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Researchers eligible for watershed grants

By ANNA MCCARTNEY
Contributing writer

Faculty members and researchers from public and private colleges and universities, and other organizations in Pennsylvania are eligible to apply for Pennsylvania Sea Grant funding for applied research projects that begin Aug. 1, 2012, and end Oct. 31, 2013.

If interested, submit a brief two- to three-page pre-proposal for screening by June 4 in PDF format via e-mail to rwl2@psu.edu. Members of the PA Sea Grant staff and advisory councils and other experts will rate the pre-proposals and issue full proposal requests for the highest rated projects. Funding decisions will be announced July 25. A final written report will be required for each project.

Proposals in the Lake Erie, Delaware River or Susquehanna River watersheds in Pennsylvania that address the following issues will be given highest priority:

- Genetic detection of aquatic invasive species.
- Mortality of smallmouth bass in the Susquehanna watershed.
- Coastal climate adaptation.

■ Nutrient loading in key watersheds.

Include the following in your pre-proposal:

- Project title.
- Statement of the critical problem being addressed.
- Objectives.
- Potential benefits of results.
- Brief review of proposed methods.

■ Opportunities for student training and outreach of research results.

■ Brief budget summary, including a required 50 percent nonfederal match (support project expenses such as faculty salaries, student assistants, travel, equipment and supplies, and sample analysis).

■ Deliverables from the project (reports, brochures, etc.).

■ Information about the principal investigators (name, title, institution and contact information).

Direct questions to: Robert Light, director PA Sea Grant, 898-6160 or rwl2@psu.edu

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MATT PLUTA/Contributed photo

PA Sea Grant Education Specialist David Boughton drops a new buoy off the PA DEP science boat into Lake Erie. In all, four buoys will help scientists at the Great Lakes Environmental Research Lab in Ann Arbor, Mich. model current patterns in Lake Erie as they also help students learn more about lake processes. You can follow their path at www.nefsc.noaa.gov/drifter/drift_psu_2012_1.html.

Student spirits lifted

Hikers recover research buoy from Niagara River

By ANNA MCCARTNEY
Contributing writer

Did the Mari-29 plunge over Niagara Falls?

When they spotted the odd, orange-colored piece of wood near the shoreline, they suspected it had a story.

"I knew this was no ordinary driftwood, so I pulled the wreckage to shore and that's when we discovered the note from the students at the Maritime Center," said Joe Giessert. He was hiking along the Niagara River near Buffalo with his son, Joe Jr., and a fellow Boy Scout when they found the wood with a note instructing them to contact Pennsylvania Sea Grant Education Specialist, David Boughton in Erie, Pa.

"Our river hike on March 7, 2012, turned into quite an adventure after we contacted Mr. Boughton and realized how important our find was," said the elder Giessert.

Indeed the special science experiment, or what was left of it, does have an intriguing tale.

Students at the Perseus House Charter School of Excellence Maritime Center built the Mari-29 buoy in October 2011 under the direction of Boughton. It was used to study current patterns and associated weather conditions on Lake Erie for the National Oceanographic and Aeronautical Administration (NOAA) "Drifter Buoy Program."

"I personally am amazed that the buoy survived so long," said Boughton. "We monitored its track from its deployment on Nov. 3 and knew that it endured eight-foot waves and miserable conditions for extended periods of time."

For approximately 19 days, the unit was caught in a circular pattern in the middle of the lake. At some point its wings were ripped off and it got sucked down the Niagara River. Instead of heading toward the Canadian Falls, it veered east onto a more treacherous route.

The lack of communication in late March had many wondering if the buoy was destroyed as it went over Niagara Falls. But then it began transmitting again. After the data became erratic, Boughton and his team planned a rescue mission to recover the buoy. But just days before they were to leave, Boughton got the call from Giessert, who then sent the transmitter to Erie.

But the story doesn't end there.

Paul Walker and his dog Sammy discovered the buoy remains about a week later. He contacted

Boughton and took photos, which he sent to Boughton, who used them to make design changes.

Yet this story is far from over.

The success of the project helped Boughton secure funding to deploy more buoys to compare nearshore patterns to deep-water drifts and to track seasonal variations in current patterns.

Scientists at the Great Lakes Environmental Research Lab in Ann Arbor, Mich., support the project because they value the student participation and the data they can use to develop modeling of current patterns in Lake Erie. Their help will allow hourly transmissions, instead of daily ones, from the buoys via satellites to a NOAA data collection station. Four new buoys, two of which were deployed on May 7, will collect the new data.

Thousands of other buoys are adrift all over the world to collect data, according to Jim Manning from NOAA at Woods Hole, Mass. "One that was deployed over a year ago off the New England Coast was just picked up in the Azores. These buoys support the Great Lakes Observing System (GLOS) and the International Ocean Observing System (IOOS) data collection and modeling projects," said Manning. "We have far fewer buoys in the Great Lakes, so this data is important not only because it involves student-built projects but because it benefits search and rescue operations, marine shipping and our general understanding of the processes of the lakes."

Students at the Maritime Center are excited about the additional buoys and the success of their project and look forward to once again helping scientists collect data. "It's really cool to start and finish a science project that goes somewhere and helps scientists and us understand how Lake Erie works," said eighth-grader Misty Wood.

Students from the Iroquois School District are joining the effort. They have finished construction of buoy "A" and will assist in its deployment from Envisionaut, Gannon University's research vessel, on May 17 north of Presque Isle. The fourth buoy will be deployed this fall.

For more information about the NOAA "Drifter Project" contact Boughton at ddb11@psu.edu or field cell 720-0746.

ANNA MCCARTNEY, a communications and education specialist for Pennsylvania Sea Grant, can be reached by e-mail at acm40@psu.edu.



ANNA MCCARTNEY/Contributed photo

Get outdoors, earn classroom resources and get paid for summer teacher trainings.

Get teacher training funds; apply soon

By ANNA MCCARTNEY
Contributing writer

Don't miss the opportunity to earn substantial resources for your students and get paid for participating in exciting professional development opportunities this summer. But hurry, space is limited.

Funding for teacher stipends, student busing for field trips, classroom materials, travel and lodging and college credits (RESTORE Institute only) are included in these three fun-filled teacher workshops. Don't miss the chance to work in the field with researchers on issues such as stormwater management, water quality, invasive species and pharmaceutical and personal-care products. Receive copies of relevant Great Lakes focused curriculum and get help for facilitating community stewardship projects with your students during the 2012-2013 school year.

For teachers grades 5-12

■ July 16-17: Great Lakes-Great Stewards at the Tom Ridge Environmental Center. Completed applications are due May 21 (limited to 25 teachers). Earn up to \$700 in funding for stipends, student busing and classroom project materials. For information, go to www.seagrant.psu.edu/education/GLGS_educator_workshop.pdf; e-mail Marti Martz at mam60@psu.edu; or call 217-9015

■ July 30-Aug. 2: Great Lakes Field Experiences (F-EX) for Watershed Educators. This workshop also comes with materials,

food, transportation and lodging (if needed) for two days in Erie and two days in Huron, Ohio. Teacher stipends and funding for bus transportation for student trips to watershed field experiences are included. Teachers will work with NOAA educators for this four-day, hands-on, immersive workshop, beginning at the Tom Ridge Environmental Center in Erie and ending at Old Woman Creek National Estuarine Research Reserve in Huron. Learn about current protection and sustainability issues related to the Lake Erie watershed and explore a variety of NOAA curricula to help integrate Great Lakes literacy into your classroom. For more information, visit www.seagrant.psu.edu/education/F-EXflyer.pdf; e-mail Lyndsey Manzo at manzol@wcooh.org or Marti Martz at mam60@psu.edu.

For teachers K-12

■ Aug. 6-10: Earth Action Great Lakes Earth Partnership-Pennsylvania RESTORE Institute at the TREC. This institute includes college-level course credit, curriculum and supplies, stipend money and field trips. You will also get the opportunity to implement a schoolyard habitat restoration or rain garden project. Contact Environment Erie at 835-8069 or plupo@earthactionerie.org.

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PAUL WALKER/Contributed photo

Sammy was with his owner, Paul Walker, when they discovered the remains of Mari-29 near the Niagara River shoreline.



ANNA MCCARTNEY/Contributed photo

Perseus House Maritime Center eighth-grader Misty Wood and other students at the school built the Mari-29 for the NOAA "Drifter Buoy Program." To view it's path visit: http://www.nefsc.noaa.gov/drifter/drift_psu_2011_1.html.



ANNA MCCARTNEY/Contributed photo

Iroquois School District students finishing one of the four new buoys in the lab at Tom Ridge Environmental Center. This buoy is sponsored by the Regional Science Consortium.

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Check out these web sites to learn more:

- www.nefsc.noaa.gov/drifter/drift_psu_2012_1.html
- www.adp.noaa.gov
- www.adp.noaa.gov/lesson_plans.html

Use the weather page to find the following for today: temperature, precipitation, Lake Erie Marine forecast including wind speed, waves, and water temperature, Lake Erie water levels. Track these values daily. Answer the following questions: How does the water temperature of the lake compare with the air temperature? Use the regional weather map to compare the air temperature for cities closest to the lake with those farther away. Visit www.nefsc.noaa.gov/drifter/drift_psu_2012_1.html to see where the drift buoys are today.

