

Senator George J. Mitchell Center for Environmental & Watershed Research



Senator George J. Mitchell Center for Environmental & Watershed Research
David Hart, Director

USGS Water Resources Research Institute for Maine
John Peckenham, Director

The Mitchell Center has a diverse interdisciplinary mission focusing on environmental research, graduate education and outreach. In all these activities, the Mitchell Center works to provide Maine's citizens and policy-makers with unbiased and credible information that can enhance efforts to achieve healthy ecosystems, strong communities, and robust economies. We are committed to forming productive partnerships with government agencies, non-governmental organizations, and the private sector to increase the relevance and utility of our programs.

The Mitchell Center is recognized as one of the premier environmental research institutions in Maine, and, as Maine's congressionally-authorized Water Resources Research Institute, we are involved in state-wide water resources research. We continue to build on our reputation by promoting interdisciplinary research with other university faculty, with federal and state agencies, and with other research collaborators both regionally and nationally. Research topics focus on a variety of physical, chemical, and biological processes that influence the quantity and quality of water resources. Our research examines connections among land, air, and water, including linkages between freshwater and marine systems. The solution to many challenging environmental problems requires an understanding of human-environment interactions as well as environmental systems. Thus, in addition to our collaboration with environmental scientists and engineers, we also work in research partnerships with experts in economics,

sociology, education, business, public policy, law, and other disciplines.

FOCUS RESEARCH: *Can gravel mining and water supply wells coexist?*

In 2003, the Lamoine Conservation Commission requested help from the Mitchell Center to assist them in understanding how gravel mining is affecting their sand and gravel aquifer. This request led to several projects that examined mining, surface waters, and groundwater in the towns of Lamoine, Hancock and Ellsworth. In July 2006, John Peckenham and graduate student Teresa Thornton presented their findings at a public meeting. Results of the research concluded that although the groundwater was far from polluted, it did show subtle signs of strain. A key finding was that effects may be too subtle to be evident over the short-time frame of the study. Stronger conclusions can be drawn from collecting more measurements for a longer period of time. Also, to be credible, the work needed to have the support of town officers, the broader community, and gravel mining companies.

Additional foundation funds were provided to further engage students and the community in a long-term monitoring plan for this study. Student involvement will help bring the greater community into an understanding and discussion of how their natural resources are managed. Results of this study will become part of an online database of groundwater quality in towns affected by gravel mining. This work will provide a template that can be applied to other towns seeking to balance industrial uses of sand and gravel with water resources.

CONTACT INFORMATION:

5710 Norman Smith Hall
Orono, Maine 04469
207/581-3244 • fx:207/581-3320
UMGMC@maine.edu
www.umaine.edu/WaterResearch



We have an obligation to leave for future generations the very basics of human life on Earth; clean air, pure water, unpoisoned land.

Senator George J. Mitchell, Oct. 6, 2000

