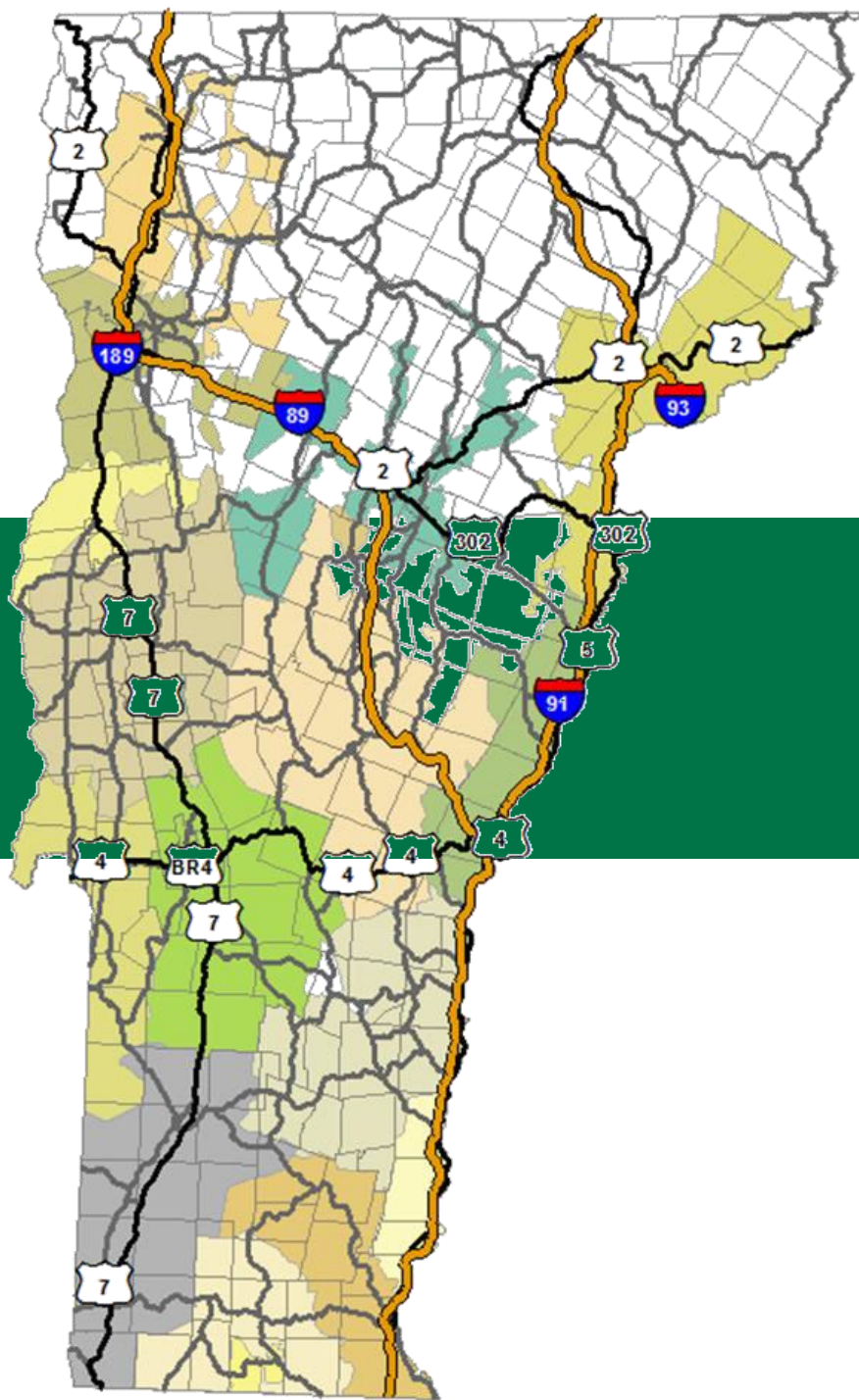


Green Mountain Power

December 23, 2022, Windstorm





GMP's Service Territory 15 Operating Districts

Winter Storm Elliott: A Bomb Cyclone

Beginning of Storm	December 22, 2022 - 8:00 p.m.
End of Storm	December 27, 2022 - 10:00 a.m.
Number of Events (outage & hazard locations)	2,205
Customer Restoration	98,039
Outage Peak During Storm	60,473

Storm Damage by GMP District

GMP Operating District	Count of Events	Total Customers Out
Brattleboro	35	854
Colchester	126	14,823
Middlebury	330	14,512
Montpelier	150	17,843
Poultney	110	10,263
Royalton	100	6,060
Rutland	95	6,391
Springfield	90	3,275
St. Albans	117	8,074
St. Johnsbury	122	8,082
Sunderland	75	2,281
Vergennes	55	1,439
Westminster	20	1,375
White River Jct	54	2,336
Wilmington	7	431
	1,486	98,039

Winter Storm Elliott

- This chart shows the restoration curve for the high wind Major Storm that started December 22, 2022, at 8:00 p.m. At the peak, 60,473 customers were impacted, with crews restoring power to a total of 98,934 customers as part of the overall storm.
- A number of factors determined the impact that the high wind event will have on outages. These factors include how heavily leafed out the trees are, soil conditions (dry, wet, saturated, or frozen), the magnitude of the wind, the duration of the wind and the direction from which the wind is blowing.



Weather Information

In this event, there were benefits from the trees not being leafed out to some degree. And what drove the outages were the following:

- **Wind Gusts** – the BTV office of the National Weather Service reported a 70 MPH wind gust, which tied for the second highest wind gust on record at the airport.
- **Wind Direction** – Over time and through natural selection, trees become hardened to the prevailing winds that typically blow through the region. The trees in our region are not accustomed to easterly prevailing winds, which is what we experienced during the highest winds in this event.
- **Duration** – Friday evening into the day on Saturday December 24th.



The graphic below shows the wind gusts that were recorded on Friday, December 23rd into Saturday December 24th as measured at Burlington International Airport. The magnitude of the wind gusts, highlighted in the green triangle, shows gusts in excess of 65 MPH. These winds arrived in Vermont out of the east as shown by the blue square.





GMP Proactive Storm Planning

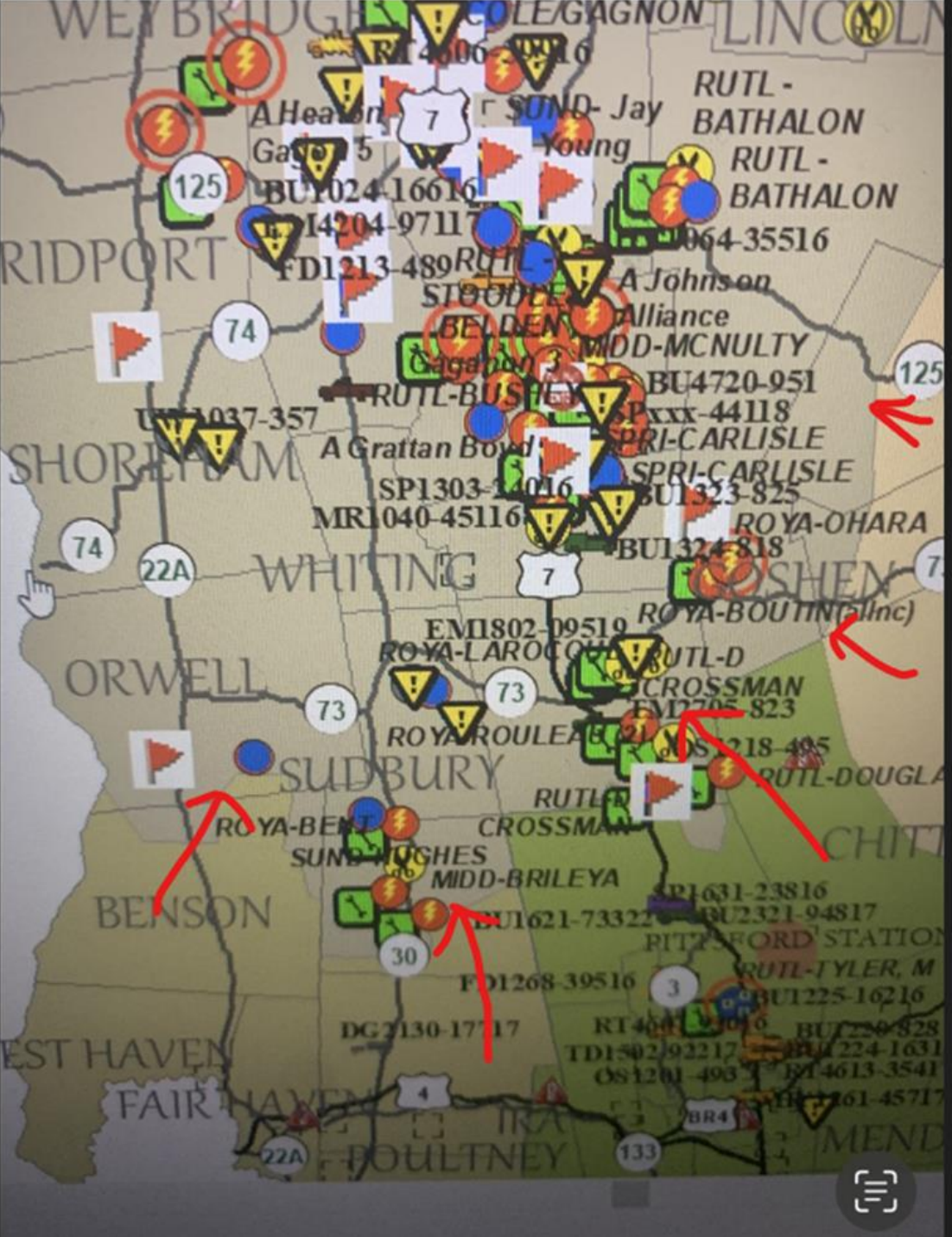
- ▶ T&D / Line Workers
 - ▶ 225 crews / 450 individuals
- ▶ Tree Crews
 - ▶ Approximately 100 crew / 225 individuals
- ▶ Everyone at GMP works during a storm with cross trained functions to fill in and best serve customers.
 - ▶ In addition to: Call Center, Relay Techs, Power Production, Designers, Engineers, Meter Service, Control Center Operators.

Middlebury District Response



- ▶ Middlebury / Vergennes Team
- ▶ 14 line workers, 7 crews
- ▶ By the end of the storm, Sunday and Monday, approximately 100 crews were working in the Middlebury district
- ▶ Dispatch of these crews were taking place from five different GMP districts (Middlebury, Colchester, Royalton, Rutland & Poultney)
- ▶ Replaced 57 broken poles in Middlebury district alone

Middlebury District Response

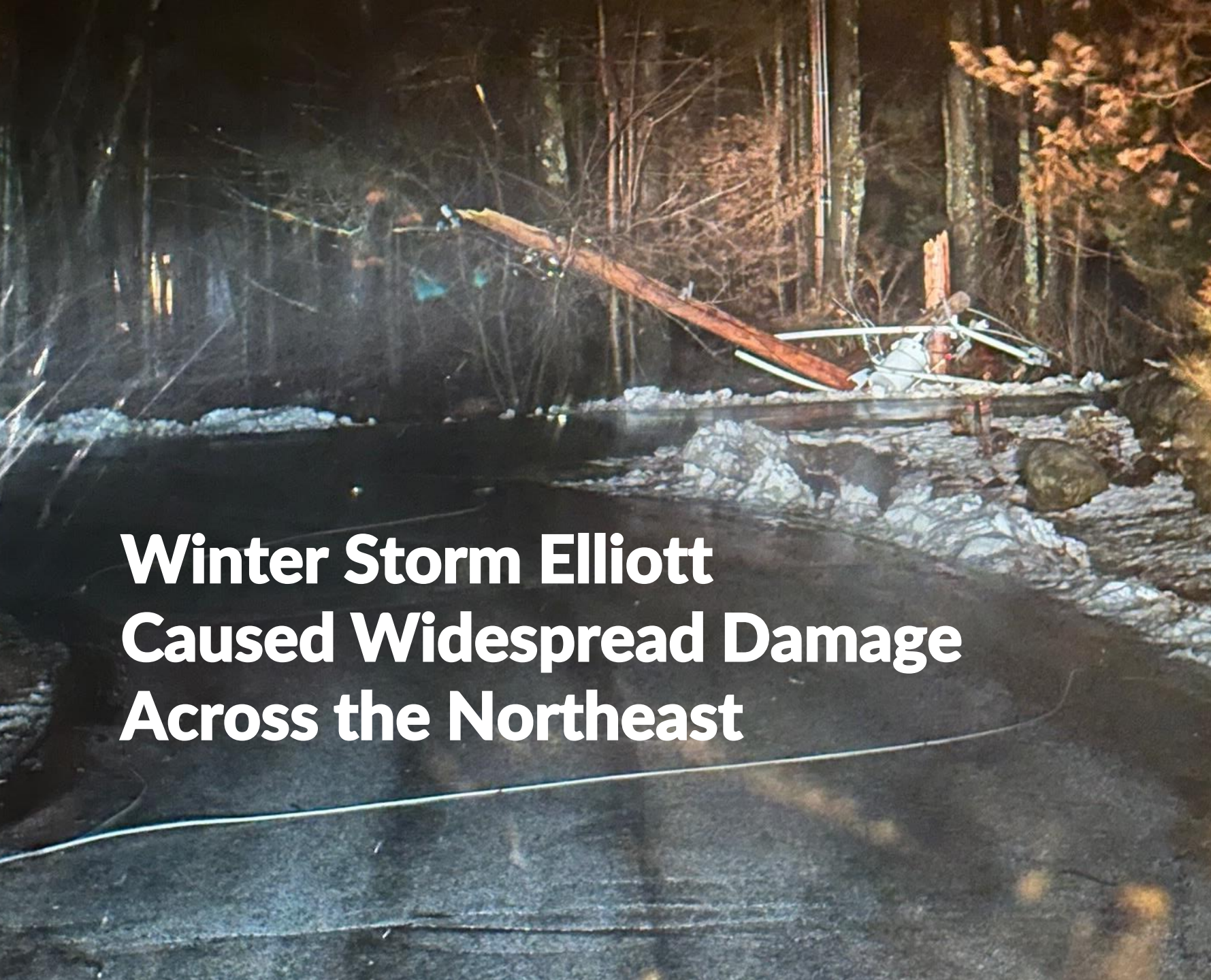


Mutual Aid & Contractors

- Thanks to GMP's proactive work, we had secured crews and pre-positioned them around the state in advance of the storm.
 - All of the Northeast was hit, most harder than Vermont.
- GMP had Crews from:
 - Northeast - Vermont, New Hampshire, Massachusetts, Maine and New York
 - Canada - Quebec and Ontario.
- Once GMP crews had power back on for our customers, we were able to help others in Vermont, New Hampshire, and Quebec.



**GMP is part of NAMAG.
All of the Northeast
United States plus four
Provinces in Canada.**



Winter Storm Elliott Caused Widespread Damage Across the Northeast

8:09 LTE

PowerOutage.us ☰

Electric customers without power:
0+ 10k+ 50k+ 100k+

States and territories by customers out

Maine	257,332
New Hampshire	109,416
New York	92,846
Pennsylvania	77,396
Massachusetts	74,302

Last Updated: 2022-12-23 07:56:28 PM EST

PowerOutage.us is an ongoing project



QUESTIONS?

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