

Stream RFP #07 – Supplemental Water Quality Sampling for Combined Reston Mussel Stocking x Stream Monitoring Program

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

For Period October 1, 2024 through December 31, 2024

PROJECT NUMBER: RPG Stream RFP #7

PERSONNEL: Sally Entrekin, Ryan Stewart, Jess Jones, Paul Angermeier

COOPERATOR: Resource Protection Group, Inc.

Project START DATE: May 1st, 2024

Project END DATE: December 31st, 2025

OBJECTIVES:

We will quantify biogeochemical effects of reintroducing native unionid mussels into two restored urban headwater streams in Reston, Virginia - Snakeden Branch and The Glade. We have scientists with expertise in mussel establishment and population dynamics, biogeochemistry and ecology as experts for each of the key components of the stated needs of Resource Protection

Group, Inc. Our study will provide a year and a half of bimonthly sampling at baseflow (June 2024-December 2025) during the ongoing mussel reintroduction as a way to provide a more detailed analysis of how mussel beds in the restoration streams are altering nutrient processing, water quality, and biological communities. We are already measuring and analyzing individual mussel biogeochemistry, and here we proposed to measure water and sediment nutrients in the downstream reaches with the established mussel beds, and at the upstream control stream reach in both streams to scale the mussel nitrogen and phosphorus nutrient cycling effect.

PROGRESS DURING REPORTING PERIOD:

1. We sampled water 9 times since study initiation.
2. All data have been processed by the VT Water Lab
3. A list of sample dates and sample locations are available in this [google document](#) that will be kept up to date.

PLANS FOR NEXT QUARTER:

1. We will continue taking bi-monthly water samples at the control and mussel-added streams and aiming to sample as close to baseflow as possible.
2. We will sample for periphyton and benthic organic matter in April.

Revised list of stream sites, reaches and events currently sampled (as of February 12, 2025)

Stream	Reach	Pools	Sample #/event	Total Events	Total Samples
Snakeden Run	Control	1	1	36	36
	Treatment	1	1	36	36
	Tributary above gaging station outflow(began sampling on 8/12/2024)	1	1	36	36
Glade Run	Control	1	1	36	36
	Treatment	1	1	36	36
Grand totals	5	5	5	36	180