SECTION A: Project Planning Elements		
A1. Title (*Project Name*):	Lake Conestee Phase 2	
Project Location:	Greenville (Greenville County), SC	
Originating Organization:	SCDHEC Federal & State Site Assessment Section	
SCDHEC Section Manager	Robert Cole, FSSA Section Manager	
Section Manager's Signature		Date: 09/04/2020
Project Manager's Name, Position, and Organization:	Jason C. Williams, Environmental Health Manager – SCDHEC	
Project Manager's Signature:		Date: 09/04/2020
EPA Project Manager's Name and Position:	Alayna Famble, Site Assessment Manager- U.S. EPA	
EPA Project Manager's Signature:	ALAYNA FAMBLE Digitally signed by ALAYNA FAMBLE Date: 2020.09.23 15:24:26 -04'00'	Date: 9/23/2020

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A2. Table of Contents	**A1. Title (*Project Name*): 1** **A2. Table of Contents 2** **A3. Distribution List 3** **A4. Project Personnel 3** **A5. Background: 4** **A6. Project Description: 4** **A7. Quality Objectives and Criteria 5** **A8. Special Training/Certifications 5** **A9. Documents and Records 5** *SECTION B: Data Generation and Acquisition* ***Error! Bookmark not defined.*** **B1. Sampling Design** Error! Bookmark not defined. **B2. Sampling Methods, General Procedures 12** **B3. Sampling Handling and Custody 12** **B4. Analytical Methods 12** **B5. Quality Control 13** **B6. Instrument/Equipment Testing, Inspection and Maintenance 13** **B7. Instrument/Equipment Calibration and Frequency 13** **B8. Inspection/Acceptance for Supplies and Consumables 13** **B9. Non-direct Measurements 13** **B10. Data Management 13** **C1. Assessments and Response Actions 14** **C2. Reports to Management 14** **D1. Data Review, Verification, and Validation 14** **D2. Verification and Validation Methods 14** **D3. Reconciliation with User Requirements 14**

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A3. Distribution List	SCDHEC: Sampling Team, Waste Assessment 2600 Bull St Columbia, SC 29201 USEPA: 61 Forsyth St SW # 9, Atlanta, GA 30303	
A4. Project Personnel	Organization	Responsibilities
Jason C Williams	SCDHEC	Project Manager
Robert Cole	SCDHEC	SCRIBE
Tim Kadar	SCDHEC	Sampling
Ben Bair	SCDHEC	Sampling
Evan Ethridge	SCDHEC	Sampling
Jarrett Wilson	SCDHEC	Sampling
Ray Holberger	SCDHEC	Sampling
Comments:		
Organization Chart: Refer to SCDHEC Site Assessment Program Level QAPP		

A5. Background:	Lake Conestee Site is comprised of the present-day Lake Conestee, an approximately 17 mile stretch of the Reedy River from Watkins Bridge Rd to Ashmore Bridge Rd, and the historical footprint of the lake which is largely now a nature preserve. The historically 135-acre (now 95% silted-in) lake was created when a dam was built on the Reedy River in 1892 to power an adjacent mill. Since that time, the lake has received industrial and municipal wastewater discharge from the upstream watershed. Several environmental sampling events at the lake have shown the historical lake sediments to contain metals, semi-volatile compounds, polycyclic aromatic hydrocarbons, pesticides, and PCBs above human health and ecological screening standards. A Preliminary Assessment conducted by the USEPA in 2019 recommended that a Site Inspection should be conducted at the site. Refer to the 2019 PA for an overview of previous investigations of the site. During the week of August 8, 2020, sediment sampling was conducted around the historical footprint of Lake Conestee and part of the Reedy River from the Nature Preserve's upstream boundary to approximately 2.2 river miles below the lake. This sampling was the first phase of sampling for this Site Investigation. The Site is used as a recreational fishery. It is currently unknown if harvested fish are consumed. Other species, such as frogs have recently been collected for consumption. Approximately 5.5 river miles of wetlands extent along the river from Watkins Bridge Rd to the Lake Conestee Dam.
A6. Project Description:	Under the authority of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the Superfund Amendments and Reauthorization Act of 1986 (SARA), the site Assessment Section, South Carolina Department of Health & Environmental Control will continue the Site Inspection at the above listed site. For this study, environmental sampling will concentrate on the Surface Water Pathway. The Surface Water Pathway will be evaluated to determine nature and concentrations of historical contamination from the numerous industrial and municipal discharges into the Reedy River. Sediment samples will be collected from the Reedy River from Watkins's Bridge Rd to the border of Lake Conestee Nature Preserve. Sampling locations were selected for their proximity to facilities know to discharge into the river (e.g Cone Mills) and areas that may have received runoff and discharges from multiple sources. Each sampling location will consist of a shallow sample, to be collected from 0-8" and a deep sample to be collected from 8-16". The Soil Exposure, Groundwater and Air Pathway will not be evaluated at this time.

	Sampling at the site will be conducted the week of September 28, 2020.
Decision(s) to be made based on data:	The information gathered from this investigation will be used to decide if the site needs further evaluation under federal Superfund or if it should be managed by some other program area.
Applicable regulatory information, actions levels, etc.	Refer to SCDHEC Site Assessment Program Level QAPP
Field Study Date:	September 28-Oct 1, 2020
Projected Lab Completion Date:	Late Oct 2020
Final Report Completion Date:	Dec 2020.

A7. Quality Objectives and Criteria

All media samples collected in this study will be analyzed for the following:

- SOM01.2 Semivolatile Target Compound List as listed at http://www.epa.gov/superfund/programs/clp/som-svtarget.htm
- SOM01.2 Pesticides/Aroclors Target Compound List as listed at http://www.epa.gov/superfund/programs/clp/som-ptarget.htm
- ILM05.3/ILM05.4 Metals and Cyanide Target Analyte List (ICP-MS + Hg & Cn) as listed at http://www.epa.gov/superfund/programs/clp/mtarget.htm
- Dioxins

All media samples will be analyzed at low concentrations.
Refer to SCDHEC Site Assessment Program Level QAPP.

A8. Special Training/Certifications

Refer to SCDHEC Site Assessment Program Level QAPP

A9. Documents and Records

Refer to SCDHEC Site Assessment Program Level QAPP.

All field observations, measurements and sampling activities supporting the field investigation will be recorded and documented according to the SESD *Operating Procedure for Logbooks*, SESDPROC-010-R3 and the SCDHEC SOP&QA Manual.

Wetland areas were located using SCDHEC's Bureau of Water's GIS watershed mapping system (https://gis.dhec.sc.gov/watersheds/) and federal Fish and Wildlife Service Wetlands Inventory maps (https://www.fws.gov/wetlands/data/mapper.html). Verification of wetlands will occur at a later date.

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B1. Sampling Design Refer to SCDHEC Site Assessment Program Level QAPP.			
Sample Number	**Sample Media**	**Analyses**	**Location/Rationale**
LCP-201-SSD/DSD	Sediment Shallow 0-8” Deep 8-16”	SVOA (Low Soil) ICP-AES Metals Mercury Aroclors Pesticides	Location: Reedy River below Watkins Bridge Rd Rationale: Control Sample for Reedy River Wetland Sample
LCP-202-SSD/DSD	Sediment Shallow 0-8” Deep 8-16”	SVOA (Low Soil) ICP-AES Metals Mercury Aroclors Pesticides	Location: Little Creek prior to confluence with the Reedy Rationale: Control Sample Little Creek Wetland Sample
LCP-203-SSD/DSD	Sediment Shallow 0-8” Deep 8-16”	SVOA (Low Soil) ICP-AES Metals Mercury Aroclors Pesticides	Location: 34.891234° -82.440489° Reedy River Rationale: Determine if there has been an impact to the Surface Water Pathway from historical discharges into the Reedy River Wetland Sample
LCP-204-SSD/DSD	Sediment Shallow 0-8” Deep 8-16”	SVOA (Low Soil) ICP-AES Metals Mercury Aroclors Pesticides	Location: 34.891289°-82.440799° Tributary of Reedy Rationale: Control Sample Wetland Sample
LCP-205-SSD/DSD	Sediment Shallow 0-8” Deep 8-16”	SVOA (Low Soil) ICP-AES Metals Mercury Aroclors Pesticides	Location: 34.883338° -82.436022° Depositional bank of Reedy Rationale: Determine if there has been an impact to the Surface Water Pathway from historical discharges into the Reedy River

			Wetland Sample
LCP-206-SSD/DSD	Sediment Shallow 0-8” Deep 8-16”	SVOA (Low Soil) ICP-AES Metals Mercury Aroclors Pesticides	Location: 34.879822°-82.432330° Historical river deposition area Rationale: Determine if there has been an impact to the Surface Water Pathway from historical discharges into the Reedy River Wetland Sample
LCP-207-SSD/DSD	Sediment Shallow 0-8” Deep 8-16”	SVOA (Low Soil) ICP-AES Metals Mercury Aroclors Pesticides	Location: 34.878190° -82.428857° Langston Creek Rationale: Control Sample Wetland Sample
LCP-208-SSD/DSD	Sediment Shallow 0-8” Deep 8-16”	SVOA (Low Soil) ICP-AES Metals Mercury Aroclors Pesticides	Location: Reedy River Below Langston Creek Rationale: Determine if there has been an impact to the Surface Water Pathway from historical discharges into the Reedy River Wetland Sample
LCP-209-SSD/DSD	Sediment Shallow 0-8” Deep 8-16”	SVOA (Low Soil) ICP-AES Metals Mercury Aroclors Pesticides	Location: 34.873820° -82.424577° Reedy River Rationale: Determine if there has been an impact to the Surface Water Pathway from historical discharges into the Reedy River Wetland Sample
LCP-210-SSD/DSD	Sediment Shallow 0-8” Deep 8-16”	SVOA (Low Soil) ICP-AES Metals Mercury Aroclors Pesticides	Location: 34.872736°-82.420439° Tributary to Reedy at Old Bleachery Rd Rationale: Control
LCP-211-SSD/DSD (SSD MS/MSD)	Sediment Shallow 0-8” Deep 8-16”	SVOA (Low Soil) ICP-AES Metals Mercury Aroclors Pesticides	Location: 34.869306°-82.420749° Reedy above Hampton Ave Rationale: Determine if there has been an impact to the Surface Water Pathway from historical discharges into the Reedy River
LCP-212-SSD/DSD	Sediment Shallow 0-8”	SVOA (Low Soil) ICP-AES Metals	Location: 34.865079°-82.420095° Reedy Below W Washington

	Deep 8-16”	Mercury Aroclors Pesticides	Rationale: Determine if there has been an impact to the Surface Water Pathway from historical discharges into the Reedy River
LCP-213-SSD/DSD	Sediment Shallow 0-8” Deep 8-16”	SVOA (Low Soil) ICP-AES Metals Mercury Aroclors Pesticides	Location: 34.864840° -82.421039° Stream leaving former JP Stevens facility Rationale: Determine if there has been an impact to the Surface Water Pathway from historical discharges into the Reedy River
LCP-014-SSD/DSD	Sediment Shallow 0-8” Deep 8-16”	SVOA (Low Soil) ICP-AES Metals Mercury Aroclors Pesticides	Location: 34.860698°-82.421253° Reedy above E Bramlett Rd Rationale: Determine if there has been an impact to the Surface Water Pathway from historical discharges into the Reedy River
LCP-215-SSD/DSD	Sediment Shallow 0-8” Deep 8-16”	SVOA (Low Soil) ICP-AES Metals Mercury Aroclors Pesticides	Location: 34.860776°-82.420140° Stream on Bramlett Rd leaving area near former MGP location Rationale: Determine if there has been an impact to the Surface Water Pathway from historical discharges into the Reedy River Wetland Sample
LCP-216-SSD/DSD	Sediment Shallow 0-8” Deep 8-16”	SVOA (Low Soil) ICP-AES Metals Mercury Aroclors Pesticides	Location: 34.858972° -82.420474° Reedy at old railroad spur Rationale: Determine if there has been an impact to the Surface Water Pathway from historical discharges into the Reedy River Wetland Sample

Wetland Sample

LCP-217-SSD/DSD	Sediment Shallow 0-8” Deep 8-16”	SVOA (Low Soil) ICP-AES Metals Mercury Aroclors Pesticides	Location: 34.856864°-82.419513° Long Branch prior to confluence with Reedy Rationale: Control Wetland Sample
LCP-218-SSD/DSD	Sediment Shallow 0-8” Deep 8-16”	SVOA (Low Soil) ICP-AES Metals Mercury Aroclors Pesticides	Location 34.855104° -82.416253° Stream adjacent to rail yard at Willard St Rationale: Determine if there has been an impact to the Surface Water Pathway from historical discharges into the Reedy River Wetland Sample
LCP-219-SSD/DSD	Sediment Shallow 0-8” Deep 8-16”	SVOA (Low Soil) ICP-AES Metals Mercury Aroclors Pesticides	Location: 34.854621°-82.416428° Reedy at Willard St Rationale: Determine if there has been an impact to the Surface Water Pathway from historical discharges into the Reedy River Wetland Sample
LCP-220-SSD/DSD	Sediment Shallow 0-8” Deep 8-16”	SVOA (Low Soil) ICP-AES Metals Mercury Aroclors Pesticides	Location: 34.849103°-82.408353° Tributary to Reedy Rationale: Control
LCP-221-SSD/DSD	Sediment Shallow 0-8” Deep 8-16”	SVOA (Low Soil) ICP-AES Metals Mercury Aroclors Pesticides	Location: 34.848545° -82.407016° Reedy at Westfield St Rationale: Determine if there has been an impact to the Surface Water Pathway from historical discharges into the Reedy River
LCP-222-SSD/DSD (SSD MS/MSD)	Sediment Shallow 0-8” Deep 8-16”	SVOA (Low Soil) ICP-AES Metals Mercury Aroclors Pesticides	Location: 34.849447°-82.403857° Reedy at Linky Stone Park Rationale: Determine if there has been an impact to the Surface Water Pathway from historical discharges into the Reedy River
LCP-223-SSD/DSD	Sediment Shallow 0-8” Deep 8-16”	SVOA (Low Soil) ICP-AES Metals Mercury	Location: 34.844005°-82.401830°- Tributary to Reedy

		Aroclors Pesticides	Rationale: Control
LCP-224-SSD/DSD	Sediment Shallow 0-8” Deep 8-16”	SVOA (Low Soil) ICP-AES Metals Mercury Aroclors Pesticides	Location: 34.844036° -82.399987° Reedy below old Camperdown Mill Rationale: Determine if there has been an impact to the Surface Water Pathway from historical discharges into the Reedy River
LCP-225-SSD/DSD	Sediment Shallow 0-8” Deep 8-16”	SVOA (Low Soil) ICP-AES Metals Mercury Aroclors Pesticides	Location: 34.841269° -82.398347° Reedy Between S Church St and Cleveland St Rationale: Determine if there has been an impact to the Surface Water Pathway from historical discharges into the Reedy River
LCP-226-SSD/DSD	Sediment Shallow 0-8” Deep 8-16”	SVOA (Low Soil) ICP-AES Metals Mercury Aroclors Pesticides	Location 34.844332° -82.393180° Brook at E Broad St Rationale: Control
LCP-227-SSD/DSD	Sediment Shallow 0-8” Deep 8-16”	SVOA (Low Soil) ICP-AES Metals Mercury Aroclors Pesticides	Location 34.845362° -82.387320° Richland Creek prior to confluence with Reedy Rationale: Control
LCP-228-SSD/DSD (DSD MS/MSD)	Sediment Shallow 0-8” Deep 8-16”	SVOA (Low Soil) ICP-AES Metals Mercury Aroclors Pesticides	Location 34.835553° -82.381142° Reedy River, depositional bank Rationale: Determine if there has been an impact to the Surface Water Pathway from historical discharges into the Reedy River
LCP-229-SSD/DSD	Sediment Shallow 0-8” Deep 8-16”	SVOA (Low Soil) ICP-AES Metals Mercury Aroclors Pesticides	Location 34.835080°-82.379152° Stream at Alameda St Rationale: Control
LCP-230-SSD/DSD	Sediment Shallow 0-8” Deep 8-16”	SVOA (Low Soil) ICP-AES Metals Mercury Aroclors Pesticides	Location: 34.828658° -82.375735° Tributary at Greenville Tech CHS Rationale: Control

LCP-231-SSD/DSD	Sediment Shallow 0-8” Deep 8-16”	SVOA (Low Soil) ICP-AES Metals Mercury Aroclors Pesticides	Location: 34.822099°-82.375100° Reedy River above Country Club Rationale: Determine if there has been an impact to the Surface Water Pathway from historical discharges into the Reedy River
LCP-232-SSD/DSD	Sediment Shallow 0-8” Deep 8-16”	SVOA (Low Soil) ICP-AES Metals Mercury Aroclors Pesticides	Location: 34.809450°-82.368363° Reedy below S Pleasantburg Dr Rationale: Determine if there has been an impact to the Surface Water Pathway from historical discharges into the Reedy River
LCP-233-SSD/DSD	Sediment Shallow 0-8” Deep 8-16”	SVOA (Low Soil) ICP-AES Metals Mercury Aroclors Pesticides	Location: 34.810484°-82.366238° Creek at intersection of Halidon Rd and Rockingham Rd Rationale: Control
LCP-234-SSD/DSD	Sediment Shallow 0-8” Deep 8-16”	SVOA (Low Soil) ICP-AES Metals Mercury Aroclors Pesticides	Location: 34.803396° -82.363680° Stream at Parkins Mill Rd Rationale: Control
LCP-235-SSD/DSD	Sediment Shallow 0-8” Deep 8-16”	SVOA (Low Soil) ICP-AES Metals Mercury Aroclors Pesticides	Location: 34.798895°-82.364494° Reedy at Mauldin Rd Rationale: Determine if there has been an impact to the Surface Water Pathway from historical discharges into the Reedy River Wetland Sample
LCP-236-SSD/DSD	Sediment Shallow 0-8” Deep 8-16”	SVOA (Low Soil) ICP-AES Metals Mercury Aroclors Pesticides	Location: 34.796356°-82.365719° Reedy at WWTP Rationale: Determine if there has been an impact to the Surface Water Pathway from historical discharges into the Reedy River Wetland Sample
LCP-237-SSD/DSD	Sediment Shallow 0-8” Deep 8-16”	SVOA (Low Soil) ICP-AES Metals Mercury Aroclors Pesticides	Location: 34.791578°-82.365496° Brush Creek at Swamp Rabbit trail Bridge Rationale: Control Wetland Sample

LCP-238-SSD/DSD	Sediment Shallow 0-8” Deep 8-16”	SVOA (Low Soil) ICP-AES Metals Mercury Aroclors Pesticides	Location: 34.789089°-82.360983° Low area between WWTP and Landfill Rationale: Determine if there has been an impact to the Surface Water Pathway from historical discharges into the Reedy River Wetland Sample
LCP-239-SSD/DSD	Sediment Shallow 0-8” Deep 8-16”	SVOA (Low Soil) ICP-AES Metals Mercury Aroclors Pesticides	Location: 34.786725° -82.361395° Reedy Below Landfill Rationale: Determine if there has been an impact to the Surface Water Pathway from historical discharges into the Reedy River Wetland Sample

Volume, Holding Time, and Preservation Requirements. See SCDHEC Site Assessment Program Level QAPP

Maps or Diagrams with sample locations: See Attached

B2. Sampling Methods, General Procedures

Refer to SCDHEC Site Assessment Program Level QAPP.

B3. Sampling Handling and Custody

All samples will be handled and custody maintained in accordance with the SESD *Operating Procedure for Sample Evidence Management*, SESDPROC-005-R1 and the SCDHEC SOP&QA Manual.

Refer to SCDHEC Site Assessment Program Level QAPP.

B4. Analytical Methods

SESD:	Suggested references are found at http://epa.gov/region4/sesd/asbsop/asb-loqam.pdf
CLP:	Suggested references are found at www.epa.gov/superfund/programs/clp.
Other:	

B5. Quality Control

Field:	Refer to SCDHEC Site Assessment Program Level QAPP.
Laboratory:	Refer to SCDHEC Site Assessment Program Level QAPP and selected CLP QA/QC.

B6. Instrument/Equipment Testing, Inspection and Maintenance

Refer to SCDHEC Site Assessment Program Level QAPP.

B7. Instrument/Equipment Calibration and Frequency

Refer to SCDHEC Site Assessment Program Level QAPP.

B8. Inspection/Acceptance for Supplies and Consumables

Refer to SCDHEC Site Assessment Program Level QAPP.

B9. Non-direct Measurements

Refer to SCDHEC Site Assessment Program Level QAPP.

B10. Data Management

The project manager will be responsible for ensuring that all requirements for data management are met. All data generated for this field investigation, whether hand-recorded or obtained using an electronic data logger will be recorded, stored and managed according to the following procedures:

SESD Operating Procedure for Control of Records, SESDPROC-002-R3. *SESD Operating Procedures for Logbooks,* SESDPROC-010-R3.

Refer to SCDHEC Site Assessment Program Level QAPP.

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SECTION C: Assessment/Oversight

C1. Assessments and Response Actions

Assessments will be conducted during the field investigation according to the *SESD Operating Procedure for Project Planning*, SESDPROC-016-R1 to ensure the QAPP is being implemented as approved. The Project Manager is responsible for all corrective actions while in the field.

Refer to SCDHEC Site Assessment Program Level QAPP.

C2. Reports to Management

The SCDHEC Project Manager (PM), Jason C. Williams will be responsible for notifying the EPA Project Manager, Alayna Famble if any circumstances arise during the field investigation that may adversely impact the quality of the data collected. SCDHEC PM will prepare said report and send to EPA PM for review.

SECTION D: Data Validation and Usability

D1. Data Review, Verification, and Validation

Refer to SCDHEC Site Assessment Program Level QAPP.

D2. Verification and Validation Methods

Refer to SCDHEC Site Assessment Program Level QAPP.

D3. Reconciliation with User Requirements

Refer to SCDHEC Site Assessment Program Level QAPP.

****Footnotes**: This Quality Assurance Project Plan (QAPP) has been prepared and approved according to the EPA *Requirements for Quality Assurance Project Plans (EPA QA/R5 EPA/240/B-01/003)*, U.S. Environmental Protection Agency, Office of Environmental Information, Washington, DC, March 2001(USEPA, 2001). This document will be used to ensure that the environmental data collected for this project are of the type and quality for the intended purposes.

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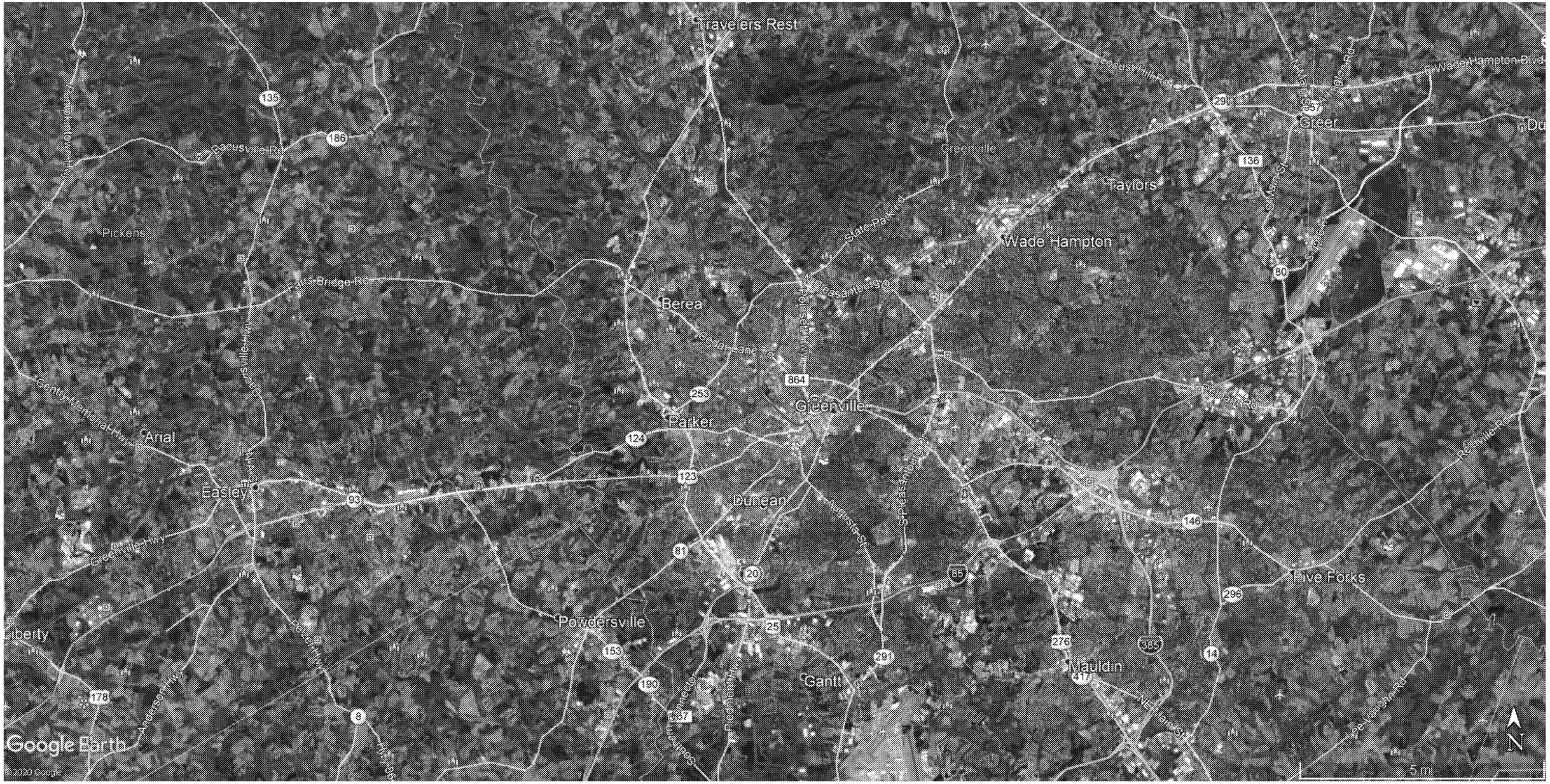

Figure 1. Site Location - Reedy River in Blue

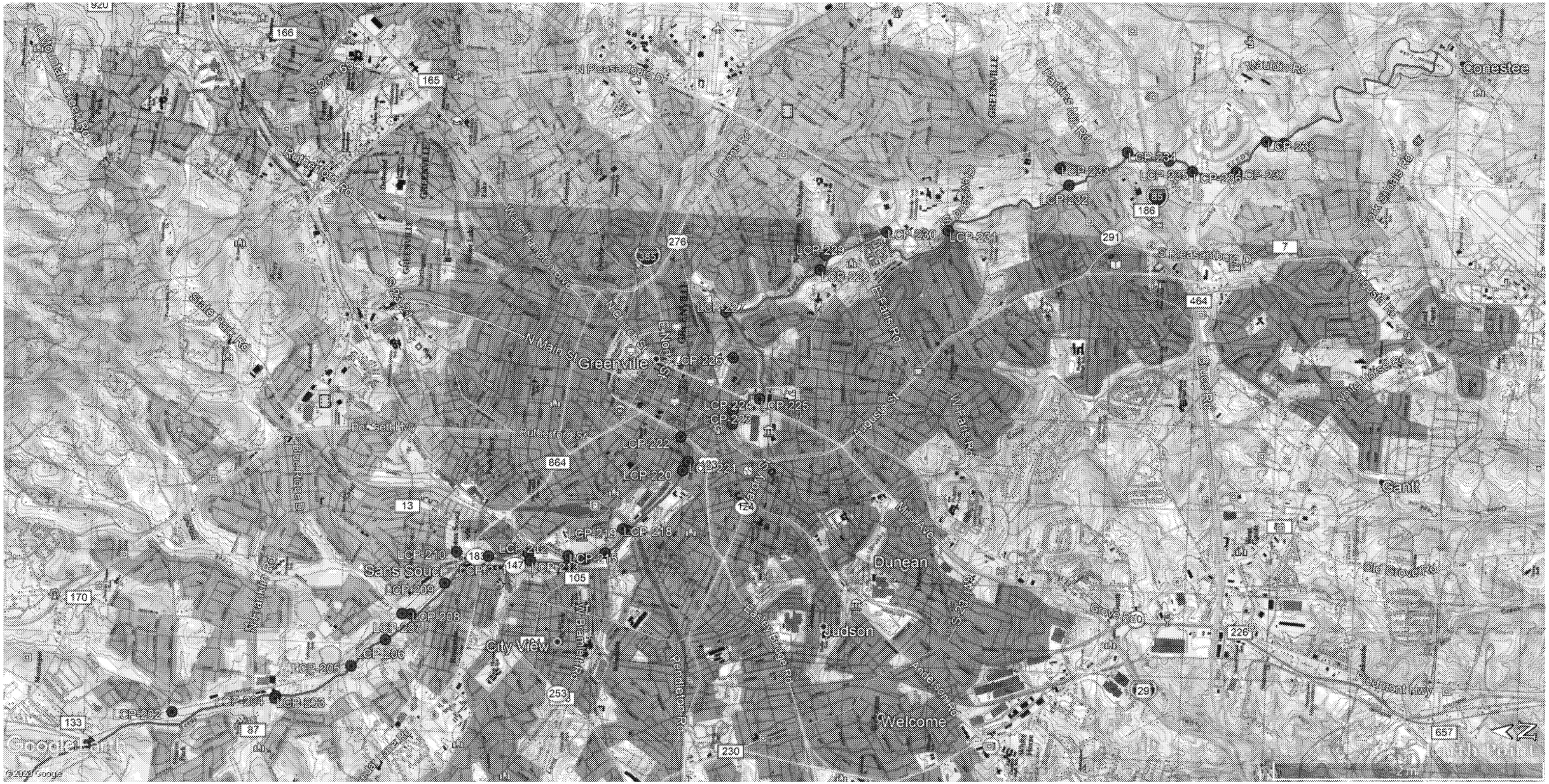
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Figure 3. Aerial Photograph with Sampling Locations