



Information about the NFIP for Municipalities and Floodplain Managers*

Flooding in Vermont can be caused by heavy rains, melting snow, storm water runoff, inadequate drainage, or failed dams and levees. Floods are natural occurring events, and provide several important ecosystem functions. However, every year Vermonters face safety risks and loss of property due to flooding along our lakes, ponds, rivers and streams. The [National Flood Insurance Program \(NFIP\)](#) is a FEMA program that relies on the cooperation of federal, state and municipal partners to properly manage our floodplains and reduce flood risk. This is done by encouraging alternatives to developing in the floodplain, and regulating floodplain development to minimize risks and damages in the absence of these alternatives. If enrolled in the NFIP, your community has adopted bylaws for regulating floodplain development, and community members are able to purchase flood insurance.

How can I join the NFIP, or make sure my town ordinance is compliant with the NFIP?

Nearly every community in Vermont has an effective FEMA floodplain map, and most of these communities participate in the NFIP. Only homeowners and renters in communities enrolled in the NFIP are eligible to purchase flood insurance. To find out if your town participates in the NFIP, check FEMA's [Community Status Book Report](#). If your community would like to participate in the NFIP, you must complete the [NFIP Enrollment Form](#) and adopt a [Resolution of Intent](#).

Both new and already participating communities need to maintain flood hazard regulations that are compliant with the NFIP minimum standards. These are often part of a community's zoning ordinance, or can be stand alone regulations for towns without zoning. The River Management Program at the Agency of Natural Resources or your Regional Planning Commission (RPC) can help you review your ordinance for NFIP compliance. The River Management Program has several variations of model flood hazard regulations available to use as a tool in developing this ordinance. These model regulations can be found on our web site, and the community can choose the model that most closely fits its goals for the level of regulation placed on development in the floodplain.

- It can sometimes be difficult to read, interpret, and administer the NFIP maps and regulations. FEMA has provided an excellent resource designed specifically for helping public officials understand floodplain management and the NFIP; FEMA-480, "[Floodplain Management Requirements: A Study Guide and Desk Reference for Local Officials](#)" (pdf, 13.2mb). Hard copies of this guide can be ordered directly from FEMA by calling 1-800-462-7585. You can also download the document from our website, or contact the River Management Program for technical assistance.

* If viewing a hard copy of this resource, you can access the document (and all internet links) online at www.anr.state.vt.us/dec/waterq/rivers/docs/rv_z_municipalities2.pdf

What are Special Flood Hazard Areas (SFHAs) and flood hazard zones?

In support of the NFIP, FEMA has identified flood hazard areas throughout Vermont by producing Flood Hazard Boundary Maps (FHBMs) or Flood Insurance Rate Maps (FIRMs) for each town. If your town participates in the NFIP program, you are required to keep effective copies of your communities FEMA maps in your town offices. You can obtain copies of the maps from the [FEMA Map Service Center](#).

The high-risk area defined as any land that would be inundated by a flood having a 1% chance of occurring in any given year (also referred to as the base flood) is called a Special Flood Hazard Area (SFHA). SFHAs are a useful tool for identifying risk associated with the inundation of floodwater. It is important to note that the potential for flood damage due to bank erosion, inadequate drainage, runoff, and storms larger than the base flood are not taken into account on these maps. In addition, a vast quantity of smaller Vermont streams do not have mapped SFHAs. Even if a resident is not located in a SFHA, they may have a substantial flood risk.

In many areas, FEMA has divided the SFHA into two areas; the **floodway** and **flood fringe**. The floodway is the stream channel and the portion of adjacent floodplain that must remain open to permit passage of the base flood, and to prevent an increase in flooding downstream. Floodwaters are generally deepest and fastest in the floodway. Any development in the floodway is strictly prohibited unless it can be shown with detailed hydrologic and hydraulic analyses that that development will not cause a rise in downstream floodwater. The remainder of the SFHA is called the flood fringe. Development may take place within the flood fringe, provided that development complies with your local floodplain management ordinance, which must meet minimum NFIP requirements.

SFHAs for a vast majority of Vermont water bodies are described as Zone A, AE, or A1-30. **Zone A** corresponds to the 1% annual chance floodplain determined in the FIS by approximate methods of analysis. Because detailed hydraulic analyses were not performed for such areas, no BFEs or depths are shown within this zone. Your ordinance should require residents to provide a BFE to give proof that development is reasonably safe from flooding. **Zones AE and A1-A30** correspond to the 1% annual chance floodplain determined in the FIS by detailed methods of analysis. In most instances, BFEs derived from detailed hydraulic analyses are shown at selected intervals within this zone. Many maps with Zone AE or Zone A1-30 also have a designated floodway.

How do I manage development in Special Flood Hazard Areas?

If your community participates in the NFIP and a property owner or developer wants to initiate a development project in a SFHA, they must obtain a permit from the town before the project begins. *Development includes the expansion or construction of buildings and other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, and the storage of equipment or materials.* Even if your town doesn't have

zoning, a permit with subsequent flood hazard review are required for development in a SFHA.

After submission of the permit to the town, all applications for new development should be forwarded to the River Management Program at the Agency of Natural Resources. Substantial improvements to existing structures where the cost of improvement exceeds 50% of the value of the structure also require review and comment by ANR. In accordance with Vermont law (24 VSA §4424), ANR has 30 days to provide technical comments for ensuring NFIP compliance for any new development or substantial improvements. The complete permit should include a thorough description of all proposed development with the SFHA, as well as your community's determination as to whether the proposed development conforms to your flood hazard regulations. The applicant should also provide a comprehensive site plan showing existing and proposed contours and elevations (in the same datum as the effective NFIP map), the location of proposed fill, floodway and/or flood fringe delineation, and the proposed lowest floor elevation (including basement) for any residential structure (and/or floodproofing elevation for any commercial structure). A helpful list of materials needed before a development review can be completed is found in the [Development Review Submission Checklist](#) (pdf, 101kb).

How do I know if a structure or property is in a Special Flood Hazard Area (SFHA)?

You should review the effective NFIP maps for your community prior to issuing a permit for development to confirm whether the site is located within a SFHA. The applicant should provide you with a site plan containing enough detail to plot the development project onto the corresponding FEMA floodplain map. The FEMA maps should contain enough detail on local landmarks to do this effectively. For help understanding how to use the FEMA maps, click the following links; "[How to read a FIRM](#)" and "[How to read a FIS](#)".

In many cases it will be easy to determine whether or not the project is in a SFHA. If the development appears to be close to the edge of the SFHA and there is a question as to whether it is in or out, the applicant should hire a licensed surveyor or engineer to provide better and more detailed data to the town for making a determination. The boundaries of the SFHA on the FEMA maps are an approximation of the true base floodplain, a surveyor or engineer can determine whether you are truly in the SFHA by comparing the base flood elevation (BFE) from the Flood Insurance Study to the elevation of the ground at the lowest end of your structure.

If the applicant is in the mapped SFHA, but believes they are above the BFE, they can have a survey done and apply for a Letter of Map Amendment (LOMA) from FEMA. If the lowest adjacent grade of the structure or area for development is higher than the base flood, FEMA will remove the site from the mapped SFHA. Only FEMA has the ability to make this official removal. Although there is no fee associated with a LOMA, they will need to hire a licensed surveyor or engineer to fill out the Elevation Form on the LOMA application. They should be aware that the survey may show that the site is located below the BFE, in which case the structure would not be able to be removed from the Special Flood Hazard Area.

What benefits exist for communities that adopt additional regulatory measures that go above and beyond the NFIP minimums?

The River Management Program (RMP) strongly encourages towns to adopt additional regulatory measures that go above and beyond the NFIP minimum requirements. The RMP has provided numerous suggestions for enhancing flood hazard ordinances, which are discussed on our web site. The best way to increase public safety, decrease flood damage, and decrease the Town's administrative burden is to adopt regulations that exclude most new development from the SFHA. The RMP Fluvial Erosion Hazard (FEH) program has developed maps that show the community's risk of flood damage due to erosion. We encourage your community to contact our program and adopt these maps into your flood hazard regulations.

If a community chooses, they can also participate in the NFIP's voluntary Community Rating System (CRS). The CRS program recognizes community efforts beyond the NFIP minimum standards by reducing flood insurance premiums for the community's property owners. These discounts may range from 5 to 45 percent. The discounts provide an incentive for new flood mitigation, planning, and preparedness activities that can help save lives and protect property in the event of a flood. Any community in compliance with the rules and regulations of the NFIP may apply. The community must appoint a CRS coordinator to handle the application work and serve as the liaison between the community and FEMA. The first step in the application process is for the community to obtain a copy of the CRS Coordinator's Manual, which describes the program and gives details on the eligible activities. The CRS Manual explains the program and the benefits for participating communities, and can be obtained from our web site, or by contacting our office.

Where can I get more information about floodplain management and NFIP regulations?

For additional information on floodplain management or NFIP regulations, you can contact the Floodplain Management Office at the Agency of Natural Resources. We can be reached by phone (802-241-3759) or email (ANR.Floodplains@state.vt.us). You can also visit our web site at www.vtwaterquality.org/rivers/htm/rv_floodhazard.htm.

Our website provides links to a number of resources to help understand the NFIP maps and regulations, and provide technical guidance for flood protection in or near SFHAs. These include [FEMA publications](#), [Technical Bulletins](#), and [LOMA forms](#).