Managing Vermont’s Emergency Response to Irene

Washington, DC
May 22, 2013
Tropical Storm Irene Total Rainfall - Northern New York & Vermont

August 27th & 28th, 2011

Reports are unofficial. This map is an interpolation of actual reported values but should be considered an estimation only. Due to the influence of terrain, amounts may vary greatly over a short distance.

Sources: 186 reports from NWS Cooperative Observers, ASOS, RAWS, CoCoRaHS, Mesonets, Trained Spotters, Personal Weather Stations, Public

Created by the National Weather Service Burlington, VT 08/30/2011

0 20 40 60 Miles

In Inches
- Irene Track
- ONQG
- < 2
- 2 - 3
- 3 - 4
- 4 - 5
- 5 - 6
- 6 - 7
- > 7

New Hampshire

Vermont

New York
Jct of VT 100 and VT 73
Tropical Storm Irene produced catastrophic river and flash flooding across Vermont and portions of northern New York on Sunday, August 28, 2011.

This was a scale of devastation not seen across the region since the epic floods of November 1927. Six lives were lost.

Thirteen Vermont communities were isolated for days due to the loss of numerous roads and bridges.

Nearly 2000 road segments were damaged, with 118 sections of state roads and 175 local roads completely washed out.

Among nearly 300 damaged bridges, several iconic covered bridges were heavily damaged or completely destroyed in Vermont.

Over 800 homes and businesses, and several rail and major telecommunication lines were damaged or destroyed by fast-moving flood waters.

Monetary damages - while still not finalized - are estimated at $750 million in insured losses and needed repairs to public infrastructure.
THE FIRST 30 DAYS

Summary of State Highway Roads and Bridges

August 28, 2011
State Road Segments Closed = 146 ~ 531 miles
Bridges Closed = 34

December 31, 2011
State Road Segments Closed = 0
(2 roads totaling 30 miles were open with restrictions)
Bridges Closed = 0
(1 open with restrictions)
RESOURCES

VTrans Employees:  Approximately 700 were assigned to IRENE recovery tasks

DOT Partners

• Maine – 150 people, 145 pieces of equipment
• New Hampshire – 75 people, 60 pieces of equipment

Hundreds of National Guard Troops:

• Vermont – 200 people, numerous equipment
• Maine – 220 people, numerous equipment, Command & Control function for out-of-state troops
• Illinois - 145 troops, 8 aircraft, 23 vehicles
• Ohio – 93 people, 29 pieces of equipment
• New Hampshire – 8 people, 2 aircraft
• South Carolina – 51 people, 23 pieces of equipment
• West Virginia – 30 people, 10 pieces of equipment
• Virginia – 16 people, 6 pieces of equipment

Over 200 Private Contractors and Consultants

• Approximately 1800 people from the private sector, primarily from Vermont

Medical Assistance from LA, ME, AR, MO, NH, ID and FL

Regional Planning Commissions – Outreach to local government, funded by VTrans
INCIDENT COMMAND SYSTEM (ICS)

Systematic tool for command, control and coordination of an emergency response

- Part of National Incident Management System (NIMS)
- ICS originally developed by fire chiefs in 1968 to respond to forest fires out west
- NIMS born in response to 9/11
- Flexible
- Scalable
- Off the shelf
- Training readily available - FEMA
The ICCs are operated by a Unified Command (UC) in Montpelier. The UC role was to set priorities, provide overall management through directives, and take the lead on communication and public information. The UC was given direction by the Secretary’s Office.
IRENE INNOVATION TASK FORCE

- Incident Command Training
- River Management Training
- OPS Emergency Response Task Team
- Contracting/Business Task Team
- IT Governance Committee/Subgroups
Incident Command Training – ICS training (ICS 100) has been delivered to all Agency employees. Managers, Supervisors and select others are now receiving ICS 200 level training.

River Management Training – We are currently working with the VTrans Training Center and the Agency of Natural Resources to deliver river management training to Agency employees – which will begin this summer: Road and River Training: Tier 1 at http://wsmd.vt.gov/rivers/roadstraining/

OPS Emergency Response Task Team – We have formed a Task Team to develop an emergency response manual, inventory lists, contact information, 3-tiered response, etc, and distribute “smart technology” with required forms and software so that we are better prepared for the next emergency.
IRENE ITF ~ RESULTS

- **Contracting / Business Task Team** – We will soon form a cross divisional task team which will be charged with investigating and implementing a number of recommendations from the report such as compiling a contractor registry database, developing a standardized electronic contract processing system, developing an emergency administrative packet for ICCs, developing an emergency administrative packet for contractors, developing an emergency waiver process, exploring alternative emergency contracting processes, and reviewing and standardizing the process for paying contractors.
**IT Governance Committee / Subgroups** – We will utilize the existing IT Governance Committee framework (and subgroups of that committee) to investigate and implement a number of recommendations from the report such as developing and maintaining an active distribution list of cell phones, exploring the use of cloud technology, formulating a recommendation for data storage during emergency response, exploring and developing connectivity between MATS and GIS, exploring the use of IT applications (511, Google, etc) for emergency response, developing a process to track equipment and materials from contractors, and standardizing data collection and data integration.
Coalition Of Northeast Governors (CONEG)

- Meetings Held To Date
  - February 13-14 Lessons Learned Workshop in Schenectady, New York
  - September 24-25 Northeast States/FHWA/FEMA Coordination/Process Improvement Workshop in Waterbury, Vermont

- Action Items Underway
  - Development of one form for ER-DDIR and FEMA PA – PW
  - Networking with APWA on enhanced local awareness on FHWA/FEMA process and procedures
  - Scheduling next workshop
OTHER RELATED LESSONS LEARNED

- Unified organization and mission
- Securing communications
- Collaboration with related organizations
- Nationwide organization
- Bridge retrofit
- Collaboration with private sector