indirect: N/A

Additional budget explanation, if needed:

The Town will utilize 100% of requested funds to contract with a qualified engineering and hydrogeological firm for a three-phase evaluation:

* Phase 1 ($255,000): Preliminary Hydrogeological Assessment including regional mapping, recharge analysis, and stream/well monitoring .

* Phase 2 ($633,000): Physical drilling of up to three (3) test wells and aquifer stress testing to confirm safe yield.

* Phase 3 (189,000.): Comprehensive treatability sampling, bench-scale blending evaluations (100/0, 75/25, 50/50 and 25/75 ratios), corrosion control studies, and completion of the certified PER .

10. Project Schedule

Develop a timeline and list of project milestones for the proposed project in the table below. Ensure that milestones are measurable and realistic, as they will be used to track and evaluate progress as the project continues. All projects are required to include quarterly progress reports on project milestones, which is already entered as Item 1, plus a final invoice / draw request and final closeout report, included as Item 25 (update this item number accordingly based upon the total number of project milestones identified). All other milestones should be listed using the number of the project month in which they will be completed (e.g. Month 5, not December 2027) or with a range indicating when the milestone will be worked on and completed (e.g. Months 9 - 14). Please note that these are months after the project starts, counted from the date of the last signature on the grant agreement.

Item	Month Number	Milestone
1	Quarterly	Submit progress reports per the terms of the grant agreement.
2	Month 1	Grant Agreement Executed
3	Month 2	Consultants Selected & Contracts Executed
4	Month 3	Project Kickoff Meeting
5	Month 3	Phase 1: Preliminary Hydrological Assessment Started
6	Month 7	Phase 1: Preliminary Hydrological Assessment Complete
7	Month 8	Phase 2: Test Well Drilling & Physical Evaluation Started
8	Month 9	Phase 2: Test Well Drilling & Physical Evaluation Complete
9	Month 9	Phase 3: Treatment Evaluation Stared
10	Month 13	Phase 3: Treatment Evaualtion Complete
11	Month 15	Phase 3: Prelimanary Engineering Report Complete
12	Month 15	Project Complete
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25	30 days after project completion	Submit final invoice / draw request, final budget report, and final closeout report to SCDES.

11. Confirmed Project Partners

A confirmed project partner is one that has committed time, materials, equipment, and/or other resources to the proposed project. List confirmed partnering organizations below and briefly describe the role / responsibility of each for the project. All organizations listed below must submit a signed Letter of Commitment on official letterhead associated with the organization. Organizations supporting the concept and outcome of the proposed project may submit a Letter of Support on official letterhead, but those organizations should not be listed here.

Please note:

- A PWS, as the primary type of organization for which EC-SDC Grant Program funding is intended to benefit, is encouraged to incorporate one or more confirmed project partners to enhance the overall outcome and reach of the proposed project but is not required to have any confirmed project partners.
- All EC-SDC Grant Program source water activities projects must include a public water system (PWS) utilizing the source waters within the project area to produce drinking water as a confirmed project partner. This requirement does not equate to a financial commitment by the PWS. It is in place solely to ensure that EC-SDC Grant Program funded source water activities are conducted in a manner that benefits the PWS, enabling the PWS to produce safer, cleaner drinking water that will be received by the small or disadvantaged community or communities the proposed project intends to help.

Town of Blacksburg, SC PWSID# SC1110002

12. Submittal Requirements

Submit a completed application form and all attachments via email as one or more PDF files to EC-SDC@des.sc.gov **prior to 5:00 PM ET on March 31, 2026**. Application materials submitted to any other address will not be considered. Email attachments cannot exceed a total of 20 MB – send multiple emails or include a file sharing link if needed for larger attachments. Confirmation emails will be sent from EC-SDC@des.sc.gov upon receipt of all proposal-related materials. If a confirmation email is not received within two business days after submitting the proposal, ensure that the submittal email was not marked undeliverable or is still in the outbox, then follow up with SCDES staff.

Applications must be received via email by 5:00 PM ET on March 31, 2026.

The application package must include:

(Check items off to ensure the inclusion of all necessary components.)

- ☑ **Application Form** – as a PDF file, with all applicable sections completed
- ☑ **Attachment A: Maps** - Submit as a PDF file
  - ☑ **A-1. Project Location Map**
    - ☑ Digitally created
    - ☑ Fits on 8.5" x 11" paper
    - ☑ Provides an overview of the entire project area
    - ☐ Legend of displayed features
    - ☑ Features to include: county boundaries, towns, waterbodies, HUC-12 watershed boundaries, source water boundaries, the PWS source water intake and/or public water supply well(s), and small or disadvantaged community or communities within the project area
    - ☑ If applicable, display the location of any sampling sites where the PFAS and/or other emerging contaminants to be addressed by the proposed project have previously been measured
    - ☑ Ensure there is an inset map referencing the location within the state
  - ☑ **A-2. Priority Area Map(s)**
    - ☑ Digitally created
    - ☑ Fits on 8.5" x 11" paper. This may require several maps / pages if multiple activity types are planned that cannot fit legibly onto a single map (study, planning & design, BMP implementation, etc.)
    - ☑ Identifies priority areas for specific activities within the project area
- ☐ **Attachment B: Letter(s) of Commitment** – Submit as a PDF file. Include a Letter of Commitment on official organizational letterhead from each confirmed project partner listed in Section 11. Multiple Letters of Commitment may be combined into a single PDF file.
- ☐ **Attachment C: Additional Information for Indirect Billing** – An organization intending to claim indirect costs must provide documentation and confirm in writing to the SCDES EC-SDC Grant Program that they operate according to an "indirect cost rate proposal" that conforms to the applicable "Cost Principles"

established under either OMB Circulars A-21, A-87, and A-22, or 2 CFR 200 Subpart E (applicable principles will be specified in an executed grant agreement). A copy of the current approved indirect rate agreement from the appropriate federal cognizant organization must be attached with any proposal including indirect costs. This applies to both the lead organization and any cooperating organization(s) receiving EC-SDC Grant Program funds. As a Subrecipient, if the Grantee (Subrecipient) utilizes an indirect cost rate, the Grantee (Subrecipient) must provide a current copy of the approved indirect cost rate letter from its federal cognizant agency OR use the de minimis rate as stated in 2 CFR 200.414(f). Otherwise, only direct charges will be allowed under the terms and conditions of this grant agreement.

13. References

List references, if applicable, including any existing planning or engineering documents utilized in the development of the project proposal.

Emerging Contaminants in Small of Disadvantaged Communities (ES-SDC) Grant Program

2026 Application – Additional Information

Section 6: Background

The Town of Blacksburg Public Water System (PWSID SC1110002) is a municipal "C" type system. It serves a growing population of 4,496 residents through 1,684 total service connections. The community is located in Cherokee County, which is a designated Tier 4 (Distressed) county, and is classified as a disadvantaged community. Because of this status, the Town faces significant financial hurdles in addressing water quality mandates and securing long-term public health protections.

Existing Source and Operational Demands

Currently, the Town of Blacksburg has zero independent water sources of its own. The system is 100% dependent on purchased surface water from the Gaffney Board of Public Works (GBPW). Based on the December 2023 Sanitary Survey, the system's operational demands are as follows:

- Average Day Demand (ADD): 0.470 MGD.
- Maximum Day Demand (MDD): 0.561 MGD.
- Purchased Capacity: The Town maintains a total purchased capacity of 1.0667 MGD through a master meter connection.

Emerging Contaminant Concerns and Public Health Risks

The primary driver for this evaluation is the documented presence of PFAS in the purchased water supply from GBPW (PWSID SC1110001). Recent UCMR 5 analytical data shown below in Table 1 for the Gaffney system confirms consistent detections of multiple PFAS compounds at levels that present a long-term exposure risk:

- PFOA: Detected at levels up to 18.0 ppt, significantly exceeding the EPA Maximum Contaminant Level (MCL) of 4.0 ppt.
- PFOS: Detected at levels up to 17.1 ppt, also well above the 4.0 ppt MCL.

- Other Detections: Sampling throughout 2025 has also recorded consistent levels of PFHxS (up to 6.0 ppt) and PFHxA (up to 5.1 ppt).

Exposure Risks and Mitigation Necessity

In addition to PFAS concerns, the Town has historically relied on system flushing as a corrective action for Total Trihalomethanes (TTHM) MCL exceedances. TTHMs are a common byproduct of disinfecting surface water. By transitioning to a local, high-quality groundwater source, the Town can eliminate the intake of PFAS-impacted water and significantly reduce the formation of disinfection byproducts, ensuring a safer and more reliable drinking water supply for its 4,496 citizens.

Table 1: Gaffney BPW UCMR 5 Data

PWS Name	Contaminant	Result (µg/L)	Collection Date
GAFFNEY BPW (1110001)	4:2 FTS	< MRL	3/13/2025
GAFFNEY BPW (1110001)	6:2 FTS	< MRL	3/13/2025
GAFFNEY BPW (1110001)	8:2 FTS	< MRL	3/13/2025
GAFFNEY BPW (1110001)	9Cl-PF3ONS	< MRL	3/13/2025
GAFFNEY BPW (1110001)	11Cl-PF3OUdS	< MRL	3/13/2025
GAFFNEY BPW (1110001)	ADONA	< MRL	3/13/2025
GAFFNEY BPW (1110001)	HFPO-DA	< MRL	3/13/2025
GAFFNEY BPW (1110001)	lithium	< MRL	3/13/2025
GAFFNEY BPW (1110001)	NEtFOSAA	< MRL	3/13/2025
GAFFNEY BPW (1110001)	NFDHA	< MRL	3/13/2025
GAFFNEY BPW (1110001)	NMeFOSAA	< MRL	3/13/2025
GAFFNEY BPW (1110001)	PFBA	< MRL	3/13/2025
GAFFNEY BPW (1110001)	PFBS	0.0032	3/13/2025
GAFFNEY BPW (1110001)	PFDA	< MRL	3/13/2025
GAFFNEY BPW (1110001)	PFDoA	< MRL	3/13/2025
GAFFNEY BPW (1110001)	PFEESA	< MRL	3/13/2025
GAFFNEY BPW (1110001)	PFHpA	0.0048	3/13/2025
GAFFNEY BPW (1110001)	PFHpS	< MRL	3/13/2025
GAFFNEY BPW (1110001)	PFHxA	0.0051	3/13/2025
GAFFNEY BPW (1110001)	PFHxS	0.0055	3/13/2025
GAFFNEY BPW (1110001)	PFMBA	< MRL	3/13/2025
GAFFNEY BPW (1110001)	PFMPA	< MRL	3/13/2025
GAFFNEY BPW (1110001)	PFNA	< MRL	3/13/2025
GAFFNEY BPW (1110001)	PFOA	0.018	3/13/2025
GAFFNEY BPW (1110001)	PFOS	0.0171	3/13/2025
GAFFNEY BPW (1110001)	PFPeA	0.0069	3/13/2025
GAFFNEY BPW (1110001)	PFPeS	< MRL	3/13/2025
GAFFNEY BPW (1110001)	PFTA	< MRL	3/13/2025
GAFFNEY BPW (1110001)	PFTrDA	< MRL	3/13/2025

GAFFNEY BPW (1110001)	PFUnA	< MRL	3/13/2025
GAFFNEY BPW (1110001)	4:2 FTS	< MRL	6/4/2025
GAFFNEY BPW (1110001)	6:2 FTS	< MRL	6/4/2025
GAFFNEY BPW (1110001)	8:2 FTS	< MRL	6/4/2025
GAFFNEY BPW (1110001)	9Cl-PF3ONS	< MRL	6/4/2025
GAFFNEY BPW (1110001)	11Cl-PF3OUdS	< MRL	6/4/2025
GAFFNEY BPW (1110001)	ADONA	< MRL	6/4/2025
GAFFNEY BPW (1110001)	HFPO-DA	< MRL	6/4/2025
GAFFNEY BPW (1110001)	lithium	< MRL	6/4/2025
GAFFNEY BPW (1110001)	NEtFOSAA	< MRL	6/4/2025
GAFFNEY BPW (1110001)	NFDHA	< MRL	6/4/2025
GAFFNEY BPW (1110001)	NMeFOSAA	< MRL	6/4/2025
GAFFNEY BPW (1110001)	PFBA	< MRL	6/4/2025
GAFFNEY BPW (1110001)	PFBS	0.0032	6/4/2025
GAFFNEY BPW (1110001)	PFDA	< MRL	6/4/2025
GAFFNEY BPW (1110001)	PFDoA	< MRL	6/4/2025
GAFFNEY BPW (1110001)	PFEESA	< MRL	6/4/2025
GAFFNEY BPW (1110001)	PFHpA	0.0051	6/4/2025
GAFFNEY BPW (1110001)	PFHpS	< MRL	6/4/2025
GAFFNEY BPW (1110001)	PFHxA	0.0048	6/4/2025
GAFFNEY BPW (1110001)	PFHxS	0.006	6/4/2025
GAFFNEY BPW (1110001)	PFMBA	< MRL	6/4/2025
GAFFNEY BPW (1110001)	PFMPA	< MRL	6/4/2025
GAFFNEY BPW (1110001)	PFNA	< MRL	6/4/2025
GAFFNEY BPW (1110001)	PFOA	0.0173	6/4/2025
GAFFNEY BPW (1110001)	PFOS	0.0156	6/4/2025
GAFFNEY BPW (1110001)	PFPeA	0.0055	6/4/2025
GAFFNEY BPW (1110001)	PFPeS	< MRL	6/4/2025
GAFFNEY BPW (1110001)	PFTA	< MRL	6/4/2025
GAFFNEY BPW (1110001)	PFTrDA	< MRL	6/4/2025
GAFFNEY BPW (1110001)	PFUnA	< MRL	6/4/2025
GAFFNEY BPW (1110001)	4:2 FTS	< MRL	9/11/2025
GAFFNEY BPW (1110001)	6:2 FTS	< MRL	9/11/2025
GAFFNEY BPW (1110001)	8:2 FTS	< MRL	9/11/2025
GAFFNEY BPW (1110001)	9Cl-PF3ONS	< MRL	9/11/2025
GAFFNEY BPW (1110001)	11Cl-PF3OUdS	< MRL	9/11/2025
GAFFNEY BPW (1110001)	ADONA	< MRL	9/11/2025
GAFFNEY BPW (1110001)	HFPO-DA	< MRL	9/11/2025
GAFFNEY BPW (1110001)	lithium	< MRL	9/11/2025
GAFFNEY BPW (1110001)	NEtFOSAA	< MRL	9/11/2025
GAFFNEY BPW (1110001)	NFDHA	< MRL	9/11/2025
GAFFNEY BPW (1110001)	NMeFOSAA	< MRL	9/11/2025
GAFFNEY BPW (1110001)	PFBA	< MRL	9/11/2025

GAFFNEY BPW (1110001)	PFBS	0.0034	9/11/2025
GAFFNEY BPW (1110001)	PFDA	< MRL	9/11/2025
GAFFNEY BPW (1110001)	PFDoA	< MRL	9/11/2025
GAFFNEY BPW (1110001)	PFEESA	< MRL	9/11/2025
GAFFNEY BPW (1110001)	PFHpA	0.0050	9/11/2025
GAFFNEY BPW (1110001)	PFHpS	< MRL	9/11/2025
GAFFNEY BPW (1110001)	PFHxA	0.0048	9/11/2025
GAFFNEY BPW (1110001)	PFHxS	0.0053	9/11/2025
GAFFNEY BPW (1110001)	PFMBA	< MRL	9/11/2025
GAFFNEY BPW (1110001)	PFMPA	< MRL	9/11/2025
GAFFNEY BPW (1110001)	PFNA	< MRL	9/11/2025
GAFFNEY BPW (1110001)	PFOA	0.0163	9/11/2025
GAFFNEY BPW (1110001)	PFOS	0.0133	9/11/2025
GAFFNEY BPW (1110001)	PFPeA	0.0054	9/11/2025
GAFFNEY BPW (1110001)	PFPeS	< MRL	9/11/2025
GAFFNEY BPW (1110001)	PFTA	< MRL	9/11/2025
GAFFNEY BPW (1110001)	PFTrDA	< MRL	9/11/2025
GAFFNEY BPW (1110001)	PFUnA	< MRL	9/11/2025

Evaluation of Regional Interconnection Alternatives

The Town is currently conducting a comprehensive water system assessment funded by the South Carolina Rural Infrastructure Authority (RIA). As part of this study, the Town is evaluated the feasibility of establishing new system interconnections with surrounding utility providers as well as the alternative of developing a local groundwater source. Preliminary findings from the RIA-funded study indicate that adjacent utilities do not possess the adequate infrastructure required to meet the Town's long-term water needs. Specifically, capacity constraints and significant line size limitations at the hydraulic extremities of neighboring systems prevent these utilities from providing the necessary volume for Blacksburg's residents. The cost to improve infrastructure in both the neighboring utility as well as Blacksburg's system for an adequate connection would be a significant financial burden to residence of Blacksburg. These preliminary findings confirm that the development of an independent, localized groundwater source is the most viable and sustainable long-term solution to ensure water security and mitigate PFAS exposure.

Section 7: Project Description

To eliminate the Town of Blacksburg's exposure to PFAS from its purchased surface water supply, this project proposes a comprehensive, three-phase engineering and hydrogeological evaluation. The objective is to evaluate the aquifer system underlying and surrounding the abandoned rock quarry property to develop a localized, safe, and traditional groundwater well system.

Phase 1: Preliminary Hydrogeologic Assessment

- Proposed Activities: This phase involves acquiring and analyzing hydrogeological information to define the framework of the local aquifer system.
    - Desktop Study & Mapping: The project team will review surficial geologic maps, well records, South Carolina Geological Survey reports, USGS studies, and SCDES Hydrology Section publications.
    - Field Investigation: Onsite surface geologic mapping will be conducted to characterize structures (faults and fractures) that contribute to groundwater flow. This data will be digitized into a GIS base map to develop a conceptual groundwater model.
    - Recharge & Streamflow Analysis: A groundwater recharge analysis of the contributing watershed will be performed. The team will locate existing USGS/SCDNR stream gaging stations and monitoring wells to conduct a streamflow/mass balance analysis.
    - Monitoring Enhancements: To refine the conceptual model, the project will fund the installation of additional stream gaging stations, surface water level monitoring devices, and groundwater level transducers. Pumping tests will also be conducted on existing wells identified in the assessment area to directly quantify groundwater contributions.
- Benefit & Justification: Phase 1 systematically quantifies the available groundwater within the Town's territory. By deeply understanding the fracture network and watershed recharge rates, the Town minimizes the financial risk of drilling "dry holes" and ensures the targeted aquifer can sustain the community's long-term demands.

Phase 2: Test Well Drilling & Physical Evaluation

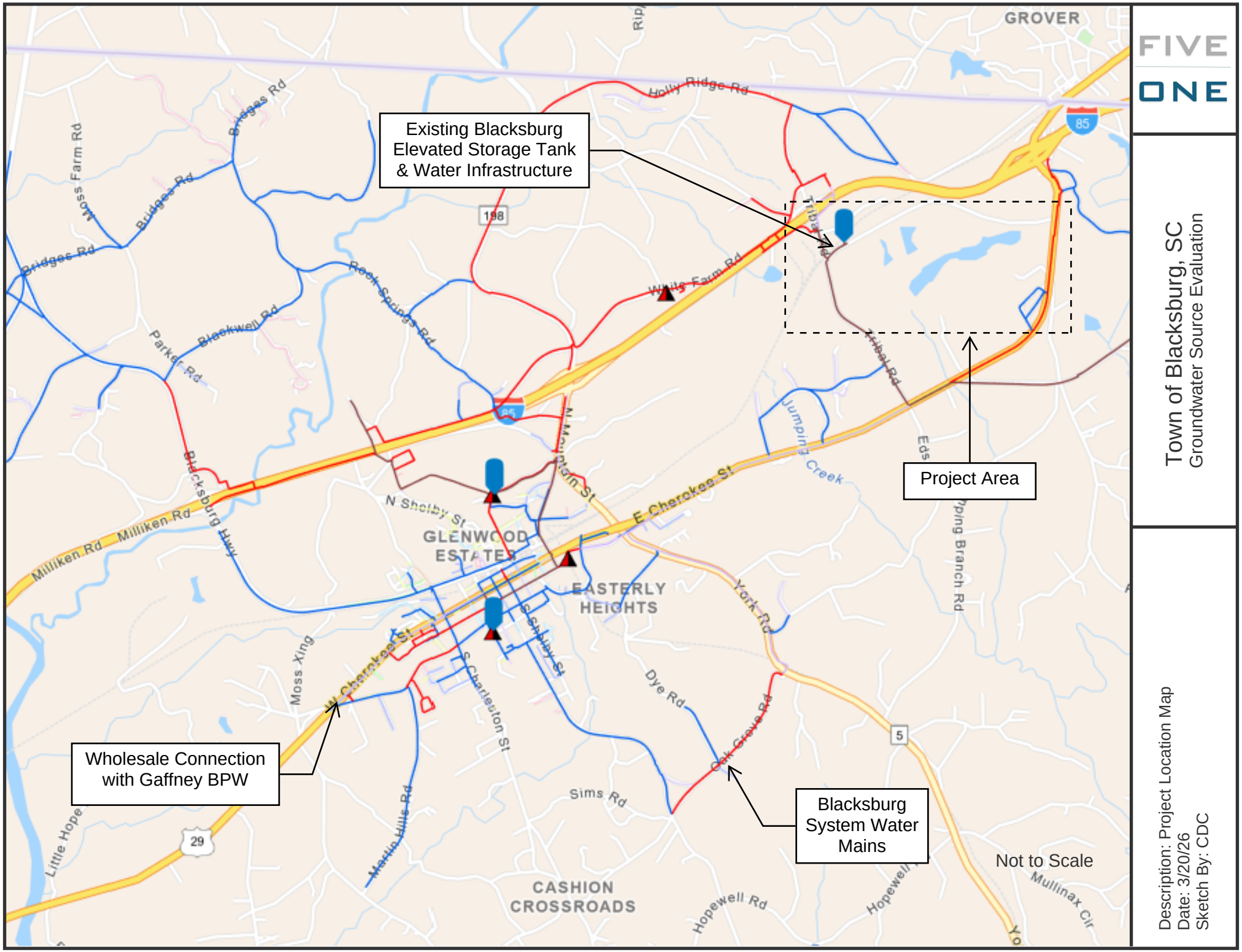
- Proposed Activities: Based on the high-probability targets identified in the Phase 1 GIS and conceptual models, the engineering team will oversee the physical drilling of up to three (3) test wells. Following construction, rigorous drawdown and aquifer stress testing will be performed on these test wells to physically evaluate the exact volume of water that can be reliably pulled from the aquifer.
- Benefit & Justification: Drilling test wells physically validates the conceptual data. By confirming the "Safe Yield" of the aquifer across three different points, the Town can guarantee the new well system is viable before advancing to the highly expensive design and construction of large-diameter production wells.

Phase 3: Treatability Evaluation, Blending Study, & PER

- Proposed Activities: Raw groundwater from the successful test wells will undergo comprehensive treatability sampling. A bench-scale blending evaluation will mix the new groundwater with the existing Gaffney BPW surface water at four specific ratios: 100/0, 75/25, 50/50, and 25/75. A critical component of this phase is a dedicated corrosion control study to evaluate how these various blending ratios affect the orthophosphate passivation layer currently established by the Gaffney BPW water source.
- Benefit & Justification: Introducing a new water chemistry into an older distribution system can dissolve existing pipe scale, risking lead and copper leaching. This blending and corrosion study ensures "simultaneous compliance," protecting residents from heavy metal exposure while mitigating the primary PFAS threat.
- Final Deliverable: All findings from Phases 1, 2, and 3 will be rolled into a Preliminary Engineering Report (PER). This PER will serve as the formal basis of design for the Town to secure future construction funding.

Attachment A

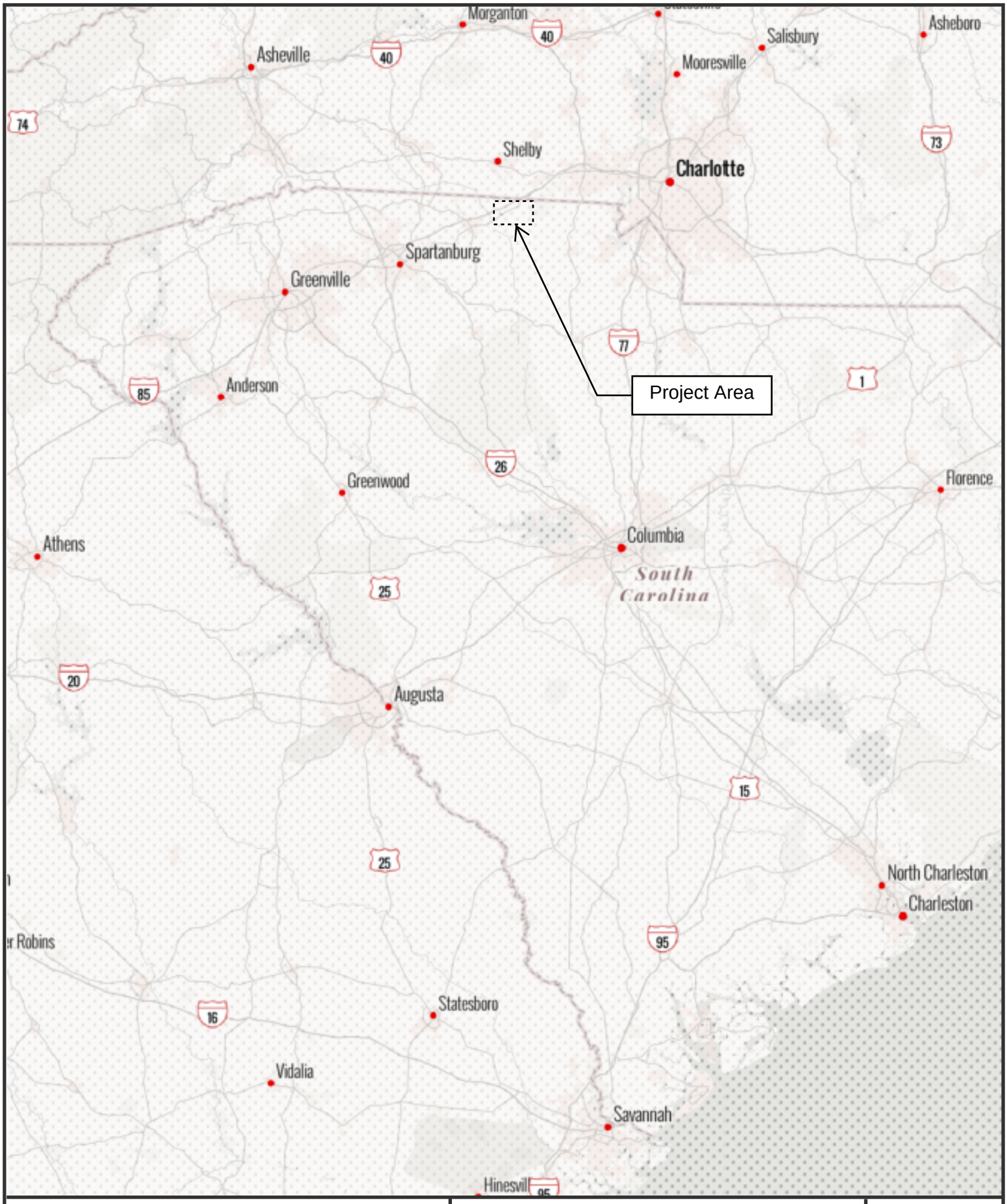
(Maps)



FIVE ONE

Town of Blacksburg, SC
Groundwater Source Evaluation

Description: Project Location Map
Date: 3/20/26
Sketch By: CDC



Description: Project Location Map #2
Date: 3/20/26
Sketch By: CDC

Town of Blacksburg, SC
Groundwater Source Evaluation

FIVE ONE