

## ***Heinz Endowments awards Marcellus Shale research grant to Penn State***

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University Park, Pa. -- The Heinz Endowments recently awarded a team of Penn State researchers a \$412,000, three-year, grant to identify and mitigate the effects of Marcellus Shale natural gas exploration and development on the forest ecosystem. The interdisciplinary research team, led by Margaret Brittingham, professor of wildlife resources, and Patrick Drohan, assistant professor of pedology, both faculty members in the College of Agricultural Sciences, also will develop land management practices and a monitoring program to reduce the Marcellus disturbance footprint.

Focusing on the north-central region of Pennsylvania, the research incorporates four broad components. First, researchers will use a database to evaluate landscape change as a result of gas exploration disturbances. Second, they will assess local and landscape-scale changes to the forest ecosystem utilizing birds, invasive plant species, and soils as indicators of broader environmental effects. The team will also develop an electronic field guide for onsite remediation and wildlife habitat enhancement at Marcellus drilling sites and pilot a long-term citizen-science based monitoring program to track changes to the physical landscape and biotic communities across the Marcellus shale formation in Pennsylvania.

"Exploration and development of natural gas within the Marcellus Shale formation is occurring at an accelerating rate across much of Pennsylvania and has the potential for large-scale ecological change," said Brittingham. "There is a critical need among public and private landowners for information on how to develop drilling sites, and their associate infrastructure, in a way that minimizes ecological damage and that can restore sites to pre-drilling conditions."

The project addresses a central goal of the endowments' Environment Program, to support sustainable communities within a sustainable region by promoting environmentally responsible land use and by protecting and restoring terrestrial ecosystems.

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"We are grateful to The Heinz Endowments for funding this research, which was initiated with a seed grant from the Penn State Marcellus Center for Outreach and Research (MCOR)," said Brittingham. "The funds from Heinz will enable us to begin to document and monitor how Marcellus-related exploration and development is changing the landscape of Pennsylvania and to develop mitigation and remediation strategies to minimize negative environmental impacts."

The University has been at the forefront of research and outreach efforts since advances in horizontal drilling technology sparked interest in unconventional gas shales. Through MCOR, Penn State scholars and researchers are working on many of the most critical technical aspects of Marcellus Shale development, providing science-based programming on the Marcellus and other unconventional gas shales, and protecting the Commonwealth's water and forest resources. Penn State researchers also are exploring community, family, health and population impacts of Marcellus development; effects on the transportation infrastructure; and labor issues such as the housing, job creation and training needed to develop and sustain a local workforce.

The Heinz Endowments' mission is to promote progress in economic opportunity, arts and culture; education; children, youth and families; and the environment. The Endowments supports efforts to make southwestern Pennsylvania a premier place to live and work, a center for learning and educational excellence, and a region that embraces diversity and inclusion.