

Vermont Housing & Conservation Board
Water Quality Protection and Flood Resilience Guidelines

This document is intended to guide the Vermont Housing and Conservation Board in considering surface water protection, river corridor management, and flood resilience in the conservation of significant natural areas, recreational lands, agricultural land, and working forestland. These Guidelines are used as a supplement to the funding priorities under VHCB policies for Natural Area Projects, Public Outdoor Recreation, Conservation of Agricultural Land, and Private Working Forestland and Sugarbush Projects.

Background

Over the years, VHCB conservation investments have built a network of protected lands that help comprise Vermont’s “green infrastructure”, fundamental to our quality of life and prosperity. This infrastructure maintains and improves the health of Vermont’s surface waters, helps to attenuate flooding, and provides vegetative buffers between waterways and working lands. However, more work remains to be done. Forestland that helps keep surface waters clean are still being fragmented and lost to development; climate change threatens Vermont with more frequent and more intense storms; and phosphorous continues to enter Lake Champlain and other water bodies at unacceptably high levels.

The State of Vermont 2012–2015 Strategic Plan adopted by the Agency of Administration contains a goal of achieving greater resiliency to natural disasters, including flooding, and to the effects of climate change. Similarly, the State is committed to working with its local, state and federal partners on ensuring that Vermont’s waters are protected and restored. Furthermore, in 2012, as part of a comprehensive flood hazard mitigation bill, the legislature made surface water protection explicit in VHCB’s enabling statute, adding as an eligible Board activity “the protection of lands for multiple conservation purposes, including the protection of surface waters and associated natural resources.”

It is with these values and outcomes in mind that VHCB and its partners will continue their land conservation and stewardship work, recognizing the synergies between land conservation and the working landscape, and the goals of protecting water quality and achieving flood resiliency. It is abundantly evident that: conserving forested headwaters positively impacts river hydrology and sediment retention; preserving productive farmland and associated buffer lands improves floodplain functioning and reduces run-off and phosphorous loading; protecting riparian corridors helps return river systems to a more stable, less flood-prone condition, while supporting biodiversity and recreation; and comprehensive and coordinated watershed scale approaches are important for successful environmental stewardship.

Guiding Principles

In reviewing potential uses of VHCB conservation funds and considering grant requests, the following principles shall provide a framework for analysis:

- VHCB recognizes that climate change will continue to have significant impacts on Vermont's ecosystems and on our traditional land uses. Conserving land and water resources is one important tool in mitigating such impacts.
- VHCB conservation strategies relating to water quality and flood resiliency will complement the work of other organizations and agencies and will reflect current science. In developing standards and guidelines VHCB will consider how federal and state programs interact with VHCB goals.
- Working farm and forest land conservation projects will be designed to balance the goals of (a) enhancing water quality and flood resiliency, (b) maintaining the landowner's ability to remain eligible for funding support from other programs, and (c) maintaining the economic viability of the land.
- VHCB will consider the upstream and downstream relationship of parcels to existing settlement areas and will take into consideration the potential of conservation projects to attenuate flow and provide floodplain storage.
- New infrastructure proposed for lands to be conserved in identified flood hazard, fluvial erosion, and river corridor protection areas should be avoided if possible. If new development is to be built in such areas, it should not exacerbate flooding and fluvial erosion.
- VHCB-funded conservation projects should be developed with a consideration for soil health and sound environmental stewardship practices and encourage the long-term management of resources in ways that will reduce soil erosion and sedimentation, and enhance water quality.
- Mechanisms proposed to protect water resources and improve flood resiliency will adequately compensate landowners for potential lost production and/or use and will take into consideration the additional costs of a higher level of management.
- VHCB acknowledges that water resources and natural processes are dynamic and that these guidelines may need to be revised as needed.

Funding Priorities

- In selecting applications for VHCB conservation funding, where opportunities exist on a property to enhance water quality and flood resiliency, projects that satisfactorily demonstrate affirmative action taken to achieve those outcomes will receive priority.
- The Board recognizes the important public benefits of riparian buffer lands, floodplain storage areas, forested uplands, and headwaters and will give priority to applications, relative to others being considered, when the applicant demonstrates that a project provides the co-benefits of water quality protection and flood resiliency.
- Targeting floodplains, river corridors, impaired waterways, and headwaters for future easement and fee acquisition is a strategy that VHCB may employ in meeting its mission with funding priority considered for lands identified as a high priority in statewide prioritization tools.
- Funding priority may be given to conservation efforts with multiple benefits at the watershed or landscape scale.

Strategies to Address Water Quality Protection and Flood Resilience

There are many programs and initiatives aimed at protecting water quality and enhancing flood resilience in the state. VHCB often collaborates with the organizations and public agencies responsible for these programs, leveraging additional funding through the VHCB grant making process.

For example, federal Farm Bill programs such as the Environmental Quality Incentives Program (EQIP), the Conservation Stewardship Program (CSP), and the Wetlands Reserve Easement (WRE), a component of the new Agricultural Conservation Easement Program, helps Vermont landowners manage their land in ways that protect water quality and enhance flood resilience. VHCB will continue to collaborate with USDA's Natural Resource Conservation Service and Farm Services Agency on these and other programs as they evolve in the future. The state and federal Conservation Reserve Enhancement Program (CREP) provides rental payments to farmers who agree to exclude livestock from, and establish vegetative buffers along, waterways. VHCB will remain mindful of not making landowners ineligible for this and other programs by virtue of VHCB's own conservation mechanisms.

The Vermont Agency of Agriculture, Foods and Markets (VAAF) makes grants available to farmers who adopt best management practices (BMPs). VHCB's Farm and Forest Viability Program may have an opportunity to collaborate with the Agency on this program. As part

of a comprehensive program to reduce agricultural nonpoint source pollution, VAAFMM manages Vermont's Accepted Agricultural Practices (AAPs). AAPs are statewide rules designed to reduce nonpoint pollutant discharges by regulating farming practices and encouraging environmentally responsible techniques that are low cost and technically feasible. Buffering surface waters is one of the components of the AAPs. VHCB will use its project selection process and will work with its stewardship partners to enhance farmers' awareness of and compliance with the AAPs.

New regulations and policies are being considered by the Vermont Agency of Natural Resources and other state agencies to further address how development is managed in floodplains. VHCB will reinforce state agency initiatives on floodplain development through its standard conservation easement language.

Vermont landowners have enrolled 1.7 million acres of farm and forest lands in the use value appraisal program. This program incentivizes the protection of working lands and requires management plans for enrolled forest land. VHCB will continue to offer landowners the option of going one step further and making their land permanently protected through conservation easements that are recorded in the land records.

VHCB Funding to Protect Water Quality and Enhance Flood Resilience

VHCB has two conduits for funding that can assist in water quality protection and flood resiliency—the VHCB conservation program and the VHCB Farm and Forest Viability Program. The conservation program protects land through the mechanism of a conservation easement. The Viability Program provides business planning, technical assistance, and small grants to landowners for implementing business improvements.

VHCB Conservation Funding - In considering conservation applications, VHCB will assess projects' water quality and flood resilience benefits. In doing so, VHCB will reward projects that demonstrate evidence of affirmative action taken to help ensure the long-term sustainability of farm or forest resources that will improve water quality and/or flood resiliency. This can include projects that have woody buffers on riparian lands, existing CRP/CREP contracts, and other project enhancements that exhibit higher levels of environmental stewardship or demonstrate positive action taken to achieve those outcomes. Protection tools will be selected that are adapted to the circumstances of individual parcels and their owners, while taking into account the larger landscape context, and recognizing that natural resource characteristics and land management activities will change over time. And subsequent to land being conserved, there may be opportunities to revisit projects in later years to achieve enhanced easement protections.

VHCB aims to only protect farmlands that are in compliance with Accepted Agricultural Practices. We will work with the Vermont Department of Environmental Conservation and the Agency of Agriculture in assessing AAP compliance early in the project selection process and in developing a system to assure compliance – or a clear plan for achieving full compliance - prior to closing on a funded project.

Additionally, since we use federal funding through the NRCS on our farm conservation projects the most recent round of federal funding through the new Agricultural Lands Easement Program (ALE) requires a management plan as part of the process. Prepared by NRCS, these plans address soil health and water quality and are another component of our collective efforts to achieve greater water quality protections and environmental stewardship through our conservation work.

Riparian Buffers and Surface Water Protection Zones in Conservation Easements—Buffers and surface water protection provisions in easement language are important tools in preventing phosphorous, nitrogen, and other pollutants from entering waterways. In a buffer area, instead of running off, these materials are absorbed and recycled in the soil and plant matter. Buffers also help to regulate water flow volume and velocity, and protection zones can help recharge the ground water supply. Within these zones, various management practices may be necessary to maintain or improve environmental quality, wildlife habitat, or other resource values. The easement language may require a landowner to refrain from certain practices within the zone, to allow others to carry out management practices, or to leave the area undisturbed.

River Corridor Management (RCM) Easements—For priority river reaches identified by the state's River Corridor and Floodplain Management Program, VHCB will continue to partner with the Vermont Department of Environmental Conservation (DEC) to purchase channel management rights. DEC defines a “meander belt” within which a river has historically moved. The RCM easement—either standing alone or embedded in a broader conservation easement—allows a river to meander, establish its natural slope, and access its floodplains. The RCM easement requires a 50 foot undisturbed buffer adjacent to the active channel. Landowners give up the right to use land within the buffer for agricultural purposes and are prevented from modifying or armoring the riverbank, though routine agricultural use is allowed outside of buffer. Timber harvest is allowed within the buffer if it is called for in an approved forest management plan. DEC payments reflect potential income loss and are much higher than the valuation of corridor easements through the standard appraisal process.

Fee Acquisition of Land—Fee simple ownership—by a public entity or qualified nonprofit—of significant riparian areas, buffer lands, and headwater areas may make the most sense to accomplish the goals of a project. Enhanced protection of farmland for water quality and flood resiliency purposes is not typically done through fee purchase, but in some cases may be the most appropriate solution for farmland in flood hazard areas with significant river frontage. VHCB will make funds available for fee simple acquisition projects that feature water quality protection and flood resiliency, especially if those projects also would advance other goals, such as significant wildlife habitat protection or public recreation.

Land Buyouts and Banking—VHCB funds have matched federal FEMA Flood Hazard Mitigation funds for home buyouts and for the acquisition of properties substantially damaged or destroyed by Tropical Storm Irene. For properties that have conservation or public access attributes, conservation easements are conveyed by the participating towns

to VHCB, preventing development while providing an opportunity for increased public access to the state's rivers and streams and creating new town parks.

Additionally, fee acquisition of targeted, flood-prone farmland parcels that are transferring outside of families is a tool we may utilize on a limited basis. Included in that strategy could be an enhanced OPAV that includes the right to purchase in fee those farmlands critical to enhancing water quality and flood resilience.

Conservation Planning and Business Planning through the Farm and Forest Viability Program—VHCB's Farm and Forest Viability Program (FFVP) can provide technical assistance to complete a financial analysis for farm and forest landowners planning investments and practices that positively impact water quality and flood resiliency. For instance, FFVP business plans can study the financial feasibility of installing manure pits, waste water systems, stream bank stabilization, and riparian buffers. FFVP technical assistance can help landowners to understand the financial resources needed to implement management practices that go beyond the state's AAPs or the minimum dictates of a use value forest management plan.