Potential for Pollutant Trading and Improving the Carbon Cycle through Stream Restoration Practices

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Abstract

Industry has long been heavily regulated and will increasingly be required to reduce pollutant discharges to meet water quality goals for the hypoxia issue in the Gulf of Mexico and as part of strategies to reduce the carbon footprint. This paper evaluates the costs and benefits of restoration strategies that may result in significant pollutant trading opportunities and increases in carbon sequestration.

The Scotts Company LLC recently restored 5300 linear feet of an impaired headwater stream in Union County Ohio. As part of the project, over 40,000 trees and shrubs were planted, approximately 2 acres of riparian wetland were created, and more than 8 acres will be protected with an environmental covenant with the Ohio EPA. Following restoration and based on monitoring data collected over the past two years, the headwater stream has been found to meet Ohio EPA's water quality standards. Given this improvement in water quality, the possibility of using stream restoration for pollutant trading, including carbon off-sets is discussed. The potential ability of a restored, functioning stream to increase the assimilation of ammonia, nitrate and nitrogen compared to degraded systems and the possibility to use river restoration to reduce pollutant discharges and sequester carbon is also considered. These remedies could be the basis for future pollutant trading.

Brenda Abke Biography

Brenda Abke is the Director of Corporate Environmental Health & Safety for The Scotts Company LLC and has over 15 years experience completing environmental and geological investigation and remediation projects.