

Sheppard's Creek Cincinnati, OH

Project Type: *Rain Barrels and Rain Gardens*

Description and Size: The Sheppard's Creek Watershed in Cincinnati, Ohio drains approximately 1.8 square kilometers (approximately 445 acres). Development in this watershed occurred in the early 1960's and then again in the 1980's. The EPA National Risk Management Research Laboratory, Sustainable Environments Branch chose to use this watershed for a long-term research experiment for storm water management. The overall project has two primary objectives: (1) to test the use of an auction to cost-effectively allocate storm water management practices among landowners, and (2) to determine the effectiveness of the resulting implementation in terms of hydrological, water quality, and ecological measures. Data collection took place from 2004 to 2007. In the spring of 2007, a reverse auction was held with BMP installation following in the summer.



Design: As part of the marketing for this project, a preview mailing, door-hanger reminder, auction package (with \$5 enclosed) and follow-up reminder were sent out consecutively with about 1.5 weeks between each contact. Of 351 residents in the watershed that were targeted, 80 forms were returned (roughly a 25% response). The bids were ranked and scored, which removed expensive and ineffective bids. 73 of the bids were for \$0 (roughly 66%). The first round of the reverse auction in 2007 resulted in 50 rain gardens and 100 rain barrels installed at 67 residential properties in the watershed.



In addition, a second reverse auction was held in 2008 and bids for an additional 35 rain gardens and 74 rain barrels were accepted. EPA researchers conducted monitoring before and after to determine the nature of impacts on environmental quality. Currently there is ongoing monitoring and maintenance until 2010 to determine if storm water is in fact abated.

Application: These practices are ideal for small drainage areas and homeowner applications. areas.



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