



Connect with your environment

Learn about environmental issues in your community and how you can get involved.



CONTRIBUTED PHOTO

Strong Vincent High School students study Cascade Creek as part of their project to become Great Lakes literate.

Funding and resources provided for educators

By ANNA McCARTNEY
Contributing writer

Educators of students in grades 4-12 can qualify for up to \$1,450 for combining Great Lakes experiential science education and service learning in 2016-17. The funding will cover teacher stipends, student field trips, classroom materials and other activities.

Interested educators must first apply by July 30, and if accepted, attend a full-day workshop facilitated by Pennsylvania Sea Grant on Saturday, Oct. 1. Only 10 educators that meet the requirements will be accepted. Educators will receive a stipend for attending the workshop. They will also receive teacher tested Great Lakes curriculum and stewardship project ideas. Lessons include multiple

watershed water quality issues, food webs, wetland and habitat restoration, emerging contaminants, invasive species, and more.

Funds for this project are provided by the Center for Great Lakes Literacy, a partnership between the Great Lakes Sea Grant Network and the U.S. Environmental Protection Agency. CGLL's mission is to build environmental literacy in the Great Lakes Basin and promote informed stewardship of its resources. For more information or an application, contact Marti Martz at 217-9011, Ext. 104 or mam60@psu.edu.

ANNA McCARTNEY, a communications and education specialist for Pennsylvania Sea Grant, can be reached by e-mail at axm40@psu.edu.



GOOGLE

Studies show that parking lots covered in cement and asphalt increase stormwater pollution and flooding. They also make areas less desirable and less attractive. Interested business owners willing to improve existing parking lots should contact Dave Skellie at Pennsylvania Sea Grant.

Lots of excellence

Green parking lots improve water quality, add value

By ANNA McCARTNEY
Contributing writer

Parking lots are the most noticeable feature of the developed environment. In some cities they consume up to one-third of all land areas.

All these paved spaces use up valuable land and increase stormwater runoff, which is responsible for more frequent flooding and pollution. They also create heat islands, increase glare and light pollution and are extremely ugly.

Guidelines used by communities since the 1980s have resulted in multitudes of under-utilized parking lots that have negative impacts on the environment. Rainwater and snowmelt become polluted with oils, greases, chemicals, heavy metals and trash. This polluted water causes erosion and contaminates nearby streams. It is especially harmful to aquatic ecosystems because it is the main source of polycyclic aromatic hydrocarbons (PAHs), a known human carcinogen found in automobile exhaust, lubricating oils, gasoline, tire particles, and parking lot sealants.

Recognizing these problems, cities around the world are investing in multi-use green parking lots as a cost-effective approach to manage stormwater while they offer communities many other environmental and social benefits. Green roofs, rain gardens, tree trenches, bioswales and pervious pavement, collectively known as green infrastructure, let water soak into the ground or be taken up by plants like nature intended instead of becoming runoff.

The best thing about green infrastructure is that it provides a range of other benefits to communities. Unlike traditional "gray" stormwater infrastructure, planting more trees and other vegetation in the built environment gives us cleaner air, wildlife habi-



CAWRSE.COM

This green parking lot utilizes natural systems to filter storm water runoff. It is part of a green initiative launched by the Cleveland Clinic using LEED principles.



CLEANWATERNASHVILLE.ORG

Planted strips generate oxygen, remove carbon dioxide, soak up stormwater and add beauty to an otherwise ugly landscape, making communities healthier and more vibrant.



PATAGONIA

Patagonia Inc. installed solar panels and green infrastructure on a parking lot at the company's headquarters making great use of the space to reduce electricity demand and manage stormwater runoff.

case studies show that green infrastructure can cost less for municipalities than traditional hard infrastructure. Studies

also indicate that there is an added economic benefit to commercial property owners: they attract more customers.

Many communities have passed ordinances that remove hurdles to green infrastructure. They include codes to retain the first inch of rainfall from any storm event on-site by building greener parking lots.

Millcreek Township supervisors took some helpful tips from other municipalities and adopted amendments to their zoning regulations that will now require 7 percent native vegetation on new or redeveloped parking lots. Planting islands with leaf-bearing trees every 15 spaces are required. Parking lots over 1/2 acre also require a minimum 15-foot planting median with deciduous trees every 35 feet every third bay (double parking row). These plantings will generate oxygen, remove carbon dioxide, soak up stormwater and add beauty to an otherwise ugly landscape making communities healthier and more vibrant.

Pennsylvania Sea Grant would like to support the Township's efforts by applying for Growing Greener funds to assist one or more parking lot owners who would like to green up existing parking lots preferably 1/2 acre or larger in the Walnut Creek watershed. For more information, contact PASG Coastal Land Use & Economic Specialist, Dave Skellie at 217-9011, Ext. 103 or dus18@psu.edu.

You can learn more about Millcreek's new ordinance at the Township Planning Commission meeting tonight at 7 p.m. when they discuss new development that will be required to meet the updated ordinance.

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CONTRIBUTED PHOTOS

Perry Elementary students and their teacher Joy Galvin are protecting Lake Erie. They collected trash, stenciled storm drains and distributed door hangers to educate neighbors about stormwater pollution.

Stenciled storm drains educate community

By ANNA McCARTNEY
Contributing writer

Perry Elementary fourth grade teacher, Joy Galvin is one of 10 teachers participating in the Center for Great Lakes Literacy project facilitated by Pennsylvania Sea Grant.

Her students have been learning about problems created by stormwater runoff and have focused their community service project on protecting Lake Erie from pollution that is carried by stormwater.

They stenciled storm drains in the neighborhood near the school and

distributed door hangers they created to educate people about stormwater. In addition, they did a storm drain cleanup using Storm Drain Sentry Data cards to capture information that will be submitted to Sarah Galloway, City of Erie Office of Sustainability. Students also did a cleanup that included Washington Park at 23rd and Cascade.

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Check out these websites to learn more:

- www.epa.gov/green-infrastructure
- http://phillywatersheds.org
- http://today.uconn.edu/2014/03/urban-parking-at-any-price/#/
- www.seagrant.psu.edu

After World War II, Americans began to leave cities and build new houses, malls, parking lots, offices and manufacturing plants on open land in the countryside. Unforeseen consequences arose, such as traffic congestion, the loss of farmland and open space. This led to air, surface and groundwater pollution, and the physical deterioration of cities.

Look in the newspaper for examples of other changes caused by this way of life. If you were in charge of new development, what would you do to make it better? Send your ideas to axm40@psu.edu for possible publication in "your space."

