

Pay for Success Examples: Mussel Hatchery and Revenue Generating Buffers
PENNVEST
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A possible avenue to identify funding opportunities for Bay restoration is the identification of activities that simultaneously improve water quality as well as generate revenues. We will, hopefully, soon be embarking on one such activity here in Pennsylvania and are exploring the feasibility of a second.

The first activity is a fresh water mussel hatchery that will be built and operated by the Partnership for the Delaware Estuary (PDE) with funds provided by us through the Clean Water State Revolving Fund (CWSRF). Mussels grown in the hatchery will be sold in both the Delaware and Chesapeake Bay watersheds for restoration purposes. We have worked for almost a year with PDE to develop the business case for this venture, which is currently with the State Treasurer for approval as an investment. If so approved, PENNVEST will be able to invest in this venture under the investment authority of the Clean Water Act. Unlike a loan, which requires repayment and which PDE, being a non-profit, would never accept, the investment strategy allows PENNVEST to take the risk of repayment but also share in the revenues to be generated should they occur as anticipated. Hence the need for a solid business case. While we could fund this project with a grant, and will if the Treasurer does not approve our business case, there are other instances where we want to fund Bay restoration activities but where loans do not work and where we simply do not have the grant capacity to fund them. That is the second avenue we are currently exploring.

We have been working for over a year with our Department of Conservation and Natural Resources (DCNR) to explore the possibility of PENNVEST investing in revenue-generating riparian buffers. Part of Pennsylvania's goals under the Bay agreement is the planting of 95 thousand acres of riparian buffers between now and 2025. At a low estimate of \$3,000 per acre for installation costs, this would translate into PENNVEST (were we to fund it all) providing about \$36 million in funding in each of those eight years. Our experience is that farmers typically do not take loans to install riparian buffers and we do not have anywhere near the grant capacity to fund even a small portion of this. But, if we can develop a credible business case for generating revenues from buffers, PENNVEST could invest in their installation and share future revenues with the farmers. As with the mussel project, we would be taking the risk for repayment, which would make this endeavor more palatable to the participating farmers, as would the future revenue expected to be earned. DCNR has identified a lot of information on possible revenue-generating crops that could be grown on these buffers, one of which is switchgrass. We are working with a group of MBA students as well as a faculty member at Penn State to see if a viable business case can be developed for the growing and marketing of switchgrass. Possible uses being studied are using switchgrass to produce one or all of the following: biofuels, poultry bedding, mushroom bedding, lubricants and absorbents.

These are two examples of a more general point. There may be other opportunities for partnering with non-profits and businesses in the Bay watershed to identify activities that could help with Bay restoration and also generate revenues in the process. Oysters are one such possibility since they have the same, if not better, water clarifying capabilities as do mussels and there is also a ready market for them. We need to engage the business community, or communities, in the Bay watershed to see what other similar opportunities for investment in Bay restoration might be developed. We also need to engage business schools and similar entities who could help us develop the necessary business cases to see which, if any, investment opportunities are economically viable.