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Press Release

Acadia Partners Awards Support for Citizen-Based Monitoring Research

Winter Harbor, ME -- May 18, 2006. Acadia Partners for Science and Learning announced that it is providing supplemental funding to Sarah J. Nelson, of the Senator George J. Mitchell Center for Environmental and Watershed Research. The supplemental funding will enable Ms. Nelson to extend her research work to evaluate the accuracy of citizen-based sampling in a very demanding scientific monitoring effort.

“Acadia National Park, like other National Parks, has a great need for long-term monitoring of the health of its ecological systems,” said David Manski, Chief of Resource Management at the Park. “It is only by looking at measurements over time that we can see trends. But long-term monitoring can be expensive because it normally requires researchers to return to the Park again and again to collect samples. If we could use volunteer, citizen researchers to collect samples with the same care and accuracy as professional researchers, we would be able to undertake more monitoring of more systems.”

In March of this year, Acadia Partners added its own funds to the L.L. Bean Acadia Research Fellowship program in order to support two more research projects in addition to the five supported by the original program. Sarah Nelson’s project, titled, “Developing a citizen-based monitoring plan for mercury in gauged watershed streams at Acadia National Park,” was one of the projects supported with the additional funding from Acadia Partners.

“Sarah Nelson’s original project interested us because of its focus on citizen-based monitoring,” said Bill Zoellick, Development Director at Acadia Partners. “We also saw that there might be an opportunity to expand her work to learn more about the efficacy of using volunteers even when the sampling effort is very demanding.”

What makes Sarah Nelson’s research so interesting from a citizen-based monitoring perspective is that it measures mercury pollution. Mercury monitoring is an issue of great importance to the Park because mercury is a toxic pollutant that bioaccumulates and biomagnifies up the food chain. Further – from the standpoint of learning about the capabilities of citizen research assistants – mercury makes an important test case because it is measured at ultra-trace levels in the environment, typically parts per trillion (ppt), or six orders of magnitude less than substances such as sulfur or nitrogen. In addition, mercury is

present everywhere in the natural and human environment. It is incorporated in human dental fillings, pet and human hair, and exists in leaves, soils, and particles in air. Thus samples are easily contaminated and require specialized sampling procedures. For instance, mercury is sampled using double-bagged Teflon sample bottles prepared in a clean room, and while wearing talc-free vinyl gloves. All equipment must be handled carefully to prevent contamination. If citizen research assistants can work effectively given such demands, Acadia Partners and Acadia National Park would have new support for increased citizen-based monitoring efforts.

Recognizing the potential to work with Sara Nelson to expand her original project, Acadia Partners sought support from the Davis Conservation Foundation for this supplemental funding, along with support for other research into citizen-based monitoring work. Acadia Partners received notice of its award from the Davis Conservation Foundation last week and is now announcing its supplemental support for Nelson's work.

Neither Acadia Partners nor the Senator George J. Mitchell Center for Environmental and Watershed Research is aware of any studies that have evaluated citizens' efficacy at sampling for ultra-trace substances. Funding from the Acadia Partners will enable Nelson and her colleagues to conduct statistical tests of whether citizen monitors can produce results that compare favorably to those produced by trained research staff, and adhere to quality assurance/quality control guidelines accepted by the U.S. Environmental Protection Agency (EPA).

This funding for Sarah Nelson's work is one element in a broader effort by Acadia Partners to learn more about the potential for using citizen-based monitoring to enable expanded monitoring research at Acadia National Park.

For more information about Acadia Partners support for research or about its work in building private support for research, contact Bill Zoellick (bill@acadiapartners.org) at 207-963-2023.

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