



**Resource Protection Group, Inc. – Reston Stream Monitoring  
PROGRESS REPORT**

**For Period Oct 1, 2020 through Dec 31, 2020**

**PROJECT NUMBER:** GC21LM00TZA0000

**PERSONNEL:** Brendan M. Foster

**COOPERATOR:** Resource Protection Group, Inc.

**START DATE:** October 1<sup>st</sup>, 2020

**END DATE:** September 30<sup>th</sup>, 2025

**OBJECTIVES:**

This monitoring program seeks to measure and evaluate system-wide hydrologic, water-chemistry, and ecologic responses to enhanced stream restoration practices, with a focus on the stream environments and practices employed in Snakeden Branch and The Glade, in Reston, Virginia. Specifically, this program will:

1. Initiate and conduct precipitation, streamflow, water-quality, and ecological monitoring at multiple locations in the Snakeden Branch and The Glade for:
  - a. Two years before enhanced stream restoration practices are implemented,
  - b. Two years during implementation of enhanced stream restoration practices, and
  - c. Two years after implementation of enhanced stream restoration practices;
2. Make all monitoring data available to other researchers and the public expeditiously via the USGS National Water Information System Web Interface (NWISWeb; <https://waterdata.usgs.gov>) and other formal data outlets; and
3. Provide peer-reviewed documentation of the findings of the monitoring program.

**PROGRESS DURING PERIOD:**

**SITES:**

1. A reconnaissance team was assembled and made multiple trips to the Snakeden Branch and The Glade watersheds to determine exact site location for all equipment to be deployed.

2. Elevation and other data of Lake Audubon was acquired from cooperator and partner to determine the distance upstream required for Snakeden Branch monitoring location to avoid backwater effects.
3. 100-year water surface elevation estimations of Snakeden Branch and The Glade were acquired from cooperator to aid in site location decisions.
4. Final site locations for the stream monitoring stations and precipitation gage were finalized.
5. CAD files of Snakeden Branch and The Glade watersheds containing existing infrastructure and 100-year floodplain were acquired from cooperator to aid in the process of getting AC power to stations.
6. Station designs and construction documents were prepared in accordance with the Reston Association Design Review Board.
7. Reston Association Design Review Board application and supplemental materials were submitted.

#### **EQUIPMENT:**

1. Equipment needed for project was enumerated and an accounting of items was completed to determine if any items were outstanding.
2. Outstanding equipment needed for project were ordered and delivered.
3. Equipment was setup and tested in the lab and test bench in the USGS Richmond office of the Virginia-West Virginia Water Science Center to prepare for deployment.

#### ***PLANS FOR NEXT QUARTER:***

1. Deploy all monitoring stations.
2. Serve real-time continuous data on NWIS.
3. Produce and serve project webpage.