
Bay Bank

The Chesapeake's Conservation Marketplace

Bay Bank Forest Conservation Protocol – Calvert County

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I. Introduction

a. About Bay Bank

The mission of Bay Bank is to sustain and improve the environment and the economic health of communities using innovative, market-based solutions. Bay Bank has established trading protocols that are compliant with existing regulatory and voluntary markets and ensure only high quality credits are transacted. This document provides the Bay Bank Regulatory Forest Conservation Market Protocol for use by participants in Maryland's regulatory forest mitigation bank market. This protocol provides the specific rules that must be followed to generate forest mitigation credits for transaction through the Bay Bank marketplace.

In addition to market protocols, which provide the rules for market participation, Bay Bank also provides an online marketplace and registry for ecosystem services credits. All credits generated using Bay Bank protocols, as well as credits generated through the use of other approved protocols, are listed in the Bay Bank market registry. The registry provides a listing of credits available for purchase in the forest mitigation banking and other ecosystem markets. It also tracks credits throughout the credit generation, marketing, sale, and monitoring process. The registry provides enough information to buyers to allow them to make initial inquiries about credit purchases, while protecting the identity of sellers. The Bay Bank registry is fully integrated with the Bay Bank marketplace, which connects buyers and sellers, provides basic transactional data, and reports transactions to the Bay Bank registry.

b. About Forest Conservation In Maryland

The key regulatory driver for forest mitigation markets and the only significant state level driver in the Chesapeake is Maryland's Forest Conservation Act (FCA). In short, the FCA requires developers to replace trees cut because of development through afforestation, reforestation, or forest conservation. Developers must first consider replacement of trees on-site. But if on-site reforestation is not possible, the developer may reforest off-site, using a mitigation bank, or pay into a forest mitigation fund. The Bay Bank facilitates the use of off-site and mitigation bank compliance through this protocol and its online marketplace and registry

Forest mitigation regulations exist at both the state and local level. Generally, a forest mitigation bank must be located in a priority area as defined by state and local statute, subject to a permanent conservation easement, and meet the rules of the local jurisdiction. Eight counties, Calvert, Montgomery, Queen Anne's, Howard, Frederick, Dorchester, Carroll, and Worcester have specific forest mitigation banking rules contained within their local forest conservation law. A market protocol is available to landowners in each of these counties. For landowners outside of these counties, there are other options they can consider including offering their land for offsite mitigation and participating in fee in-lieu programs where available. Information about these options is included in the landowner education portion of Bay Bank's website.

c. Organization of this Protocol

This protocol is divided into five sections: eligibility, credit definition, credit origination, credit development, and monitoring. Together, these sections provide a step-by-step guide to developing a forest mitigation bank in a given county, consistent with that county's regulations. Landowners interested in developing a forest mitigation bank should first read the entire protocol to gain a comprehensive understanding of the bank development process. Credits developed using this protocol are guaranteed to be eligible for sale through the Bay Bank marketplace. Questions about the protocol should be directed to Bay Bank staff at _____ or a Bay Bank approved service provider (hyperlink).

d. Contact Information

Bay Bank Forest Conservation Market Coordinator: Name, email, phone
Bay Bank Approved Service Provider List: Hyperlink
County Forest Conservation Staff Contact: Name, email, phone

e. Information for Credit Purchasers

Credit buyers are encouraged to review this protocol and contact Bay Bank staff with any questions or concerns. This protocol is designed to provide buyers with confidence that the credits they are purchasing are of high quality, meet regulatory standards, and are approved by county or state regulators. Transparency is critical to the success of ecosystem markets. As a result of this protocol, buyers can be assured that credits offered for sale through the Bay Bank marketplace are of the highest quality and were developed using standardized practices.

It is also possible for credit purchasers to participate in the credit development process through the use of this protocol. "Eligible" credits that have yet to be developed into sale-ready credits are listed on the Bay Bank marketplace. These credits may be developed under contract with the landowner by the buyer as an offsite mitigation project, subject to regulatory approval. Buyers interested in developing mitigation projects in this manner may use the Bay Bank protocol to guide the establishment of the offsite mitigation site, as the rules for location, planting density, etc. are the same for offsite mitigation and forest mitigation banking.

This protocol does not provide credit purchasers with information or guidance about when forest mitigation is required as a result of development activity.

II. Eligibility

a. Legal Requirements

None for mitigation banking.

Calvert County also has a Forest Conservation Transferable Development Rights (FCTDR) program that is similar to mitigation banking, with some differences (See Section IIIa). FCTDR eligible lands must be within a county designated Agricultural Preservation District

(APD). An APD is established voluntarily by the owner of agricultural or forestry land, with approval by the Agricultural Preservation Advisory Board. Rules, criteria, and eligibility for the establishment of an APD are available on the Calvert County website at:

<http://www.co.cal.md.us/government/departments/planning/agpres/>

b. Geographic/Ecological Requirements

Only reforestation projects are eligible for forest mitigation banking.

- Reforestation is defined as the creation of a forest with at least 100 living trees per acre, with ½ (50%) of the trees having the potential to reach at least 2 inches or greater in diameter measured 4 ½ feet above the ground within 7 years.
- Reforestation is specific to areas that were previously forested and have been cleared.
- Reforestation may be conducted through either planting or natural regeneration

The minimum bank size is one-half acre for the following ecological characteristics:

- Establishes or enhances forest buffers adjacent to intermittent and perennial streams to widths of at least 50 feet;
- Establishes or enhances non-forested areas on 100-year floodplains, when appropriate;
- Establishes or increases existing forested corridors to connect existing forests within or adjacent to the site and where practical forested corridors should be a minimum of 300 feet in width to facilitate wildlife movement;
- Establishes or enhances forest buffers adjacent to critical habitats where appropriate;
- Establishes plantings to stabilize slopes of 25 percent or greater and slopes of 15 percent or greater with a soil K value greater than 0.35 as determined by the Universal Soil Loss Equation, including the slopes of ravines or other natural rights-of-way.

The minimum bank size is one acre for the following ecological conditions:

- Establishes buffers adjacent to areas of differing land use when appropriate, or adjacent to highways or utility rights-of-way;
- Establishes forest areas adjacent to existing forests to increase the overall area of contiguous forest cover, when appropriate;
- Uses native plant materials for afforestation or reforestation.

To be eligible for the Forest Conservation Transfer of Development Rights program, the portion of the landowner's property to be enrolled must be forested.

III. Credit Definition

a. What is a Forest Mitigation Bank?

In Calvert County, a forest mitigation bank is an area that is reforested by the landowner and then permanently protected by recording the existence of the bank as a permanent forest retention area on the land's property records. Until a bank is recorded and a mitigation credit is sold from the bank to a buyer, a landowner can change his/her mind and withdraw the bank. However, once a portion of the bank has been sold to a buyer to meet a mitigation requirement, the remaining portion cannot be withdrawn. Forest mitigation banks are used by

developers to meet forest mitigation requirements created by the state of Maryland's Forest Conservation Act and the county's local ordinance implementing the state act. In order for a forest mitigation bank to be accepted into Calvert County's banking program it must meet the eligibility requirements noted in the previous sections and the administrative requirements discussed below. In order to sell credits through Bay Bank, the landowner must first receive county approval for the forest mitigation bank and credits.

Forest Conservation Transferable Development Rights program land is somewhat different in definition, but functionally the same as a mitigation bank. FCTDR program participants protect existing forests rather than reforested land. Participants sell their development rights rather than mitigation rights. Therefore, FCTDRs may have a different value than mitigation bank credits. The sale of development rights to a buyer to meet mitigation requirements results in the permanent protection of the existing forestland.

b. Forest Mitigation Credit Units

Credit units are the commodity being bought and sold in a market transaction. There are two components to credit units: what does the credit represent and how much of it is contained within each credit, in this case measured in land area. In the case of forest mitigation banking in Calvert County, a credit represents a fixed amount of reforested land.

Bay Bank defines one forest mitigation bank credit as one acre of a county approved forest mitigation bank. For example, a mitigation bank containing 20 acres of reforested land contains 20 forest mitigation credits. These credits may be sold as fractions: a bank owner may sell $\frac{1}{2}$ of a forest mitigation credit (representing $\frac{1}{2}$ of an acre of reforested land contained within the forest mitigation bank).

The definition and units of credits created by participation in the Forest Conservation Transferable Development Rights program are the same as for standard forest mitigation banks.

c. Trading Ratio

Trading ratios are the ratio between the number of credits needed for mitigation by the buyer and the number of credits the buyer is required to purchase by county regulations to meet its mitigation requirements stemming from development activity.

The trading ratio for Calvert County forest mitigation banks is one to one: for each acre of mitigation needed by a buyer, he/she must purchase one credit from a forest mitigation bank. A bank containing 20 acres contains 20 credits and may sell the 20 credits to buyers requiring up to 20 acres of mitigation. Fractions of credits may be sold, e.g. $\frac{1}{2}$ of a forest mitigation credit may be sold to a buyer to meet $\frac{1}{2}$ an acre of forest mitigation demand.

The trading ratio of Calvert County Forest Conservation Transferable Development Rights is two to one: for each acre of mitigation needed by the buyer, he/she must purchase two credits from the FCTDR program participant. A FCTDR program participant with 20 acres enrolled in the program owns 20 forest mitigation credits and may sell credits to buyers

requiring up to 10 acres of mitigation. Fractions of credits may be sold, e.g. 1 FCTDR credit may be sold to a buyer to meet 1/2 an acre of forest mitigation demand.

IV. Credit Origination

a. LandServer

LandServer is an easy to use, online tool for landowners. It allows landowners to estimate the environmental/ecosystem services produced by their land and generates a report outlining the programs and market areas they may be eligible for, including forest mitigation banking. LandServer can be accessed through Bay Bank's website (www.thebaybank.org) or directly (www.landserver.org).

Landowners interested in participating in a forest mitigation banking program, posting their forest mitigation bank credits in the Bay Bank registry, and connecting with credit purchasers through the Bay Bank marketplace should utilize LandServer to estimate their eligibility for forest mitigation banking and to begin the credit development process. LandServer will provide landowners with an estimate of eligibility for forest mitigation banking, an indication of the amount of land that may be eligible for forest mitigation banking and how many credits this land represents, an estimate of the value of forest mitigation bank credits based on previous market transactions, and provide landowners with the option to register their land in the Bay Bank registry if they are interested in pursuing the development of a forest mitigation bank. Landowners are not required to register in the Bay Bank registry to use LandServer, but they are required to register if they wish to develop forest mitigation bank credits. Landowners who elect to register with the Bay Bank registry are assigned an account and the estimated credits as determined by LandServer are posted as "estimated." Estimated credits are unverified for eligibility and may not be contracted for sale or sold through the Bay Bank marketplace.

b. Verification of Eligibility

Estimated credits must be verified on-site by a Bay Bank approved technical service provider before credits may be listed for contract or sale in the Bay Bank registry. The technical service provider must verify the following and submit a verification report to the Bay Bank registry (available in Appendix X):

- Land eligibility: does the proposed forest mitigation bank area meet the county requirements for slope, stream buffers, etc. (see Section II: Eligibility)?
- Land Area: Do the number of credits estimated by LandServer match the number of eligible credits available to the landowner? For example, LandServer may indicate that a land area of 20 acres are eligible for forest mitigation banking, resulting in 20 forest mitigation credits. On-site verification checks the LandServer estimate and adjusts it as necessary
- Size: After the land area is verified, verify that the actual acreage of eligible forest mitigation bank land complies with the county requirements (see Section II: Eligibility).

The Bay Bank provides a list of approved technical service providers on its website at www.thebaybank.com.

c. Listing of Originated Credits on the Bay Bank Marketplace Registry

When verification of eligibility by a Bay Bank approved technical service provider has been completed and the verification report accepted by the Bay Bank, estimated credits as determined by the landowner using LandServer, plus or minus any changes to the number of forest mitigation credits discovered during on-site verification, are upgraded in the Bay Bank registry to “prospective” credits.

Designation of forest mitigation credits as prospective is an important milestone in the forest mitigation bank development process. When credits are designated prospective, they represent credits that have a high probability of receiving regulatory approval. Prospective credits are listed on the Bay Bank registry and are visible to potential forest mitigation credit buyers on the Bay Bank marketplace. Prospective credits are eligible for contract with buyers to meet offsite mitigation requirements if a landowner does not wish to complete the forest mitigation bank development process. The terms of such contracts and the ultimate sale price of the credits are set between the buyer and the seller. For a discussion of the some of the advantages and disadvantages of contracting for offsite mitigation vs. forest mitigation banking, see Appendix A.

The process for FCTDRs is the same, except that FCTDRs are not eligible for use as offsite mitigation project sites; landowners interested in participating in the FCTDR program must receive regulatory approval to establish and sell actual credits representing protected forests.

V. Credit Development

a. Forest Mitigation Bank Plan

A forest mitigation bank plan must be developed by a Bay Bank approved technical service provider. The technical service provider developing the forest mitigation bank plan must be different from the provider who reviewed forest mitigation bank eligibility to help ensure there is no conflict of interest.

The following elements are required for regulatory approval of a forest mitigation bank plan.

- A survey of the bank site
- A statement of the total number of acres to be reforested and included in the bank
- The tax identification number of the parcel, the tax map, and the parcel and lot number for the parcel containing the forest mitigation bank
- A description of the method of reforestation (e.g. natural versus artificial regeneration).
- A replanting plan detailing how the area will be reforested.

The forest mitigation bank plan must be submitted to the county for regulatory approval. When regulatory approval is received, documentation must be submitted to the Bay Bank.

For FCTDRs, the process is similar. However, because the FCTDR program protects existing forest, a description of the reforestation methods and replanting plan are not needed.

b. Conservation Easement

A conservation easement is not required by Calvert County. However, a note on the land records for the parcel containing the forest mitigation bank must be recorded prior to the sale of any forest mitigation bank credits. This note must state that the area designated for forest mitigation will remain in forest for perpetuity. The owner of the forest bank may withdraw their land from the forest bank prior to the sale of any credits. Once a credit has been sold from the bank, the entire bank is permanently protected and may not be withdrawn.

c. Maintenance Agreement/Surety Bond

A two year maintenance agreement between the owner of the forest mitigation bank and Calvert County is required for all forest mitigation banks. The maintenance agreement must be approved by the county prior. The agreement specifies what maintenance will be performed over the first two years of the forest mitigation bank's life to ensure the survival of the forest. The following shall be included in an agreement, consistent with the Maryland Forest Conservation Manual:

- Watering and fertilizing schedules
- A description of how competing vegetation will be controlled
- A description of how the site will be protected from disease, pests, and mechanical damage
- Permission for county staff to inspect the bank site
- A requirement that the bank owner contact county staff to schedule a final inspection at the end of the maintenance agreement
- Provisions for the release of the require financial assurance of bank maintenance
- Name of the individual or entity responsible for bank maintenance
- Evidence of the bank owner's legal right to implement the maintenance agreement.

In addition to a maintenance agreement between the bank owner and Calvert County, the county also requires the bank owner to post a financial assurance against the failure of the forest mitigation bank. The purpose of the maintenance provision is to give the landowner the ability to sell credits immediately, while also providing the county with "insurance" against bank failure.

Financial assurance must be in the form of an irrevocable letter of credit or a cash bond from a financial institution authorized to do business in the state of Maryland. The amount of the bond will be determined by the Calvert County Department of Planning and Zoning, but will equal 125% of the estimated cost of the forest mitigation bank's planting and maintenance for two years. The bond shall be made payable to the Calvert County Commissioners. Financial assurance must be provided before any credits may be sold during the initial two year maintenance agreement period. The bond must be in place until the maintenance agreement between the bank owner and the county is completed. If, after two growing seasons, the forest bank area does not meet the requirements of the maintenance agreement, the bond will be released less the cost of completing the requirements of the maintenance agreement.

d. Bank Verification

Forest Mitigation Bank and FCTDR site verification is performed by the county. A county representative will review the forest mitigation bank plan, the proposed mitigation bank site, and the replanting plan for the site.

Documentation of county forest mitigation bank verification must be submitted to the Bay Bank.

e. Regulatory Approval/Certification

Upon completion of forest bank verification and registration of a note on the property records for the parcel containing the mitigation bank providing for the establishment of the forest bank or FCTDR site in perpetuity, a forest mitigation bank is eligible for regulatory approval by the county. It is the landowner's responsibility to gain approval from the county.

Documentation of regulatory approval of a forest mitigation bank must be submitted to Bay Bank before credits can be traded through the Bay Bank marketplace.

f. Sale of Credits on the Bay Bank Marketplace

Upon receipt of documentation showing county regulatory approval of a forest mitigation bank, the Bay Bank will reclassify the bank owner's credits as "certified credits" in the Bay Bank registry. Credit buyers will be able to access basic information and inquire about the purchase of the credits through the Bay Bank marketplace. The Bay Bank registry will record all transactions that take place through the Bay Bank marketplace and deduct forest mitigation credits sales from the seller's forest mitigation bank account in the registry. The terms of transactions are decided between the buyer and seller.

g. Credit Sale Reporting

In order to meet their regulatory obligations, developers must report the purchase of credits from a certified forest mitigation bank or FCTDR site to the county. The county paperwork required for reporting transactions is provided to buyers and sellers participating in the Bay Bank marketplace. In addition to reporting transactions to the county, transactions must also be reported to Bay Bank to enable the tracking of credits in the Bay Bank registry. Buyers and sellers can report transactions through their accounts on Bay Bank's website.

VI. Monitoring

Monitoring of forest mitigation banks is generally carried out by the county where the bank is located. The county is to holder of the conservation easement providing for permanent protection of the forest bank, and therefore assumes the monitoring responsibility for the bank.

Counties have different approaches to monitoring; landowners should discuss monitoring procedures followed by the county at the beginning of the forest mitigation bank development

process. Generally, monitoring will be relatively unobtrusive – its goal is to ensure the forest bank remains in place over time and that restricted uses do not take place within the forest bank area.

In addition to county monitoring, if a landowner elects to participate in more than one ecosystem market, Bay Bank or a Bay Bank representative may also conduct monitoring visits from time to time. The purpose of these visits will be to monitor the other ecosystem credits present on the property and to ensure these credit values do not inappropriately overlap with the forest bank credits. Bay Bank monitoring will only occur if a landowner is engaged in more than one market; if forest conservation is the only market a landowner is currently participating in, Bay Bank will rely on the county to carry out its own monitoring program.

Appendix A: Estimated Costs and Returns from Establishing a Forest Bank

a. Option A: Landowner Financed

b. Option B: Developer Financed

Appendix B: Bay Bank Certified Verifier/Monitor Requirements