



Flood Lines

Summer 2021

Volume XIV Issue 3

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NH Floodplain Management Program
Office of Planning and Development,
NH Department of Business and Economic Affairs



Summer Floods Hit New Hampshire Communities Hard

Multiple rounds of flooding affected communities in southwestern and central New Hampshire this July, the wettest on record in certain areas. Saturated soils and heavy rainfall contributed to flash flooding and to a lesser degree, river flooding, that caused a significant amount of damage, particularly to roads.

As this newsletter went to press, State officials were working to evaluate damage and to determine whether the events met the threshold for Federal assistance to be requested by the Governor.

For National Flood Insurance Program (NFIP) communities, a reminder that any damaged buildings in the Special Flood Hazard Area, as shown on FEMA flood maps, must be evaluated by the community to determine if they have incurred “Substantial Damage” to determine which building requirements in the community’s floodplain ordinance apply when rebuilding. The NH Floodplain Management Program’s (FMP) [Substantial Damage webpage](#) includes more information and resources for community officials on this topic. (Also see page 3 of this issue for a new training video.) And, as always, the [NH FMP team](#) is available to answer questions about Substantial Damage or other NFIP-related topics.



*Road damage in Acworth
(Source: NH Electric Cooperative)*

We’ve Moved Agencies!

As of July 1, 2021, the Planning Division staff and programs of the NH Office of Strategic Initiatives (OSI), which includes the Floodplain Management Program, now form the Office of Planning and Development within the NH Department of Business and Economic Affairs. Despite this change, our responsibilities, mission, and the support we provide communities and others related to the National Flood Insurance Program remain the same. See page 9 for our updated contact information.

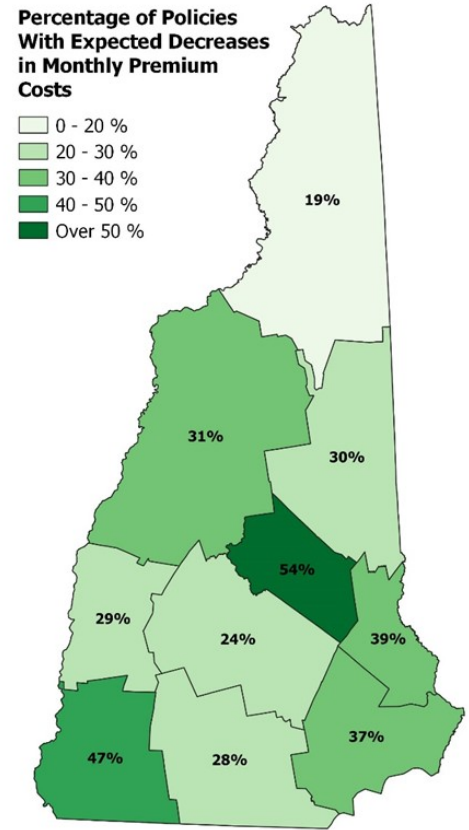
Risk Rating 2.0 Update: Changes Roll Out October 1st for New NFIP Insurance Policies

Risk Rating 2.0, FEMA’s new insurance rating system for National Flood Insurance Program (NFIP) insurance policies, is scheduled to go into effect on October 1st for new policies. Also on that date, existing policyholders will be able to take advantage of any immediate decreases in their premiums due to the new methodology. (All remaining policies renewing on or after April 1, 2022 will be subject to the new rates at that time.)

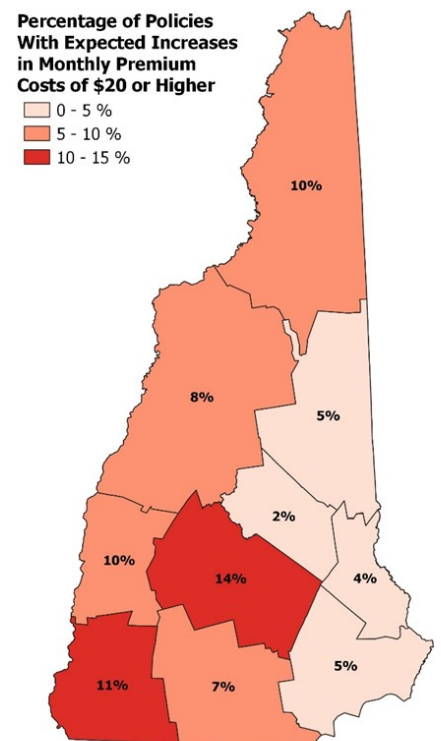
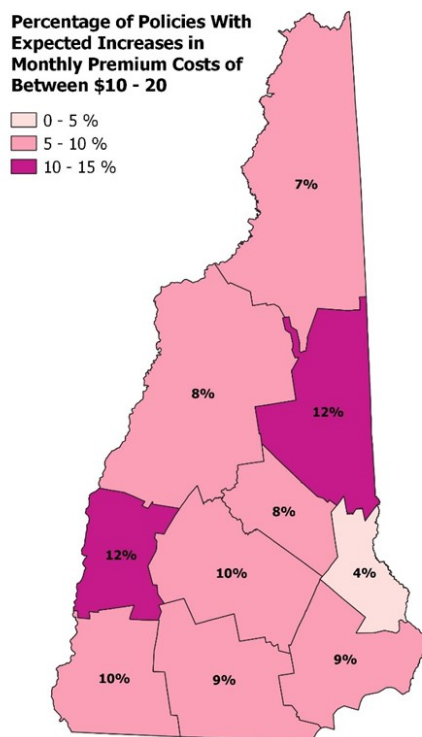
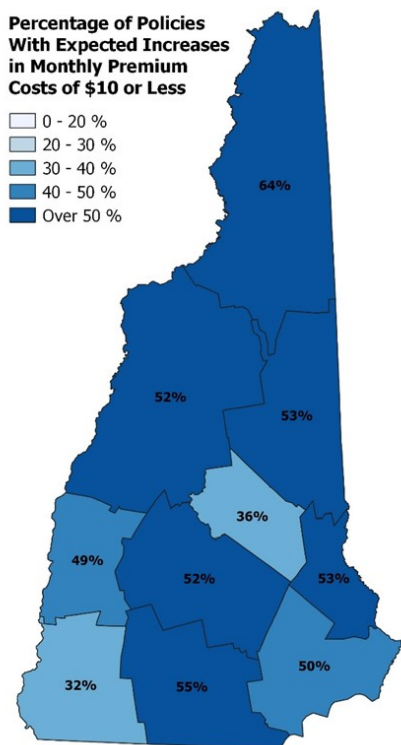
FEMA [previously released information](#) about expected impacts on current policyholders, showing that decreases in premium costs are expected for 35% of NH policyholders, and only slight increases for 58%. Recently, [county-level data](#) was also released—See maps to the right and below for more details about expected cost decreases and increases.

The NH Floodplain Management Program team is planning online training for the fall about Risk Rating 2.0. In the meantime, FEMA is also holding online training sessions regularly over the next few months. See details [here](#) and [here](#). (Note that these training sessions are open to anyone.)

Remember that these changes have no impact on municipal officials’ enforcement of community floodplain regulations nor on how lenders determine where the mandatory purchase of flood insurance applies!



Anticipated Changes in NFIP Flood Insurance Monthly Premium Costs By County



Maps created by the NH Floodplain Management Program using [FEMA data](#). In some cases, county percentages across maps may not total 100% due to rounding.

Apply Today! FEMA Hazard Mitigation Grant Funding Opportunities

FEMA recently announced that Congress has appropriated funding for several of their hazard mitigation assistance programs, the [Building Resilient Infrastructure and Communities \(BRIC\) program](#) and [Flood Mitigation Assistance \(FMA\) program](#). NH Homeland Security and Emergency Management (HSEM) is requesting Letters of Intent from local governments, State Agencies, and private non-profits that intend on applying for these funds. Once received, HSEM will review project eligibility and potential for application submission for the nationally competitive review process. For more information, including the submittal deadline, contact your community's HSEM Field Representative or the Hazard Mitigation Team at HazardMitigationPlanning@dos.nh.gov. Fact sheets about each program, including summaries of eligibility requirements, are available [here](#) (BRIC) and [here](#) (FMA). FEMA is also holding a series of webinars about the funding opportunities—schedule and registration information is available [here](#).

International Guidelines on Natural/Nature-Based Features for Flood Risk Management

The U.S. Army Corps of Engineers is holding a virtual launch event announcing the release of the *International Guidelines on Natural and Nature-Based Features for Flood Risk Management*. These guidelines “focus on the role of nature-based solutions and natural infrastructure (e.g., beaches, dunes, islands, wetlands, etc.) as a part of coastal and riverine flood risk management systems. The guidelines were developed to support decision-makers, project managers, and practitioners in conceptualizing, planning, designing, engineering, implementing, and maintaining sustainable flood risk management systems.” Learn more [here](#) or watch the [livestream on YouTube](#) on Thursday, September 16th at 11:00 am.

NFIP Reauthorization

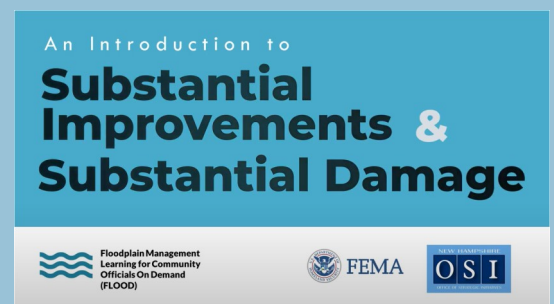
In order for the NFIP to continue to operate, the program was required to be reauthorized by Congress by September 30, 2017. On September 30, 2020 after many other short term authorizations occurring since that deadline, the President signed legislation passed by Congress authorizing the program until September 30, 2021. FEMA's [NFIP Reauthorization webpage](#) provides the latest on the status of the reauthorization.

New Training Video About Substantial Improvements and Substantial Damage Now Available!

The NH Floodplain Management Program Team recently released the second video in its Floodplain Management Learning for Community Officials On Demand (FLOOD) series. [“An Introduction to Substantial Improvements and Substantial Damage”](#) provides a half-hour overview of the Substantial Improvement and Substantial Damage requirements that apply for all communities that participate in the NFIP.

And don't forget about our first video in the series, [“FEMA Flood Mapping Basics for Community Officials”](#) which is also available!

While targeted to community officials, others with an interest in the NFIP may also find these videos useful.



Substantial Improvement Definition:

Any reconstruction, rehabilitation, addition or other improvement of a

Substantial Damage Definition:

Damage of any origin sustained by a structure whereby the cost of restoring the structure would equal or exceed 50 percent of the market value of the structure before the damage occurred.

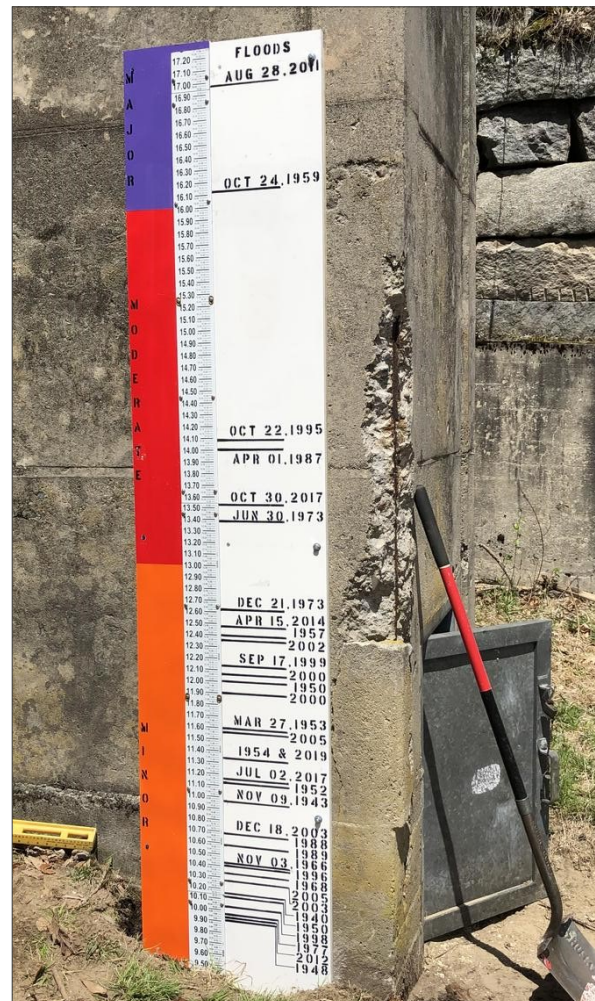


August Marks the 10th Anniversary of Tropical Storm Irene

For some, the floods that affected parts of the state this summer, along with Tropical Storm Henri, may have stirred up memories of Tropical Storm Irene, one of the most damaging storms to affect New Hampshire in recent memory. August 28th marked the 10th anniversary of that event.

Irene caused strong winds and heavy rain throughout much of the state. Saturated soils, a result of rain earlier in the month, contributed to widespread flooding in Carroll, Grafton, and Coos Counties. The heaviest amounts of rainfall were at higher elevations, with as much as 8 inches of rain falling in parts of the White Mountains. Impacts included severe damage to property, roads, bridges, and culverts, and significant erosion along rivers and streams. Many trees also came down due to the high winds and saturated soils, resulting in 1 death and several injuries.

The [USGS New England Water Science Center](#) recently installed markers along the Pemigewasset River in Woodstock (right) and Plymouth, the East Branch Pemigewasset River in Lincoln, and the Saco River in Bartlett and Conway showing recorded high water marks from Irene. You can also use the [Flood Event Viewer](#) to view high water mark data from Irene for these and other locations. Their [Remembering Tropical Storm Irene in New England website](#) also includes additional information about the storm's impact in New Hampshire and the rest of the region, with photographs, publications, and more.



High Water Mark Monument in Woodstock at the USGS Stream Gage Along the Pemi. (Source: USGS)



Flooding in Holderness Along Route 175 from Irene. (Source: Betsy Ayotte via [Plymouth State](#))

In the aftermath of Irene, the importance of a coordinated effort among state and federal agencies to effectively respond to the unprecedented amount of post-storm recovery and repair work became clear, and the inter-agency Post-Irene River Response Team (PIRRT) was formed to coordinate such activities. PIRRT later evolved into the [NH Silver Jackets](#), the multi-agency team focused on flood risk management activities in the state today. Be on the lookout for more about the 10th anniversary of the formation of this important group soon!

See more photos from Irene on the next page.

Photo Album: Tropical Storm Irene in New Hampshire

Campton Pond Dam (Source: NH DES Dam Bureau)



The Pemigewasset River, Woodstock (Source: USGS)



Damage to Route 49 in Campton (Source: NH HSEM)



Residential Flood Damage in Conway (Source: FEMA)



Erosion Along the Peabody River, Gorham (Source: NH DES)



Loon Mountain Bridge Failure, Lincoln (Source: NH DES)



New Hampshire Flood Mapping Update

Below is a status update for flood mapping activities in New Hampshire based on information provided by FEMA. For the latest information we have, please visit our [Current NH Floodplain Mapping Activities webpage](#). You can also view an interactive map showing project locations [here](#).

Rockingham County Coastal Mapping Project

Updated flood maps became effective on January 29, 2021.

Salmon Falls—Piscataqua Rivers Watershed (Outside coastal area)

Preliminary maps showing revised flood hazard information were previously under development. This project has been on hold, but is expected to move forward in 2022.

Contoocook River and Pemigewasset River Watersheds

Virtual meetings were held with community officials in March and April to review work maps showing updated flood hazards. The next step in the map update process will be issuance of preliminary flood maps.

Middle Connecticut River, Millers River, and Winnepesaukee River Watersheds

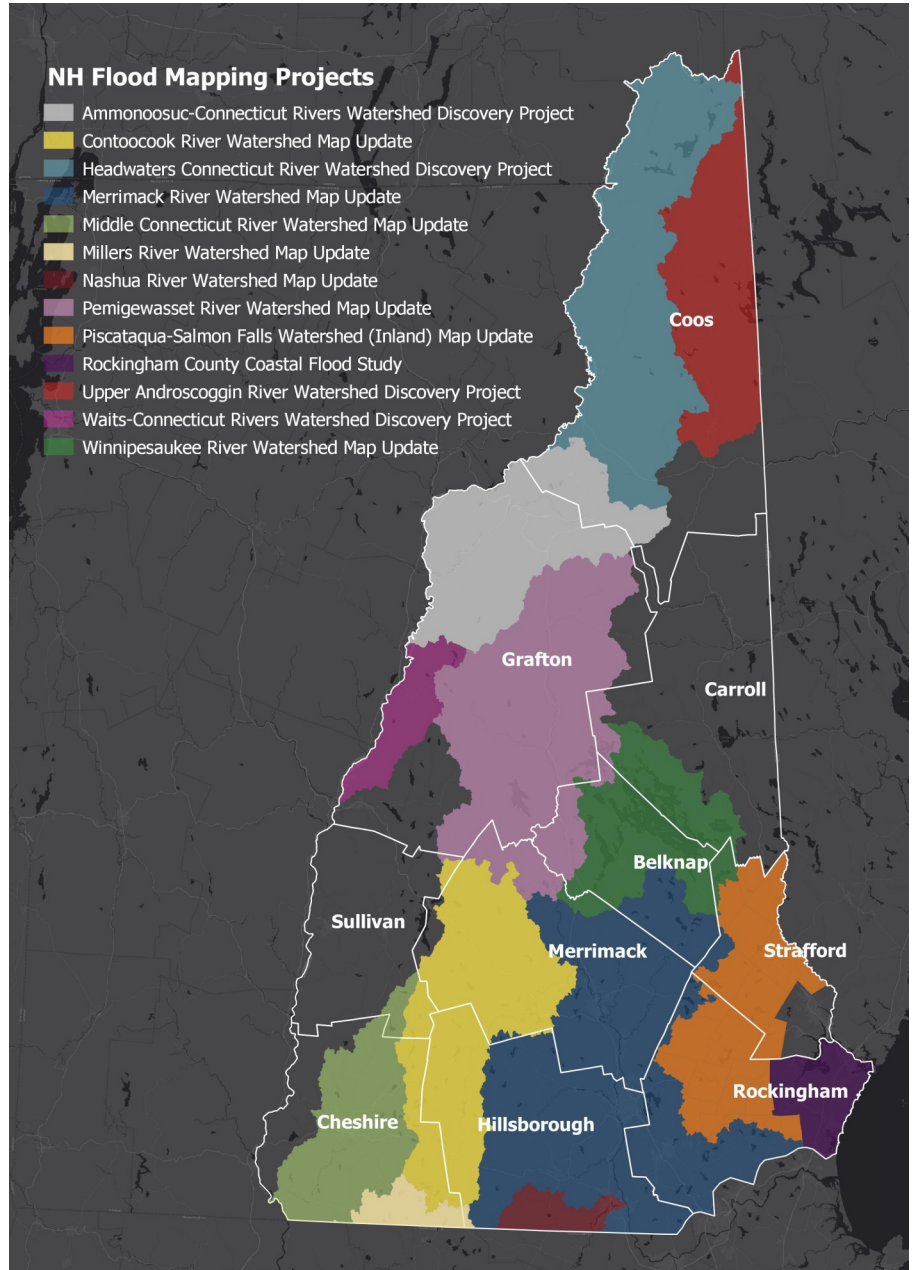
Updated field surveys and/or flood hazard analyses for new flood maps are currently in progress. The next step will be for FEMA to hold meetings to review draft work maps showing updated flood hazards with community officials.

Merrimack River and Nashua River Watersheds

The development of revised flood maps is currently underway. Issuance of preliminary maps may happen in late 2021.

Headwaters Connecticut River, Upper Androscoggin River, Waits-Connecticut Rivers and Ammonoosuc-Connecticut Rivers Watersheds

FEMA has developed scopes for new mapping projects based on input from community officials and other information gathered. Field surveys are either underway or expected to occur in the fall for these projects to support updated flood hazard analyses and revised flood maps.



Community Rating System (CRS) Update

Upcoming Opportunities to Learn About CRS

[CRS](#) is a voluntary program that NFIP communities can choose to join. By taking measures that go beyond minimum requirements, communities can reduce flood insurance rates for residents and improve local flood resilience. Interested in learning more? FEMA is offering free 2-day training via Zoom on August 24-25 and September 14-15. For more information, contact [Samara Ebinger](#) of the NH Floodplain Management Program.

FEMA Seeks Public Comments on CRS Program (Due by September 22nd)

FEMA is seeking input on ways that the CRS program can be improved to better incentivize communities and residents to become more flood-resilient and “to support the sound financial framework of the NFIP”. View the [Federal Register notice](#) for more information, including questions for commenters to consider and the link to the digital comment form. There will also be 3 virtual meetings on September 7, 8, and 9 during which FEMA will provide more details about the program review and collect verbal comments. More information about the sessions, including how to register, is available [here](#).

GIS For Floodplain Managers: Getting to Know FEMA’s National Flood Hazard Layer (NFHL) — Part II

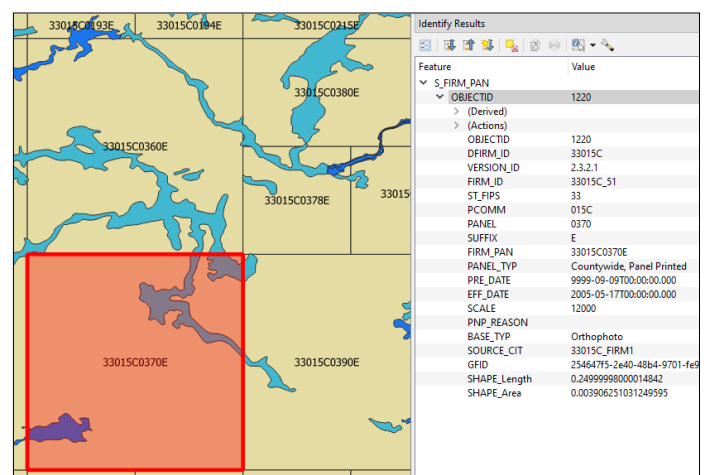
With the exception of the Town of Lincoln and Belknap County, most NH communities have FEMA flood map data available in GIS format (known as the [NFHL dataset](#)). Below, we take a closer look at the **S_FIRM_Pan** layer in this dataset. To follow along, first download the effective FEMA NFHL GIS dataset for your community:

1. Go to the [FEMA Map Service Center website](#) and click [Search All Products](#).
2. On the next screen, select your state, county, and community and click Search.
3. On the next screen, click on *Effective Projects* and then *NFHL Data-County* (unless you’d like a dataset that includes all data available in the whole state). Then click the Download button.
4. A zipfile containing a GIS file geodatabase with different map layers will download to your computer.

Using the GIS software of your choice (e.g., ArcMap, ArcGIS Pro, QGIS), navigate to the unzipped file geodatabase and add the **S_FIRM_Pan** layer to your map.

This layer includes the boundaries of each of the FEMA flood map panels. Some of the most useful attributes in the S_FIRM_Pan layer include:

- **FIRM_PAN:** the full 11-digit map panel number including the suffix.
- **PANEL:** the shortened 4-digit map panel number.
- **PANEL_TYP:** will indicate if the panel is printed or (if there are no flood hazards yet identified in the area) not printed, and
- **EFF_DATE:** the effective date of the map panel.



Attribute fields for the panel polygons in the S_FIRM_Pan layer.

To learn more about the S_FIRM_Pan layer, and the other NFHL data layers, check out FEMA’s [Flood Insurance Rate Map Database Guidance document](#).

New Publications and Resources Available!

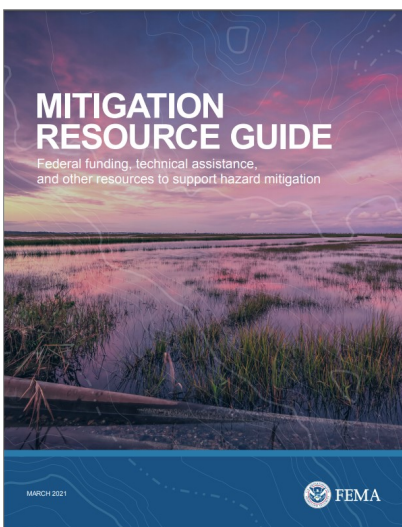
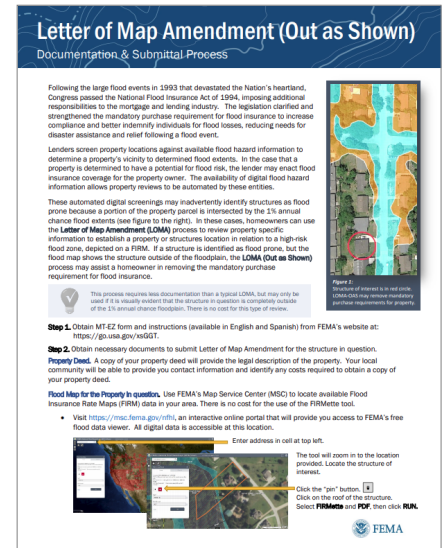
[Letter of Map Amendment Out as Shown - Fact Sheet](#) This new fact sheet from FEMA provides information about “Out as Shown” (OAS) Letters of Map Amendment (LOMAs), including what they are, when they may be needed, and how the application process works.

[Level Up Audio Project - Season 2](#) A new season of the Level Up Audio Project podcast is now available. A production of FEMA Region 9 and available through the Georgetown Climate Center, this project focuses on community conversations about prioritizing hazard mitigation planning and actions.

[Communities Gaining Ground in the Race Against Rising Waters](#) This story map from the Association of State Floodplain Managers features case studies of eight communities across the country that successfully addressed flooding problems. The story map includes a diverse cross section of locations, flooding challenges, and solutions that may serve as helpful examples for communities looking for sound approaches to address flooding.

[Technical Mapping Advisory Council 2020 Annual Report](#) - The Technical Mapping Advisory Council (TMAC) is a Federal advisory committee that supports FEMA by providing recommendations related to flood hazard and risk mapping. Each year FEMA asks the TMAC to focus its efforts on a specific area related to the National Flood Insurance Program and mapping, with the 2020 focus being a framework and best practices for a future flood hazard mapping program. Read about their findings in the **[2020 annual report](#)**.

[Community Resilience Toolkit](#) - The U.S. Department of Housing and Urban Development (HUD) has developed this toolkit to help communities improve their resilience to climate-related natural hazard risks. Specifically, it provides resources that housing and community development professionals can use to identify climate-related risks and implement resilience actions related to housing and infrastructure using HUD funds and other financing options.



[Guidebook: Promoting Nature-Based Hazard Mitigation Through FEMA Hazard Mitigation Grants](#) - This guidebook developed by The Nature Conservancy provides information about the use of FEMA Hazard Mitigation Assistance funds for a wide range of nature-based hazard mitigation and climate change resilience projects. Relevant case studies of specific projects in different communities across the U.S. are also presented.

[Mitigation Resource Guide: Federal Funding, Technical Assistance, and Other Resources to Support Hazard Mitigation](#) - This new guide from FEMA provides a comprehensive list of mitigation grants, loans, technical assistance, and other resources available nationwide from different Federal agencies. Specific examples of community mitigation successes related to each resource are also presented.

[FEMA Hazard Mitigation Partners Workshop Recordings](#) - Each year, FEMA's Hazard Mitigation Division holds a workshop about key topics related to hazard mitigation and floodplain management. The theme of this year's workshop, held virtually in May, was “Resilience, Equity, and Future Conditions.” Recordings of most workshop sessions can be viewed **[online](#)**.

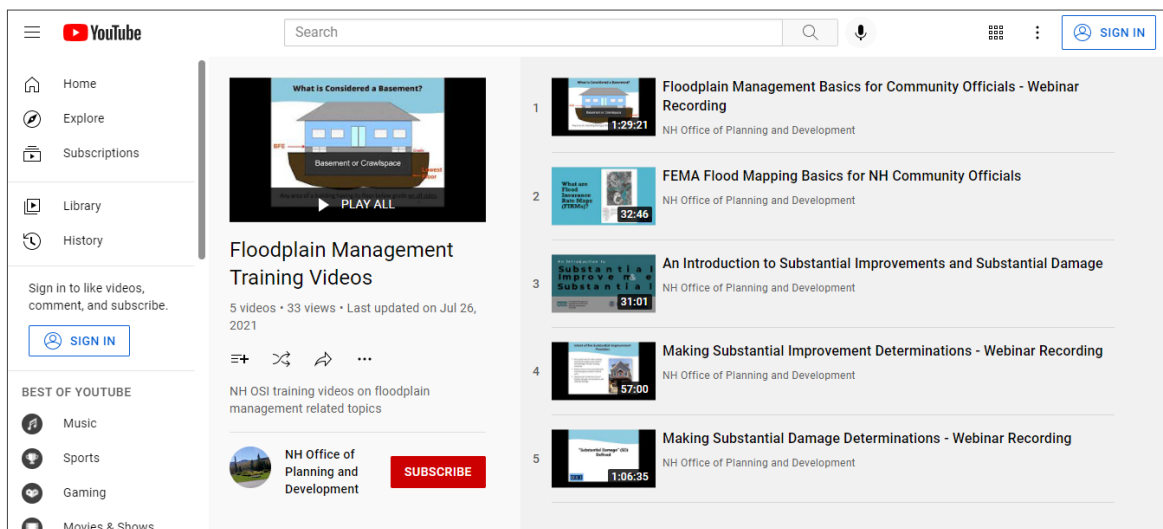
Online Training Events Planned for Fall/Winter

The NH Floodplain Management Program (NH FMP) team is planning several NFIP/floodplain management-related online training events for the fall and winter. We'll be announcing details via our Flood Lines email list so keep an eye out! (If you're not currently subscribed, contact [Samara Ebinger of NH FMP.](#)) Topics planned include:

- [Risk Rating 2.0](#) (In the meantime, see other upcoming training options on page 2)
- Floodplain Development Scenarios for Community Officials

View Recorded Webinars on our YouTube Playlist!

Besides our FLOOD training video series (See page 3) which is available on our [NH FMP YouTube Playlist](#), you can also access recordings of webinars we've held recently. Webinars available include *Floodplain Management Basics for Community Officials*, *Making Substantial Improvement Determinations*, and *Making Substantial Damage Determinations*. [Check them out today](#) and don't forget to hit the Subscribe button!



New Hampshire Floodplain Management Program (NH FMP)

Office of Planning and Development
NH Department of Business and Economic Affairs
Concord, NH

Jennifer Gilbert, CFM, ANFI
State NFIP Coordinator
Phone: 603-271-1762
Email: jennifer.r.gilbert@livefree.nh.gov

Samara Ebinger, CFM
Assistant State Coordinator
Phone: 603-271-1755
Email: samara.m.ebinger@livefree.nh.gov