Reflections on Weathering the Storm
This Irene Recovery Status Report serves as the fourth and final written testimony from the Irene Recovery Office, since its creation following Tropical Storm Irene in August 2011. It builds on previous reports submitted under the leadership of Irene Recovery Officers Neale Lunderville, Sue Minter and Dave Rapaport. Within these pages, you may find evidence of the agility, strength, generosity and courage of Vermonters to recover from the state’s most devastating disaster since the Great Flood of 1927.

We are fortunate to have collaborated with numerous authors, photographers, colleagues and community partners to create this report. A full list of contributors can be found at the end of the document.

We wish to acknowledge ALL of Irene’s survivors, volunteers, emergency management personnel and all of the community leaders who have contributed to recovery. There are thousands who helped their neighbors and their communities. Our intent here is to acknowledge ALL the heroes and heroines of Tropical Storm Irene. You know who you are, and Vermonters will be forever grateful.

Sincerely,

Ben Rose
Recovery & Mitigation Chief
Division of Emergency Management & Homeland Security

Katherine Ash
Interagency Liaison
Irene Recovery Office

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COVER PHOTO: GORDON MILLER
The view from the National Guard helicopter the morning after

Tropical Storm Irene had roared across Vermont was devastating. Then-Adjutant General Michael Dubie and I looked down on more than 500 miles of state roads destroyed, 200 bridges damaged or ripped off foundations, more than 60,000 homes and businesses without power, 1,000 homes destroyed. Families were grieving lost property and, in some cases, lost loved ones. Entire towns were cut off from the rest of state.

It was an historic moment, one of the most damaging storms in the state’s history. Rather than bringing Vermont to its knees, however, the storm actually presented our state with an opportunity—a chance to rebuild stronger, more resilient, and less vulnerable to the wild weather that climate change has wreaked upon our world.

Today those 500 miles of roads are not only open, but in most cases built to better withstand future flooding. Fewer homes remain in flood zones. Culverts are wider and bridges are reinforced. State agencies, local officials, and emergency responders now work together in crisis. We know our neighbors, and we know we can count on them in an emergency.

This report contains the words, numbers, and charts that quantify our recovery, but it is the photographs that display the true lessons left in Irene’s wake.

What we also saw from that helicopter two years ago were neighbors helping neighbors, and strangers helping strangers, pick up the pieces of their lives amidst total destruction. We saw National Guard and transportation crews working long hours to reach those stranded by flood waters, deliver medical supplies, food and water. We saw small communities gathering on town greens for meals, children walking unimaginable distances to attend school, and those in areas of the state not impacted by the storm assisting those who were devastated by the storm’s passing.

I take great personal pride in the progress documented in this second anniversary report. While I recognize that there is still work to be done, and some Vermonters are still recovering, I know that today our state is stronger and our future brighter than it was when Tropical Storm Irene found us.

Peter Shumlin, Governor
CHAPTER ONE

August 28, 2011
Hurricane Irene tracked from New York City north-northeast across the states of New York and Massachusetts before entering Vermont as a Tropical Storm during the evening of August 28, 2011. Throughout the early morning, winds gusted to nearly 60 mph over Vermont, creating waves of four to six feet on Lake Champlain. The National Weather Service reported record-setting rainfall ranging from four to eleven inches throughout the state.
Water overwhelms a Stockbridge culvert. ■ [Opposite, Top] During Irene, parts of Vermont received more than 7 inches of rainfall in a 2-day period. ■ [Opposite, Center] A propane tank slams into the Taftsville Bridge between Quechee and Woodstock. ■ [Opposite, Right] A Strafford resident captures the rising water at Alger Brook Road.

[Top] One of Quechee’s best known destinations, Simon Pearce, is flooded by rushing water at the Gorge. ■ [Above] Waterbury residents wade through high water at Elm Street towards safety. ■ [Far Left] Flooding on Winooski Street in Waterbury; this heavily damaged home was later destroyed. ■ [Left] Water and debris fill the streets of West Woodstock at the site of the local Farmer’s Market.
When the sun came up on August 29th, Vermon ters emerged from their safe havens, and gathered to marvel at scenes of epic destruction.

The storm had passed, but 13 communities had been completely cut off. 3,500 homes and businesses were damaged, including 500 mobile homes.

20,000 acres of farmland were under water, 500 miles of state roadway and some 200 bridges were damaged across the state, while nearly 1,000 culverts had been washed away or damaged.

Most tragically, 6 lives had been lost and Irene had become the worst natural disaster to strike Vermont since the Great Flood of 1927.
No one was able to reach our house from the main roads, and it was only after several hours of severe crashing floodwater rushing down Tracy Hill Road that we could reach our closest neighbor’s property. By then, our elderly neighbors had been rescued by a bucket loader tractor that brought them to safety. I got my camera to take pictures, knowing people would not believe the devastation without seeing it for themselves.

SERGIO PEDRINI, Roxbury Resident
Throughout Vermont, homes and cherished contents that had been in families for generations literally drifted away.

In Wilmington, Dot’s Restaurant, a community landmark, had been lifted into the air and set down in a nearby parking lot.

In Rockingham, the obliteration of one of Vermont’s treasured covered bridges, the Bartonsville Bridge, was captured on video and shown in national media for weeks afterwards.

The West Hartford General Store, home to years of community events and a favorite stop of Appalachian Trail hikers, had been torn to pieces.

Just north, in Rochester, horrified residents watched as human remains floated away from the Woodlawn Cemetery when raging waters cut into the banks of the Nason Brook.

[Top] Family photos found among the rubble in Middlesex. [Left] An aerial view of homes along Route 100 after the raging White River tore through Rochester. [Above] The remains of a mobile home in Danby rests on stilts.
“When we heard the awful sound of the metal roof twisting we knew our bridge had lost its battle against the storm. When she went, she went so gracefully, the southwest side of the bank collapsed and the far end of the bridge dipped into the raging river. A second later the bridge pulled away from the bank and the covered bridge that had been the gateway to Bartonsville for more than 140 years floated down the river, collapsing into a pile a half mile downstream.”
Ultimately, over 60,000 homes and businesses in Vermont were left without electric power all across the state, with the highest concentration of damage in southeastern Vermont. Water shortages also occurred in some communities, as public water supplies were contaminated from oil and propane tanks washed downstream. There were new islands of debris, containing uprooted trees, mobile homes, cars, and red barn doors. As town officials struggled to comprehend the extent of the damage, Governor Peter Shumlin directed town officials to do whatever was necessary to protect lives.
IRENE: Reflections on Weathering the Storm

JOE FLYNN, Director, Division of Emergency Management & Homeland Security

“When I finally left the Incident Command Center on Saturday, September 3rd with two colleagues and drove into Newfane, I frankly could not believe what I was seeing. Piles of debris towered over our vehicle... and outside this house was a woman with a small card table. Every couple of minutes an arm would extend from the second floor window and hand her something. She would wipe it off, look at it and place it on the little table. I sat and watched this person take stock in the few recognizable pieces she had left. After the pace of our work and the shell shock of what we were seeing, it simply brought you to tears.”
The Waterbury State
Office Complex (WSOC), home to the Vermont State Hospital, workplace hub of many state agencies, and a vital part of the central Vermont economy, was under water.

State Hospital officials had watched the Winooski River surge, and with help from members of the State Police and National Guard, braved the rising water to relocate 51 hospital patients from the ground floor of the building to other state facilities.

Meanwhile, the state agencies displaced from their offices adapted quickly to challenging new working conditions and maintained day to day operations. The State Emergency Operations Center had to be evacuated, and federal and state emergency personnel worked frantically to relocate the state command center to Burlington.
“We always say ‘You need to prepare for the Big One.’ Well, this certainly was the Big One! During the initial Irene response, it was an added challenge to maintain the necessary response and recovery support for Vermonters while displaced from our Emergency Operations Center (EOC). Learning from that, we are taking advantage of Hazard Mitigation funding from Irene to flood-proof the EOC and other critical public safety functions.”

ROSS NAGY, State Coordinating Officer

[Top Right] FEMA Administrator Craig Fugate (right) reviews the damage to Ludlow with Governor Peter Shumlin and General Dick Harris, Brigadier General, Vermont National Guard. [Top] State and volunteer organizations active at the Emergency Operations Center. [Above] A kayaker floats on Route 2 in Bolton on Monday morning. [Right] Standing water remains in East Pittsford on Wednesday, three days after the storm.
The Federal Emergency
Management Agency (FEMA), which had been wrapping up its recovery efforts from May 2011 flooding, reactivated for Irene and deployed nearly 500 reservists to Vermont within days. The Vermont Air National Guard positioned 300 of its members to deliver commodities, including food, water, and supplies, to communities that had been cut off, and helped to repair damaged roads.

In all, 225 of Vermont’s 251 towns reported damage to public infrastructure.
Father Caleb Abetti, Pastor of St. Jacob’s of Alaska Orthodox Church in Northfield Falls

“I toured the river front; uprooted trees and reformed landscape is all there is, sad to say. Strange huge objects here and there. Then there were two doves, two white doves, fluttering around. Did they belong to the owners? What were they doing out?... What are these white doves? In the flood aftermath what has been the most alive is the piercing quality (the white of a bird against this dark backdrop) of the human spirit... the presence of this grace is abundant here today and probably will be for a while.”

Father Abetti gave permission to share his flood journal with Voices in the Flood, which was kind enough to share this submission with us.
CHAPTER TWO

How Vermonters Responded
Here, we invite Sue Minter to pick up the narrative. “The day after Irene swept through Vermont, the weather was warm, sunny and still. All at once, Vermonters came to rescue each other. Volunteers showed up in towns by the thousands. And they kept coming.

“Over the next year, Vermonters housed, clothed and fed their neighbors; they raised money, organized response and recovery missions, mucked basements, and rebuilt homes, businesses, farms, rivers and roadways. These volunteers—and many of you were among them—not only gave help to those in need, they gave hope. Hope that we would get through this disaster. Hope that tomorrow would come, and that no one would be left alone.”

Sue Minter was Deputy Secretary of the Agency of Transportation when Irene hit. In January 2012, Governor Shumlin appointed her to lead the Irene Recovery effort. Minter returned to her position at VTrans in January 2013.
IRENE: Reflections on Weathering the Storm

ANDREA VARNEY, Volunteer Coordinator, Rutland County Long Term Recovery Committee

“From chainsawing debris, to carrying buckets of mud, moving belongings, and making lunches, I have witnessed such caring and compassion. It has not only been about the work that these volunteers have done for Irene survivors, it has also been about these survivors feeling cared for. In many cases, the volunteers and survivors share similar experiences and have found healing in reaching out to one another.”
To coordinate the massive recovery effort, Governor Peter Shumlin appointed Neale Lunderville, Green Mountain Power executive and leader within the Douglas administration, to act as Irene Recovery Officer.

In this position, Lunderville helped mobilize the recovery, ensuring that funding flowed and government responded effectively; from the heroic VTrans emergency road crews that managed to restore more than 500 miles of damaged road in less than four months, to the emergency housing task force that ensured no Irene survivors were left without shelter.

[Far Left] An ambulance makes its way across a recently repaired road near Hancock. ■ [Top] An aerial view captures the challenge faced by repair crews to restore access to isolated communities. ■ [Left] Repair and flight crews collaborate to assess the reconstruction needs near Clarendon. ■ [Above] This structure, known as “Bridge 11,” was one of hundreds of infrastructure projects that relied on extraordinary engineering to repair and rebuild.
“VTrans’ ability to rebuild over 500 miles of damaged roadways required continuous innovations and extraordinary effort: swift action from Agency staff; a strong organization utilizing the incident command system; unprecedented coordination with partners, and a never-say-die determination that typifies the VTrans’ Operations motto ‘service beyond self.’”

SUE MINTER,
Deputy Secretary,
Agency of Transportation
Lunderville’s team
coordinated with state agencies
and congressional representatives
to obtain and implement a vast
array of federal and state resources.
The alphabet soup contained the
dedicated work of hundreds;
hats off to the following state and
federal agencies:

A of A  Agency of Administration
ACCD  Agency of Commerce and
Community Development
AOT  Agency of Transportation
AHS  Agency of Human Services
ANR  Agency of Natural Resources
ARNG  Army National Guard
BGS  Buildings and General
Services
DOL  Department of Labor
EPA  Environmental
Protection Agency
ESFs  Emergency Support
Functions
FEMA  Federal Emergency
Management Agency
NRCS  Natural Resources
Conservation Service
SBA  Small Business
Administration
USACE  US Army Corps of
Engineers
USDA  US Department of
Agriculture
VEM  Vermont Emergency
Management

and many more.

[Top] Governor Shumlin addresses members of the
Irene Coordination Team, made up of senior state
agency officials and voluntary agency partners, on
long term recovery goals. ■ [Left] Members of the
VTrans District 2 Office in Dummerston gather after
the reopening of critical infrastructure in southern
Vermont. ■ [Above] Recovery requires assistance
from all partners, as seen here in September 2012
when the AmeriCorps National Civilian Community
Corps (NCCC) Moose 5 Team was deployed to
Vermont to assist in repair and rebuild projects.
The community recovery partnership (CRP) was designed to bring local, regional, state and federal partners together to better understand the issues facing survivors and begin to lay the building blocks for recovery. The thirteen meetings provided a venue to hear directly from those impacted and involved. The stories, ideas and suggested improvements shared by over 500 participants helped to shape and mold the ways state agencies and partners approach recovery.
To provide long term support for survivors, nine Long Term Recovery Committees (LTRCs), as well as many other community organizations, spontaneously developed in the hardest hit areas of Vermont. The philanthropic community led the way for supplemental assistance, with the Vermont Community Foundation serving as the nucleus of dozens of fundraising efforts aimed at bridging the gaps between recovery dollars.
Repairing & Rebuilding Vermont's Homes

Long Term Recovery Committees (LTRCs) were created following Irene to enable survivors to access a network of available resources, including funding, disaster case management, and volunteer and construction coordination for disaster-caused unmet needs. In February 2012, Vermont became one of the first states to receive a FEMA Disaster Case Management Program (DCMP) Grant—which provided funds to local Community Action Agencies to hire case managers for the local LTRCs to assist individuals with long term recovery.

In Fall 2012, the need for more Construction and Volunteer Coordinators to support the rebuilding effort became evident; and thus, the DCMP collaborated with the Central Vermont Community Action Council and FEMA to hire 10 additional coordinators with state funds. In collaboration with LTRCs and the Vermont Disaster Relief Fund, disaster case managers made enormous progress in serving affected families; though, it is expected that up to 100 cases will remain after August 2013 as a result of complexities including intricate grant programs, home buyouts, and overall lack of resources.

SANDRA DALY,
Chair, Southeastern Vermont Long Term Recovery Committee

“The ‘behind the scenes’ organizational aspects of disaster recovery provided quite a learning curve for many in Windham County. Blessed with social service agencies, 27 dedicated town governments, active faith communities and generous citizens, we experienced the power of working together, and will do so again more easily.”

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<th>Amount</th>
<th>Source</th>
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<tr>
<td>$23.3M</td>
<td>Awarded by FEMA Individual &amp; Households Program (IHP)</td>
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<td>$17.6M</td>
<td>Loaned by Small Business Assistance to Individuals and Families</td>
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<td>$3.4M</td>
<td>Allocated by Vermont Disaster Relief Fund (VDRF)</td>
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<tr>
<td>$2.4M</td>
<td>Awarded by FEMA Disaster Case Management Program</td>
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<td>$1.6M</td>
<td>Provided by Department of Labor for Disaster Recovery Coordinators</td>
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<tr>
<td>$400,000</td>
<td>Provided by Agency of Human Services for Disaster Case Management</td>
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<td>$250,000</td>
<td>Provided by Budget Adjustment Act for Disaster Recovery Coordinators</td>
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<td>3642/7252</td>
<td>Eligible Individuals/Households Registered with FEMA for Individual Assistance</td>
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<tr>
<td>522/705</td>
<td>Individual Cases Closed/Opened by Disaster Case Managers</td>
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<tr>
<td>88/513</td>
<td>Remaining Home Repair Projects/Total Repair Projects</td>
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Chart reflects data reported as of 7/29/13 and does not include case management activities conducted outside of the Disaster Case Management Program.
Simultaneously, in partnership with Vermont’s Voluntary Organizations Active in Disaster, the Vermont Disaster Relief Fund (VDRF) was established—the region’s first private nonprofit fund for disaster recovery. With a $1 million leadership gift from Tony Pomerleau to assist residents of mobile homes, VDRF successfully raised over $8 million to aid families and individuals. Meanwhile, unique programs were developed to serve Vermont’s most vulnerable residents, such as the mobile home condemnation program that allowed nearly $1 million in supplemental funds to be made available to residents of destroyed mobile homes.

[Far Left] In Plymouth on 100A a mobile home was all but consumed by the raging river. [Top] Norwich Cadet Benjamin Kroll beholds the power of the Dog River as he stands in the flooded basement of this home in Northfield Falls. [Left] Residents begin to dig out from the floodwaters in West Bridgewater. [Above] Local and faith-based volunteers help clean out the remains of a Duxbury mobile home.
Vermont Witnesses the Vulnerability of Mobile Home Parks

While mobile homes provide an affordable homeownership option for tens of thousands of Vermonters, their location and relatively low resistance to water damage meant mobile home residents were disproportionately impacted by Irene. Further, the fact that mobile home owners own the structures they live in, but not the land those structures sit on, presented a unique set of challenges in terms of recovery—challenges that were largely overcome through creative collaboration. In coordination with the Governor’s Office, the Department of Public Safety, the Vermont Disaster Relief Fund and FEMA, the Agency of Commerce & Community Development (ACCD) implemented a program to condemn destroyed mobile homes, thereby opening up an additional $1 million in FEMA Individual Assistance benefits for mobile home residents. Lt. Governor Phil Scott assembled a team of public and private sector partners to dispose of 83 flood-destroyed mobile homes—an expense not covered by FEMA or insurance—at no cost to homeowners and without using any taxpayer dollars. Looking ahead to the future, ACCD worked closely with lawmakers, the University of Vermont, and the Champlain Valley Office of Economic Opportunity’s Mobile Home Program to make funds available for new financing programs and to improve the disaster resiliency of homes in mobile home parks. To learn more, visit http://www.cvoeo.org/htm/housing/mobilehome/

<table>
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<th>Percentage</th>
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<tr>
<td>7%</td>
<td>Vermont housing stock in mobile homes</td>
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<tr>
<td>15%</td>
<td>Irene-damage homes that were mobile homes</td>
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<tr>
<td>17</td>
<td>Mobile home parks flooded</td>
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<tr>
<td>14</td>
<td>Mobile home parks that had homes destroyed</td>
</tr>
<tr>
<td>226</td>
<td>Mobile homes flooded</td>
</tr>
<tr>
<td>133</td>
<td>Mobile homes destroyed</td>
</tr>
<tr>
<td>525</td>
<td>Mobile homes that received FEMA assistance</td>
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</table>
The disaster damage was so severe that President Obama authorized a 90 percent federal cost share, reducing the financial burden on small communities. For only the third time in its history, FEMA implemented the Disaster Case Management Program, which provided $2.4 million to Vermont for staff resources to work with Long Term Recovery Committees in support of survivors. Additionally, Vermont’s congressional delegation helped to secure over $38 million in Community Development Block Grant-Disaster Recovery funds to resolve a variety of unmet community needs.

[Far Left] After the storm, many survivors, including this Stockbridge homeowner, found it challenging and frustrating to navigate the complex network of assistance programs available to them. ▲ [Top] Sandy’s Restaurant owner Chandra Aldrich inspects the damage to her business in Sharon. Businesses like Chandra’s received robust volunteer support to clean up the mess, and relied on local business development programs and federal funds to help them rebuild. ▲ [Left] Life did not stop when the roads washed out; here, Rochester resident Janni Jacobs gets creative in her commute to her job as a school teacher in Braintree. ▲ [Above] In Waitsfield, a living room is uprooted, displaying the damage to its contents.
IRENE: Reflections on Weathering the Storm

JEN HOLLAR,
Deputy Commissioner,
Department of Housing &
Community Development

“None of the countless inspiring stories of Irene has touched me more than that of Sandra Gaffney. Sandy lost her home and neighborhood when Weston’s Mobile Home Park was washed away. As she traveled her road to recovery, she became an advocate for not only herself but for other survivors as well. From the sodden ground outside her destroyed home to the halls of the State House, Sandy spoke on behalf of and helped direct help to mobile homeowners across the state. Now, Sandy not only has a new home she likes more than the one she lost, but she has also found her voice.”
In January of 2012, when the Legislature returned to Montpelier, Neale Lunderville and his team presented the comprehensive “Irene Recovery Report, A Stronger Future.” The publication was organized around six distinct areas of focus for long term recovery:

- Support Vermonters Affected by Irene;
- Ensure Economic Recovery & Resiliency;
- Foster Community Recovery;
- Rebuild Our Roads, Bridges and Rails;
- Manage Environmental Impact; and,
- Prepare for Future Disasters.
The majority of damage from Tropical Storm Irene was to transportation infrastructure, including culverts and bridges. Approximately two-thirds of the repairs to these structures included upgrades to make the damaged elements more resilient in the future. Some upgrades were made possible by Federal Hazard Mitigation funding, while others were done to comply with local codes and standards.

To date, state and local communities have received over $575 million in federal assistance to properly rebuild infrastructure. Together, the Agency of Transportation, Division of Emergency Management and Homeland Security, regional planning commissions, and local leaders are seizing opportunities created by Irene to make damaged infrastructure elements better able to withstand future flood events.

These Vermont towns incurred the highest costs from public infrastructure damage:

- $5.1M BETHEL
- $4.9M JAMAICA
- $4.3M STOCKBRIDGE
- $4.2M WOODSTOCK
- $4.0M HALIFAX
- $3.3M SHREWSBURY
- $3.2M CAVENDISH
- $2.9M GRAFTON
- $2.7M ROCHESTER
- $2.4M WINDSOR
- $2.3M NEWFANE
- $2.1M KILLINGTION

PETER GREGORY,
Executive Director, Two-Rivers Ottauquechee Regional Commission

“TRORC has been working with 28 towns over a 3 year period, to update their Hazard Mitigation Plans... plans which are critical in identifying hazards and areas of potential danger. The lessons learned from Tropical Storm Irene are being integrated by town planners and emergency responders into these plans to help prevent and mitigate future disasters.”
During the ensuing months, a symbol emerged to represent the Vermont spirit. Rutland natives, Eric Mallette and Lyz Tomsuden, created the “I Am Vermont Strong” image with the simple intention of producing good energies out of the disaster. Shortly thereafter, the Legislature enacted various new laws to address issues related to Irene, including a bill authorizing the display of their symbol in commemorative “I Am Vermont Strong” license plates on private and commercial vehicles, with proceeds to benefit recovery.

Structural changes were made within state government to ensure a fluid approach to managing complex programs, including moving the Public Assistance program from the Agency of Transportation to the Department of Public Safety’s Division of Emergency Management and Homeland Security.
JOSH HANFORD, Director, Vermont Community Development Program

“From the very beginning constant communication was essential. It is a very complicated process and working harder and faster doesn’t necessarily speed it up! Finally, families are beginning to close this chapter in their lives, but everyone involved has learned that disaster recovery is an endurance sport!”

[Top Right] Business recovery programs were created to help small businesses, such as Miller Machine in Bethel (pictured here, with owners Terri and John Hodgdon). [Top] Waterbury residents meet with representatives from the town, Salvation Army, and Hope International shortly after the flood. [Above] Emergency Management personnel review recovery plans. [Right] Collaboration between agencies generated innovative projects, such as this FEMA Multi-Family Rental Repair Program, which restored this building in Barre to create affordable housing for displaced survivors.
CHAPTER THREE

What We Have Learned...
Rivers need their space.

We must inventory and better understand our vulnerabilities.

Out of crisis, comes opportunity.

Vermonters have accomplished a great deal together in the past two years, and we have learned. Above all else, however, we have remained committed to the goal of building back stronger than we were before the storm.

[Far Left] The Waterbury community worked with the Rozalia Project on Green Up Day in 2012 to finish riverside cleanup. ■ [Top] Route 4 in Mendon displays the destructive power of roadside rivers. ■ [Left] A small convoy of ATVs manages to navigate a route out of their isolated community. The community then elected to seek, build, and blaze a safer ATV route for the future. ■ [Above] Reflections from the Floodgates Project displays the opportunity Irene provided for Vermonters to make new connections.
IRENE: Reflections on Weathering the Storm

David Mears, Commissioner, Department of Environmental Conservation

“Irene reminded us that rivers flowing through Vermont communities have tremendous power to wreak havoc. At the same time, we saw that when we give rivers room to spill out over fields, forests and wetlands, the immense power of a flooding river can be substantially tempered before it inflicts costly damage to homes and businesses in town centers. Vermont’s state agencies are working with communities, regional planning commissions, federal agencies, businesses, land trusts and others in a partnership to target conservation efforts so that we protect these critical natural assets.”
In January 2013, the state broke ground on a new psychiatric facility in Berlin, as part of a new regionally based mental health system to replace the old Vermont State Hospital in Waterbury. The state and FEMA have worked closely together to maximize federal funding eligibility. That partnership has continued with planning for the return of the Waterbury State Office Complex (WSOC), expected to reopen to state employees in 2015.

The Agency of Administration made a commitment to ongoing preparedness, supporting a General Fund allocation to the Division of Emergency Management & Homeland Security for more robust emergency response capacity within state government in the future.
Waterbury State Office Complex & Vermont State Hospital

The repair and improvement of the Waterbury State Office Complex will be the largest construction project ever undertaken by the state. The Federal Emergency Management Agency (FEMA) has been a strong and invaluable financial partner, supporting relocation of the Vermont State Hospital. The Complex has been re-designed with resilience in mind, maintaining the historical integrity of the core buildings, but adding and remodeling in anticipation of future flooding. In January 2013, the state broke ground on a new 25-bed psychiatric hospital located in Berlin, one component of the new regionally based mental-health system that also includes facilities in Rutland, Middlesex, Morrisville and Brattleboro. As we proceed with construction, FEMA Federal Coordinating Officer Mark Landry acknowledges that “Tropical Storm Irene was the ‘perfect storm’ event for Waterbury and the State Office Complex. To avoid having this same problem in the future, a lot of puzzle pieces needed to come together...through teamwork we have put those pieces together.”

$198,000,000

Estimated total project cost including: stabilization, reconstruction and renovation of Complex; new State Hospital in Berlin, upgrades to regional mental health facilities, and renovations to house ANR at National Life

1,500

State employees who worked at the Waterbury complex, pre-Irene

1,200

State employees capacity at the reconstructed complex

Aug-2013/Dec-2015

Deconstruction begun / Expected completion of the Waterbury State Office Complex

FAUNA HURLEY AND MK MONLEY, Revitalize Waterbury

“Waterbury businesses such as restaurants, gift shops, hair salons, car repair shops and drug stores were heavily impacted by the loss of workers at the Complex. On average, businesses lost between 20–50% of their customer base and many are still struggling. However, these business owners continue to remain open and many are hopeful that if they can get by for the next few years, the influx of the expected 900 workers to the rebuilt State Complex will revive their hopes and increase their sales. It is a test of our strength and resilience as a community.”

[Top] A schematic of the future State Hospital in Berlin highlights outdoor spaces, recreation facilities, and the feeling of community created by a central courtyard. The new hospital is one of many opportunities for improvement created by Irene’s destruction. [Bottom] Construction continues at Berlin. The crew broke ground for the new facility on January 8, 2013. Officials expect the structures will be mostly completed by May 2014, with anticipated occupancy by staff and patients in June 2014.
Vermont has displayed leadership in hazard mitigation on the national stage. Our congressional delegation worked tirelessly on legislation following Hurricane Sandy in October 2012, which revised federal policies to allow for modern hazard mitigation techniques. A revision of the state’s Stream Alteration permit program establishes new state codes and standards for bridges and culverts, and emergency preparedness and training programs are now underway.

[Far Left] Greg Russ of the White River Partnership, based in Royalton, is making use of a grant from the Department of Fish & Wildlife to help make long-term repairs to culverts that blew out during Irene.  ■ [Top] Construction on a bridge in Jamaica displays new engineering techniques.  ■ [Left] The Roaring Branch in Bennington was inundated with gravel and debris in the flood.  ■ [Above] The town adopted a River Corridor Protection Plan for the Roaring Branch to protect Bennington from future flooding.
DEB MARKOWITZ, Secretary, Agency of Natural Resources

“We have a unique opportunity, created by our heightened understanding of our vulnerability following the damage from Irene, to look ahead and reflect on what we can do to increase our resilience. Strengthening Vermont’s prized land use pattern—beautiful, walkable villages surrounded by a landscape of working farms and forests—is the single most cost-effective strategy we can pursue.”

[Top Right] Downtown Wilmington has integrated improvements into their reconstruction, including wider sidewalks. [Top] The village of Grafton demonstrates the type of vibrant downtown that Vermonters and visitors hope to protect. When towns rebuilt after Irene, planning officials had a chance to think about not just replacing the structures that were there, but also building in design improvements to make their communities more flood-resistant in the long-term. [Above] Churchville Road in Hancock was rebuilt using larger culverts and stone-lined ditching, which should prevent landslides in the future. [Right] A landslide on Churchville Road after Irene.
Irene taught us about small and large gaps in our safety nets. In responding, we learned about the need to eliminate silos among state agencies to support recovery for our most vulnerable citizens and neighbors. Interagency collaboration has increased, and we’ve taken a comprehensive approach to flood-smart community and land use planning. A new structure is in place for supporting individuals and families affected by disaster, relying heavily on the unique strengths of our community groups and volunteers. And although some Long Term Recovery Committees (LTRCs) will dissolve or “go into hibernation” after Irene recovery, we have learned that functional communities generate truly adaptive responses.

[Top] Governor Shumlin visits with Diane Graham, a resident of Weston’s Mobile Home Park, and UVM students who participated in a semester-long course about disaster recovery. [Left] Vermont Disaster Relief Fund Chair David Coates thanks long term recovery partners and donors for their contributions to helping Vermonters build back from Irene. [Right] Norwich Cadets at the Mad River LTRC Headquarters, still rebuilding in the winter of 2012.
The Vermont Disaster Relief Fund Fills a Critical Gap In Assisting Survivors

The Vermont Long-Term Disaster Recovery Group was established following spring 2011 flooding events, but it was not until Tropical Storm Irene that the Group expanded to its current role as a body to coordinate resources and raise and allocate donor dollars from the Vermont Disaster Relief Fund (VDRF). VDRF works closely with the Vermont chapter of Voluntary Organizations Active in Disaster, local long term recovery committees, and disaster case managers to deliver resources to those with disaster-caused unmet needs. Although Irene recovery efforts are winding down, the Fund still meets regularly to discuss its future, and according to David Coates, Chair of the Board, “... with leadership from all sectors of Vermont, (VDRF) stands ready to respond once again when the next disaster strikes.”

As of July 2013, the Vermont Disaster Relief Fund had provided more than $3.4 million in direct assistance to over 300 Vermont families to aid in their recovery from the spring 2011 floods and Tropical Storm Irene. In 2012, the Fund also partnered with the Pomerleau Cornerstone Fund, which ensured access to another $1 million for mobile home owners to replace more than 70 flood-ravaged mobile homes.

Institute for Sustainable Communities Launches the Resilient VT Project

Vermonters recognize that climate change is bringing new challenges. In the aftermath of recent disasters, the Institute for Sustainable Communities (ISC), working closely with key stakeholders from state and local governments, businesses and non-profits, has facilitated the Resilient Vermont Project to help Vermont become a model of community, economic, and environmental resilience. Over the course of the 18-month project, participants with expertise in community planning, economic development, business, infrastructure, emergency management, transportation, and social services have gathered to create a “Roadmap to Resilience”, to be published in fall 2013. This Roadmap will present state, regional and local partners with strategies and policy options to make Vermont more resilient to future weather events. ISC President George Hamilton reflects that, “from the storm, Vermont has stepped forward, determined to learn and grow from this experience. Learning, adapting, and challenging ourselves, we will move toward resilience.” To learn more, visit: http://resilientvt.org/
As we continue to monitor the ongoing recovery efforts, we must acknowledge that for many, recovery from Irene will never be fully complete. Although most homeowners have returned to safe and functional housing, there are over 100 individuals and families who still await payment for FEMA buyouts. As of May 2013, Dot’s was on the mend, but the community is still unsure when their favorite diner will be up and running. The Bartonsville Bridge celebrated its reopening on January 26, 2013, a date that represented an iconic relinking of past and present over the Williams River. The West Hartford General Store is back to serving local residents and travelers alike, but faces continuing challenges, including higher unemployment insurance on remaining employees. And back in Rochester, a memorial was held to honor those who were washed away when the Nason Brook swelled, restoring the old cemetery’s peace and dignity.
“The reopening of the bridge on a brilliant late-January day was an important symbol of the recovery of the region and the state. A large crowd turned out, and there was great civic pride. As I was walking through the bridge, I noticed that sunlight coming through knotholes in the wood siding caused them to glow bright violet and orange. Many aspects of our recovery are small, beautiful, and unexpected.”
There will certainly be future disasters. Even as this report goes to print, two new federal disasters have been declared in Vermont since May 2013. Perhaps Irene has helped prepare us for “the new normal.” Vermont stands strong and ready, confident in our collective ability to weather the storm and recover from whatever comes next.
Irene: Nearly $1 Billion in Aid for Vermont

As we continue to recover from the losses of Tropical Storm Irene, the economic impact to the state of Vermont is difficult to completely measure. While personal contributions, undocumented losses, and the generosity of thousands of volunteers are difficult to quantify, the chart below provides a general picture of the funding sources that have contributed to Vermont’s recovery from August 2011 through July 30, 2013.

For additional information, including a detailed breakdown of these figures, visit www.vtstrong.vt.gov.

**JOELLEN CALDERARA,**
Chair, Central Vermont Long Term Recovery Committee

“The devastation of Irene is undisputed. But with the devastation we also built lasting legacies that will continue to help the State deal with future disasters. Three of the most important legacies, in my opinion, are the strong spirit of community that arose immediately following the receding of the flood waters, the creation of local Long Term Recovery Committees, and the development of the VT Disaster Relief Fund. These lasting legacies will allow Vermonters to mobilize and assist faster and more constructively following future disasters. The legacy of Irene is that Vermont IS stronger!”
Appendix

COMMON ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Name</th>
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<tbody>
<tr>
<td>ACCD</td>
<td>Agency of Commerce and Community Development</td>
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<tr>
<td>AHS</td>
<td>Agency of Human Services</td>
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<tr>
<td>ANR</td>
<td>Agency of Natural Resources</td>
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<td>AOA</td>
<td>Agency of Administration</td>
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<td>AOT</td>
<td>Agency of Transportation</td>
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<td>ARNG</td>
<td>Army National Guard</td>
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<td>BGS</td>
<td>Buildings and General Services</td>
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<tr>
<td>CDBG</td>
<td>Community Development Block Grant</td>
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<td>DCMP</td>
<td>Disaster Case Management Program</td>
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<td>DEMHS</td>
<td>Division of Emergency Management and Homeland Security</td>
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<td>DMV</td>
<td>Department of Motor Vehicles</td>
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<td>DOL</td>
<td>Department of Labor</td>
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<td>EPA</td>
<td>Environmental Protection Agency</td>
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<td>ESFs</td>
<td>Emergency Support Functions</td>
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<td>FEMA</td>
<td>Federal Emergency Management Agency</td>
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<td>HMGP</td>
<td>Hazard Mitigation Grant Program</td>
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<td>IRO</td>
<td>Irene Recovery Office</td>
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<td>LEPC</td>
<td>Local Emergency Planning Committee</td>
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<td>LTRC</td>
<td>Long Term Recovery Committee</td>
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<td>NRCS</td>
<td>Natural Resources Conservation Service</td>
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<td>RPC</td>
<td>Regional Planning Commission</td>
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<tr>
<td>SBA</td>
<td>Small Business Administration</td>
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<td>USACE</td>
<td>US Army Corps of Engineers</td>
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<td>USDA</td>
<td>US Department of Agriculture</td>
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<tr>
<td>VDRF</td>
<td>Vermont Disaster Relief Fund</td>
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<tr>
<td>VT VOAD</td>
<td>Vermont Voluntary Organizations Active in Disaster</td>
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ADDITIONAL RESOURCES

To learn more about the status of various initiatives described in this report, please visit: [www.vtstrong.vt.gov](http://www.vtstrong.vt.gov). This website also contains a variety of information for those individuals, businesses and communities who may still be recovering from Tropical Storm Irene, including contact information for many of the groups who may be able to help.


For questions about this report, and to view a complete breakdown of the estimated funding sources on page 47, please visit [www.vtstrong.vt.gov](http://www.vtstrong.vt.gov).
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