
Bay Bank

The Chesapeake's Ecosystem Service Marketplace

Habitats Suitable for Eastern Brook Trout Habitat Credit Protocol

This protocol establishes requirements and rating methods for projects that conserve Eastern brook trout habitat in Chesapeake watershed states. Projects will be evaluated on a case-by-case basis. The award of credits will be based on how well projects meet criteria provided in this protocol. The Bay Bank criteria focus primarily on the project's location, amount of additional habitat protection resulting from the project, how long-lasting or durable the project benefits will be.

Principle 1.0 – Project Eligibility

1. To be eligible for participation in the Bay Bank Voluntary Habitat conservation market, a property must be located in a priority Eastern brook trout watershed as identified by LandServer (www.landserver.org). Presently, Bay Bank is not accepting projects occurring outside the following areas:
 - 1.1. A watershed designated by the Maryland Department of Natural Resources as a special trout management area where brook trout are present: Savage River, North Branch Potomac River, Youghiogheny River, Big Hunting Creek, Little Hunting Creek, and Gunpowder Falls.
 - 1.2. A stream reach designated as inhabited in the Maryland Department of Natural Resources Maryland Brook Trout Management Plan, published in 2006.
 - 1.3. A watershed designated by the Eastern Brook Trout Joint Venture as Best for Protection or Best for Enhancement and with an index score of .16 or above.
 - 1.4. A watershed with a score greater than 50 from the Trout Unlimited Conservation Success Index.

Principle 2.0 – Project Evaluation

Projects will be assigned credits based on the following criteria. (Management strategies included in this project evaluation criteria are based on the Maryland Department of Natural Resources' Maryland Brook Trout Management Plan, adopted in 2006.)

2. Projects of different sizes and kinds are acceptable, and can include large whole-parcel projects, sub-parcel projects, or a set of management practices introduced for a period of time. The location (e.g. priority watershed), quality (e.g. land cover), and type (e.g. duration) of project affect credit density.

2.1. Credit density refers to the amount of Eastern brook trout habitat contained in the entire area protected by the project and the portions of the project area where specific management activities that protect the persistence of the Eastern brook trout habitat are undertaken.

2.2. Project Location

2.2.1. Location within priority watersheds (Eastern brook trout habitat refers to areas that meet the eligibility standards defined in Principle 1 of this management guidance.) Maximum 50 points

2.2.1.1. **[50 pts]** The site is located in an Eastern brook trout priority watershed with a Trout Unlimited Conservation Success Index rating above 50 and an Eastern Brook Trout Joint Venture best for protection or best for enhancement index rating above 0.16. LandServer provides these values.

2.2.1.2. **[40 pts.]** The site is located in an Eastern brook trout priority watershed with a Trout Unlimited Conservation Success Index rating above 50 or an Eastern Brook Trout Joint Venture best for protection or best for enhancement index rating above 0.16. LandServer will provide these values.

2.2.1.3. **[30 pts.]** The site is located in an Eastern brook trout priority watershed. LandServer provides this information.

2.2.1.4. **[0 pts. and no project]** The site is outside an Eastern brook trout priority watershed.

2.2.2. Proximity to an occupied stream and adjacent riparian areas. Maximum 30 points

2.2.2.1. **[30 pts., Zone 1]** Land immediately adjacent to and buffering stream reaches within a priority Eastern brook trout watershed. The width of the stream buffer included in this habitat zone is dependent on stream characteristics and the topography of the surrounding land, but is usually between 100 and 200 feet wide.

2.2.2.2. **[15 – 25 pts. , Zone 2]** Lands outside but adjacent to Zone 1 [25pts.], or a previously established Zone 2 [15 pts] project. All Zone 2 projects are connected either directly or through other project areas to Zone 1.

2.2.2.3. **[4 points, Zone 3]** Lands within priority watersheds not qualifying as Zone 1 or Zone 2.

2.3. **Quality of the Project Area** - Projects are evaluated based on the suitability and security of the land cover that helps maintain favorable conditions in coldwater streams, and/or protecting the function of adjacent Zone 1 and Zone 2 sites. Maximum 20 points

2.3.1. **[20 pts.]** Site currently composed entirely (more than 75%) of suitable natural cover, e.g. forest, natural meadows, and grasslands, or the project will result in land cover composed of greater than 75% suitable natural cover, and protected from disturbances that will diminish protection of cold-water streams, such as grazing, motor vehicles, timber harvesting, disease/pest outbreaks, etc. A habitat management plan shall require the maintenance of practices, structures, and/or land-use restrictions, which will maintain natural cover and protection for streams and adjacent Zone 1 and Zone 2 project areas. Practices should reflect techniques that are proven to be effective, and reflect strategies expressly recognized for improving Eastern brook trout habitat.

2.3.2. **[10 – 15 pts.]** Site composed of 50% to 75% suitable natural cover (points dependent on percentage of land in suitable cover), or the project will result in land cover composed of greater than 50% but not more than 75% suitable natural cover, but protected and unlikely to experience disturbances that will further diminish protection provided to cold-water streams. A habitat management plan shall include land-use restrictions which will prevent degradation of the site.

2.3.3. **[7 pts.]** Site composed of less than 50% suitable natural cover, or the project will result in land cover composed of less than 50% suitable natural cover, but is protected and unlikely to experience disturbances that will further diminish protection provided to cold-water streams. A habitat management plan shall include land-use restrictions which will prevent degradation of the site.

2.3.4. **[3 pts.]** Site lacks suitable natural cover, but is protected and unlikely to experience disturbances that will further diminish protection provided to cold-water streams. A habitat management plan shall include land-use restrictions which will prevent degradation of the site.

2.3.5. **[0 points, and no project]** Site lacking natural cover, is unprotected from conditions that will impair coldwater streams, or not adjacent Zone 1 or Zone 2 properties.

2.4. **Duration of the Project.** All projects are subject to a credit adjustment based on the length of the contract through which credits are received. The base contract length is 100 years. Shorter contracts adjust the total credit value as a percentage of the full contract length. Fifty year contracts are therefore valued at 50% of the full credit density. No contract can be shorter than 15 years.

2.5. **Practices** – this management guidance does not specify precisely which practices must be implemented in order to earn Eastern brook trout habitat credits. Project developers may select specific projects at their discretion based on their expertise and judgment of what is needed on a specific site. Credit purchasers will evaluate projects on an individual basis and select credits for purchase at their discretion. Project developers/landowners are encouraged to consult with credit buyers via the Bay Bank before they begin to develop a project based on specific management practices to ensure they meet the expectations of the buyer. However, at minimum, implemented practices must result in the following verifiable benefits:

2.5.1. Protection of key Eastern brook trout habitat characteristics, as defined by the Maryland Department of Natural Resources' Maryland Brook Trout Management Plan, adopted in 2006.

2.5.2. Maintenance of Eastern brook trout habitat characteristics for the life of the project

2.5.3. On sites where "whole-parcel" projects are infeasible, a suite of practices can form a project, provided that:

2.5.3.1. Practices are associated with provisions assuring that the effects of the practices are not diminished by other activities on the parcel.

2.5.3.2. Practices are subject to an evaluation of durability (e.g. permanence)

2.5.4. In all cases, projects that fail to provide verifiable protection and maintenance of Eastern brook trout characteristics are ineligible for credits.

2.6. **Credit Calculation:** The credit density of a project is determined by adding the points earned by the project based on Criteria 2.1 and 2.2, multiplied by the project duration percentage relative to the base contract length (Criteria 2.3). Credit density is calculated on a per acre basis. Example credit calculation:

Project located in an area rated above 50 by the Trout Unlimited Conservation Success Index, but not rated by the Eastern Brook Trout Joint Venture as best for protection or enhancement: 40 points

Project located in Zone 1 habitat: 30 points

Project site contains greater than 75% natural cover: 20 points

Total Points: 90 (40+30+20)

Duration of the Project: Landowner agrees to a 50 year contract (50% of base contract length)

Final Credit Density: 90 points X .5 = 45 credits/acre

2.7. **Credit Valuation:** The price of individual credits is determined through negotiation between the buyer and the seller of the credits (the market); there is no fixed credit price.

Principle 3.0 – Additionality

Eastern brook trout habitat values offered for sale through the Bay Bank must be additional and not already conserved on-site through other transactions or commitments, whether voluntary or mandatory. The additionality of a given project is evaluated according to the following criteria

3.1 Values offered for sale may include priority eastern brook trout habitat created, restored, or maintained if prior transactions or commitments do not require these activities;

3.2 Passive additions on-site: Should additional eastern brook trout habitat or transactable attributes develop that are not included in the original transaction, but are not the result of actions undertaken for this purpose (e.g. an additional restoration project), the landowner/project developer will not be permitted to sell additional credits.

3.3 Active additions on-site: Should additional eastern brook trout habitat be created as the result of actions undertaken for this purpose, the landowner/project developer shall be permitted to sell additional credits.

Principle 4.0 – Permanence

The purpose of the Bay Bank's voluntary Eastern brook trout habitat conservation market is to conserve existing quality brook trout habitat and expand the range or quality brook trout habitat in Maryland. As a result of this goal, longer contracts, including permanent conservation easements, are given strong preference in the project evaluation criteria established in Principle 2.0. In all cases, projects must have a minimum contract length of 15 years to be eligible to generate and sell credits. Bay Bank provides buyers and sellers with standard contract and conservation easement instruments that meet the following criteria. Project habitat management plans shall be made enforceable by incorporation into the standard contract/conservation easement language.

4.1. The contract instrument protects the land area of the project site from degradation and alternative use and whether it is subject to landowner decisions, transfer of deed, foreclosure, or adverse possession;

4.2. The contract instrument provides for long-term ecological viability and resilience through incorporation of the habitat management plan (see Principle 5.0). Evaluation shall include measures of:

4.2.1. Present and future threats from adjacent land uses;

4.2.2. Vulnerability to adverse effects of climate change; and,

4.2.3. Probability of loss due to disease, pests, and natural disturbance.

4.3. The contract instrument contains terms for in-kind replacement of ecosystem values at the expense of the project owner in the following cases:

4.3.1. The project owner violates the terms of the protection agreement resulting in the loss or degradation of protected ecosystem values.

4.3.2. The project owner engages in activities outside of the contractually protected land area that directly results in the degradation of protected ecosystem values.

4.4. The project owner shall not be liable for degradation of protected ecosystem values in cases where the degradation is not the result of a willful act by the project owner, e.g. wildfire, drought, hurricanes, or other acts of God. However, the project area remains under projection for the duration of the contract instrument and the credit purchaser is granted the right to restore the ecosystem values at its expense. The landowner may also restore ecosystem values in coordination with the credit purchaser.

4.5. The contractual instrument for the project is required for bank establishment and must be in place before any credits may be transacted. Once the agreement is executed, it shall remain in place for the duration of the contract period stated in the agreement, regardless of the rate at which credits sell or credit price.

4.6. The contractual instrument must be held by a Bay Bank approved conservation partner (for criteria, see Principle 6.0). A list of approved conservation partners is provided to landowners and their technical service providers during the bank development process. The decision to accept a project contract for a Bay Bank Eastern brook trout habitat bank is at the sole discretion of the approved conservation partner.

Principle 5.0 – Planning, Monitoring, and Maintenance

Projects are guided by a ‘habitat plan’ documenting the strategy for generating and protecting the Eastern brook trout habitat offered for sale and a monitoring plan that establishes benchmarks of performance and informs any shifts in strategy required to preserve these values.

5.1. A “habitat plan” is in place for the long-term maintenance and conservation of the Eastern brook trout habitat for sale, including:

5.1.1. Provisions to ensure replacement of habitat in the event of project failure. “Project reversals” may be handled through actual replacement of habitat or “insurance” by discounting the value of credits adequate to ensure the project can be replaced by funds placed into a stewardship endowment by the purchaser of the credits;

5.1.2. Clear description of roles and liabilities of the project owner (landowner selling credits) and the credit purchaser detailing who is responsible for maintaining specific ecological values. The specific ecological values protected by individual contracts will vary, but will include the core Eastern brook trout habitat characteristics described above in Principle 2.0;

5.1.3. Credible strategy to carry out roles and responsibilities, which includes financial capacity and technical resources. Protection agreements shall provide for establishment financial capacity to carry out maintenance and monitoring at the time credits are transacted. This capacity may be in the form of a legal commitment of the credit purchaser to maintain the habitat, a stewardship endowment funded by the credit purchaser or out of the value of the credits, or a bond posted by the credit purchaser or project owner;

5.1.4. Clearly established indicators and supporting measures (see monitoring plan) that will be tracked and used to understand how values are changing. At minimum, the values that must be tracked by these indicators and supporting measures are the habitat characteristics described in Principle 2.0;

5.1.5. Clear timeline for project oversight. The habitat plan must explicitly detail a schedule for project monitoring. If monitoring will take place on anything except for a yearly basis, provide detailed justification of why yearly monitoring is not needed or impractical and how the proposed alternative plan will ensure maintenance of Eastern brook trout habitat values;

5.2. A “habitat monitoring plan” is in place to ensure that all parties understand how and to what extent Eastern brook trout habitat values are being maintained. The “monitoring plan” shall include:

5.2.1. A description of the Eastern brook trout habitat values to be maintained by the project with specific reference to the habitat characteristics detailed in Principle 2 and a strategy to track changes to these habitat values;

5.2.2. Clear indicators to assess how Eastern brook trout habitat values have changed;

5.2.3. Clear description of the habitat thresholds that can be evaluated through the monitoring plan and how reaching clearly defined thresholds indicating decline of the quality of Eastern brook trout habitat as a result of changes in conditions within the project area trigger different management strategies and enforcement procedures if a violation has occurred.

Principle 6.0 – Buyer and Seller Eligibility

6.1. Status and history of the landowner, project developer, and other parties bearing liability in the transaction should support future commitments, including but not limited to:

6.2. Buyer Eligibility (Bay Bank Conservation Partner)

6.2.1. Demonstrated capacity of the project developer to manage restoration projects, handle financial transactions competently and transparently, and demonstrate long-term fiscal viability.

6.2.2. Bay Bank or its representative will periodically monitor projects/credits purchased and administered by Bay Bank Conservation Partners to ensure ongoing compliance with Eastern brook trout contract instrument requirements, as described in Principle 4.0, and the project habitat management and monitoring plans.

6.3. Seller (Property Owner) Eligibility

6.3.1. Ownership status of property is secure. If there are liens on the property where the project is located, e.g. a mortgage, the owner of the lien must agree to subordinate their interest in the land to the conservation easement or other instrument protecting the Eastern brook trout habitat bank and submit documentation to Bay Bank to such effect.

6.3.2. Formal agreement ensures property owner/manager will cooperate with scientists and other partners to develop and refine measurements of the Eastern brook trout habitat and related upland areas present on the property.

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