

Title: Biennial Report on the River Corridor & Floodplain Protection and Lake Shoreland Management Programs

Year: 2021

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Committee: House Natural Resources, Fish & Wildlife, and Senate Natural Resources & Energy

Authorizing Law #: Acts 110 (2010) and 138 (2012)

Section #: Section 8 of Act 110, Section 17 of Act 138

Executive Summary

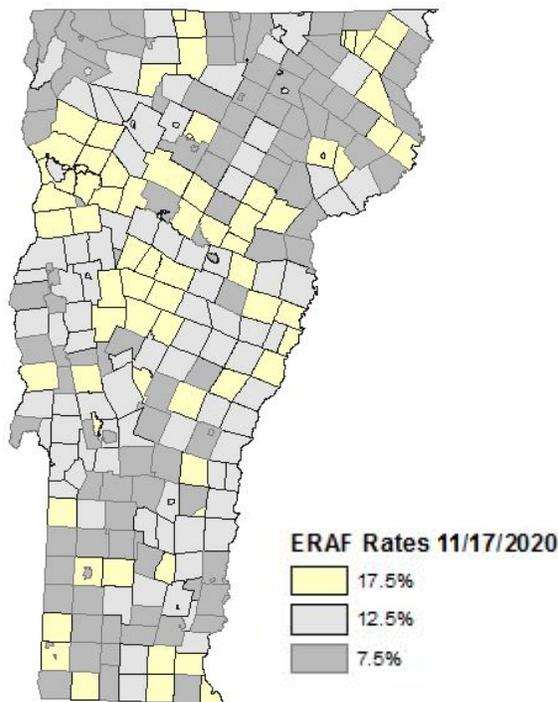
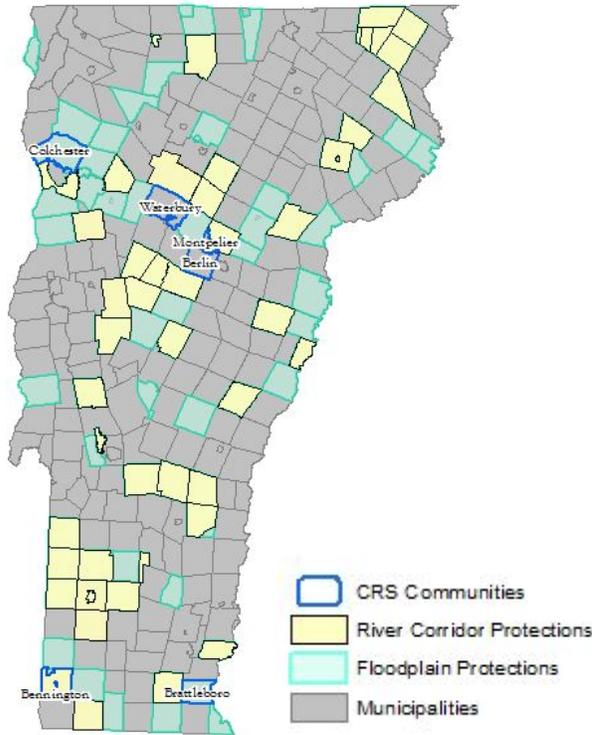
The River Corridor & Floodplain Protection Program works with Vermont communities in a variety of ways to increase flood resilience across the state. These efforts include 1) enrollment in the National Flood Insurance Program (NFIP), 2) flood hazard bylaw updates and adoption, 3) Municipal Incentives for River Corridor and Floodplain Protection including ERAF incentives, 4) Outreach and Training, 5) Model flood hazard bylaws.

The River Corridor and Floodplain Protection Program created a statewide River Corridor map layer first published in 2015 and subsequently updated in 2019 with over 2300 miles of stream geomorphic assessment field data. The River Corridor map layer is publicly available on the [ANR Natural Resources Atlas](#) and is used to inform state and local planning and regulatory work as well as river and floodplain restoration efforts.

Additionally, Act 110 of 2010 required establishing a **Shorelands Management Program** to protect the land area between the mean water level of a lake, pond, or impoundment and the area of shore upland to 1000 feet. Act 138 of 2012 required a legislative report from the Shoreland Management Program on whether the state should regulate development in shorelands. The Act 138 Shorelands Report was submitted to the Legislature in January 2013, which led to passing the state regulated 2014 Shoreland Protection Act (Chapter 49A of Title 10, §1441 et seq.).

Since the establishment of the Shorelands Management Program in 2010, the Program grew from one full time staff to five staff in 2014 to permit development under the Shoreland Protection Act on lakes greater than 10 acres (~44 lakes), while continuing to provide technical assistance to all shoreland owners on Vermont's 811 lakes and ponds. Highlights from the Shoreland Management Program include: 30 Shoreland Best Management Fact Sheets; A Shoreland Permitting Handbook; 1,002 Shoreland Permit Determinations; more than 500 voluntary Lake Wise shoreland assessments completed; 670 professionals certified through the Natural Shoreland Erosion Control Certification training; and living shoreland restoration projects using bioengineering techniques, known for protecting water quality and wildlife habitat and building resiliency along the shore. Improvement work along shorelands also led to one lake community earning a 2020 EPA Award for Environmental Excellence.

Key Takeaways



The River Corridor & Floodplain Protection Program

- Many communities have taken action to protect river corridors and/or floodplains in recent years. Since 2008, the number of communities enrolled in the National Flood Insurance Program (NFIP) has increased from 226 to 249
- 97 Communities have adopted river corridor or floodplain protection bylaws consistent with [ANR Model Hazard Bylaw](#) standards, which far exceed federal minimum standards.
- [The Emergency Relief and Assistance Fund \(ERAF\)](#) provides State funding to match federal Public Assistance Grants after federally declared disasters.
- For communities that take specific steps to reduce flood damage the State will contribute 12.5% or 17.5% of the total cost.
- A [summary of current municipal actions for ERAF](#) can be found on the Community Reports page of the Flood Ready Vermont website.

Key Takeaways

The Shorelands

Management Program

The [Vermont Lakes and Ponds Program Web Pages](#), feature information on the condition of Vermont lakes and their lakeshores and should serve as a reference to the summary material provided in this Shorelands Management Program report.

Shoreland Permitting

The Shoreland Protection Act (SPA) requires permitting review for any projects that increase impervious surface or clear native vegetation within 250 feet of the mean water level on lakes greater than 10 acres in size. About 440 lakes from 811 lakes and ponds total in Vermont are greater than 10 acres in size.



Shoreland Permitting Preserves a 100 Foot Wide Shoreland Buffer

Since the passing of the SPA, 633 shoreland permits, 281 shoreland registrations, and 88 shoreland determinations have been issued, totaling 1,002 total determinations, or close to 155 development reviews annually. Each year the number of permit review requests has risen.

Through the voluntary **Natural Shoreland Erosion Control Certification Training**, legislatively required to be offered (Section Four of the Shoreland Protection Act), more than 640 contractors have been trained in shoreland Best Management Practices, including in bioengineering methods for restoring living shorelands. [The 2018 NSECC Report](#) was submitted to the Legislature, which showed that 100 percent of participants recommended this training to other contractors. **Many who live and work along the 1400 miles of Vermont shorelands still do not know about or practice lake friendly development, and it may be time for the Legislature to change this training from voluntary to mandatory.** In many other states, like Maine, require all contractors working within 250 feet of surface waters to be trained in erosion control and water quality protection. Furthermore, mandating the NSECC training could be a critical step in addressing the need for stronger action to protect Vermont's pristine, clear lakes (oligotrophic lakes) where recent lake monitoring data show statistical declines in water quality conditions. The NSECC Program helps ensure that future shoreland work incorporates practices that increase storm resiliency, stormwater filtration, wildlife habitat, and erosion control, and the Legislature could consider ways to strengthen this training to better protect Vermont lakes.



Traditional Development before the 2014 Shoreland Protection Act



Contractors at a NSECC Training

Lake Wise Shoreland Assessments are offered voluntarily to help shoreland owners, including State Parks, municipalities, businesses, or private residents improve their shoreland conditions to ensure shorelands do not harm lake conditions. More than 500 site assessments have been completed and are shown on the [Lake Wise Google Map](#). The Lake Seymour community in Morgan promoted Lake Wise participation to improve shoreland conditions, which lead to a decreasing phosphorus trend in the lake and earned them an EPA Award in Environmental Excellence in 2020.

Projects to restore living shorelands has resulted in the first successful **Bioengineering Projects** installed along Vermont lakeshores. More than 12 projects have been installed, offering hands-on trainings for NSECC contractors. These softscape stabilization methods, using biodegradable products, native plants, and other natural materials will be featured as Case Studies in the 2021 Vermont Bioengineering Manual.



Lake Wise Award for Exemplary Shoreland Management



Bioengineering: Black Pond Road, Hubbardton