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## **Farmers as Producers of Clean Water: Getting the Institutions Right**

Peter Maille, Alan Collins, and Neil Gillies

### Abstract Text:

We are testing a novel approach to controlling agriculture-related nonpoint source pollution in a small watershed in the Potomac Highlands of West Virginia. This approach redefines water as a commodity that farmers can choose to produce. Those who participate receive water payments that are structured to provide an incentive to attenuate monthly stream flow and decrease nitrate-N loadings. Thus, they are paid based on their water quality performance. This is in sharp contrast to current regulatory and cost-share approaches to nonpoint source pollution control. The purpose of this poster is to contrast the approach we are using in our field experiment with the current approach. First we look at how institutional arrangements differ between the two approaches. Our definition of institutions comes from Douglass North who describes them as “human devised constraints that shape human interaction.” These can include formal arrangements like regulations and codes, as well as informal arrangements like how neighbors cooperate. Second, we present how we engaged these institutions—the operational framework. This framework includes key parts of the agreement that participating farmers have signed, descriptive information provided to watershed farmers prior to signing, and the use of group payments. We evaluate our success to-date, with a focus on farmer participation, using data from the first round of surveys.

### Impact Statement:

Under this project a substantial portion of farmers in a small watershed have signed up to participate. They have evaluated detailed water quality sampling data collected by the project to identify sources of nitrate-N in the watershed, and are working to bring additional farmers on-board.