

Field Name	Field Value
Name	JeanMarie Hartman
Organization	Rutgers University & Synapse @ UAkron
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email	jhartman@rci.rutgers.edu
Web_Address	
Renewal	No
Permit_Number	2011-008
Activity	Research
Project	Moving Water
Dates	May 2011-December 2012
Group_Size	1
Research_Area	Yes
Eighteen_Acres	Yes
Grandview_Alley	Yes
Round_Top	Yes
Sensitive_Area	No
Garden_Bowl	Yes
Other_Areas	Yes
Public_Areas	Yes
Building	Yes
Prep_Work	office/work space
Sampling_Collecting	Yes
Sampling_Methods	Soil samples will be collected and analyzed for texture, moisture, porosity, pH, and nutrients. Samples will be collected with a 1" diameter core at densities of < 1 per 1 sq. meter. Each sample will be approximately 50 cubic cm.
Description	The focus of my experiments is rain garden design. I will be testing materials that can be used to slow erosion and run-off during rain events and plants that can be used to hold soil and water onsite for percolation into the groundwater. My proposed activities include (A) setting up two test sites new the UAkron Field Station Building for monitoring and testing materials. Initially, this will involve marking out an area (~3m X 12m) at the rear of the build where water collects and a swale where drainage from gutters is released (3m X 20m). Both of these areas will be removed from regular mowing, killed using an approved herbicide, and monitored for soil moisture and water flow characteristics. A variety of erosion

	<p>materials will be test in the gardens. In the fall, they will then be planted with a cover crop of winter wheat and annual rye. Selected plantings of native grasses and forbs will be added. During the spring and summer of 2012, the gardens will be repeatedly monitored. In the fall of 2012, the results of the initial study will be repeated. At that time, the gardens will either be (a) removed and re-planted with lawn grass seed or (b) an additional permit for further study and development will be requested. The second part of my activities will be conducted in areas where drainage pipes intersect with trails. Small interventions of erosion control materials and or plants will be used to develop recommendations for improved vegetation management of the current bio-swales associated with these drainages. There are over 40 areas that are potential sites for these studies and I will complete a survey of their characteristics and locations. Next, I will characterize them in a way that comparable bio-swales can be used as replicates in experiments. The treatments will test materials to collect sediments and plants to stabilize drainage swales. Finally, a series of small & ephemeral environmental art projects will be conducted and photographed. The photographs will be collected and documented in order to provide illustrations of water movement patterns and impacts. These will be available for use by interested environmental educators. Many of these projects will be inspired by students or friends who assist with my field work. All will rely on biodegradable, non-toxic materials such as child safe paints or small wooden beads. The primary scientific goal is to test design methodologies for rain gardens and bio-swales. I also hope that some of the projects will lend themselves to out-reach education. Through collaboration and communication with Bath Twp. Parks Department and the UAkron Field Station staff, my work may lead to new practices in landscape management.</p>
Agreement	Accept