

Project Title: * To Our Schoolyard Watershed and Beyond!

To be eligible for the grant, projects should be specifically tied to one or more of the following topics (Choose all that apply) *

Water Conservation
The Water Cycle
Source Water Protection
Watershed Education (as related to drinking water)
Native Plant and/or Pollinator-Friendly Gardens

Amount Requested: * \$500.00

Teacher / Leader's Name: * Charles A. Wagner

School or Organization Name & Complete Address: * Gloucester County Public Schools
6099 T.C. Walker Road
Gloucester, VA 23061

Subject / Grade / Age Range: * 4th Grade Science

Number of Children: * 400

Goals & Objectives: *

SOL 4.9a – This project is designed to engage all fourth graders in Gloucester County in an extended study, investigation and reflection of the wildlife resources and watersheds in our community. Approximately 400 students will interact with the larger scientific community by contributing their data to citizen science research such as Virginia WildlifeMapping on iNaturalist and other monitoring networks. The activity conforms to the Virginia Department of Education's "Meaningful Watershed Educational Experience" (MWEE)

This main purpose of this program is to facilitate field investigations for 4th grade students to focus on the local watershed and utilize their own schoolyard and the local reservoir. Investigations will be based in recently installed schoolyard habitats and other school site locations. This study will be followed by a day long investigation at the local reservoir (Beaverdam), allowing children to apply their new skills in a

broader setting. Contributing data to citizen science research such as Virginia WildlifeMapping is also an element of the investigations.

Community partners will assist in planning and leading outdoor experiences. Partners represent Gloucester Parks and Recreation, Virginia Tech Extension, the Chesapeake Bay National Estuarine Research Reserve, Virginia Master Naturalists from three chapters, Gloucester Master Gardeners, Virginia Department of Forestry, Tidewater Soil and Water Conservation District, the Virginia Museum of Natural History and the Gloucester Schoolyard Habitat Pollinator Partnership.

Project Timeline: * October 26 – November 3, 2016

Project Budget: * \$1,500.00.

We are applying for limited funding through VGDIF eStore; however, that grant cannot include student bus transportation. The purpose for this grant application is to support costs to transport students to and from Beaverdam Park for the field investigations.

Name: * Charles Wagner

Email: * chuck.wagner@gc.k12.va.us

Phone Number: * (804) 693-6240

All information in this application is correct. I have reviewed the proposal with my school principal or organizational leader. As a condition of accepting the mini-grant money, I understand that I will be required to complete and submit the project summary form and pictures from the project upon completion of this project. I will submit my summary report within 14 days of completion. *

By checking the box and submitting this form, I certify the above.

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Will students learn about the reservoir itself? (i.e. the role the reservoir plays in providing drinking water, why reducing pollution is important for drinking water, water as a limited resource/conservation etc.) Please give a few examples.

Response:

Yes, the students will learn about the reservoir itself. Beaverdam is the drinking water source for approximately 4800 households in Gloucester County and this is a key reason for choosing the park as the field investigation site. We are planning stations where water quality parameters and macroinvertebrates as indicators of water quality will be investigated. We also have representatives of our Soil and Water Conservation district who will be working with students on the effects of pollution using the EnviroScape and other materials. Our senior park ranger has been actively involved in the planning of the investigations. She will lead a station on wildlife of the watershed with a colleague. Representatives from Virginia Tech Extension will lead investigations of the terrestrial plants of the reservoir and the effect of buffer plants on water quality. The latest county water quality report for the reservoir will be made available to the teachers for their use with their students.

What types of data will students be collecting during these investigations?

Response:

Students will learn be collecting water quality data including temperature, dissolved oxygen, pH, nitrogen, phosphates, and secchi depth. Students will also be collecting macroinvertebrates and determining if their finds are indicative of good or poor water quality. If we are not able to locate macros due to cooler temperatures and lateness of the season, data will be simulated and/or examples from previous investigations will be provided.

Equipment and materials used for water quality testing are available courtesy of a Virginia Department of Environmental Quality watershed grant which my Master Naturalist chapter secured for summer camp studies at Beaverdam. In addition, I am a GLOBE trained teacher and have a GLOBE approved kit with materials for some of the parameters we will test. We hope in the future to secure funding to provide teachers with a backpack kit for materials to study water quality at their school sites.

I am hoping that students will be able to compare conditions at the reservoir to those at their schoolyard. With the support of the Virginia Department of Game and Inland Fisheries, students have planned and installed pollinator habitats at four of the five elementary schools.

Please provide a detailed budget of how the \$500 would be spent. Is it all for transportation? If so, please indicate how many trips/classes would be covered.

Response:

The \$500 would be entirely for bus transportation to support the safe and reliable transport of 400 children from their schools to Beaverdam Reservoir over the course of four (4) days in late October and early November:

Abingdon ES - 5 classes of children

Achilles ES - 4 classes

Bethel ES - 4 classes

Botetourt ES - 5 classes

Petersworth ES - 3 classes

The drivers will take children to and from Beaverdam. The total transportation costs for the Beaverdam MWEE will exceed \$500; however, this amount was the maximum offered through your generous grant.

If you do not meet the \$1,500 project budget through other funding sources, what are your plans for raising additional funds or alternatively for scaling back on the project?

Response:

If we do not receive the full grant award from eStore, we do have plans to scale back the investigations/stations; however, we prefer not to scale back student participation. I also may be able to allocate some local division resources to supplement the grant funds, but this will need to be determined after the grants are awarded.