

Potomac Headwaters Leaders of Watersheds Spring 2018 Application



Educating future generations of environmental stewards through classroom education and on the ground conservation practices at schools.



About PHLOW

Potomac Headwaters Leaders of Watersheds (PHLOW) has continued to grow since being established in 2008. Over the years PHLOW has had many funders, but since 2011, it has been largely funded by the USDA Forest Service, the National Fish and Wildlife Foundation (NFWF), and the Chesapeake Bay Program funding through the WV Department of Environmental Protection (WVDEP). PHLOW has spread from its WV base and now includes schools in Western Maryland and the Shenandoah Valley.

Through PHLOW, Cacapon Institute (CI) teaches students that hands-on conservation in their local watersheds can provide significant environment benefits for the greater Chesapeake Bay Watershed. PHLOW has three sub-programs: *Grow-a-Garden*, *Growing Native*, and *Plant-a-Tree*. Each program follows the distinct PHLOW model- educate students on environmental issues then inspire them to participate in hands-on conservation at their school.

Each program has a main focus and a conservation project that proposes a remediation. *Grow-a-Garden* lessons focus on stormwater runoff; students then install a rain garden to capture runoff from their school. *Growing Native* is an in-depth study of trees and the importance of native trees to the Potomac Basin. Students grow trees in a grow-out station at their school. *Plant-a-Tree* has one classroom lesson that focuses on the overall structure of trees and the role they play in the environment. Students then participate in planting established trees throughout their school landscape.

All of these programs empower future generations of watershed stewards by being environmentally literate. PHLOW has engaged over six thousand students and adults through all of its school programs.

What is a Watershed?

An area of land where all the water drains into a local stream.

Application due by January 20th

Growing Native

Growing Native focuses on the structure and importance of native trees within our rural and urban landscapes. *Growing Native* helps students discover the connections between trees and the health of rivers while simultaneously linking learning standards.

Lesson Topics:

- Watersheds 101: What are they and do I live in one?
- Trees Inside and Out: What is the role of each part of the tree?
- Tree Characteristics: Discover how to identify native tree species
- Pollution Buffers: How do trees reduce pollution?



The four education sessions are paired with a hands-on conservation project where students propagate native seeds in the fall program and pot tree whips in the spring program.

Fall Program Details:

- Four fifty minute education sessions led by CI's Watershed Education Specialist
- Students collect seeds from their home or local park as individuals and bring them into school on planting day
- Students plant their seeds in either a school year-long temporary tub grow-out station or a long-term fenced grow-out station
- Pots, soil, grow-out station, and planting instruction provided by CI

Spring Program Details:

- Four fifty minute education sessions led by CI's Watershed Education Specialist
- Installation of the fenced grow-out station on school grounds
- Students pot tree whips (2-year-old seedlings) on planting day. Grow for 1-2 years in fenced grow-out station
- Pots, trees, soil, fenced grow-out station, automated watering system, and planting instruction provided by Cacapon Institute

Fenced Grow-Out Station:

- Semi-permanent 10 foot by 20 foot structure alongside the building that allows for a multi-year program to grow trees
- These trees could be sold as a school fundraiser, planted on school property, or donated to a local watershed group
- Each station is set up with an automated watering system
- Station is removed by CI at the request of the school
- Participation in the spring program requires approval for a fenced grow-out station



Tub Grow-Out Station:

- Less permanent structure ideal for growing seeds over the school year
- Fall projects only; returned to CI following the school year
- Eighteen gallon storage bins are converted into growing stations
- Students monitor progress of their trees through the school year and take home trees at the conclusion of the school year



PHLOW Goals:

- Educate future stewards on the importance of reducing pollution on land and in streams
- Assist with design and installation of rain gardens, grow-out stations, and tree plantings at schools
- Increase awareness within the community on the function of conservation practices
- Demonstrate that students can make a difference at their school and within their communities
- Foster the importance of clean rivers for future generations
- Promote long-term care of conservation projects within the school system and community

Project Partners:

- National Fish and Wildlife Foundation
- U.S. Forest Service
- Chesapeake Bay Program / West Virginia Department of Environmental Protection
- Cacapon Institute

Requests welcome from:

- Public or private schools within the Eastern Panhandle of West Virginia, Shenandoah Valley, or Western Maryland

Application Requirements:

- Program takes place within a school system and on school property
- Located within West Virginia's Eastern Panhandle, Virginia's Shenandoah Valley, or in Western Maryland
- Commitment to coordination of class lessons instructed by Cacapon Institute
 - Spring education sessions beginning February 6th
 - Spring education sessions concluding by April 1st
- Assistance in the planning and execution of the tree whip potting
 - Tree whip potting planned between June 1st thru end of the school year
- Keep an ongoing record of volunteer contribution for submission of Final Project Report at the conclusion of the project
- Ongoing maintenance of trees

Application Components to be submitted by January 20th:

- Cover Sheet
- School History
- Description of Need
- Goals and Evaluation
- Tree Care
- Tree Plan
- Volunteer Contribution
- Maintenance Agreement

Application Deadlines:

- Application submitted by COB: January 20th
- Notification of Program Approval: February 1st
- Education Programs Begin: February 6th
- Tree whip potting between: June 1st thru the end of the school year
- Final Program Report Due: June 30th

To Apply:

- Email Application: Watershed Education Specialist, Cacapon Institute
phlow@cacaponinstitute.org

Note: Please apply for only one program a season. We encourage whole grade levels to participate.

Growing Native PHLOW Proposal Cover Sheet

School Name:

School Address:

County, State:

Grade(s) Level:

Number of Classes:

Total Number of Students:

Name of Project Leader:

Job Title:

Phone Number:

Email:

Suggested Education Dates: These will allow the watershed education specialist an opportunity to create a schedule for spring projects. Please provide a different education date between January 25th and April 8th for each of the four lessons (we recommend a lesson a week).
Provide a tree whip potting date and rain date between April 18th and May 27th.

Lesson:	Watersheds 101	Trees Inside & Out	Tree Characteristics	Pollution Buffers	Tree Whip Potting	Rain Date
Tentative Dates:						

Class Schedule: Provide an agenda for the watershed education specialist to follow on education days.

Teacher Name	Class Time	Grade Level	# Students

Project Abstract (briefly describe your project in less than five sentences):

If project is accepted, we grant Cacapon Institute permission to contact us annually and use planting and site pictures for future publications. (Check Box)

1. School's History. Be sure to address the following:

- School's mission, goals and objectives
- Current or past environmental education programs
- School structure (grade levels, staff, student's groups)
- Has your school installed a conservation project before?

2. Description of Need. Please be sure to address the following:

- What do the teachers plan to gain from an external educator leading classroom sessions?
- How will *Growing Native* be an asset to the school, foster community involvement, and aid in educational lesson plans?

3. Goals and Evaluation

What are the short-term and long-term goals along with benefits of this program for the school? How will you measure the success of the project?

4. Tree Care

Briefly describe how you will care for the trees, remove weeds, and upgrade pots when necessary. (All stations will be provided with an automated watering system for the summer months).

5. Tree Plan

When trees have outgrown the station and are ready to leave, what would the school like to do with them?

Examples: planted at school; sold as a fundraiser; donated to a local watershed organization; or planted throughout the community under Cacapon Institute's other programming. Please describe in detail.

Maintenance Agreement Form

In consideration of Cacapon Institute’s PHLOW Programs providing technical support, native plants, and materials, we agree to:

1. Grant Cacapon Institute volunteers, agents, contractors permission to inspect and/or provide maintenance on conservation practices installed at:

Project Address	City	State	Zip
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2. Provide proper maintenance for trees through the program’s duration by:
 - a. Checking soil moisture weekly during the months of June-September and providing 5-10 gallons of water each week, as needed, depending on soil conditions and precipitation.
 - b. Maintain a layer of brown hardwood mulch around the trees.
 - c. Avoid the use of fertilizers, herbicides, and other chemicals without performing soil tests or consulting a “Licensed Pesticide Applicator”. Results of such tests are to be reported to Cacapon Institute before application.
 - d. Removal of grass or weeds when necessary in fenced grow-out station
 - e. Assist in upgrading trees into larger pots after one year of growth with CI assistance.
 - f. Ensure the automated watering system is working properly on a weekly basis in the summer.
3. Hold Cacapon Institute and its volunteers, agents, contractors harmless from any liability arising from the planting or care of any trees planted under this agreement.
4. Arrange the return of any Tub Grow-Out Stations at the conclusion of the school year.
5. Call for the removal of the Fenced Grow-Out Station at the conclusion of the program.

Failure to fulfill these maintenance requirements will make your group ineligible to apply for programs in the future.

Name: _____ Date: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____

Email: _____ Phone: _____