



Preparation Matters for Municipalities

Municipal officials find themselves on the front line when disasters hit. Local government leaders – particularly those who have been through a flood disaster – recognize that water combined with Vermont’s steep hills and narrow valleys can quickly devastate a community. Vermonters count on their local governments to prepare and lead the immediate response and take action to prevent future damage.

Why it Matters

Local leaders know that planning and preparation save lives, avoids property and infrastructure damage and speeds recovery efforts. It also improves the ability to obtain federal and state assistance. Planning for flooding can help the community mount an effective disaster response, direct future development away from high hazard areas and attract funding that can make the community safer and can even identify opportunities to apply disaster prevention efforts into addressing broader community concerns.

Prepare for Emergencies

Experience from the 2011 floods clearly demonstrated that municipalities that prepared for emergencies and were committed to local safety and resilience, responded and recovered faster and better than those that did not. Municipalities are now encouraged to prepare a plan to manage disasters and then follow-through with regular training and updates. Where local resources are insufficient to adequately respond to disasters, mutual aid agreements with nearby municipalities can help fill the gap.

Local Emergency Management Director

In Vermont, each city and town is required to establish a local organization for emergency management and appoint a director. In most communities this is the fire chief or an individual with the

COMMUNICATION HELPED WATERBURY RESPOND

Tropical Storm Irene hit Waterbury hard, damaging 220 homes and businesses, but the community immediately mounted an effective response, helping those in need, removing debris, restoring services and making plans for recovery. Efforts to build social ties and a culture of open communication before the flood contributed to the community’s success in navigating the chaos of the disaster. Town officials stepped forward immediately to provide leadership, making these critical decisions that enabled a speedy recovery:

- Choosing a central meeting place for daily meetings and to offer services;
- Selecting radio and daily newsletters as the ways to keep people informed;
- Collaborating with adjoining towns, and the state, federal and non-profit entities offering assistance; and
- Setting priorities to direct resources to the most urgent needs.

Investing in waste removal on day one, clearly communicated that the town was committed to improving conditions, boosting community confidence and morale.

skills and experience to respond in an emergency situation. Typical responsibilities of the local Emergency Management Director include:

- ➔ Acting as local point of contact for emergency management issues.
- ➔ Developing an emergency operations plan and community continuity of operations plan.
- ➔ Conducting tests and exercises and coordinating training programs for emergency volunteers.
- ➔ Maintaining a communications system to alert key officials in the event of an emergency.
- ➔ Coordinating the establishment of an emergency shelter with the American Red Cross.
- ➔ Helping develop mutual aid agreements.
- ➔ Acting as a liaison to the Department of Emergency Management and Homeland Security.

TIPS

When developing emergency plans, consider individuals with special needs and those with pets, or livestock. Often emergency shelters cannot accommodate individuals' special needs or pets. Documenting those with special needs can also help identify medical or service needs if roads and power are out.

Training for Emergencies

Preparing to respond usually involves significant training, drills and practice to ensure that key leaders and volunteers are ready to jump into action quickly and that local residents understand their roles and responsibilities in preparing for and responding to disasters. Communities should also consider coordinating regular trainings with neighboring towns and with state partners.

Local Emergency Operations Plan (LEOP)

Among the key documents your city or town will want to have in place when an emergency strikes is a Local Emergency Operations Plan (LEOP). These plans contain the legal authority for emergency operations, explain the general concept of operations and assigns responsibilities for emergency planning and operations. Residents and business have a critical role and shared responsibility identifying local risks and familiarizing themselves with the plan so they can take proactive steps to protect themselves and their property.

Most emergency plans also include a municipal Continuity of Operations Plan (COOP) – a written document that outlines how the local government will respond and recover from a major emergency or disaster as well as standard operating procedures and contacts. When identifying key contacts in the plan, be sure to appoint alternates for important response positions so if the primary contacts are not able to perform their duties, or the work demands 24 hour attention, someone else is trained and informed to step in.

Communities should test and refine their Local Emergency Operation Plans (LEOP) annually and submit them to their Regional Planning Commissions after Town Meeting Day and before May first. A person trained in the [National Incident Management System \(NIMS\)](#) offered by FEMA is responsible for certifying that the LEOP has been adopted by the municipality.

Resources:

- ➔ FEMA offers a [general LEOP template](#) that includes recommended content as well as general guidance on creating and adopting a plan is responsible for certifying.
- ➔ Vermont Department of Emergency Management and Homeland Security provides details on [preparing an LEOP](#).

Mutual Aid Agreements

Mutual aid agreements, also known as interlocal agreements, are contracts among local governments that increase the capacity to respond to an emergency situation by sharing resources (staff, supplies equipment) before, during, and after an emergency.

The conditions of the agreements typically outline the policies and procedures for reimbursement and compensation in advance. Fire department mutual aid agreements are the most common type of interlocal agreement used by Vermont municipalities. FEMA also requires written mutual aid agreements as a condition of certain grants.

Resources:

- ➔ Vermont Department of Emergency Management and Homeland Security provides a [mutual aid template](#) (opens in WORD).

Plan for Avoiding Flood Damage

Since the devastating floods of 2011, Vermont communities gained a heightened awareness of the need to avoid future flood damage. This requires planning and a number of different types of plans are required to access federal and state benefits. Communities can use these planning processes to prepare for and prevent flooding, serve as guideposts for municipal decision-making and help direct state and federal funding towards projects that will lessen flood damage in the community.

Local Hazard Mitigation Plan

Flood-damaged roads and bridges can wipe out a town's entire year's road budget in a matter of hours. Local Hazard Mitigation Plans (LHMP) identify local policies and projects that reduce key vulnerabilities and the repetitive repair costs to infrastructure that impact community. Once FEMA has approved the LHMP, projects like floodproofing public buildings, elevating private and public buildings, property acquisitions and culvert improvements are eligible for federal funding. Communities must update their LHMP every five years and can obtain [regional planning commission](#) assistance for preparing the plan.

Although flooding is the primary hazard faced by Vermont communities, the LHMP needs to address not just flooding but all important hazards facing the community. The plan is particularly oriented to identifying priorities for the Hazard Mitigation Grant program. The flood resilience section of the municipal plan is oriented to protect existing landscape features that already function for the community before dwelling on spot by spot fixes. Future LHMPs can address the flood resilience goals and contribute substantially to helping to meet the flood resilience element of municipal plans so efforts do not need to be duplicated.

Resources:

- ➔ [FloodReady.vt.gov](#) provides [guidance to communities for developing an LHMP](#).

FEMA's [Hazard Mitigation Grant Program](#) offers a significant source of funding for community flood resilience projects identified in the Hazard Mitigation Plan.

Municipal Plans (Town Plan)

For municipalities to qualify for certain grants and incentives, their municipal plans must include, among other components, a flood resilience element that identifies their vulnerabilities and risks and outlines strategies and projects to reduce those risks. In order to reduce the risk of flood damage to infrastructure and property, the plans must designate areas for protection, including floodplains, river corridors, and land adjacent to streams, wetlands, and upland forests. They must also recommend policies and strategies to protect the areas identified to decrease risks to public safety, critical infrastructure, existing buildings and municipal investments.

This means that in flood-prone communities, the vision expressed in the plan, including the parts that address land use, transportation, public facilities and even economic development need to address flood resilience. The municipal plan, as the overarching plan for the community, also needs to connect and harmonize with the LEOP and LHMP. Those plans can be acknowledged and incorporated by reference.

Resources:

- ➔ The purpose and requirements for Vermont's [Municipal Plans](#) are found in [24 VSA Chapter 117](#). The municipal plan describes the community's goals and how the community will work together to prioritize, fund and make the changes envisioned.
- ➔ Any plan updated after July 1st, 2014 must include a [flood resilience element](#).
- ➔ [Municipal Planning Grants](#) are available for planning and implementation.

Capital Improvement Program

Once projects are identified, municipalities need to determine how they will pay for the flood resilience upgrades recommended in the municipal and hazard mitigation plans. The schedule of capital investments over a number of years is generally called a Capital Improvement Program (CIP). This allows the community to prioritize capital projects and to optimize financing. In order to protect public safety, reduce disruption and damage from flooding and foster flood-safe development, the municipal plan and capital improvement program can identify and prioritize many kinds of public facility improvements, including those that are identified in other plans such as:

- ➔ [Municipal plan](#) priorities for infrastructure including those needed to [promote safer places for future development](#);
- ➔ [Local Hazard Mitigation Plan](#) priorities;
- ➔ [River Corridor Plan](#) priorities;
- ➔ [Culvert, bridge and road](#) priorities;
- ➔ [Critical facility and public buildings' needs](#); (including water supply, wastewater facilities, equipment);
- ➔ [Emergency operations needs](#);

Consider establishing a CIP reserve fund to match and leverage FEMA Mitigation Assistance. The Hazard Mitigation Grants cover 75% of a project's costs so it is important to prepare a fund specifically to provide the match funds for priority mitigation projects funded by FEMA.

EXAMPLES OF FLOOD RESILIENCE PLANS

Municipal plans adopted after July 1, 2014 need to include a flood resilience element to be eligible for benefits. Examples of plans that address flood resilience include the following:

- ➔ [West Windsor](#) – flood resilience amendment to the plan
- ➔ [Unified Towns and Gores of Essex County](#) - part of updated plan
- ➔ [Greensboro](#) – part of an updated plan

REGIONAL PLANNING COMMISSIONS CAN HELP

Regional Planning Commissions receive funding to assist municipalities with Hazard Mitigation Plans and Local Emergency operations Plans. They may also be able assist with municipal plans.

Resources:

- Flood Ready provides extensive resources on [Capital Programs and Budgets](#) for flood resilience.
- For a primer on facilities and capital improvement planning see the [Implementation Manual: Vermont Land Use Planning](#), specifically the papers on [Capital Improvement Program](#) and [Facilities Management](#) (340 kb)

Comparison of Plans for Flood Resilience and Preparation

PLAN	AUTHORITY	LOCAL LEAD	ADOPT BY	UPDATE	FUNCTION	BENEFITS
Municipal Plan (Town Plan)	24 V.S.A. Chapter 117 §4381-4387	Planning Commission	Governing Body	5 years	Comprehensive Plan with Land Use focus, incorporating a Flood Resilience element.	<ul style="list-style-type: none"> • Eligible for MPGs • Eligible for State Designation
Local Hazard Mitigation Plan (LHMP)	FEMA	Governing Body with help from RPC	Governing Body	5 years	Identify important hazards and prioritize projects for reducing risks.	<ul style="list-style-type: none"> • Eligible for FEMA Hazard Mitigation Assistance Program • Part of ERAF eligibility
Local Emergency Operations Plan (LEOP)	FEMA	Governing Body with help from RPC	Governing Body	1 Year	<ul style="list-style-type: none"> • Legal authority for emergency operations • Assigns responsibilities during disaster planning and response 	<ul style="list-style-type: none"> • Prepared for disasters • Part of ERAF eligibility
Capital Improvement Program (CIP)	24 V.S.A. Chapter 117 §4430	Planning Commission and/or Selectboard or Public Works Director	Governing Body	1 year for Budget, 5 years for Program	Plan beyond one year for how to pay for flood resilience upgrades	Spreads costs over multiple annual budgets

ANR – [Agency of Natural Resources, Watershed Management Division](#)

ERAF – [Emergency Relief Assistance Fund](#)

FEMA – [Federal Emergency Management Agency](#)

Governing Body – Municipal Selectboard, City Council, Town/City Manager, Village Trustees

MPGs – [Municipal Planning Grants](#)

RPC – [Regional Planning Commission](#)

State Designation – [State Incentive Programs for Downtowns, Village Centers, etc.](#)

V.S.A. – [Vermont State Statutes](#)

Coordinating Plans

It can be difficult, especially for small towns that rely on volunteers, to produce plans that are coordinated. The people who work on hazard mitigation plans and local emergency operations plans may be made up exclusively of emergency services personnel, while the municipal plan may have an entirely different group involved. Anticipating the potential for this disconnect, FEMA produced guidance on [Integrating the Local Natural Hazard Mitigation Plan into a Community's Comprehensive Plan](#). A short scoring tool at the end of the document may be particularly useful for evaluating whether important issues concerning hazards are addressed in the municipal plan.

For evaluating coordination between all the other plans discussed above, consider adapting this evaluation tool produced for local plans in New Jersey: [Getting to Resilience, A Coastal Community Resilience Evaluation Tool](#).

Responding to the need for greater community collaboration and social cohesion in the face of disastrous floods, some Vermont towns are now forming [Community Resilience Organizations](#). CROs aim to bring diverse sectors of a community together for projects that improve local resilience and at the same time celebrate and build community spirit.

BENNINGTON AVOIDS DAMAGE THROUGH EFFECTIVE PLANNING

Bennington's Roaring Branch River flows through its downtown and as the name implies, it periodically brings destruction in its path.

Bennington had used all the typical strategies to make the downtown safer from flood damage such as building berms and deepening the river channel but after millions of dollars in damage and reconstruction, town leaders began to see that these methods only made matters worse. Starting in 2008, Bennington began a new approach to managing the river starting with a plan using the following steps:

- Conducted public outreach and obtained agreement from residents to protect the town's economic center and ensure public safety.
- Identified areas of economic activity that might be impacted by a major flood, noting key employers, infrastructure and support functions such as police and town offices.
- Analyzed the flood risks in specific locations in their community.
- Identified physical changes that could reduce or eliminate risks to key areas by reducing the river's energy during flooding and spreading flood water on open land.

Bennington put the plan into action by:

- Adopting new flood hazard zoning regulations to keep people and buildings out of harm's way and preventing development that causes worse flooding on other properties.
- Restoring floodplains by acquiring land next to the river, removing berms and allowing room for the river to move and flood without causing damage.

The new flood hazard regulations made the town eligible for increased disaster relief funds and additional funds to finance the floodplain restoration.

While other parts of Bennington were hit hard by Tropical Storm Irene in 2011, the Park Street Bridge and the downtown area were largely saved by the restored floodplain. The Town's planning director, Dan Monks later said, "Without the floodplain restoration in that area, the bridge would've likely been destroyed." The Town estimates that it avoided \$93 million in damages to property, roads, bridges and other infrastructure. In comparison, the floodplain restoration cost around \$725,000. Clearly it was a worthwhile investment.

