

Community Floodproofing Toolkit



DEERFIELD RIVER VALLEY



RESILIENCE IN CHANGING ENVIRONMENTS

Acknowledgements



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Table of Contents

01	Community-Level Actions Guide	1
02	Flood Risk Mapping Tool	5
03	Residential Flood Guide	7
04	Recommendations	18

Appendices

A2	Chapter 02: Maps	19
A3	NFIP Quote Checklist	21

01

Guide to Community-Level Actions

A locally tailored educational toolkit designed to empower residents with the knowledge and resources needed to prepare for, respond to, and recover from flood events.

When thinking about floodproofing your home, it is easy to think only about your property and the mitigation steps you can take as an individual. These steps are numerous, as further explained in the Residential Floodproofing Toolkit. However, the reality is that town-wide policies are often as (if not more) effective at mitigating flood damage than individual actions. This guide serves as a summary of the recommendations we made to your local government to strengthen your community against future flooding.

As you consider preparing for flooding, consider supporting these town-wide actions. There are lots of ways you can express your support for resilient policies: you can make comments at public meetings, write your Selectboard, educate other community members, and advocate for programs through your vote.

Build Resilience into Local Zoning

Zoning is a set of laws developed by your municipal town government that divides land uses into different zones and regulates how land and buildings in each zone can be developed and used. Zoning is your municipality's single-most important tool in guiding the shape of development in your town, and plays a critical role in protecting the health, safety, and welfare of residents. Zoning is home to some of the strongest actions your town can take to protect residents and their property in future floods. Some of these actions include:

Flood Hazard Overlay Zones

Flood Hazard Overlay Zones identify areas in your town that experience frequent flooding and establish additional rules on how land within these zones can be used. Some of the most common rules include:

- **Development restrictions:** prohibiting or significantly restricting development in flood hazard zones is the most effective way to reduce flood risk.

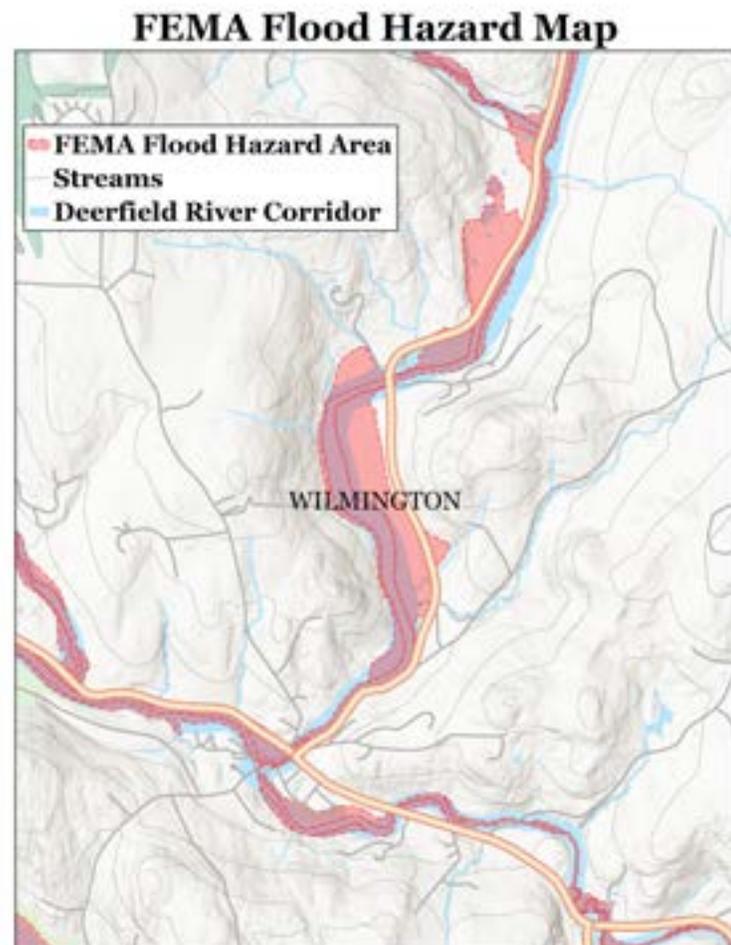


Figure 1

- **Elevation requirements:** new development must be raised above the base elevation of floods, protecting the structure from erosion and ensuring buildings remain livable.
- **Floodway protection:** large structures like retaining walls and roads can constrict the flow of streams and rivers, and should not be built close to or in flow paths.



Denser Housing Types Permitted by Right

Flooding in Southern Vermont has significantly reduced the availability of housing and developable land, causing housing prices and land values to rise. Denser housing in flood-safe areas lessens housing costs, uses resources more efficiently, and builds a more tight-knit community. Zoning regulates the allowable density of development of a municipality. It can be changed to permit denser housing types, such as duplexes and triplexes, while also maintaining that the designs of these developments maintain the form and character of the existing community.

Protect Flood-Prone Areas as Conservation Land

Thousands of acres of land are zoned as conservation across Dover, Readsboro, Whitingham, and Wilmington, providing countless natural amenities and services. Management of floodwaters is one of the essential amenities provided by conservation lands. Zoning is the main regulatory channel for expanding conservation lands around bodies of water, protecting the natural landscape in which water can naturally flow without causing harm. Implementing specific regulations, like wetland buffers, in zoning offer natural solutions that are quick and inexpensive.

Participate in Disaster Assistance Funding Programs

When disaster strikes, each of the four municipalities receive large sums of funding from the State of Vermont and the Federal Emergency Management Association (FEMA) to assist with recovery efforts. Vermont's Emergency Relief Assistance Funding (ERAF) provides a financial guarantee to each town that the state will pay for a designated fraction of recovery costs. The rate of funding paid by ERAF is dependent on the extent of flood resilient policy measures each town hosts. As the figure below shows, Vermont covers a base rate of 7.5% of costs to all municipalities, a 12.5% rate to all municipalities with adoption of four core flood resilience measures, and an expanded 17.5% to all municipalities with adoption of an additional two steps (Flood Ready Vermont, n.d.). The last recommended measure in Vermont's ERAF program is to adopt FEMA's Community Rating System (CRS). Similar to ERAF,

the CRS rewards municipalities and their local policy holders with reduced flood insurance premiums by implementing strong flood management practices. Each of these programs bring higher levels of recovery funding into the area. Even without the incentive of external funding, the incentivized actions are worthy of pursuing based on their impact.

Maintain Culverts

Culverts are not glamorous, but they are essential to handling large amounts of stormwater during floods. Vermont is home to over 113,000 culverts; Wilmington alone has over 1000 culverts within its borders (Vermont Association of Planning and Development Agencies, n.d.). All of which, when working correctly, should reasonably go unnoticed. It takes conscientious, year-round work and significant funding to keep them in good repair. Your town has the opportunity to coordinate this work with the rest of the region. This level of coordination requires some political leg-work, but will ultimately make maintenance

How many culverts are in the Deerfield Valley?

Town	Count
Dover	933
Readsboro	551
Whitingham	645
Wilmington	1,072
Total	3,201

(Vermont Association of Planning and Development Agencies, n.d.) **Figure 2**

Implement a Stormwater Utility Fee

A Stormwater Utility Fee (SUF) is a longer-term way for your town to raise money to fund flood-preparedness programs. This fee is not a tax – it’s a variable charge on development based on their contribution to runoff. Put simply, a stormwater utility fee rewards property owners for making smart choices that decrease the amount of pavement and other non-natural landcover. This fee can be targeted mostly at new and/or larger development and can be an important revenue source for your town. For their size, the four towns host very strong stormwater systems, as the map below shows, but recent floods have still pushed them to the brink. A SUF would provide critical funding power that would critically strengthen stormwater systems across the four towns.

Stormwater Infrastructure in Whitingham Village



Figure 2

A reserve fund is an amount of money set aside on an annual basis to fund unexpected expenses or make up for changes in revenue that can not be supported by general fund appropriations. A reserve fund is perhaps the most straightforward way your town can prepare for the next flood. In light of shrinking federal aid, it is increasingly important for towns to be financially independent in the wake of a disaster. Setting some extra money aside now can lead to a faster and more effective response in the future.

These and many other policies can greatly increase the ability of your town to survive the next flood event. Your support now can help ensure these policies are in place before the water rises again. For a more detailed analysis of these policies, please visit the Municipal and Regional Capacity Toolkit which can be found on our website, deerfieldvalleyrise.com.

References

- Flood Ready Vermont. (n.d.). Emergency Relief and Assistance Fund. Retrieved November 16, 2025, from https://floodready.vermont.gov/find_funding/emergency_relief_assistance
- Homes for All: A 'Design & Do' Toolkit for Small-scale Home Builders, Investors & Community Leaders.* (2024). Vermont Agency of Commerce and Community Development. <https://accd.vermont.gov/current-initiatives/homesforall/toolkit>
- Vermont Agency of Natural Resources. (2025). Vermont Water Infrastructure [Dataset]. Vermont Open Geodata Portal. <https://geodata.vermont.gov/maps/01210da4457d42a1bbcc43f7e54cbad6/about>
- Vermont Association of Planning and Development Agencies. (n.d.). *VT Culverts*. Retrieved November 17, 2025, from <https://www.vtculverts.org/>
- Vermont Flood Hazard Areas. (2022). [Shapefile]. Vermont Open Geodata Portal. https://geodata.vermont.gov/datasets/b40ccd85e9ca41989e7a803f48cf5bcb_57/explore
- Vermont River Corridors. (2022). [Dataset]. Vermont Open Geodata Portal. <https://www.arcgis.com/home/item.html?id=51797aa9327343b9a04215e5e59e00c5>
- Vermont Short Structures- Bridges and Culverts. (2024). [Shapefile]. Vermont Agency of Transportation. <https://geodata.vermont.gov/datasets/VTrans::vt-short-structures-bridges-and-culverts/about>
- Vermont Town Boundaries. (2025). [Shapefile]. Vermont Open Geodata Portal. https://geodata.vermont.gov/datasets/3f464boe1980450e9026430a635bffa_o/explore?location=43.857653%2C-72.459722%2C7.86

02

Flood Risk Mapping Tool

The growing intensity of floods has changed Southern Vermonters' perception of risk. While avoiding the Deerfield River on rainy days has been a longstanding standard precaution, unprecedented amounts of precipitation mean the smallest of streams has great potential to do (Federal Emergency Management Administration (FEMA), 2007) serious damage.

Though these hydrological changes are shared in local anecdotes, they are not yet reflected on paper, as FEMA's Flood Insurance Rate Maps (FIRM) are currently in the process of being updated. As Figures 1 and 2 show, our leading resource for determining flood risk—FEMA's 100-year special flood hazard areas map—is no longer reliable. There is a dire need to redefine flood risk in these four towns and reshape how we develop around water bodies.

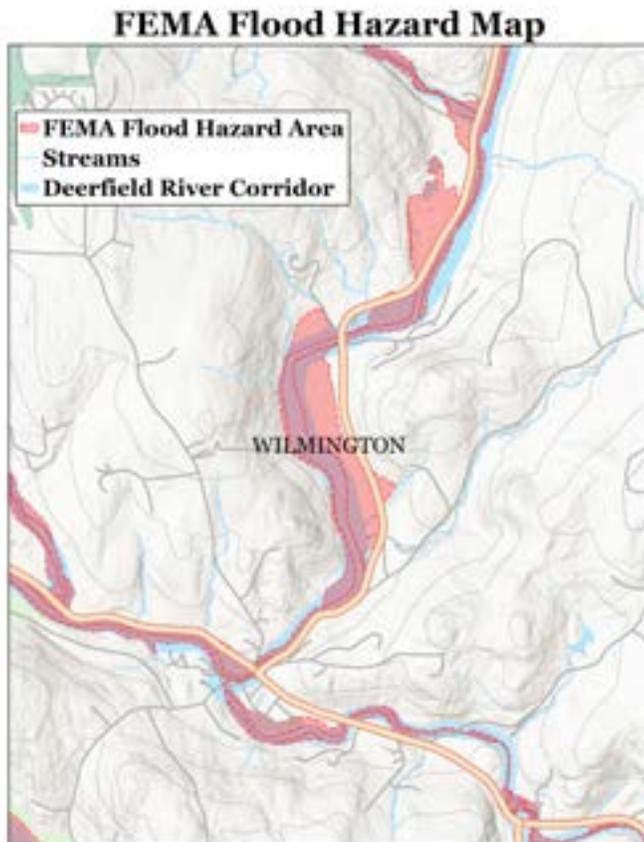


Figure 1

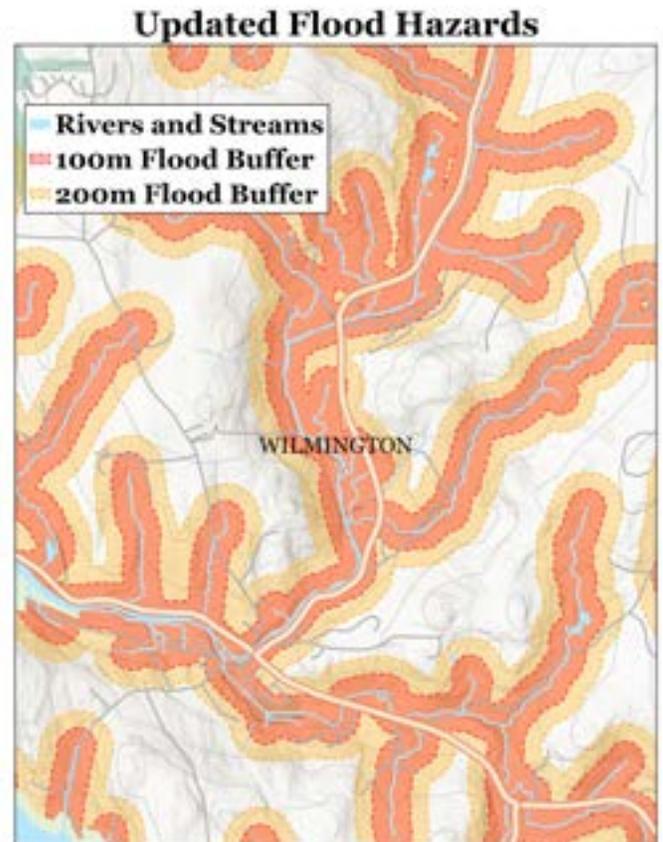


Figure 3



Figure 4

vote.

The Flood Risk Mapping tool is an interactive online map that residents and town leaders can use to identify flood risk down to the parcel level. Simply type in an address, and the tool should visualize a flood risk index score for the given parcel of land.

This tool aggregates multiple types of flood resilience data in layers on an interactive map. It synthesizes critical hydrological layers like land cover, soil type, slope, elevation, and proximity to water. The interactive map uses this data to determine a flood risk score for each parcel on a scale from 1-5, where 1 indicates lower flood risk and 5 indicates very high flood risk. Parcels with scores from 1-2 are considered lower risk, while a score between 3-4 indicates moderate risk of flooding, and a score of 4-5 indicates high risk where flood-proofing and mitigation efforts should be made. For example, parcel X may receive a flood risk score of 4.3, indicating high likelihood of flooding during intense rainfall.

Municipal staff can use this tool in their educational efforts with residents, allowing them to provide personalized flood vulnerability data for each property owner. Understanding a plot of land's flood risk is integral to determining its potential for development. This tool provides critical instruction on the most suitable plots of land for future flood-safe development. The tool can also integrate spatial data regarding critical infrastructure, such as water, sewer, and roads, and important regulatory factors, such as zoning, to build a robust roadmap for siting future development. The map tool is designed to be easily updated as new data is released, providing a critical educational tool for years to come. To explore the map tool and learn more about its methods, please follow the link below.

[Explore the Map](#)

03

Residential Flood Guide

The Residential Floodproofing Guide equips residents with practical tools and actions that make it easier to prepare for and withstand flood emergencies.

Section 1: What to do NOW?

1

Know Your Flood Risk

Understanding your flood risk is the first step in preparing for and mitigating the impacts of a flood. Don't get caught off guard!

The location and elevation of your home are the foremost factors that determine flood risk. Flood risk by location is shown in FEMA's flood insurance rate maps (FIRMs). FEMA's flood zones are differentiated by the level of flooding expected to occur in a 100-year flood, or a flood that is probable to occur once every 100 years, or a 1% chance year-over-year. If your home is in a FEMA flood zone, also known as a special flood hazard area (SFHA), then you are at a higher risk of inundation flooding, which is flooding from the overflow of water beyond a river's banks during a high-precipitation event.

The State of Vermont also measures flood risk based on River Corridors. A River Corridor is the critical area that must remain undeveloped to accommodate the natural meandering movement of the river's water over time. This area includes an additional 50-foot buffer and is also known as a "fluvial erosion hazard area" (Windham Regional Commission, 2020). If your home is in a River Corridor, it is at a higher risk of damage from fluvial erosion, which is the erosion of land due to periods of heavy river flow. Fluvial erosion can be seen along Goose City Road in Dover.

Our Flood Risk Mapping Tool compiles flood risk information in an easy-to-use, interactive online map. Simply type in your address or scroll to your property using the map's navigation tools to see your flood risk score. More information about this tool can be seen in Chapter 02 of this document. The tool is located on our website: deerfieldvalleyrise.com.

Recommended Actions

- Review FEMA's FIRM maps online, [available here](#). Simply type in your address in the upper left search bar, and the map will zoom to your location. If your house is in a flood zone, you will see the blue flood zone overlay. You can click the overlay to download a digital version of the FIRM map.
- Look at Vermont's River Corridor maps online, available in the [Flood Ready Atlas](#). Find your home or business' location and make sure that River Corridors are on (click Flood Ready Tools -> Toggle River Corridors on). If your home is in the yellow buffer zone, then it is located in a River Corridor. Note: the Flood Ready Atlas also contains FEMA's NFHL data.
- Talk to your local planning and zoning office, your neighbors, or other local officials to learn more about your location's flood history.

Resources

FEMA's National Flood Hazard Map

FEMA'S Flood Map Service Center

Vermont's Flood Ready Atlas

2

Buy Flood Insurance

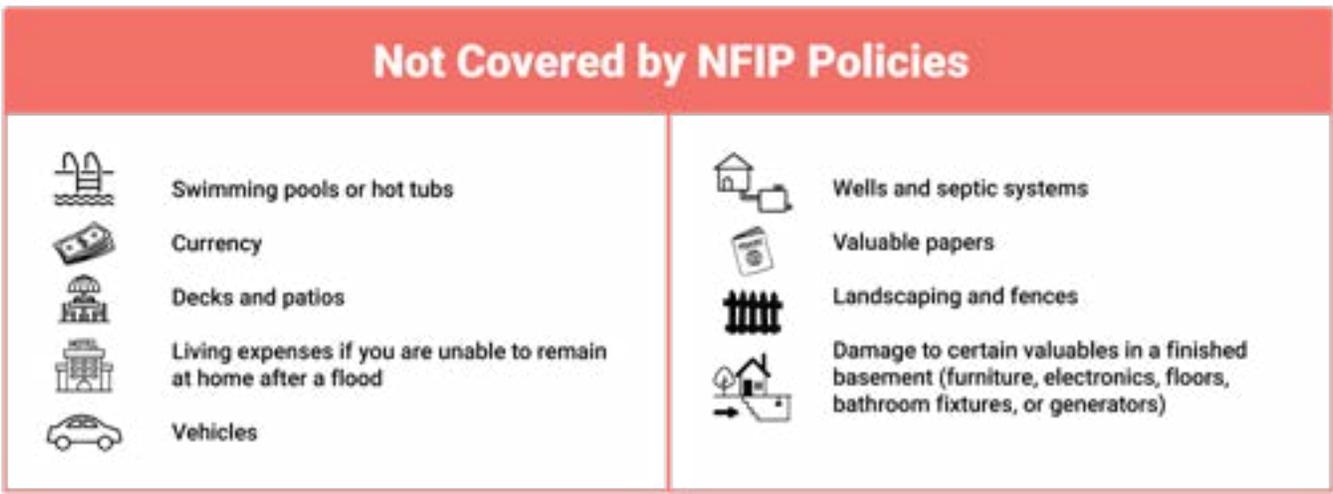
Flood insurance reduces your financial burden in the event of property damage or loss due to flooding. Participation in FEMA's Community Rating System reduces the NFIP rate for community members.

FEMA's National Flood Insurance Program

Flood insurance provides coverage for direct physical losses to your structure and belongings from flooding (FEMA, 2025). The National Flood Insurance Program is administered to property owners, renters, and businesses through a network of over 47 insurance companies on the NFIP Direct (FEMA, 2025). Depending on personal circumstances, policy holders can purchase coverage for buildings, contents, or both, but the policies themselves must be purchased separately and have separate deductibles (FEMA NFIP, n.d.). NFIP flood insurance is available to homeowners in participating communities. Dover, Readsboro, Whitingham, and Wilmington all participate in the NFIP.

FEMA's Community Rating System (CRS) is a voluntary program that incentivizes communities to adopt flood management practices that go beyond the minimum requirements of the NFIP. CRS communities are granted additional flood insurance discounts. Community members can learn more about this program at FEMA's website: [fema.gov](https://www.fema.gov).

Types of NFIP Coverage	
Building Coverage	Contents Coverage
<ul style="list-style-type: none">  Electrical and plumbing systems  Furnaces and water heaters  Refrigerators, stoves, and built-in appliances like dishwashers  Permanently installed carpeting, paneling, and bookcase  Window blinds  Foundation walls, anchorage systems, and staircases  Detached garages  Fuel tanks, well water tanks 	<ul style="list-style-type: none">  Clothing, furniture and electronic equipment  Curtains  Microwave  Washer and dryer  Carpet installed over wood floors  Portable and window air conditioners  Valuable items such as original artworks and furs (up to \$2,500)  Merchandise and raw materials held in storage or for sale
Maximum coverage of \$250,000	Maximum coverage of \$100,000



Federal Emergency Management Administration (FEMA) National Flood Insurance Program (NFIP) (2-2-2) What you need to know about buying flood insurance. FloodSmart.com. Revised December 14, 2023. For more information, please visit <https://www.floodsmart.gov> or call 1-800-358-3473. © 2023. May 12. © Private Flood Insurance Right for Your Neighborhood. <https://www.floodsmart.com/resources/insurers/private-flood-insurance>

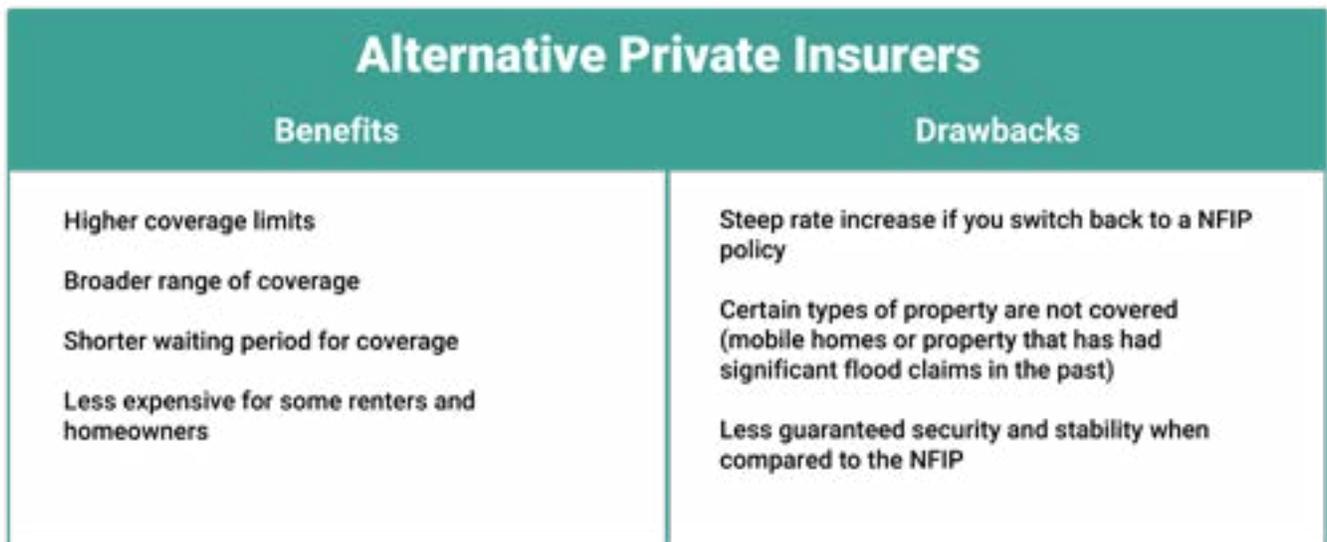
Figure 2

The national average annual cost of NFIP policies in 2025 is \$899 with an average monthly cost of \$75 (Schlichter, 2025a). Due to higher flood risk, the average annual cost in Vermont is significantly higher than the national average at \$1,590 with an average monthly cost of \$132 (Schlichter, 2025a). Given rising costs it is important to compare NFIP rates with alternative insurance options in the private insurance market.

Other Insurance Options

There are benefits to private flood insurance including higher coverage limits, broader range of coverage, shorter waiting periods for coverage, and some private flood insurance policies are less expensive for some renters and homeowners (Schlichter, 2025b). Some drawbacks to private flood insurance include a steep rate increase if you return to NFIP insurance, certain types of property are not included like mobile home or property that has had significant flood claims in the past, and there is less security in a private insurance company when compared to NFIP policies which are backed by the federal government (Schlichter, 2025c).

Figure 3



© Schlichter, S. (2025). May 12. © Private Flood Insurance Right for Your Neighborhood. <https://www.floodsmart.com/resources/insurers/private-flood-insurance>



With increasing risk of flood damage to property, infrastructure, and valuables it is essential to know your options for insurance coverage and find the best fit for you.

- Before selecting a policy, explore the [NFIP Policy Quote Tool](#) to get a quote for your unique property. Complete the NFIP Policy Quote Requirements checklist in the Appendix at the end of this chapter to ensure you have all the necessary information on hand to get the most accurate quote.
- Explore alternatives to FEMA’s NFIP before making a final decision. Alternatives include:
 - Aon Edge <https://www.aonedge.com/>
 - Beyond Floods <https://www.beyondfloods.com/>
 - Chubb <https://www.chubb.com/us-en/>
 - Neptune Flood <https://neptuneflood.com/>

Resources

Floodsmart.gov

Flood insurance policy checklist

Section 2: What to do NEXT?

There is only so much a homeowner can do to reduce the risks of flood damage. However, floodproofing your home can reduce damage and loss. Within the limits of your property, there are three main categories of floodproofing: wet, dry, and outdoor.

3

Wet Floodproofing Your Home

Wet floodproofing reduces flood risk by allowing floodwater to enter parts of the home in a controlled manner so that essential supports and living areas are spared and the structure remains viable.

When floodwaters are allowed to enter specific enclosed areas and directed outwards through dedicated channels, the effects of hydrostatic pressure, the load imposed on a home due to differences in water levels inside and out, are reduced (FEMA & RiskMAP, n.d.). Wet floodproofing can reduce the structural damage caused by floods. It works similarly to a floodplain; dedicated parts of the home’s lower level are designed to flood in the event of a major flood so that the rest of the home is spared.

“Wet floodproofing techniques include raising utilities and important contents to or above the flood protection level, installing and configuring electrical and mechanical systems to minimize disruptions and facilitate repairs, installing flood openings or other methods to equalize the hydrostatic pressure exerted by floodwaters, and installing pumps to gradually remove floodwater from basement areas after the flood.” (FEMA & RiskMAP, n.d.)

If you choose to take this option on, remember that any material the flood water touches should be made of water-resistant material or coating. If your crawl space or basement is not made of water-resistant material, do not employ this technique. Consulting a professional to determine the structural integrity of your walls is highly recommended. Because of these costly steps, wet floodproofing has limited practicality. However, in some cases, it may be the step that saves your home.

Warning: Non-compliant wet floodproofing a residence will not reduce the flood insurance premium (FEMA & RiskMAP, n.d.). Always consult a licensed, bonded, and insured contractor before initiating a wet floodproofing project. Be sure that your contractor has experience with wet floodproofing. Wet floodproofing can be extremely costly, and applicability to residential structures is limited by cost and the availability of contractors.

Figure 4

Recommended Actions

- Take the first step by consulting a professional to learn more about your property's potential for wet floodproofing. The website floodproofing.com is a good source for finding a qualified contractor, though options for installation in Vermont are limited.

Resources

Floodproofing.com

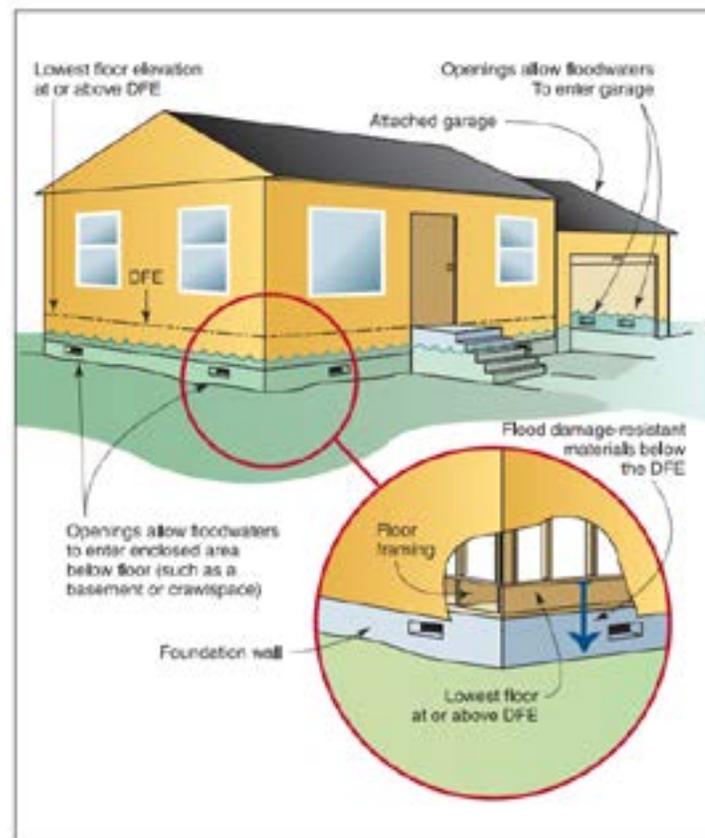
4

Dry Floodproofing Your Home
Dry floodproofing is essentially making your home water-tight, keeping the water out and your home dry.

Dry floodproofing is essentially making your home water-tight, keeping the water out and your home dry. Dry floodproofing can also include making some walls and doors water-resistant, and may also require professional consultation.

One way to temporarily dry floodproof your home is to install impermeable shields on your doors, windows, and any other openings at or below flood levels. These are called opening barriers, and they are typically made from wood or metal. Only employ this option if the expected flood level is around 3 feet or less.

A backflow valve may be the right choice for your home to prevent dirty floodwater and wastewater backflow through your pipes during a flood event. This is typically done by a licensed professional.



Typical wet floodproofing, Source: FEMA & RiskMAP

Warning: Dry floodproofing techniques should only be used if the flood level is not expected to rise above 3 to 4 feet, and if your walls and foundation are strong enough to withstand the water pressure. Because of this, it is recommended that you incorporate both wet and dry techniques simultaneously.

Recommended Actions

- Take the first step by consulting a local professional to learn more about your property’s potential for dry floodproofing. Dry floodproofing is better fit for Do-It-Yourself projects than wet floodproofing is, but it should be confirmed that your property is not expected to receive more than 3 to 4 feet of floodwaters during a flood event.

Resources

FEMA’s Homeowners Guide to Retrofitting

5

Outdoor Floodproofing Your Yard

Outdoor floodproofing options can include constructing floodwalls, levees, and other various landscaping techniques, such as creating a rain garden or planting trees and shrubs to decrease runoff or erosion on your property.

Grading & Re-Sloping

Ensuring that your yard is sloped to facilitate the flow of runoff away from your house is one of the most important steps you can take to reduce your flood risk. The ground around your house should slope downward away from your foundation to prevent water from pooling.

Steps to grade your yard:

- Build up sunken areas of land around the foundation.
- Dig small depressions into the ground to channel water.
- Ensure that the land around your home slopes downwards, away from the foundation.

Note: It’s important to routinely maintain the drainage equipment already on your property, such as gutters, downspouts, splashpads and nearby drainage ditches (culverts) or storm drains.

Rain Gardens

Rain gardens are an excellent choice for floodproofing your home. According to the EPA (2015), “a rain garden is a depressed area in the landscape that collects rain water from a roof, driveway or street and allows it to soak into the ground.” Rain gardens are planted with grasses and flowering perennials. In addition to reducing runoff from your property, rain gardens also help filter out pollutants in runoff and provide food and shelter for local wildlife.



Steps to build a rain garden:

1. Locate an area that is at least 10 feet away from your home foundation, on a naturally flat or flattened surface, that is downstream from some water flow.
2. Call Dig Safe before you dig!
3. Dig down about 6–12 inches to create a flat depression, if necessary. Avoid tree roots, wires, and other underground utilities.
4. Amend soil with compost and mulch if necessary for better absorption.
5. Select native plants adapted for wet soil like sedges, rushes, and wildflowers.

Tips for maintaining rain gardens:

1. Create a barrier of rocks entering the garden.
2. Minimize watering via planting the right vegetation. New plants will need to be watered more often until their roots are established.
3. Aerate the soil annually, changing out the compost if necessary. Ideally, mulch and soil will only need to be replaced every few years. Spot mulching is also a good option.
4. Create a planting plan. A good planting plan can make or break the success of your project. The rain garden manual is a great resource for considering the synergy of your rain garden.



Swales

Swales are shallow, vegetated channels that guide stormwater across your property:

1. Shape gentle depressions or trenches along natural flow paths (the best way to determine these are to see how water runs along your property during a rainstorm).
2. Plant grass, native plants, or ground covers that tolerate wet conditions.

Recommended Actions

- Consult a local contractor to discuss stormwater management on your property, such as the construction of culverts.
- Improve lot grading by building up sunken areas around the foundation, digging small depressions to channel water, or sloping your yard away from your home.
- Build a rain garden with local plants.

Resources

The Vermont Rain Garden Manual

Source: the Vermont Rain Garden Manual.



Section 3: What to do BEFORE A FLOOD?

6

Disaster Preparedness

Flooding can happen quickly and without much warning, and being ready can make a critical difference in keeping your household safe and minimizing damage.

Recommended Actions

Residents should be aware of the key steps and resources that can make flood preparedness more manageable and effective:

- Plan and ensure everyone in your household knows what to do during a flood. Visit [Ready.gov/plan](https://www.ready.gov/plan) to create a personalized Family Emergency Plan and ensure everyone in your household knows what to do during a flood.
- Learn how to assemble a Disaster Go Bag with essential supplies that can sustain your household for several days. Not sure what should go into your bag? Visit [Ready.gov/plan](https://www.ready.gov/plan) Some of these things may include; med kit, medications, cash, food, water, prescription glasses, chargers, whistle, map, flashlight, clothes, blankets, and other essentials.
- Protect important documents with waterproof containers or digital backups to keep records safe. Not sure which documents matter most? Visit [Ready.gov/plan](https://www.ready.gov/plan). Some of these documents may include; Social Security Cards, Passports, Identification Cards, and other sealed certificates.
- Keep an updated inventory of your household items. This will help you grab what's needed quickly and assist with insurance claims after the event. Some information (counts, costs, expiration dates, purchase dates) may be useful for items like; food, water, batteries, cash, and other valuables.

Resources

[Ready.gov/floods](https://www.ready.gov/floods)

- Federal Emergency Management Administration (FEMA). (2007). *FIRM Panel 50025C0345E* [Map]. FEMA. <https://msc.fema.gov/portal/availabilitySearch?addcommunity=500127&communityName=DOVER,%20TOWN%20OF#searchresultsanchor>
- Federal Emergency Management Administration (FEMA). (2014). *Homeowner's Guide to Retrofitting: Six Ways to Protect Your Home From Flooding* (No. FEMA P-312, 3rd Edition; p. 212). https://www.fema.gov/sites/default/files/documents/fema_hmd_fema_p-312-homeowners-guide-retrofitting_07152025.pdf
- Federal Emergency Management Administration (FEMA). (2025a, September 16). *Community Rating System*. FEMA.Gov. <https://www.fema.gov/floodplain-management/community-rating-system>
- Federal Emergency Management Administration (FEMA). (2025b, October 29). *Flood Insurance*. FEMA.Gov. <https://www.fema.gov/flood-insurance>
- Federal Emergency Management Administration (FEMA) National Flood Insurance Program (NFIP). (n.d.-a). *Buy a Flood Insurance Policy*. Floodsmart.Gov. Retrieved November 12, 2025, from <https://www.floodsmart.gov/get-insured/buy-a-policy>
- Federal Emergency Management Administration (FEMA) National Flood Insurance Program (NFIP). (n.d.-b). *NFIP Quoting Tool*. Retrieved November 9, 2025, from <https://www.floodsmart.gov/policy-quote/setting-expectations>
- Federal Emergency Management Administration (FEMA) National Flood Insurance Program (NFIP). (n.d.-c). *The National Flood Insurance Program*. Floodsmart. Retrieved November 9, 2025, from <https://www.floodsmart.gov/>
- Federal Emergency Management Administration (FEMA) & RiskMAP. (n.d.). *Protect Your Home from Flooding: Low-Cost Projects You Can Do Yourself*. Retrieved November 5, 2025, from https://www.fema.gov/sites/default/files/documents/fema_hm-protect-your-home-from-flooding_english.pdf
- MassDEP. (n.d.). *Check Dams*. Massachusetts Clean Water Toolkit. Retrieved November 13, 2025, from <https://megamanual.geosyntec.com/npsmanual/checkdams.aspx>
- Schlichter, S. (2025a, April 29). *What Does Flood Insurance Cover?* NerdWallet. <https://www.nerdwallet.com/article/insurance/flood-insurance>
- Schlichter, S. (2025b, May 8). *Flood Insurance for Renters: Your Complete Guide*. NerdWallet. <https://www.nerdwallet.com/article/insurance/flood-insurance-renters>
- Schlichter, S. (2025c, May 13). *Private Flood Insurance Companies*. NerdWallet. <https://www.nerdwallet.com/article/insurance/private-flood-insurance>

- Schlichter, S. (2025, May 13). *Is Private Flood Insurance Right for You?* NerdWallet. <https://www.nerdwallet.com/insurance/homeowners/learn/private-flood-insurance>
- The Rain Campaign. (2021, March 10). *Rain Gardens*. <https://raincampaign.org/raingarden/>
- US Department of Homeland Security. (n.d.). Make a Plan. Ready.Gov. <https://www.ready.gov/plan>
- US Environmental Protection Agency (EPA), R. 01. (2015, August 19). *Soak Up the Rain: Rain Gardens* [Collections and Lists]. US EPA. <https://19january2021snapshot.epa.gov/soakuptherain/soak-rain-rain-gardens>
- Vermont Vacation. (2024, January 25). *Historic Downtown Wilmington*. Vermont Tourism. <https://vermontvacation.com/places-to-visit/downtowns/wilmington/>
- Windham Regional Commission. (2020, 77/21). *Town of Wilmington Local Hazard Mitigation Plan*. Windham Regional Commission. https://wilmingtonvermont.us/wp-content/uploads/2021/05/Wilmington_-2019-Haz-Mit-Plan-update-adopted.pdf
- Winooski Natural Resources Conservation District & UVM Extension School. (n.d.). *The Vermont Rain Garden Manual*. https://dec.vermont.gov/sites/dec/files/wsm/erp/docs/sw_WNRCDrain_garden_manual.pdf

04

Recommendations

Deliverable Component	Contained In	GG	PP	RR	Impact	Cost
Reducing Residential Flood Risk	Community Floodproofing Toolkit				High	\$\$

Figure 1

Prioritization

The residential flood risk guide is a unique deliverable because it is directed towards individual community members. These steps can be recommended in relation to a stormwater utility fee, as reductions to a property's impermeable surface coverage could reduce the owner's fee. This guide offers tools for residents to take at their own pace to harden their homes and properties against flood damages. These tools scored well in our scenarios because they are implemented by individuals rather than municipalities, and thus do not require analysis for the use of public funds.

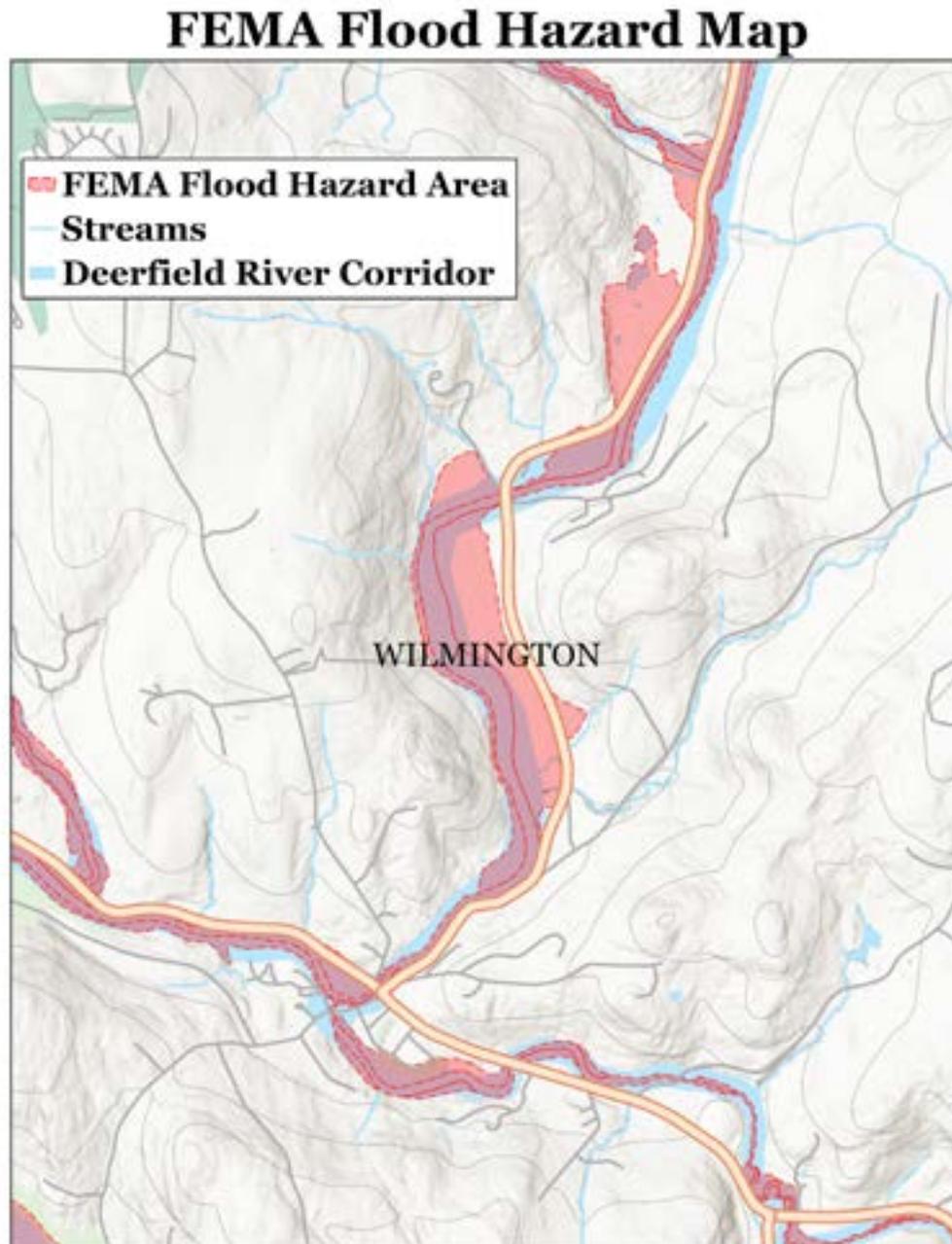
Key Takeaways

- Distribute education materials to inform residents of the broad spectrum of actions they can take.
- Coordinate a community wide effort in reducing residential flood risk to increase the effectiveness of this component.

Appendix A2 - Chapter 02: Maps

Figure 1: FEMA Flood Hazard Map

Created by Seth Price of Deerfield Valley River RISE. Based on Vermont Flood Hazard Areas (2022), Vermont Town Boundaries (2025), Vermont River Corridors (2022).



Vermont Flood Hazard Areas. (2022). [Shapefile]. Vermont Open Geodata Portal. https://geodata.vermont.gov/data/sets/b40ccd85e9ca41989e7a803f48cf5bcb_57/explore

Vermont River Corridors. (2022). [Dataset]. Vermont Open Geodata Portal. <https://www.arcgis.com/home/item.html?id=51797aa9327343b9a04215e5e59e00c5>

Vermont Town Boundaries. (2025). [Shapefile]. Vermont Open Geodata Portal. https://geodata.vermont.gov/data/sets/3f464b0e1980450e9026430a635bff0a_0/explore?location=43.857653%2C-72.459722%2C7.86

Figure 2: Stormwater Infrastructure in Whitingham Village

Created by Seth Price of Deerfield Valley River RISE. Based on Vermont Agencies of Natural Resources (2025), Vermont Short Structures-Bridges and Culverts (2024).



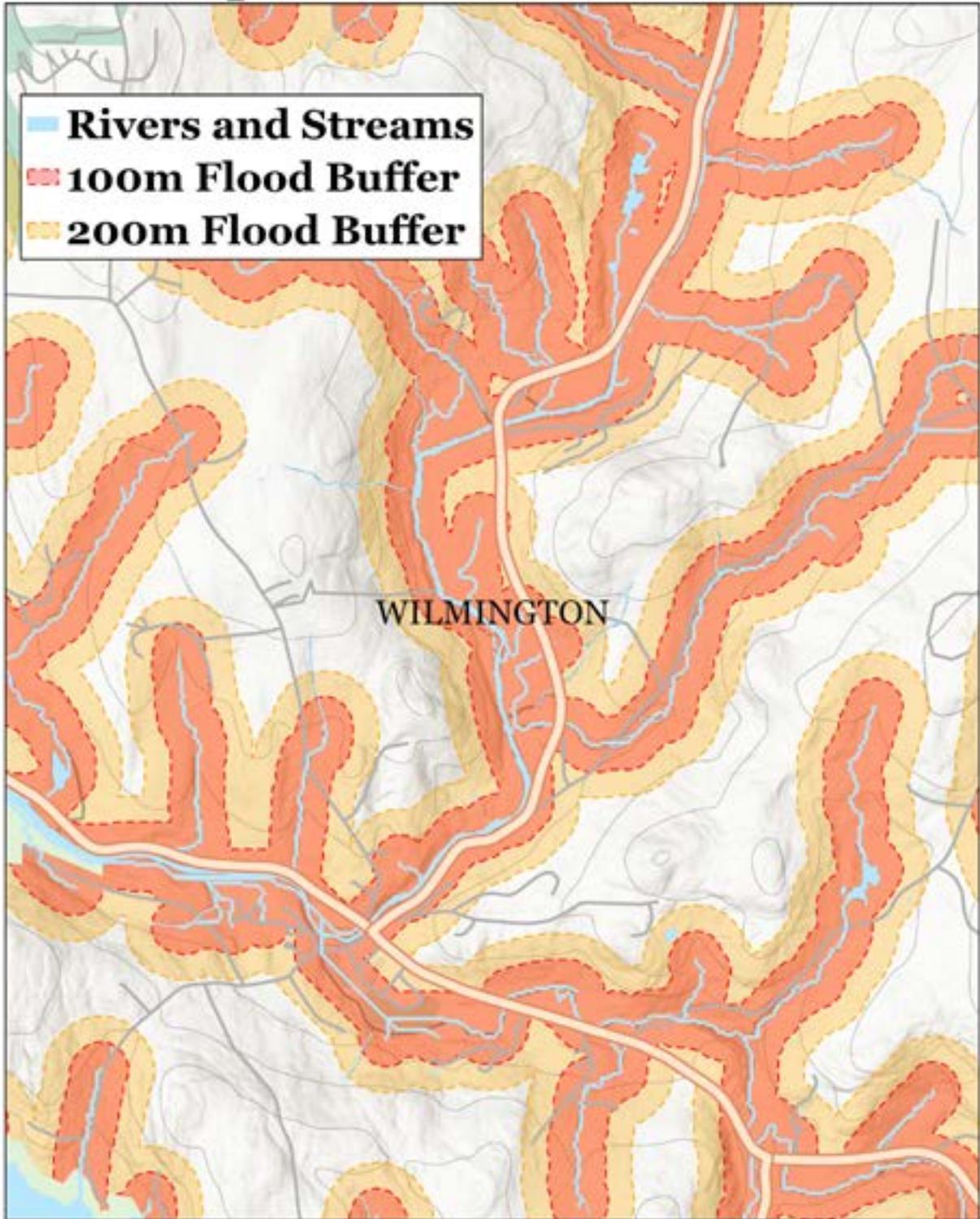
Vermont Short Structures- Bridges and Culverts. (2024). [Shapefile]. Vermont Agency of Transportation. <https://geodata.vermont.gov/datasets/VTrans::vt-short-structures-bridges-and-culverts/about>

Vermont Agency of Natural Resources. (2025). Vermont Water Infrastructure [Dataset]. Vermont Open Geodata Portal. <https://geodata.vermont.gov/maps/01210da4457d42a1bbcc43f7e54cbad6/about>

Figure 3: Deerfield River Valley RISE Flood Hazard

Created by Seth Price of Deerfield Valley River RISE.

Updated Flood Hazards



A3 - NFIP QUOTE CHECKLIST

Please use this checklist to assist you in the quote process for FEMA's National Flood Insurance Program.

Flood insurance policy checklist

1. Street Address:

Number Street Apt/Ste

City State ZIP code

2. Building Type (check one):

- Single-Family Home
- Two-to-four family unit building
- Residential manufactured/mobile home
- Residential Unit

3. Foundation Type (circle one):

- Basement
- Crawlspace
- Elevated without enclosure on posts, piles, or piers
- Elevated with enclosure not on posts, piles, or piers (solid foundation walls)

4. Building Information (write in):

- Date of construction: ____/____/____
- Building square footage: _____
- Number of floors: _____
- Location over water: _____
- Location of systems and equipment: _____

5. Building Use

- Primary / Secondary residence (circle one)
- Renter Status (circle one): Yes / No

Building Coverage

- A coverage will be suggested to you based on your answers for the previous questions.
- The maximum coverage you can receive is \$250,000
- Coverage is calculated through a comparison with other policy holders who have the same or similar building type and residence status

Contents Coverage

- A coverage will be suggested to you based on your answers for the previous questions.
- The maximum coverage you can receive is \$100,000
- Coverage is calculated through a comparison with other policy holders who have the same or similar building type and residence status



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