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Local land uses and downstream benefits: How farmer attitudes influence watershed conservation practices

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The well being of metropolitan areas depends in part on resources provided by rural landscapes, which in turn can lead to tensions over traditional rural land uses such as agriculture. Farmers' perceptions of "who benefits" may be crucial to their willingness to engage in conservation practices. We examined farmer adoption of the conservation enhancement reserve program (CREP) in the Cannonsville Watershed in Delaware County, 150 miles northwest of New York City (NYC). The watershed is a primary source of drinking water for NYC, and a good illustration of how farmer attitudes can affect conservation practices.

The expansion of the NYC water supply system began in 1842 when the city experienced water shortages and disease outbreaks. The Cannonsville was the last reservoir to be constructed in the system. To maintain drinking water quality, the city acquired land surrounding the reservoir. When water flooded the valley in 1966, it covered nearly 20,000 acres of Delaware County dealing an economic blow to up-state residents, particularly dairy farmers. The combination of forced evictions and low payments for land acquired by NYC created animosity towards the city and its endeavors.

New York City spent considerable time and resources developing a watershed-monitoring program that established buffer zones around watercourses. The Watershed Agriculture Program (WAP) was established in 1992 to address environmental problems, while allowing a continued presence of agriculture in the watershed. In addition, the CREP (Conservation Reserve Enhancement Program) has been adopted by approximately one-third of the farms in the watershed since 1999. CREP is a voluntary program that uses financial incentives to encourage farmer enrollment in 10-15 year contracts to remove certain lands adjacent to water from production.

We explored farmer adoption of conservation practices via a mail survey to the more than 200 farmers in the watershed in the summer of 2004. The questionnaire addressed farmer and farm characteristics, as well as attitudes and beliefs.

50% of the farmers surveyed had adopted at least some CREP practices. Compared to non-adopters, adopters tended to be older, had been farming fewer years, were more politically liberal, and were affiliated with more environmental organizations. They sought

information from multiple sources, including extension agents, consultants, and Watershed Agricultural Council (WAC) personnel. CREP adopters were more likely to identify themselves as innovators and less likely to see best management practices (BMPs) as risky. They perceived livestock access to streams as detrimental to water quality, and generally held more positive attitudes toward WAC and NYC's presence. All survey respondents agreed that protecting local water quality should be an important priority for local farmers, and supported private property rights. Adoption of CREP is not related to education level, the presence of an off-farm job, or anticipated plans for children continuing to farm in the future.

The combination of farm and farmer characteristics (smaller operations, older but farming fewer years) suggests that many of the CREP adopters are non-traditional farmers: retiree or 'hobby' farmers. More importantly, we find that attitudinal variables rooted in the local context are strong predictors of adoption. The question "who benefits" from local practices is crucial: the fact that farmers are being asked to change their land use practices, for the benefit of outside interests, even with technical and financial recompense, alters or even negates the concept of a "common goal". The watershed has several particular characteristics that have shaped our results: most notably, the economic incentives and extra-local control have led to local resentment and the perception that farmer interests are being subordinated to those of NYC water consumers.

Thus, a particular conceptualization of conservation is especially relevant here.

Perceptions of stewardship have shifted from protecting one's own farm for future prosperity to vaguer notions of protecting "the environment" for the greater good of someone else: either diffuse and abstract (i.e., "society as a whole") or particular, but distant (i.e., improved water quality for downstream interests). Understandably, Cannonsville farmers may not readily embrace the idea that they are responsible for the quality of New York City's water supply. ▲

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