



# THE PINCHOT LETTER

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*Leadership in Conservation Thought, Policy and Action*

## ***Bay Bank—The Chesapeake's Conservation Marketplace***

**T**he collective actions of millions of farmers and woodland owners are the key to the restoration of the Chesapeake's streams, farms, forests, wetlands, and the largest estuary in the United States, the Chesapeake Bay itself. Private families and individuals own nearly 80% of the land in the Chesapeake region and live within minutes of the 100,000 streams and rivers that flow directly into the Bay.

New and innovative market-based approaches have emerged to offer landowners realistic financial incentives to implement conservation actions. Market-based conservation harnesses economic markets to effi-

ciently deliver environmental objectives. For many market-based projects, property owners who implement conservation practices that enhance ecosystem services generate credit supply in an environmental marketplace. For example, by installing a suite of practices that include planting of riparian buffers and other actions to manage nutrient runoff to streams, landowners can generate nutrient reductions that create credits. These credits can then be sold to buyers in a water quality market.

Buyers provide the established need and money that drives markets. For example, water quality markets will be driven by the demand for nitrogen

and other nutrient reductions across the watershed. The businesses, institutions, and citizens demanding these reductions do so to comply with regulations like the Clean Water Act, to prepare for future regulations, or for strictly voluntary reasons. Although these markets are becoming available nationwide, there is no efficient way to link landowners with this capital.

Bay Bank ([www.thebaybank.org](http://www.thebaybank.org)) fills this need by serving as the Chesapeake's conservation marketplace. As markets develop, Bay Bank will make sense of all developing rules and tools and present them so the main suppli-

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## **Status of Markets for Ecosystem Services**

Sara Vickerman

**I**n recent years, enthusiasm for market-based approaches to the conservation of ecosystem services appears to have increased. Private businesses, landowners and operators, government agencies, and other parties are all actively trying to determine their opportunities and roles. Organizations like the Bay Bank in the Mid-Atlantic and the Willamette Partnership in the Pacific Northwest are working to coordinate market-based projects among these varied interests.

Although an influential element of conservation today, the definitions

and diversity of markets are both interesting and complex. A description of several of existing and emerging markets and supportive policies may be useful.

### **Wetland Mitigation Banking**

The most mature domestic market for ecosystem services is probably wetland mitigation banking. Wetlands are protected by the federal Clean Water Act, and the U.S. policy of "no-net-loss" triggers mitigation responsibilities for developers and others who impact wetlands. A his-

toric preference for on-site, in-kind mitigation projects produced a rash

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er of credits, farmers and woodland owners, can easily and more cheaply enter these markets. Bay Bank is currently in the pilot phase in Maryland and Delaware and will be operational in the entire states of Virginia, West Virginia, Pennsylvania, and New York in 2010.

In addition to the social, economic, and environmental needs for Bay Bank, there is also a more practical reason: numerous organizations in the watershed have demanded it. One of the most significant requests for Bay Bank was from the Chesapeake Bay Executive Council—the six Governors of the Bay states, the mayor of DC, the US EPA Administrator, and the Chesapeake Bay Commission. The State of Maryland is also using Bay Bank to help implement its current sustainability initiative.

### **The Problem—Limited Access and High Costs**

Just as economic capital provides steady financial returns, the natural capital of private farms and forests provide steady environmental, economic, and social returns in the form of ecosystem services. In fact, the public spends millions of dollars on technological replacements for services that these lands provide naturally—such as drinking water filtration, storm water management, air pollution control, and flood mitigation. As we lose farms and forests, we also lose the ecosystem services that they provide.

### **While Bay Bank will eventually facilitate numerous markets and programs, it is initially focusing on the following market areas:**

- ✿ Forest conservation: credit for maintaining, planting, and enhancing forest lands
- ✿ Habitat conservation: credit for preserving and enhancing high-value habitats
- ✿ Carbon sequestration: planning for emerging markets that will incentivize conservation actions that increase carbon storage
- ✿ Conservation programs: cost-share funding for conservation actions that leverage ecosystem service markets
- ✿ Water quality: credit for implementing practices that reduce nutrient pollution

Numerous regulatory tools exist to protect the provision of ecosystem services. These include regulation of industrial discharges, land use restrictions, requirements to protect endangered species, land acquisition, and a complex system of mitigation requirements for some resources but not others. Regulations on their own have not been able to deliver the ecosystem gains needed to restore the Chesapeake ecosystem.

Recent landowner incentive programs have been successful in encouraging the implementation of conservation actions, but funding and agency capacity to administer these programs has not met landowner demand.

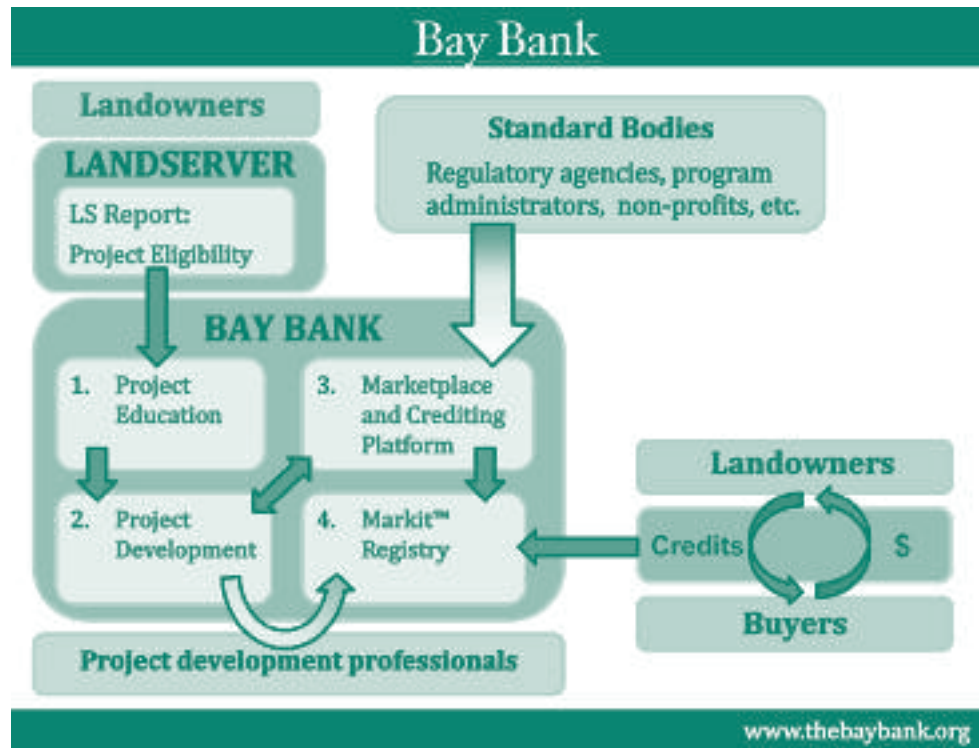
There are existing and emerging markets available to farmers and woodland owners to help them implement conservation practices, but their utility is limited by a couple of

factors: high costs of participation and a lack of awareness. For a landowner that has never been involved in a conservation program before, joining one can be daunting. To develop a forest mitigation bank in Maryland, a landowner needs to know about the program, conduct research on their options, contact a county program, find a project developer that can help set up the bank, and then make contact with a buyer. Forest mitigation credits can sell for a nice sum, but by themselves may not be enough to convince a landowner to join the program. A landowner could attempt to leverage their forest bank with income from other programs, but the enrollment process would need to be repeated all over again with new players.

### **The Solution—Market-Based Approaches to Conservation**

Implementing market-based conservation can be complex. From





Bay Bank will facilitate landowner involvement in market-based programs by communicating the rules of the road, evaluating opportunities, and connecting landowners to project developers and buyers.

landowner outreach to payment for credits, a number of dedicated agencies, organizations, and volunteers are needed to complete the entire process. Bay Bank is developing the partnerships and infrastructure needed to make existing markets and programs more cost-effective and transparent, speed the development of emerging ecosystem markets, and encourage the creation of new ecosystem markets. Bay Bank provides the following services to conservation buyers, farmers, and woodland owners:

- Market education and outreach;
- Market facilitation; and
- Coordinated third-party verification and independent registry services

### Market education and outreach

Bay Bank makes sense of ecosystem market and conservation program

rules to increase participation, save conservation buyers' and landowners' time, and ensure environmental gains. This is accomplished through a number of online tools and resources including LandServer and the Ecosystem Crediting Platform.

### LandServer

LandServer is a web-based tool that provides farmers and woodland owners with a quick and easy natural resource assessment, an evaluation of their property's potential to receive payments for implementing conservation actions, and information on how to get started. In the Chesapeake, users have access to the Bay Bank marketplace where ecosystem service credits are generated and posted for potential buyers. Governments, conservation organizations, foundations, and other groups will benefit from the ability of LandServer to educate landown-

ers on conservation programs and other priorities.

The heart of LandServer is a robust database that contains regional geospatial datasets provided by state agencies, conservation groups, and other partners used to process landowner reports. LandServer will be continually updated to reflect that latest information for landowners.

### Natural resource assessment

By opening a private LandServer account, farmers and woodland owners can generate a natural resource assessment for their property. This report will include detailed information on the natural resources on their land including land use/land cover, soil types, and presence in conservation priority areas. The assessment will also estimate how their property provides valuable ecosystem services like growing food



and fiber, cleaning water, filtering the air, and maintaining healthy wildlife habitat. By providing landowners with a natural resource assessment, LandServer serves as an educational resource raising awareness of natural systems' provision of valuable ecosystem services.

### *Conservation funding assessment*

LandServer's most unique service to landowners and organizations is its ability to translate complex program requirements into simple eligibility models. These models will be continually updated to reflect program changes and new models will be developed when new opportunities arise. LandServer will allow landowners to:

- Easily evaluate potential to enroll in valuable state and federal cost share programs;
- Evaluate potential to receive payments for implementing land practices that enhance ecosystem services; and
- Save time by easily moving to the next step and enrolling in Bay Bank to generate ecosystem service credits, and list credits online for buyers.

### *Market facilitation*

After learning about their conservation funding opportunities in LandServer, landowners can choose to enroll in Bay Bank. Bay Bank will facilitate landowner involvement in market-based programs by communicating the rules of the road, evaluating opportunities, and connecting landowners to project developers and buyers.

### *Market protocols*

In order for Bay Bank to succeed in its mission to use innovative, market-based tools to facilitate conservation in the Chesapeake, clear standards for



A forested area within the floodplain of the Chesapeake Bay watershed

participation in each market area in which credits will be transacted are needed. These "market protocols" establish the rules of the road for landowners wishing to participate in ecosystem markets. These protocols outline rules such as:

- Landowner eligibility,
- Verification and certification procedures for practices generating credits,
- Credit definition,
- Stewardship requirements for maintaining credits over time, and



Trees provide multiple services, such as habitat and sequestering carbon, that can provide financial incentives.

- Others needed to ensure only high-quality credits are transacted.

Within each of these market areas, protocols provide landowners and project developers with the information they need to develop certified credits. The protocols within each market area were thoroughly developed over the past year by chaired workgroups consisting of experts from across the region. The protocols, in most cases, are translations of regulatory standards for the given market. These translations place all of the rules in a single, sequential protocol that can be used by project developers and landowners to move step-by-step through the credit development process. Some markets may have more than one protocol. For example, habitat conservation markets have a protocol for each habitat type, and forest conservation markets have a protocol for each different participating county or city.

### *Ecosystem Crediting Platform*

After identifying potential conservation actions, landowners can then use a simple map interface to evaluate how their preferred actions can be integrated with their management goals and to identify baseline credit and financing potential.

Bay Bank provides landowners a list of certified project developers to help them design and implement their chosen conservation actions. Project developers can use the online tools provided by Bay Bank to help landowners make good project planning decisions, verify eligibility, and assist landowners with implementation of conservation actions. This tool is being built in partnership with the States of Maryland and Delaware and the Willamette Partnership ([www.willamettepartnership.org](http://www.willamettepartnership.org))—a regional market coordinator in the Pacific Northwest.

At the conclusion of this process, landowners will have a credit listed on the Bay Bank Marketplace.

### *Marketplace*

The Bay Bank Marketplace allows buyers to view credits and/or expressions of interest in generating credits for particular markets that have been “posted” by the credit generator. Bay Bank also provides basic market information to the buyer and seller such as current average sale price of credits to ensure transparency.

The Marketplace posts three stages of credits that are designed to help buyers and sellers manage their risk during transactions:

- Expression of interest—a landowner has expressed interest in generating credits, but is waiting for demand to be established before implementing conservation actions.
- Verified opportunity—a landowner has verified that their site conditions are suitable for credit generation. This includes an assessment that the site meets regulatory requirements to generate credits.
- Certified credit—a landowner has implemented conservation practices according to market protocols and has received confirmation from Bay Bank or regulatory agencies that their credit is eligible for sale.

The Marketplace will be available to landowners in Maryland and Delaware in early 2010 and to residents of other Bay States later in the year.

### *Conservation targeting*

Bay Bank allows non-profit, government, and corporate organizations to better target their objectives by finding landowners and operators willing to implement conservation actions in



places they care about. In the Chesapeake, organizations can inquire with Bay Bank to access interested landowners. Elsewhere, LandServer will have some basic querying functions available that allow organizations to find willing landowners. For example, a small watershed group can easily identify landowners interested in planting riparian buffers through the Conservation Reserve Enhancement Program. The LandServer database can be loaded with any state or local priority area GIS data that can then be included in the report to the user. This GIS data can include special resource areas, priority funding areas, wildlife action plan data, zoning, rural legacy, cost share programs, etc.

## Verification

### *Technical service provider certification*

Bay Bank provides landowners access to certified technical service providers (i.e., project developers) to assist them in project design, implementation, and credit marketing. Landowners can be assured that technical service providers found through the Bay Bank will deliver honest and high-quality service. Bay Bank's educational resources and tools help prepare landowners for these discussions and quicken the overall process.

### *Training*

To ensure technical service providers are able to meet landowners' needs, Bay Bank offers training on eligible practices, certification standards, and verification requirements for the Bay Bank. In addition, Bay Bank is developing a comprehensive protocol that will allow for effective verification of credits for multiple markets. This will limit the number of site visits to a landowner's property by verifiers.

### *Multiple-market registry*

Bay Bank is partnering with Markit



Within the watershed, all residents live within minutes of a nearby stream or river that flows into the Chesapeake Bay


Environmental Registry ([www.markit.com](http://www.markit.com)) to provide a multiple market registry that allows credits to be tracked from generation through verification. This transparency will serve markets by ensuring that individual credits are not being sold multiple times (i.e., double dipping). The multi-state nature of the registry will also assist the development of regional markets (e.g. intra-basin water quality trading). The registry is a first step in developing protocols that allow credit bundling or stacking, the ability to generate multiple credits from a single conservation action.

## The Future—Making the Most of What Resources Provide

Bay Bank is being developed through a unique partnership of the Pinchot Institute for Conservation and Sustainable Solutions, LLC. The program's ultimate success lies with our multiple other non-profit, university, foundation, state, and federal partnerships. Bay Bank has a 20-plus member advisory committee that provides guidance on broad organizational issues and six market-area

workgroups that are defining landowner opportunities.

Bay Bank is beginning landowner pilots in early 2010 in Maryland and Delaware. Lessons learned from the pilot process will be incorporated for the expansion to Virginia, West Virginia, Pennsylvania, and New York in late 2010 and the public launch in January 2011.

Linking farm and forest landowners to current and upcoming market-based programs is an essential element to restoring the Chesapeake Bay. Demanded by numerous organizations in the region and supported by both the policy and the natural resource community, Bay Bank will coordinate market-based conservation in the Chesapeake to restore the bay and conserve working lands. 

*For more information about the work of the Pinchot Institute through our Bay Bank program, please go to [http://www.pinchot.org/gp/bay\\_bank](http://www.pinchot.org/gp/bay_bank) or [www.thebaybank.org](http://www.thebaybank.org) or contact Eric Sprague directly at [esprague@pinchot.org](mailto:esprague@pinchot.org).*