

## **Alfred University Student to Present Groundwater Study at Conference**

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Alfred, NY -- Hannah Hallman, a senior pursuing a joint major in political science and environmental studies, will present results of a groundwater study at a regional conference March 13-15 in New Jersey. The 35th annual meeting of the Northeastern Section of the Geological Society of America will be hosted by geologists at Rutgers University in cooperation with the New Jersey Geological Survey, Stockton State College, and Rider University. It's not unheard-of for an undergraduate to present research at the session -- about 17 percent of the 335 papers to be presented are authored by undergraduates -- but it is an honor, said Dr. Michele Hluchy, professor of geology and environmental studies and co-author of the paper. The acceptance of Hallman's abstract "indicates that the work she did is of professional quality," explained Hluchy. Hallman's study looked at acid rain falling in the Alfred area to see what -- in chemical terms -- happened to it after it hit the ground and became ground water or stream water, Hluchy explained. "Acid rain (also) contains nitrogen and sulfur compounds, and Hannah was particularly interested in those." She found that as the water moved through the soil, the sulfate increased and the nitrate decreased. "The groundwater and stream water (of Canacadea Creek) is not particularly acidic, (so) the acids are being neutralized in the subsurface, before the water makes its way to the groundwater zone or stream," Hluchy said. "This is what Hannah discovered, and we are continuing to work on this project to determine the specific reactions taking place in the subsurface to cause these changes in chemistry." Chemistry students of Dr. Garrett McGowan are working on the continuing research. "We hope to continue our research in the summer and into next year," Hluchy said. She added that AU environmental studies majors are required to complete senior projects. "Many of them, like Hannah's, represent research worthy of publication at professional meetings," she said.