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UNDERSTANDING THE BARRIERS AND OPPORTUNITIES FOR WATER UTILITY INVESTMENTS IN ECOSYSTEM SERVICES

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Water utilities benefit from ecosystem services that improve water quality and moderate stream temperatures, such as the natural filtration and shading services provided by riparian forests. Such benefits have brought increased attention to the role of water utilities in protecting ecosystem services through what are known as payments for ecosystem services (PES) programs. PES programs typically offer incentives to landowners for management practices that provide ecosystem services and may help utilities avoid significant treatment costs or meet regulatory requirements. However, these initiatives have not been widely adopted. To better understand the potential for PES to meet water utility objectives, we examined the barriers and opportunities water utilities face in engaging with existing PES initiatives.

Approach

We conducted interviews with experts from 37 different water utility PES programs across the United States. Interviewees included water utility staff, government regulators, and representatives of nonprofits involved with implementing programs. We asked participants about their experiences with PES programs including challenges they faced, how they overcame challenges, and the lessons learned.

Results

Barriers to water utility investments in PES

Building landowner trust takes time. Many programs initially struggled to get landowners to participate in programs. Several participants attributed this to distrust between rural and urban residents as a result of past land-use conflicts. In describing the challenge, one nonprofit representative explained, “Initially there was a lot of hesitation, even resistance [from landowners]. You couldn’t hide the fact that we were more or less working with the City... So it’s taken time...”

Many utilities lack the capacity to pursue PES on their own. Interviewees suggested that PES is still a novel concept for utilities, and that many lacked the internal experience necessary to develop programs on their own. Budget and other resource limitations further constrained program development and implementation.

The financial benefits of PES are not always easily measured. A commonly noted challenge was the difficulty of showing direct fiscal costs and benefits in PES programs. In some cases there were clear cost-benefit advantages to pursuing PES, for example regulation-driven programs where utilities were able to avoid building expensive treatment facilities. In other cases, the advantages were often less clear and it was difficult to quantify how investments in natural infrastructure translated into specific economic benefits for the utility. One participant described this challenge and their strategy to address it as: “A justifiable complaint we get is, ‘show me what I’m getting from my investment’ ... So we’re developing a model so we can

say, ‘this piece of property... if we don’t develop it, it’s keeping this much nitrogen, phosphorous, and sediment out of the water system’. So it’s not a fiscal value - it’s not like you save this much money. It’s more just saying that we’re keeping a certain amount of excessive nutrients and sediments out of the water.”

Opportunities for water utility investments in PES

Local intermediaries can help facilitate land-owner relationships. Although building local support and trust in programs takes time, interviewees suggested that working through local intermediaries often helps facilitate the process. As one representative described their successful strategy: “We hired a local rancher to be our on-the-ground contact and she’s been instrumental in getting local buy-in and support... actually having somebody that is part of the community out there talking about the program has been key.”

Utilities can leverage strategic partnerships to design and implement programs.

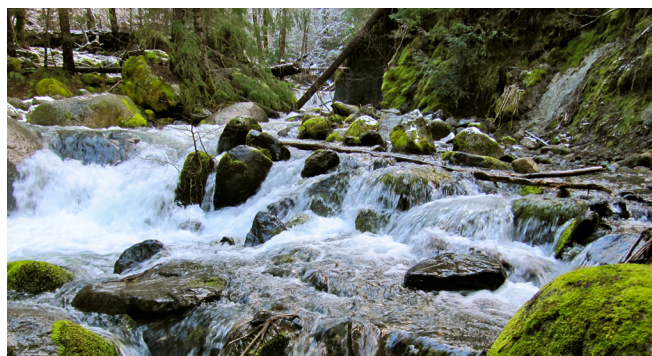
Nearly every PES program we investigated relied on community partners such as soil and water conservation districts, land trusts, watershed councils, and other nonprofits to guide program development and implementation. As one partner representative explained, “One of the things that made it easier for [the utility] is they knew they could give the money to us and we’d go out and administer it instead of them trying to do it all themselves. They were really interested in a larger watershed level effort and knew that they were plugging into that level all at once by just giving the money to us.” These local partners appear to be essential for the success of many utility PES programs.

Utility customers typically support programs at low levels of financial commitment. Several water utilities examined customer willingness to pay for PES programs and found that most utility customers are willing to support PES programs at modest financial commitments, such as between \$0.50 and \$2.00 per customer per month.

Local champions can push efforts forward. Interviewees reported that in many cases, the emergence of water utility PES programs was due to the dedication and determination of specific individuals or small groups that championed these efforts. These individuals ranged from local politicians to nonprofit leaders and utility staff, and were essential for building management and community support and pushing initiatives through to implementation. As one expert put it, “Leadership is huge... They obviously have to be in an influential position, but somebody who’s willing to listen and promote something like this is kind of outside the realm of the typical public utility’s work. So it’s really key to have somebody that will help champion this for you.”

Implications

Water utilities engage with PES programs in multiple ways and to meet different objectives. These efforts can face challenges, particularly in building the relationships, knowledge, capacity, and demonstrable benefits necessary to gain widespread support for programs. To build support for PES initiatives, and to help move initiatives through to implementation, utilities can leverage the capacity of strategic partnerships, the extensive knowledge and experience of local intermediaries, and the influence of local champions.



More information

We elaborate on this research in the peer-reviewed article, “Utility engagement with payments for watershed services in the United States” published in the journal *Ecosystem Services*:

<http://www.sciencedirect.com/science/article/pii/S2212041614000059>

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