

NWS Boston / Norton

Emergency Management Briefing

Impactful Storm Friday into Saturday



**National Oceanic and
Atmospheric Administration**
U.S. Department of Commerce



NWS Boston Monday EM Briefing

December 22, 2022
4:30 AM

For Southern New England

Decision Support Briefing #3

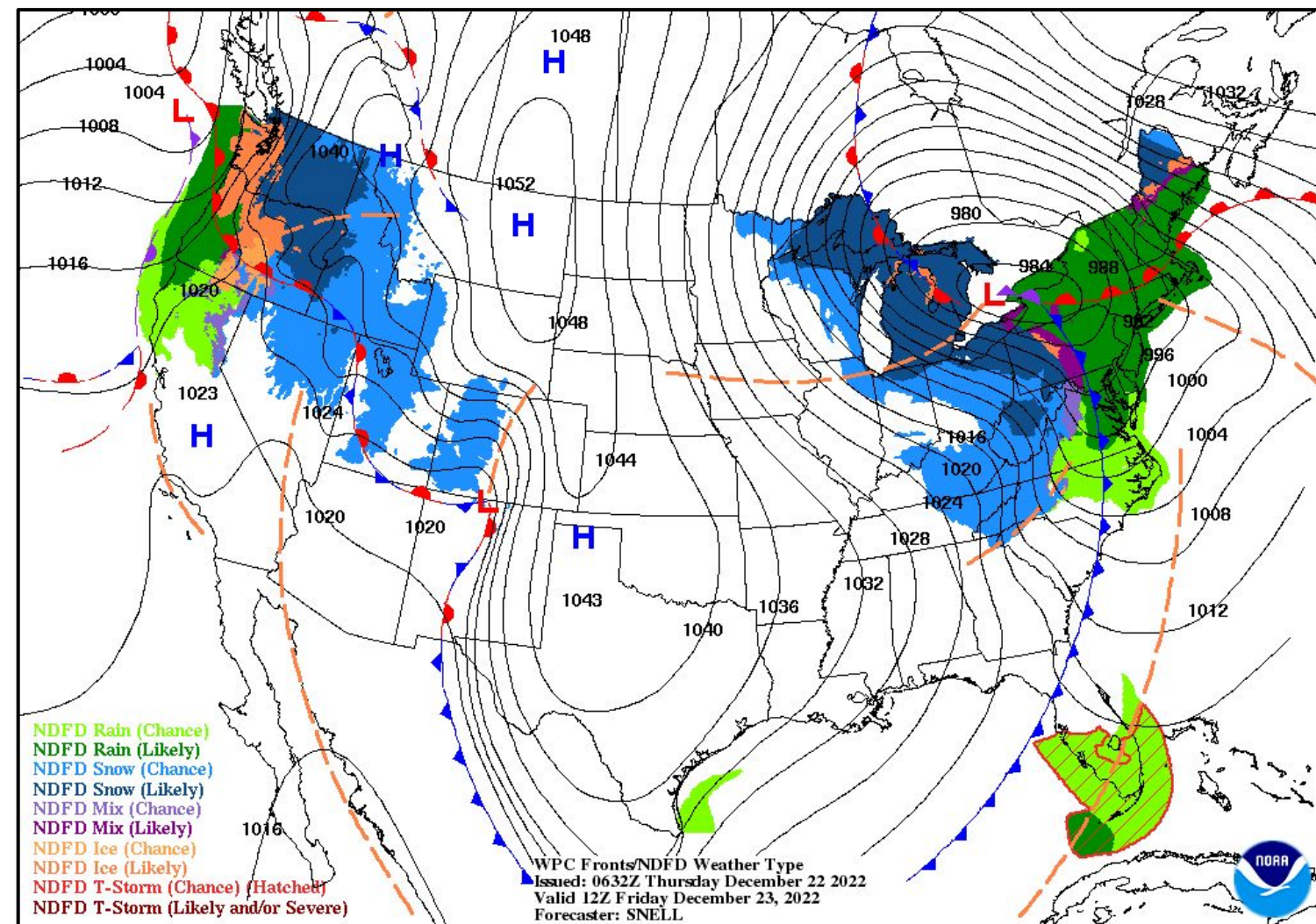
→ As of 4:30 AM Thursday, 12/22/2022

NEW

Important Updates

- Coastal Flood Warnings issued for all coasts, primary concern around Friday morning high tide
- High Wind Warning issued for eastern Massachusetts and Rhode Island. Wind Advisory for central and western Massachusetts and Connecticut
- Hazardous marine conditions for all waters
- Winter Weather Advisory issued for east slopes of the Berkshires

7 AM Friday Weather Map



National Oceanic and
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National Weather Service
Boston / Norton, MA



Coastal Flood Warning

December 22, 2022
4:30 AM

Minor to Moderate Coastal Flooding

Do not drive through flooded roadways.

Weather Forecast Office
Boston/Norton, MA
Issued Dec 22, 2022 4:12 AM EST



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Atmospheric Administration
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High Wind Warning/Wind Advisory

December 22, 2022
4:30 AM

Strong Damaging Winds Friday

Damage To Trees, Power Lines, And Property Is Possible

Weather Forecast Office
Boston/Norton, MA

Issued Dec 22, 2022 4:19 AM EST



High Wind Warning

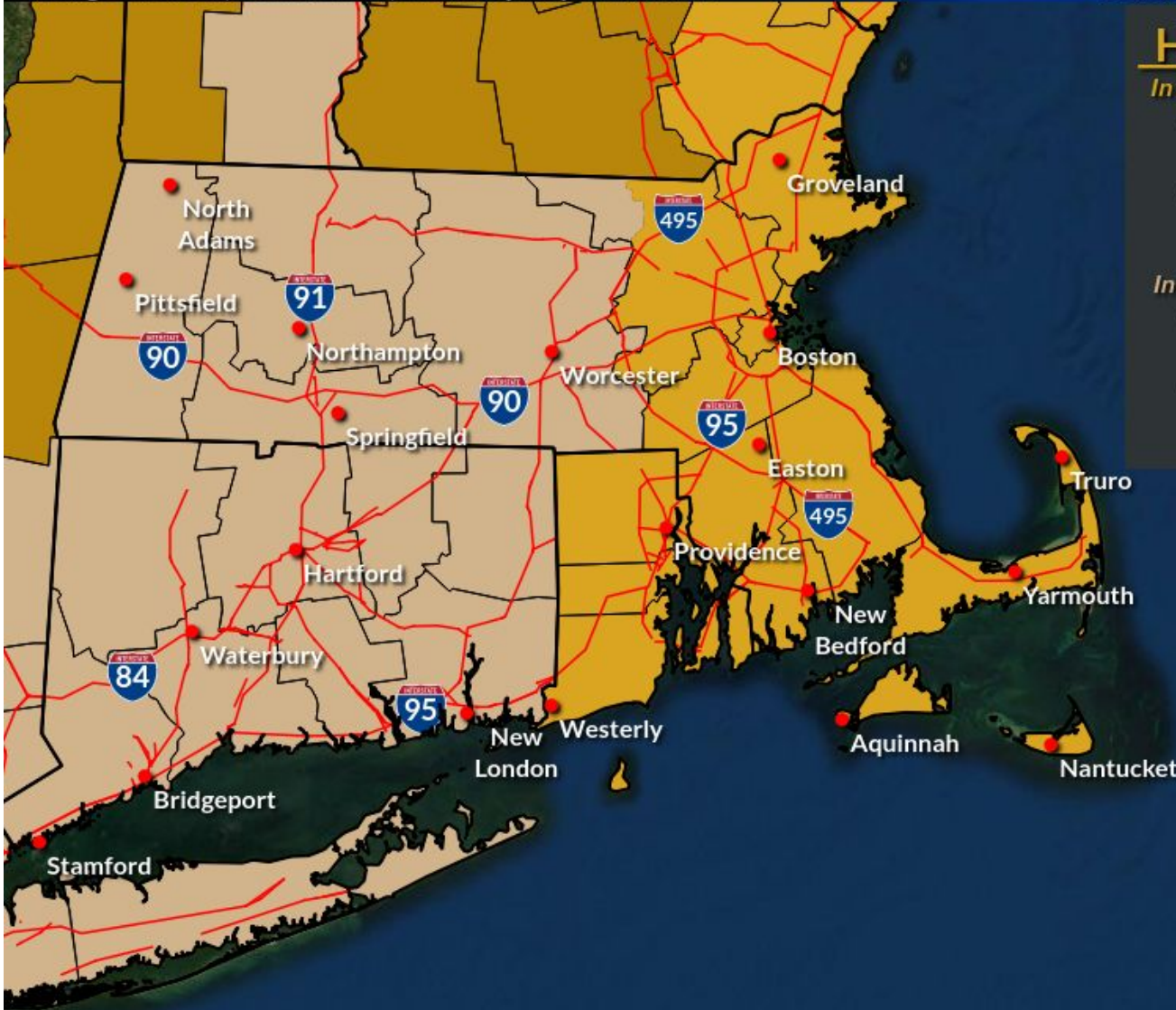
In effect Thursday night - Friday night

- SE wind gusts 45-65 mph shifting to SW
- Power outages possible

Wind Advisory

In effect Thursday night - Friday night

- SE wind gusts 40 to 55 mph shifting SW
- Some power outages possible



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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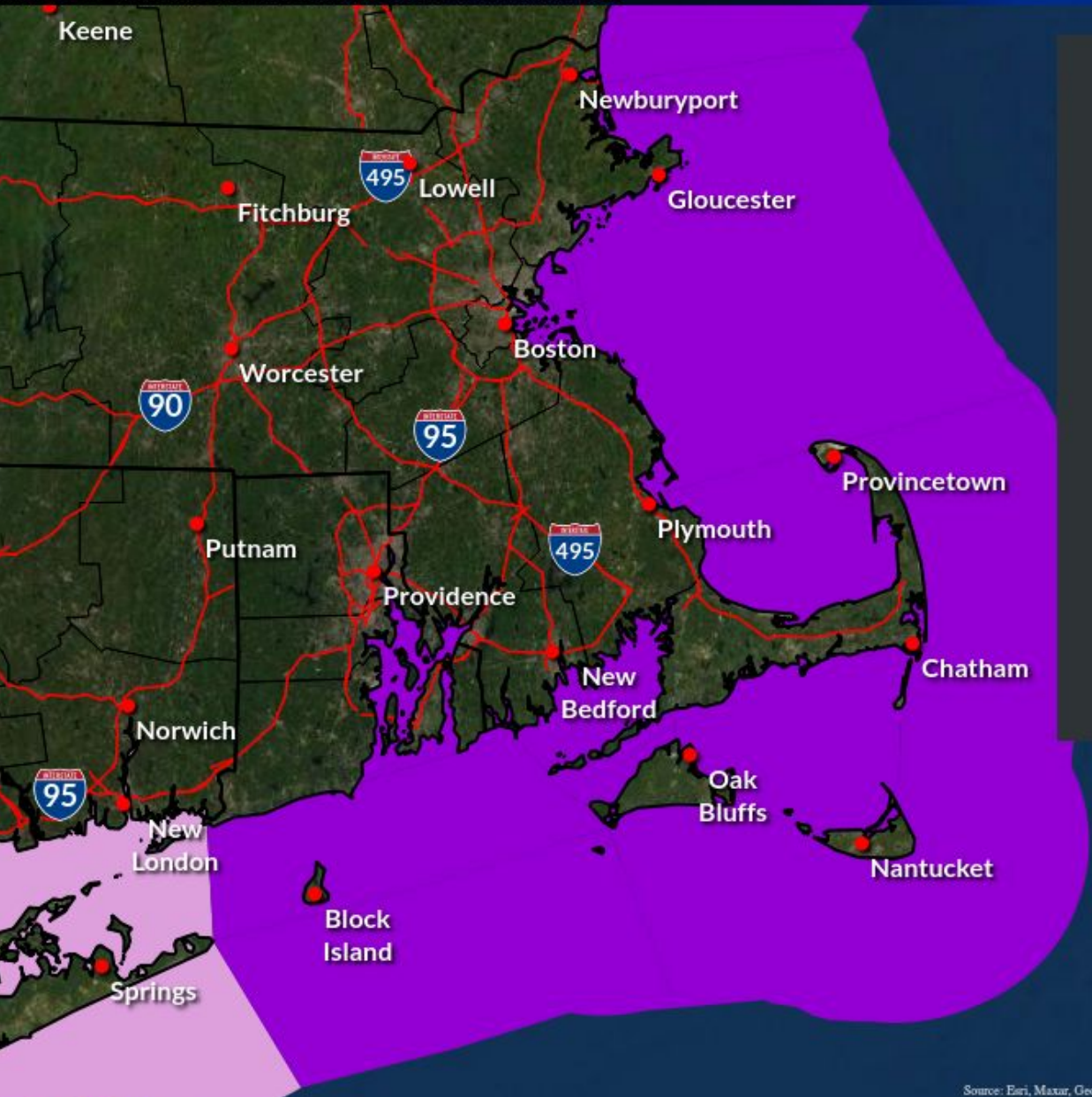
Hazardous Marine Conditions

December 22, 2022
4:30 AM

Hazardous Marine Conditions

Smaller Vessels Should Avoid These Conditions

Weather Forecast Office
Boston/Norton, MA
Issued Dec 22, 2022 4:24 AM EST



Gale Warning

In effect Thursday night through Saturday morning

- Sustained winds or frequent gusts 34-47 knots
- Rough seas

Storm Warning

In effect Thursday night through Saturday morning

- Sustained winds or frequent gusts 48-63 knots
- Rough seas

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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Winter Weather Advisory

December 22, 2022
4:30 AM

Winter Weather Advisory

Snow Covered And Slippery Roads Are Expected

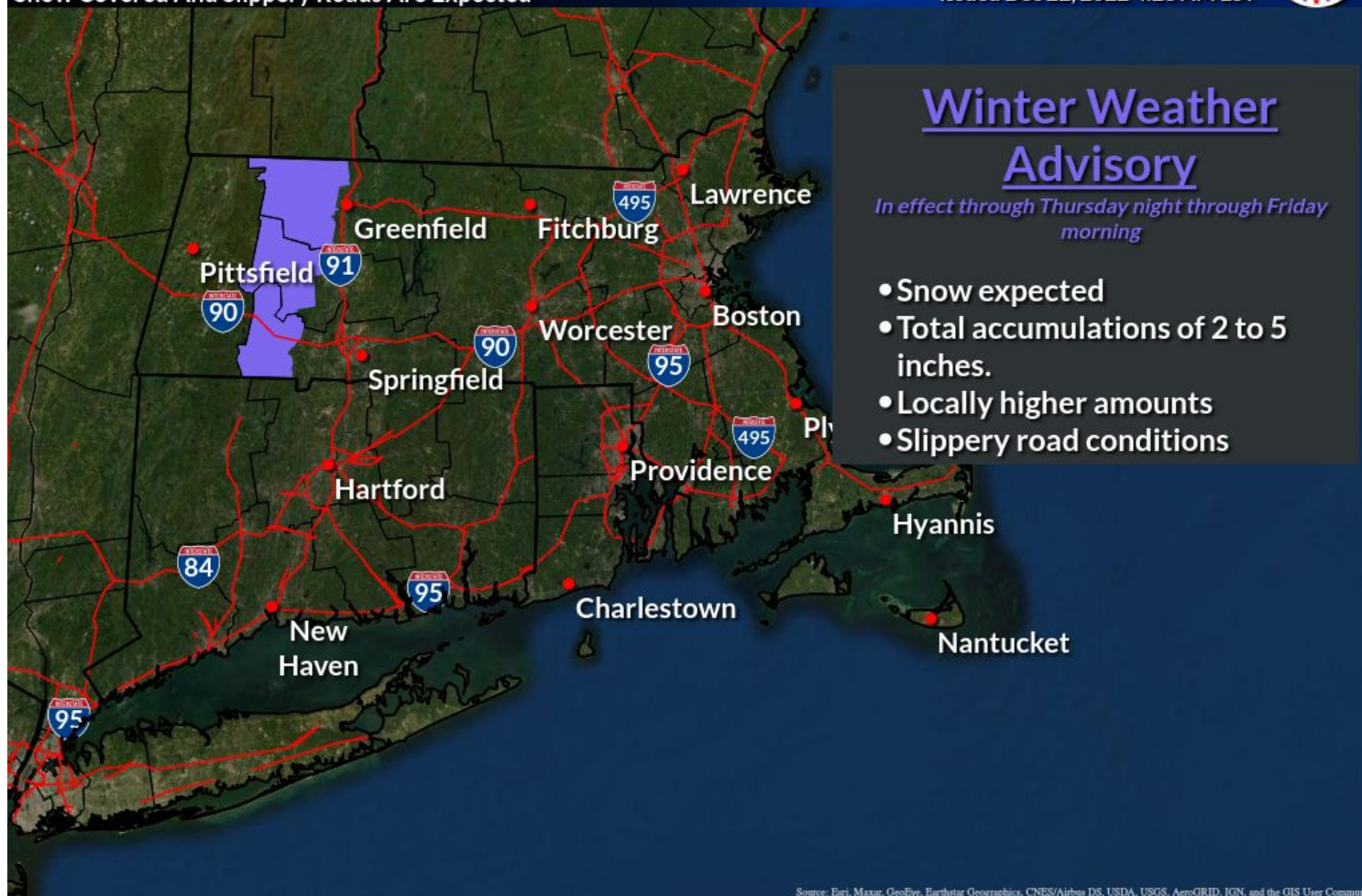
Weather Forecast Office
Boston/Norton, MA
Issued Dec 22, 2022 4:28 AM EST



Winter Weather Advisory

In effect through Thursday night through Friday morning

- Snow expected
- Total accumulations of 2 to 5 inches.
- Locally higher amounts
- Slippery road conditions



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

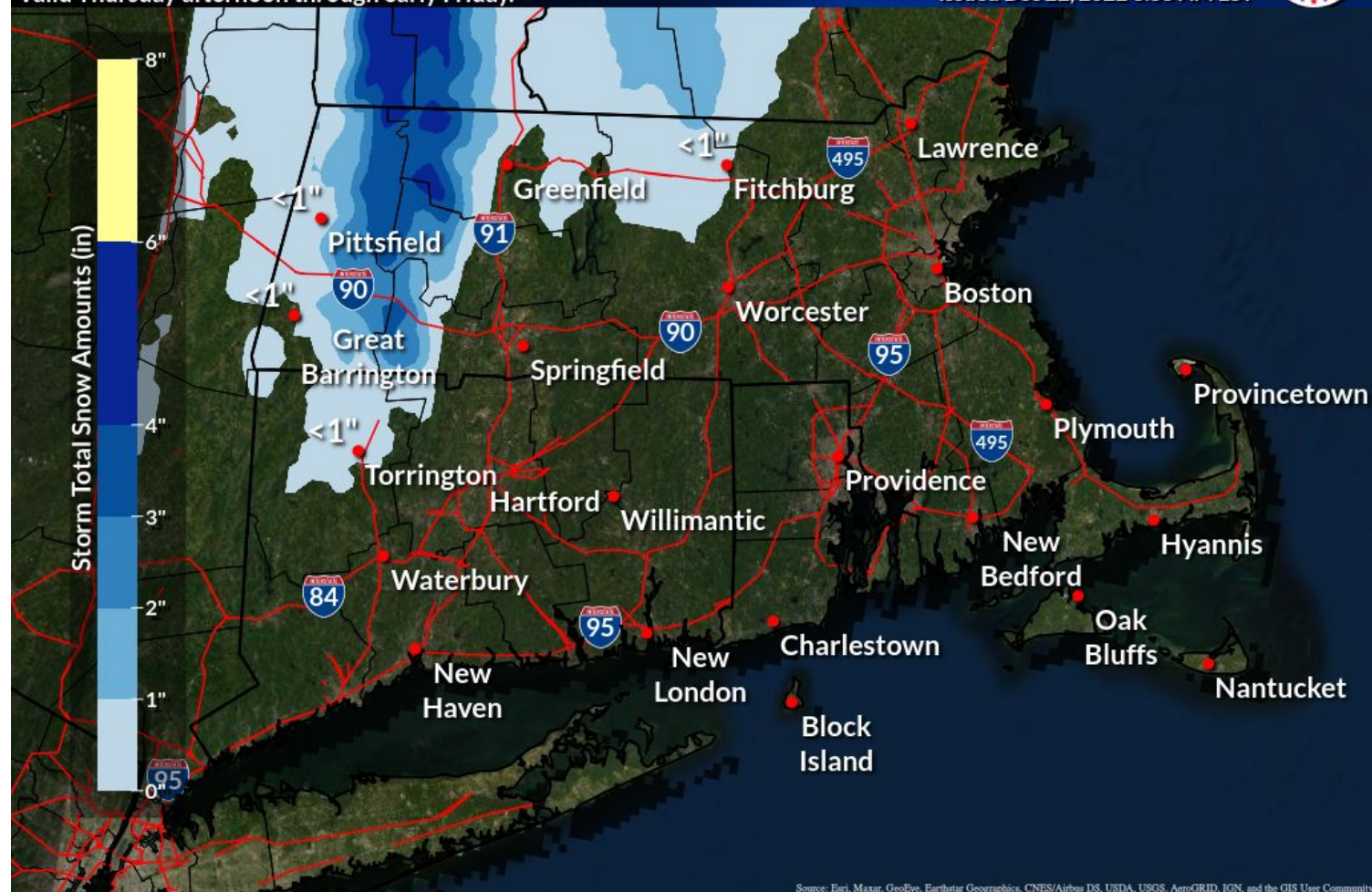
NWS Boston/Norton

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Expected Snowfall - Official NWS Forecast

Valid Thursday afternoon through early Friday.

Weather Forecast Office
Boston/Norton, MA
Issued Dec 22, 2022 3:55 AM EST



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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Main Points

December 22, 2022
4:30 AM

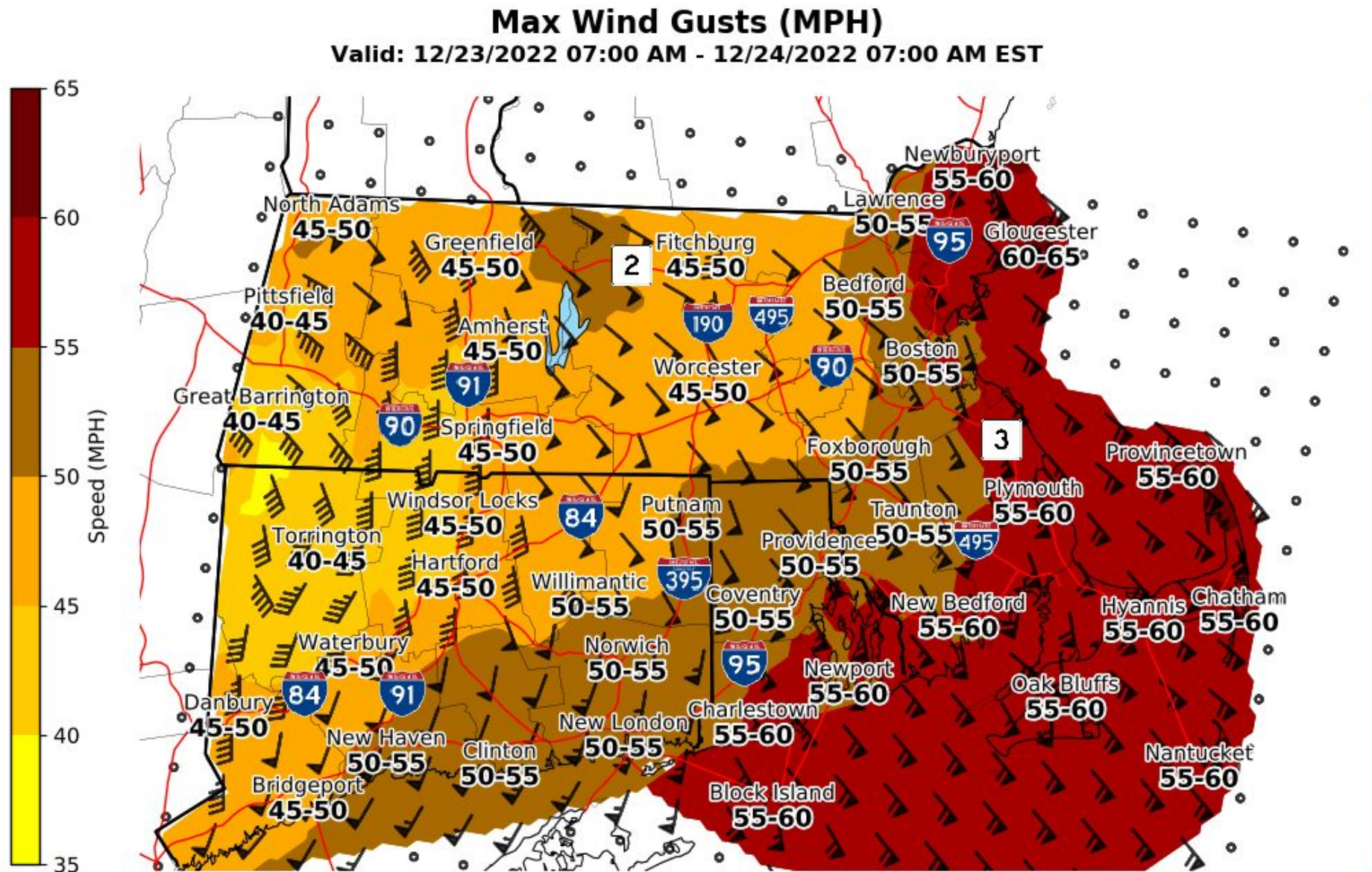
Hazard	Impacts	Location	Timing
Damaging Wind 	Damaging wind gusts up to 65 mph Power outages possible	50 to 60 mph gusts possible across all of southern New England 60-65 mph gusts more likely along the coastal areas	50 to 60 mph gusts Friday morning through Friday evening 40+ mph gusts may carry into early Saturday, especially over The Cape/Islands
Coastal Flooding 	Minor to moderate coastal flooding	South and East Coasts	Friday morning: South and East Coasts Friday evening: South Coast
River Flooding 	2-2.5 inches of rainfall and snowmelt may support minor river flooding	Along the Connecticut River Other small stream flooding possible	Small stream flooding possible Friday Larger rivers cresting Saturday and Sunday
Marine 	Gale to Storm Force Winds High Seas	All of southern New England Coastal Waters	Thursday Night through Saturday
Winter 	Snow accumulations of 2-5 inches	Highest terrain of western Massachusetts	Thursday Night through Friday morning





Maximum Wind Gust Forecast

December 22, 2022
4:30 AM



National Weather Service
Boston/Norton, MA
12/22/2022 01:36 AM EST

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Peak Wind Gusts Friday Afternoon

December 22, 2022
4:30 AM

- Winds ramp up to 30 to 40 mph late tonight into early Friday
- Winds peaking Friday afternoon and evening
- Strong gusts carry into early Saturday morning
- 65 MPH gusts are possible

Maximum Wind Gust Forecast																		
	12/22 Thu				12/23 Fri				12/24 Sat				12/25 Sun				12/26 Mon	
	12am	6am	12pm	6pm	12am	6am	12pm	6pm	12am	6am	12pm	6pm	12am	6am	12pm	6pm	12am	Maximum
Boston	7↗	9↘	14↘	26↖	47↘	55↘	59↗	53↗	35↗	29↗	25↗	22↗	23↗	24↗	24↗	20↗	17↗	59
Hartford	5↘	9↘	16↘	31↖	47↘	49↘	52↗	44↗	29↗	24↗	23↗	20↗	20↗	22↗	22↗	16↗	15↗	52
Hyannis	6↗	15↘	21↖	30↖	48↘	59↘	62↗	56↗	44↗	38↗	33↗	30↗	28↗	28↗	28↗	24↗	23↗	62
Lowell	3↗	7↗	10↖	18↖	43↘	52↘	55↗	49↗	30↗	23↗	23↗	17↗	20↗	24↗	23↗	16↗	14↗	55
Nantucket	7↖	16↘	23↖	32↖	47↘	58↘	63↗	59↗	47↗	41↗	36↗	35↗	33↗	31↗	32↗	30↗	28↗	63
New Bedford	6↗	15↘	18↖	29↖	47↘	56↘	62↗	54↗	38↗	33↗	30↗	26↗	25↗	25↗	25↗	21↗	20↗	62
Providence	5↗	10↖	16↖	25↖	46↘	54↘	60↗	52↗	31↗	25↗	24↗	18↗	20↗	22↗	23↗	16↗	15↗	60
Provincetown	10↗	15↘	24↖	38↖	52↘	58↘	56↗	51↗	43↗	36↗	32↗	31↗	31↗	29↗	28↗	26↗	25↗	58
Springfield	5↘	8↘	16↖	28↖	47↘	48↘	52↗	43↗	28↗	25↗	23↗	20↗	20↗	20↗	21↗	17↗	15↗	52
Worcester	6↗	9↘	13↖	23↖	41↘	48↘	53↗	47↗	31↗	25↗	24↗	21↗	22↗	23↗	24↗	17↗	16↗	53

*Table values in mph

**Created: 1 am EST Thu 12/22/2022

***Values are maximums over the period beginning at the time shown.





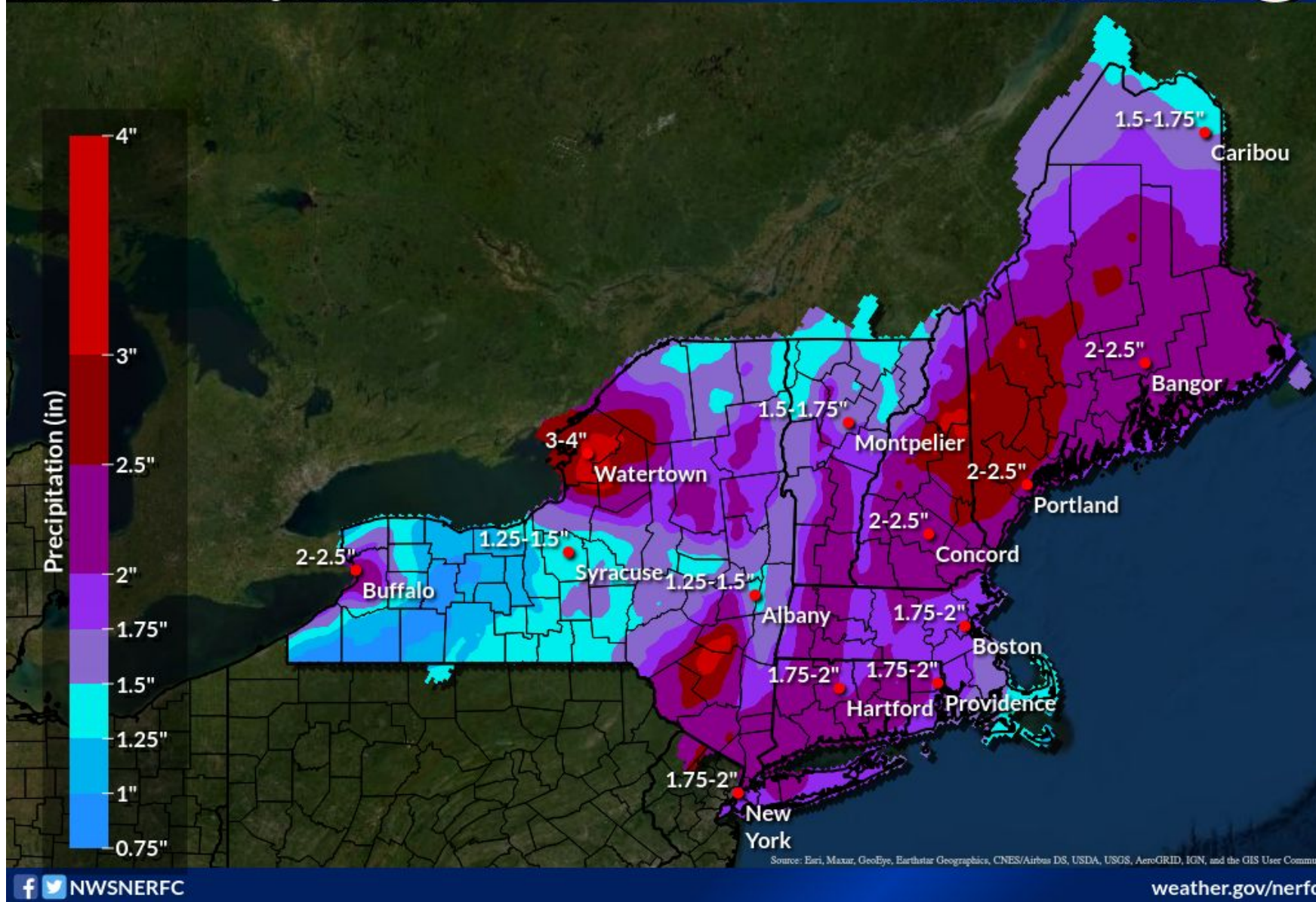
5 Day Precipitation Forecast

December 22, 2022
4:30 AM

5 Day WPC Precipitation Forecast

Valid Wed 7:00PM through Mon 7:00PM EST

River Forecast Center
Northeast RFC
Issued Dec 21, 2022 7:05 PM EST



- Precipitation expected to occur between late Thursday and early Saturday
- Primarily as rain for most of southern New England
- Perhaps ending as snow in the highest terrain (Berkshires)
- Widespread 2 to 2.5 inches with locally higher amounts



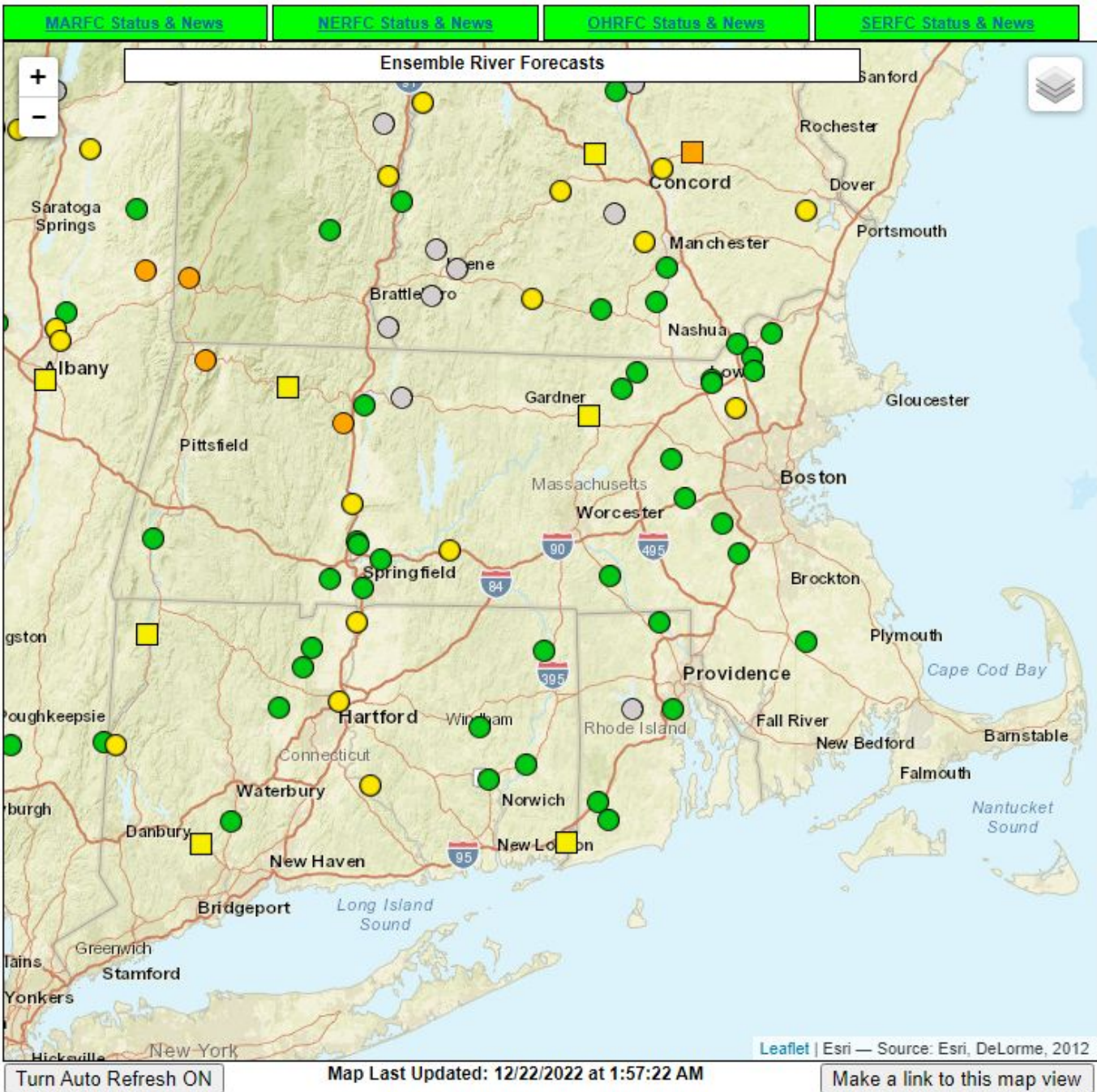
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River Levels Outlook

December 22, 2022
4:30 AM



- Rain/Snowmelt across northern New England resulting in a potential for minor flooding along the Connecticut River (late Saturday through Monday)

30%	Level	70%
	Action	
	Minor Flood	
	Moderate Flood	
	Major Flood	
= less than 30% chance of reaching Action level		

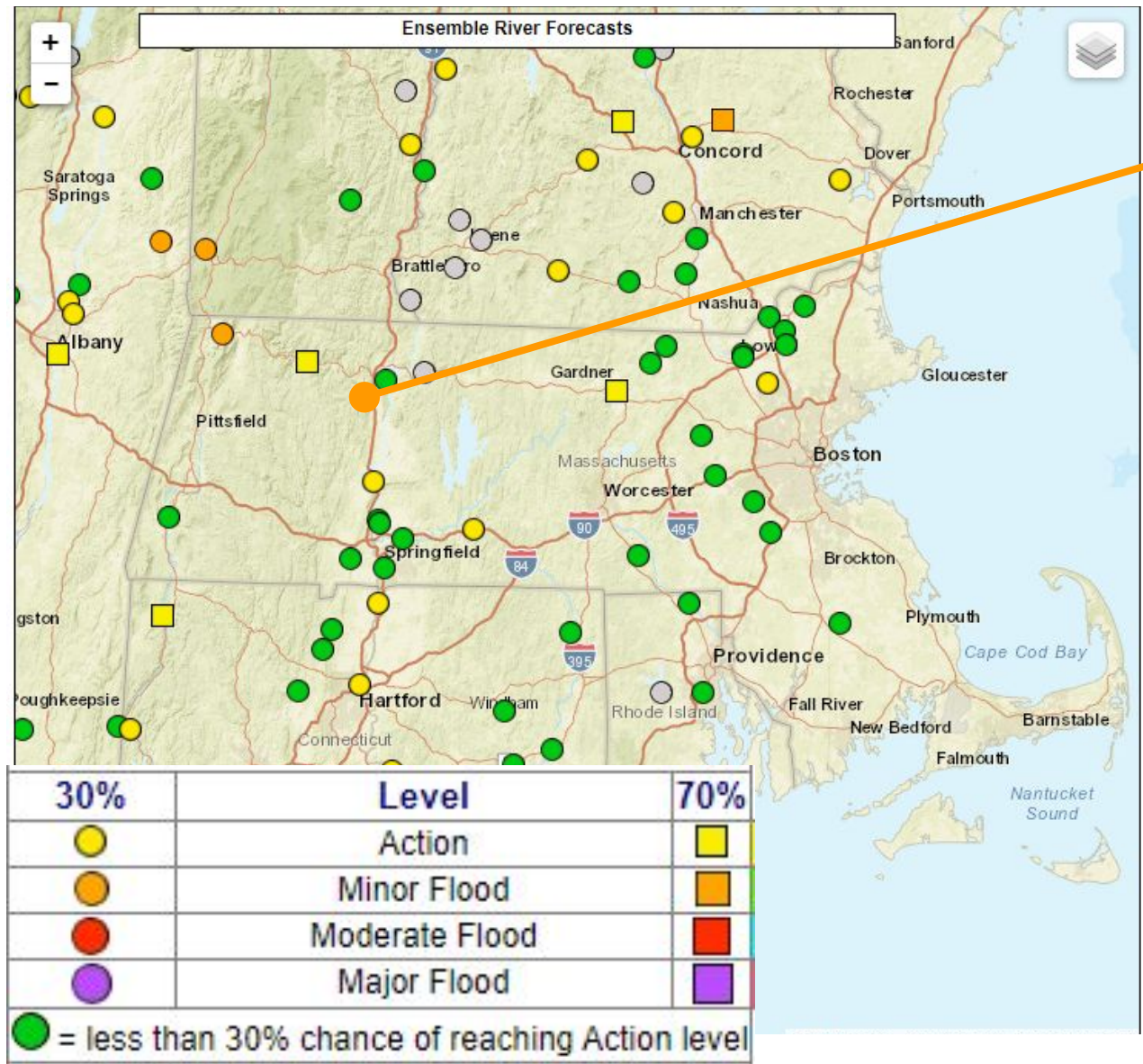




River Levels Outlook

December 22, 2022
4:30 AM

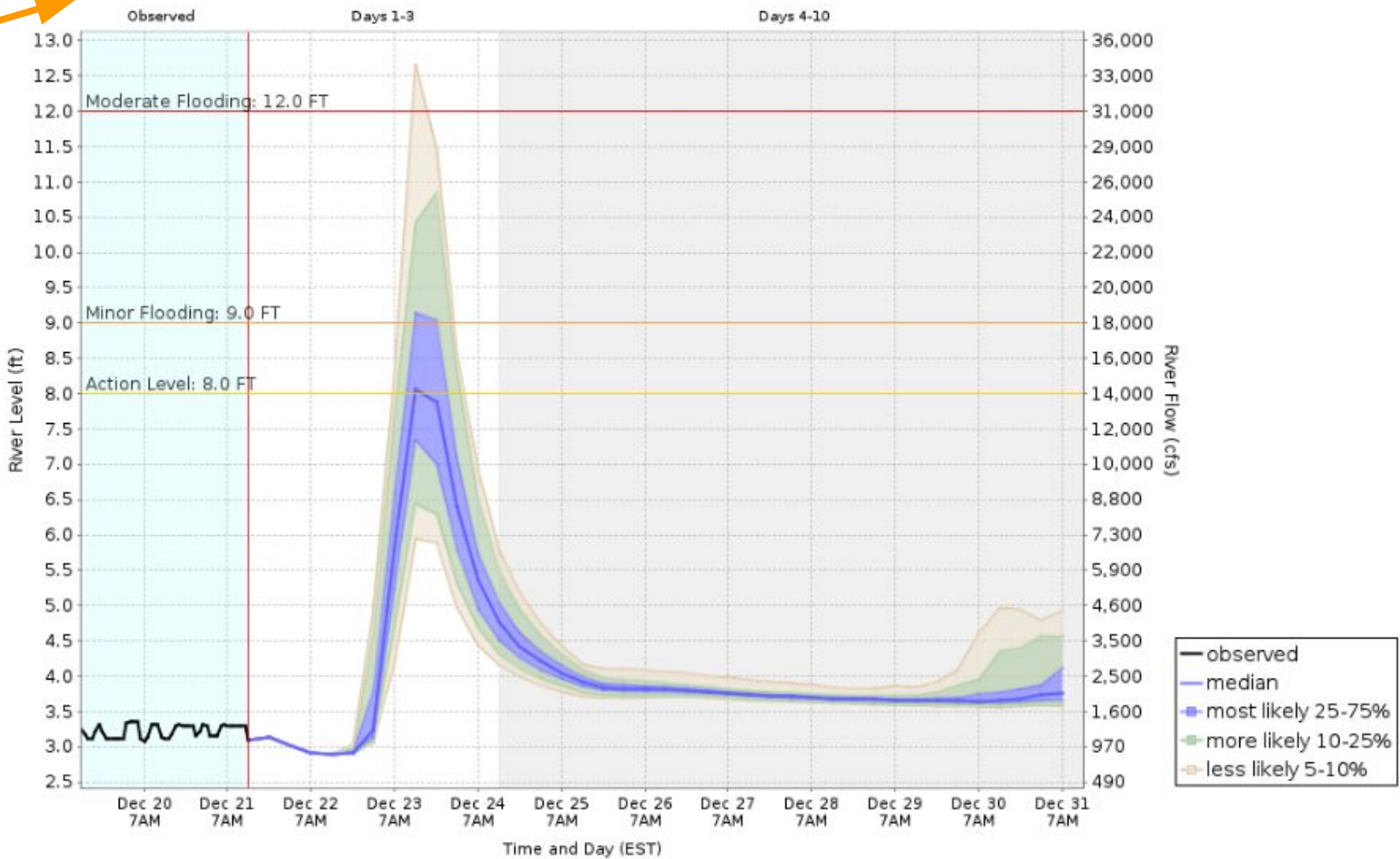
Connecticut River at West Deerfield, MA



Latest forecast crest is Saturday night

Dec 21 - Dec 31, 2022

Deerfield River at West Deerfield (WDEM3)



Model runtime: 01:00 PM EST Dec 21 2022
Northeast River Forecast Center



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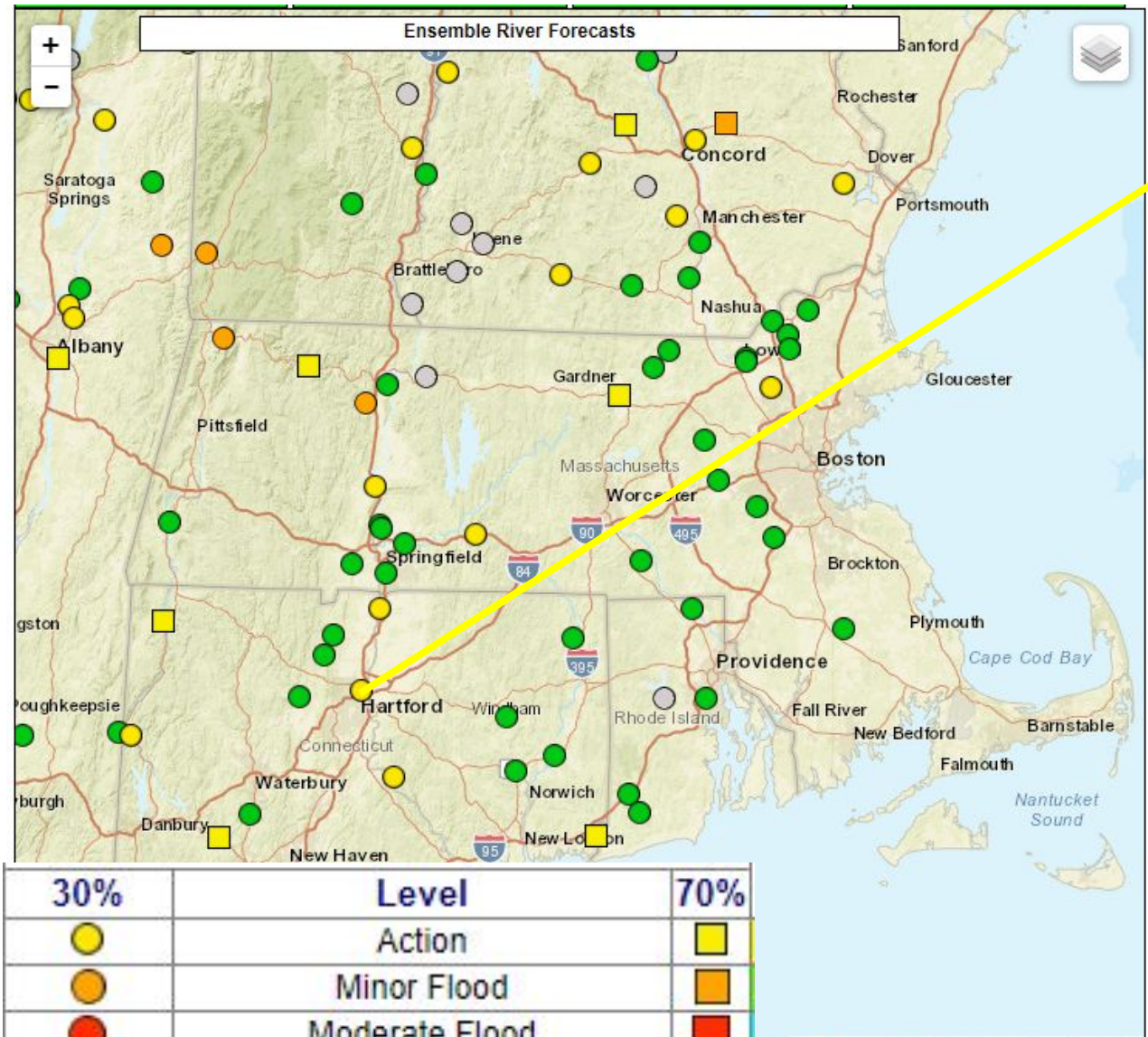
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River Levels Outlook

December 22, 2022
4:30 AM

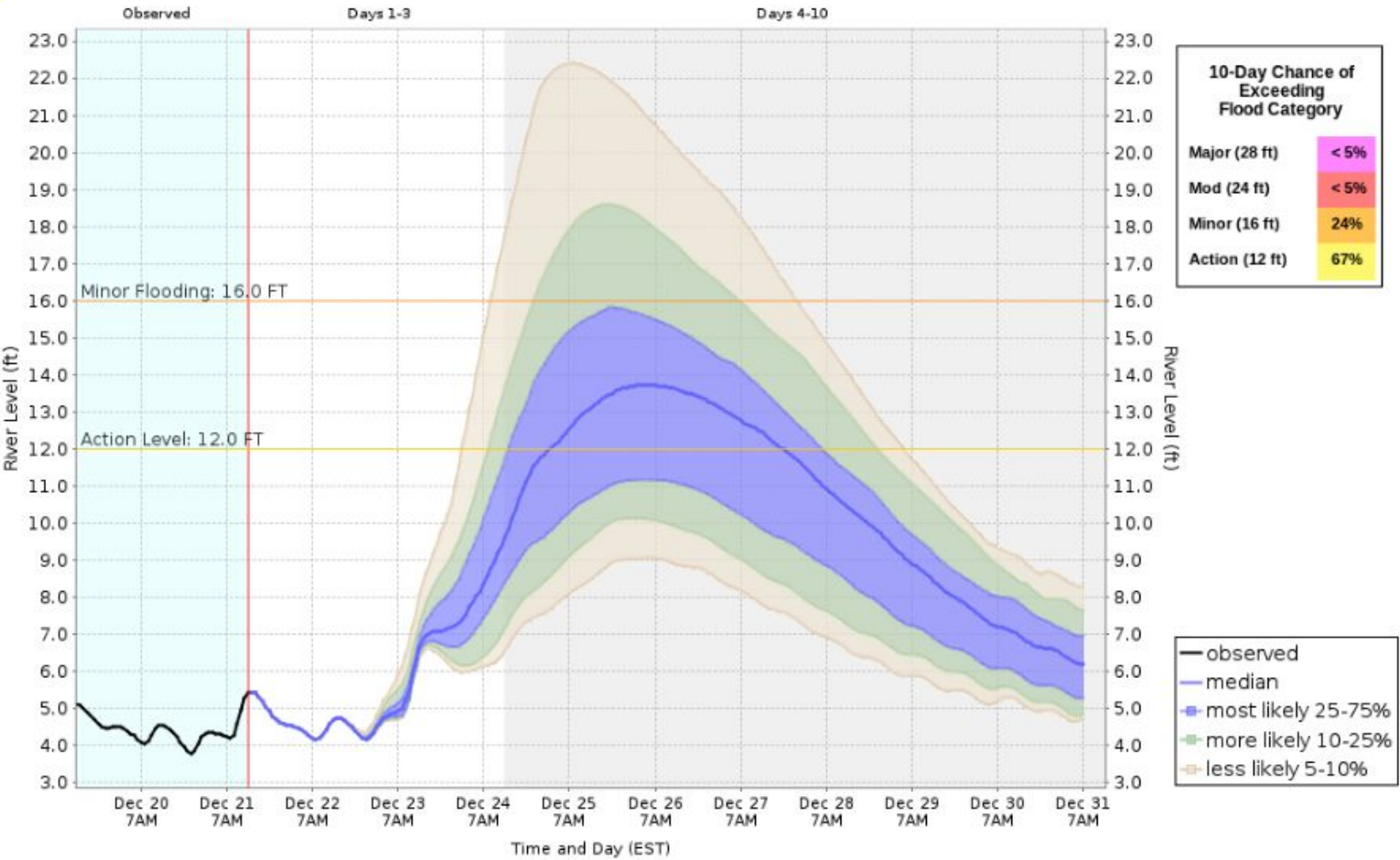
Connecticut River at Hartford



30%	Level	70%
	Action	
	Minor Flood	
	Moderate Flood	
	Major Flood	
= less than 30% chance of reaching Action level		

Latest forecast crest is Sunday night

Dec 21 - Dec 31, 2022
Connecticut River at Hartford, CT (HFDC3)



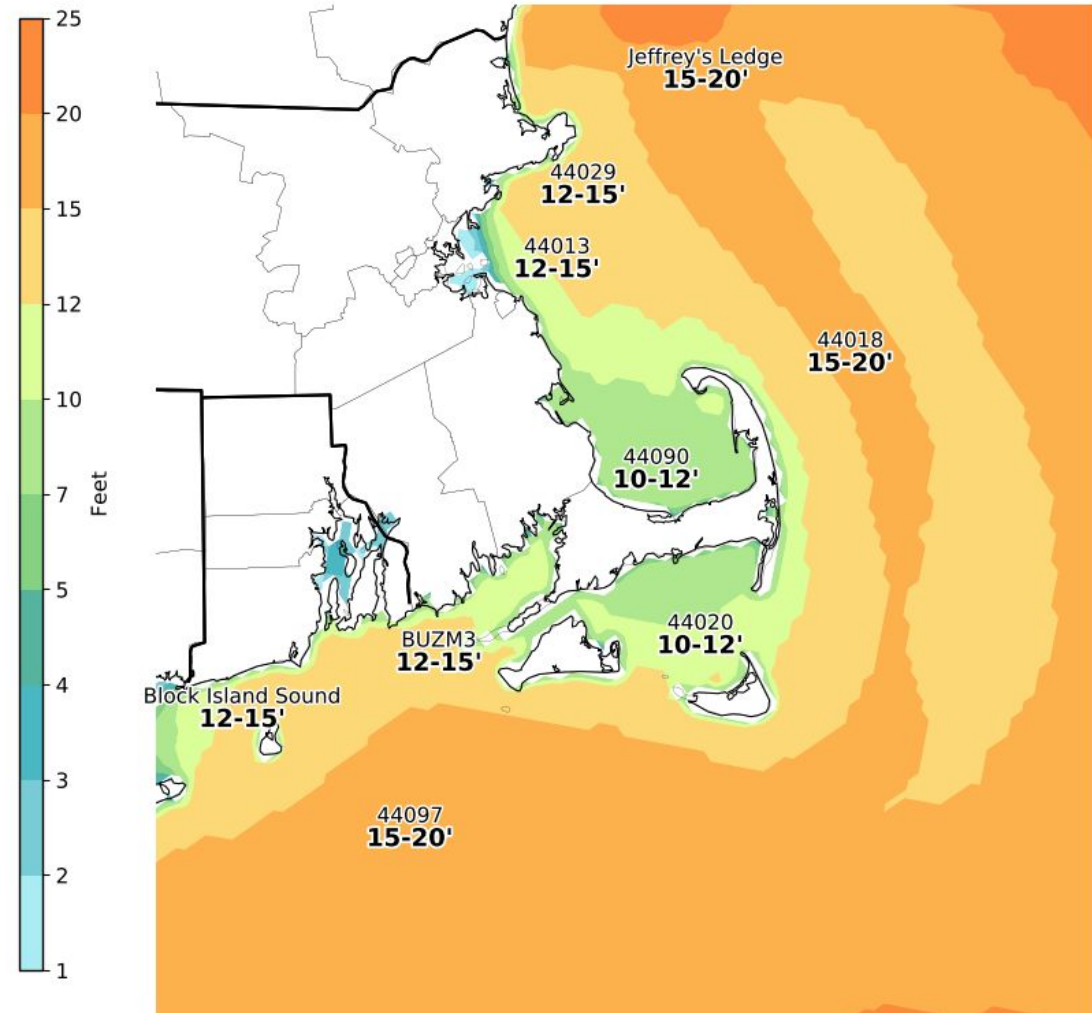


Marine Impact Timeline

December 22, 2022
4:30 AM

Maximum Wave Height

Valid: 12/23/2022 07:00 AM - 12/24/2022 07:00 AM EST



National Weather Service
Boston/Norton, MA
12/22/2022 02:16 AM EST

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Arrival of Strongest Winds:

- Gale force (34 kt) SE winds begin 9 PM Thu - 12 AM Fri
- Storm force (48 kt) SE winds begin 4 AM - 7 AM Fri

Peak Gusts:

- Friday morning and early afternoon (S/SE 50-60 kt)

Departure of Strongest Winds:

- Storm force (S/SW) subsides 7 PM - 11 PM Fri
- Gale force (W) subsides 4 PM - 10 PM Sat
- Gradually subside below 25 kt Sunday

Seas:

- Rapidly build early Friday morning
- Peak during the day Friday
- Subside below 10 ft nearshore Saturday afternoon/night and offshore later Sunday
- Subside below 5 ft nearshore Sunday afternoon/evening and offshore later Monday



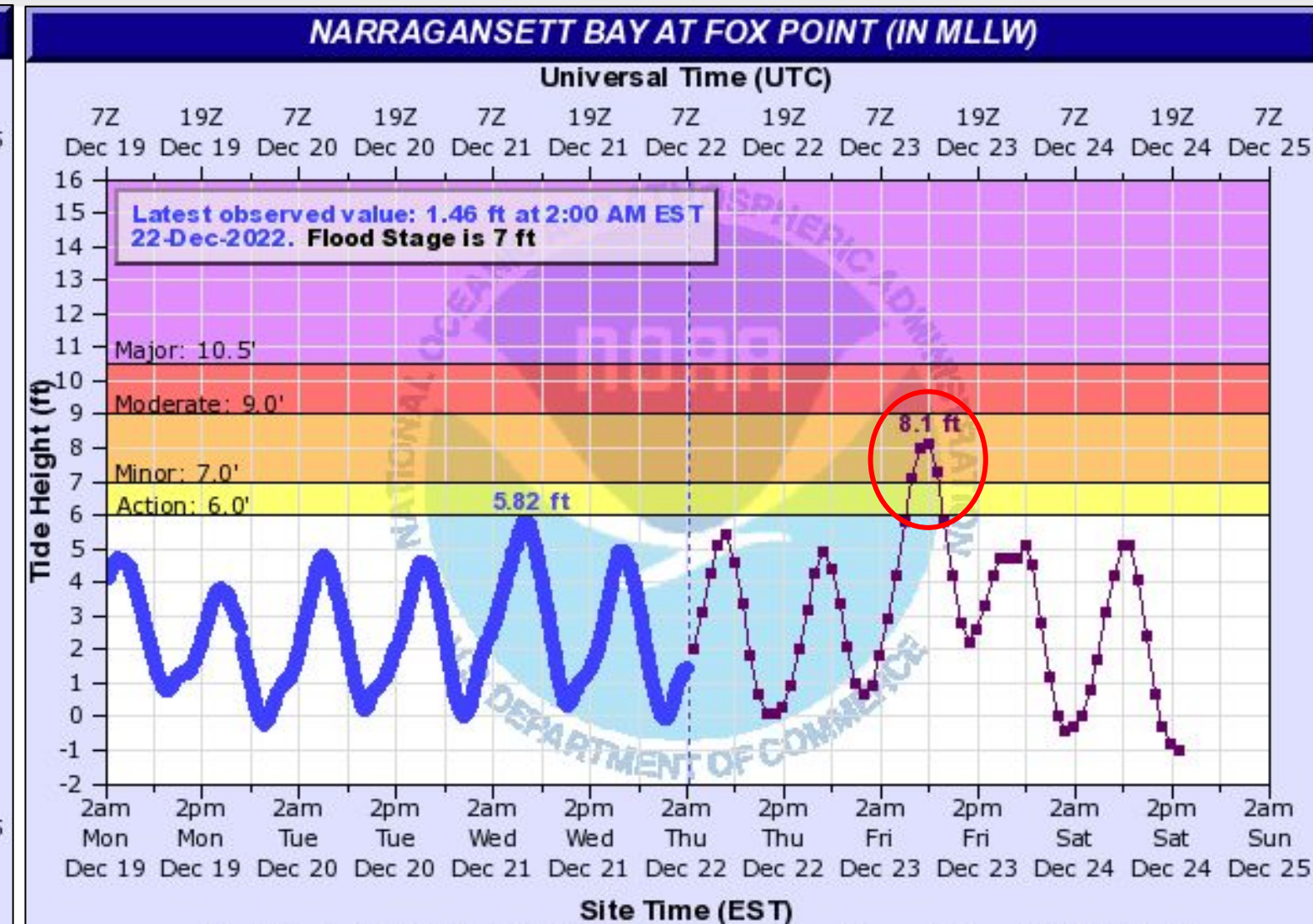
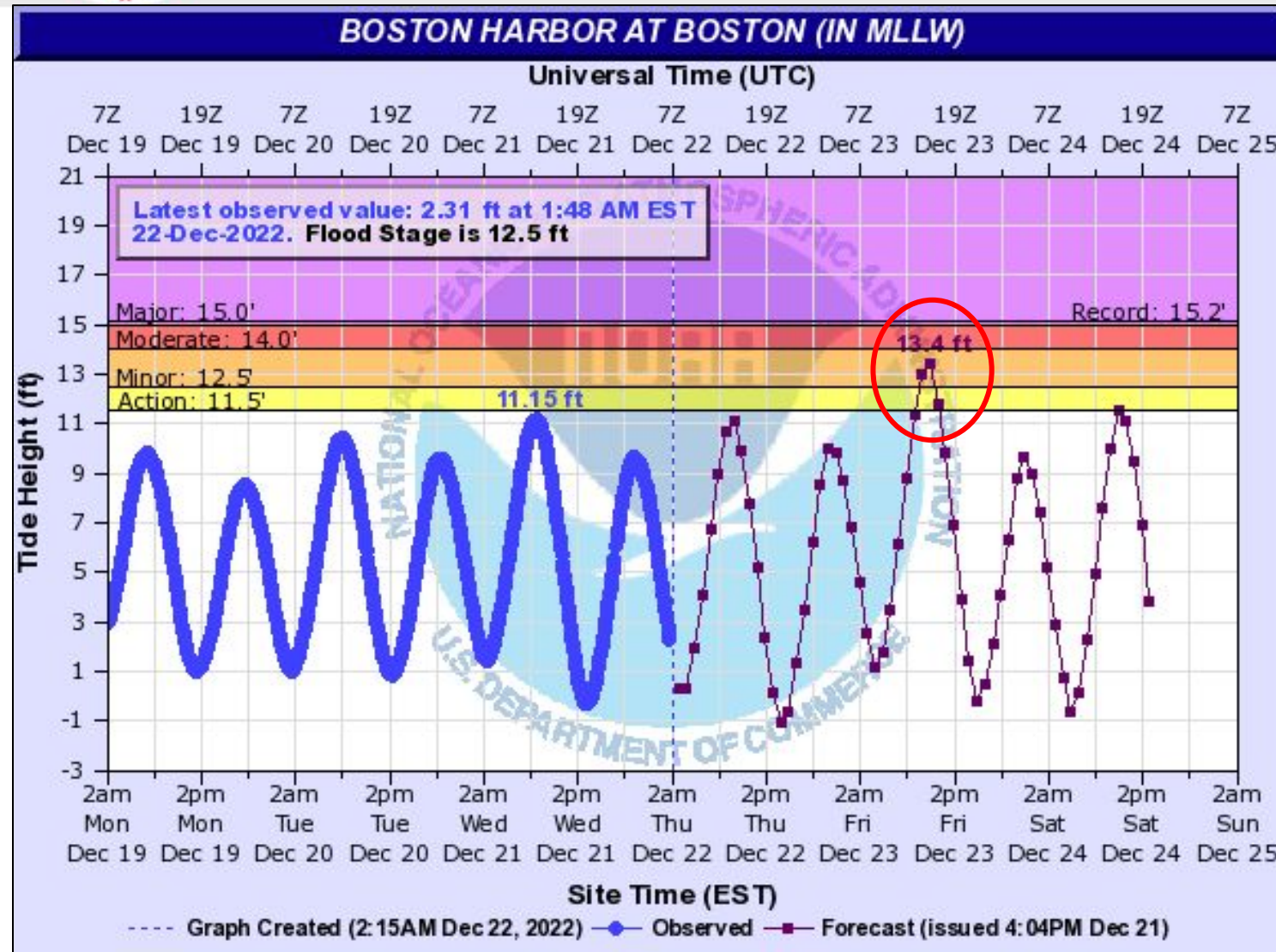
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Coastal Flooding Potential

December 22, 2022
4:30 AM



- Pockets of moderate flooding Friday morning - north of Boston, Edgartown, and RI south coast (due to waves)
- Minor flooding Friday evening along South Coast - threat for moderate flooding decreased
- Significant beach erosion along S/SE facing shores (southeast winds around high tide)



Coastal Flooding Definitions

December 22, 2022
4:30 AM

Minor Coastal Flooding

- Flooding up to 1 foot deep, nuisance-type flooding
- Affects the most vulnerable shore roads
- Majority of roads remain passable with only limited closures
- No significant threat to life and any impact on property is minimal.



Moderate Coastal Flooding

- Flooding 1 to 3 feet deep.
- Widespread flooding of vulnerable shore roads and basements of shore homes.
- Debris may wash onto coastal roads from breaking waves.
- Numerous road closures are typically needed.
- Some damage of vulnerable structures such as docks or house decks/porches near the high tide line due to waves.
- Risk to life for those who place themselves in unnecessary danger (driving around barricades, viewing surf from piers or jetties).

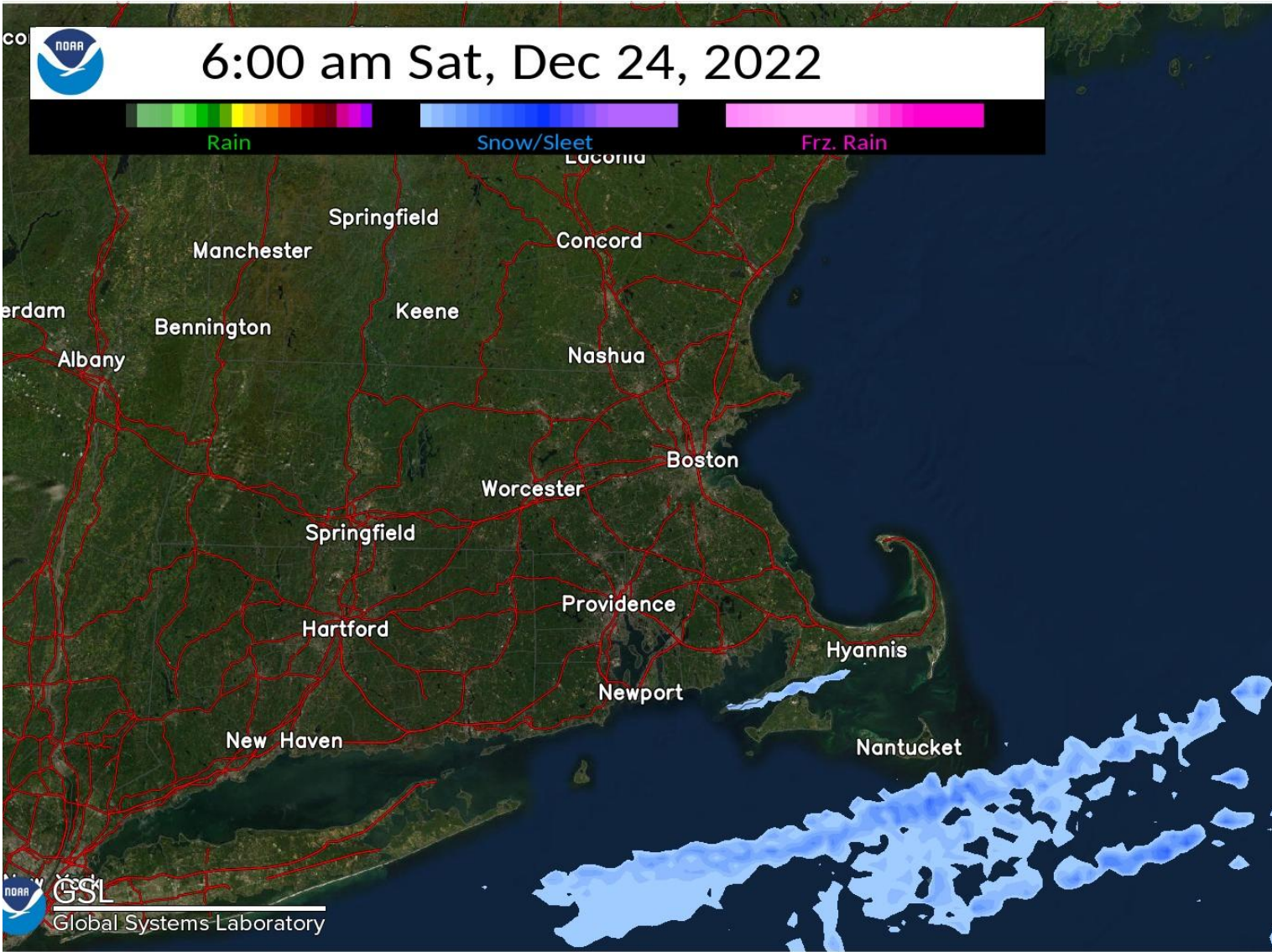




Post Event Outlook

December 22, 2022
4:30 AM

Cold and Windy on Saturday and Ocean Effect Snow



Minimum Wind Chill Forecast											
	12/23 Fri		12/24 Sat				12/25 Sun				Minimum
	12pm	6pm	12am	6am	12pm	6pm	12am	6am	12pm	6pm	
Boston	39	9	4	5	11	7	4	4	14	11	4
Hartford	28	2	0	0	8	4	3	3	14	10	0
Hyannis	39	12	6	6	13	7	6	6	15	11	6
Lowell	38	9	3	2	10	7	3	4	14	11	2
Nantucket	38	16	11	11	15	12	10	10	17	15	10
New Bedford	37	6	2	3	12	6	3	3	16	9	2
Providence	36	5	2	0	10	7	4	4	15	13	0
Provincetown	37	14	9	9	11	10	8	8	14	14	8
Springfield	29	3	-1	0	7	3	1	1	12	9	-1
Worcester	31	1	-3	-3	5	2	0	0	10	7	-3

*Table values in °F
**Created: 2 am EST Thu 12/22/2022





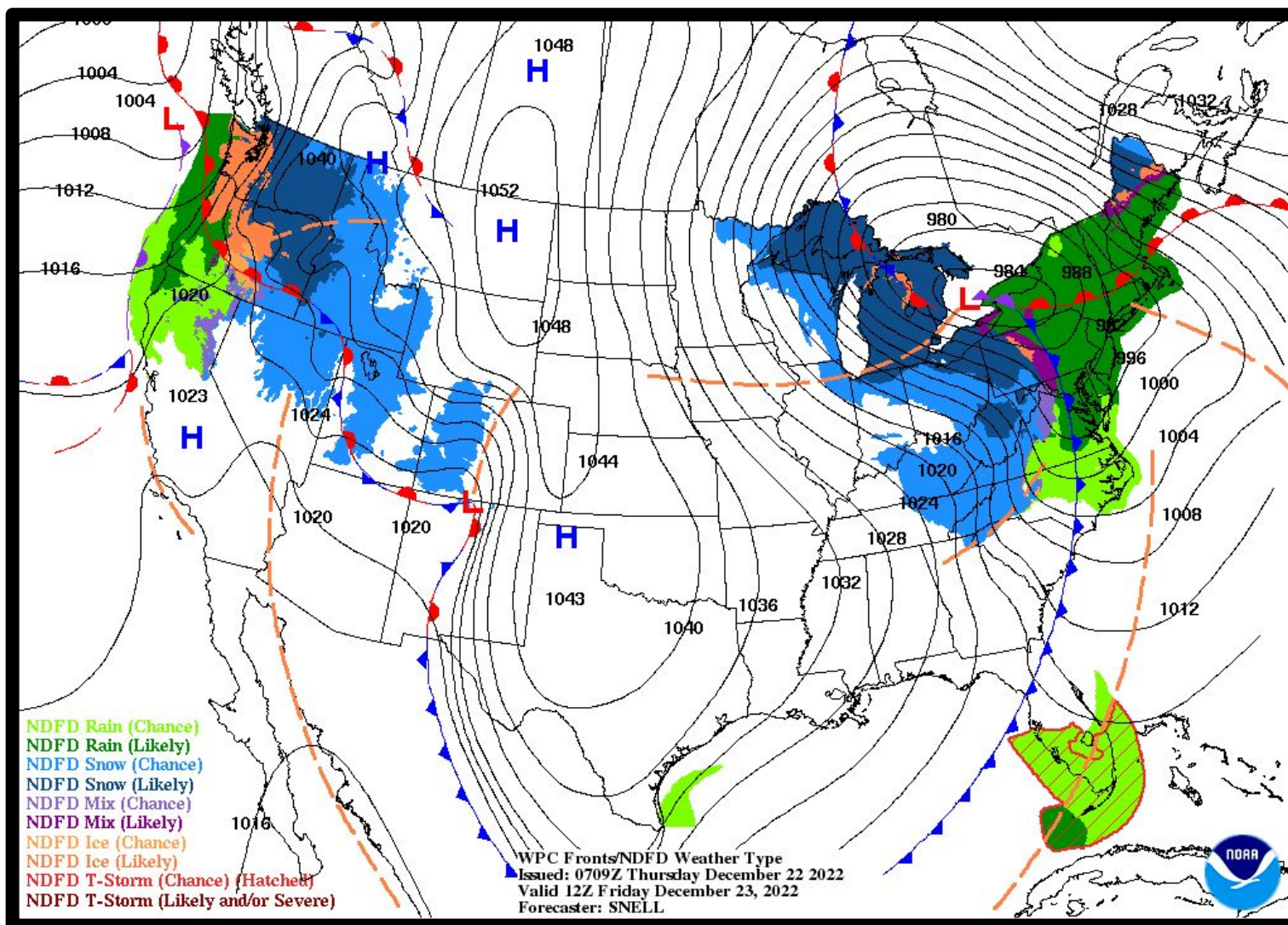
Recap

December 22, 2022
4:30 AM

Key Messages

- Powerful Storm late Thursday night into early Saturday
 - Damaging winds up to 65 mph. Power outages possible.
 - Heavy rainfall 2-2.5 inches
 - Minor to moderate coastal flooding Friday morning
 - Minor river flooding possible
- Coastal Flood Warnings issued for all coasts
- High Wind Warning issued for eastern Massachusetts and Rhode Island. Wind Advisory for central and western Massachusetts and Connecticut
- Hazardous marine conditions for all waters
- Winter Weather Advisory issued for east slopes of the Berkshires

7 AM Friday Weather Map





Contact and Next Briefing Information

December 22, 2022
4:30 AM

For Southern New England



Briefing Webpage

→ <https://www.weather.gov/erh/ghwo?wfo=box>



Next Briefing

→ By Thursday at 6 PM, but could be sooner if there are any significant changes to the forecast.



Disclaimer

- Information contained in this briefing is time-sensitive
- Do Not Use After: 06:00 PM Thursday, 12/22/2022



Contact Information

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