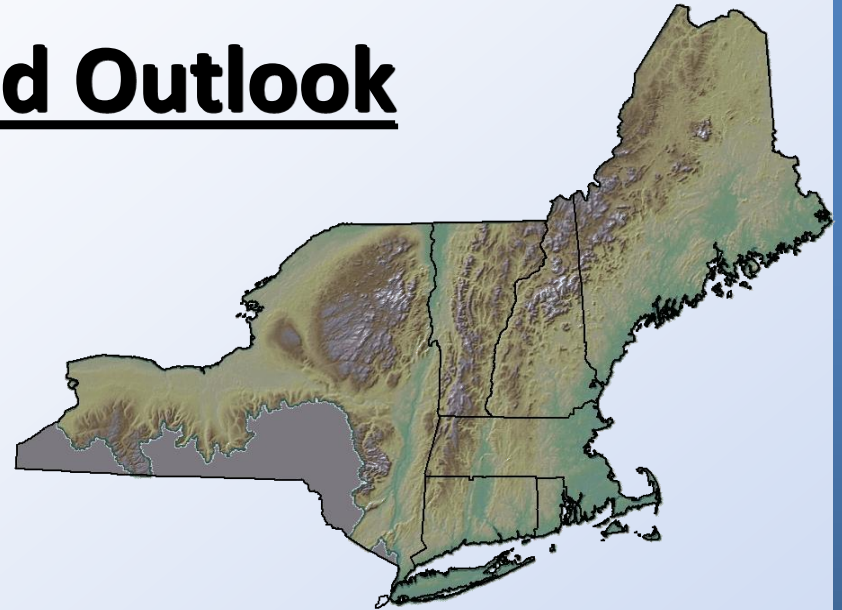


# NERFC Spring Flood Outlook

- Mar 26th 2015
- Next Briefing – 4/3

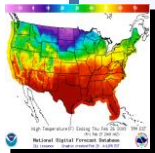


➤ Brought to you by:

➤ Edward Capone - Service Coordination Hydrologist

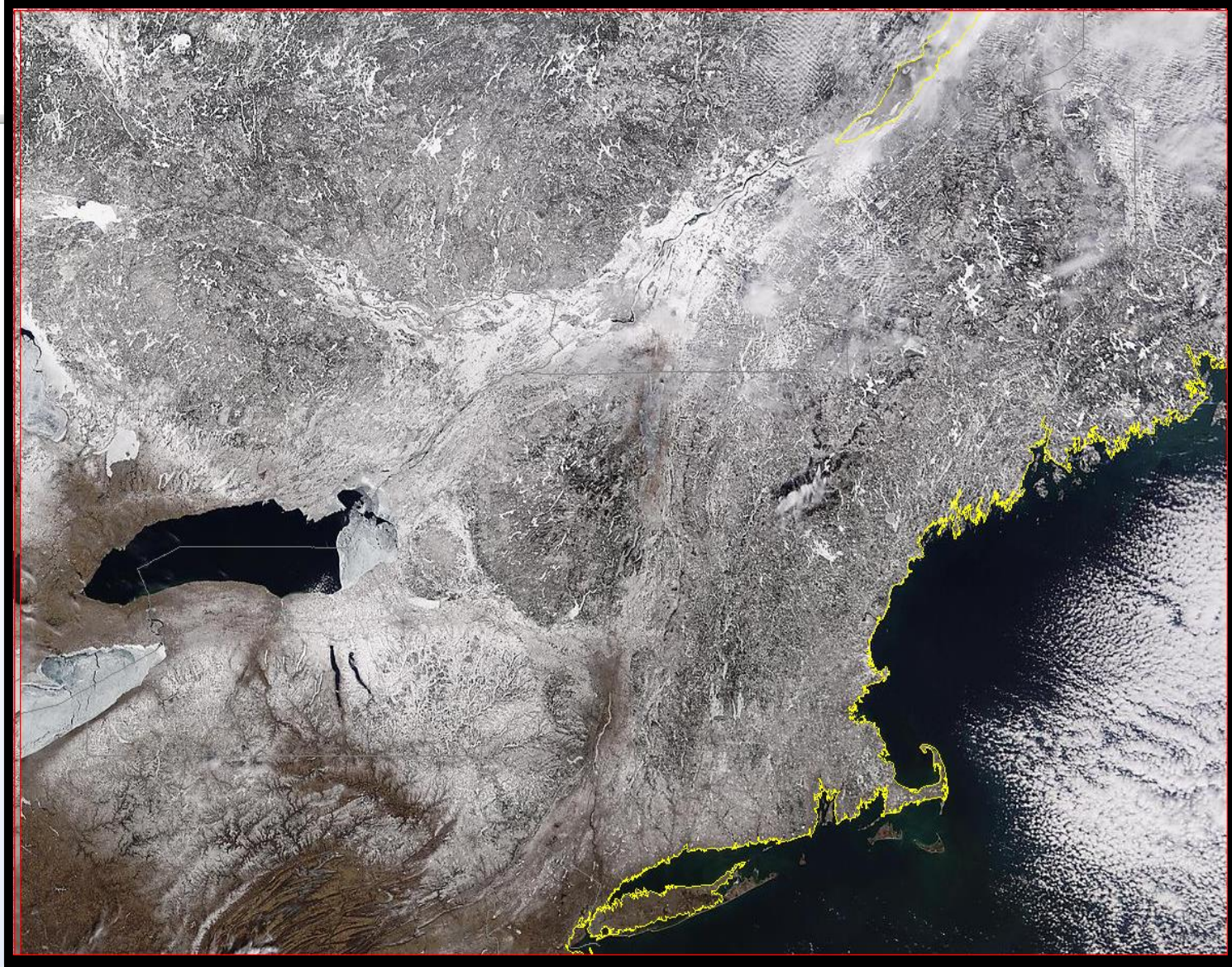
➤ Overview to Include:

- • Potential flood outlook – convective/synoptic conditions
- • Snow Water/Melt Potential --- Ice Jam Potential---
- • Stream flow-Groundwater-Soil moisture and Snow Water Equivalent conditions
- • Antecedent –Current—Future precipitation forecasts
- • Short and Medium Range Met Forecasts (especially potentially significant events)
- • Flood or Drought Outlook (Near term & Longer term)

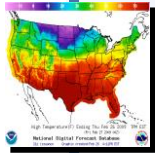


<http://ge.ssec.wisc.edu/modis-today/>

# MODIS IMAGES – TERRA/ AQUA

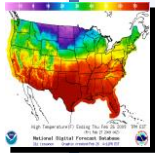


National Weather Service  
*Protecting Lives and Property*



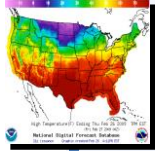
<http://www.weather.gov/nerfc/briefings>

National Weather Service  
*Protecting Lives and Property*



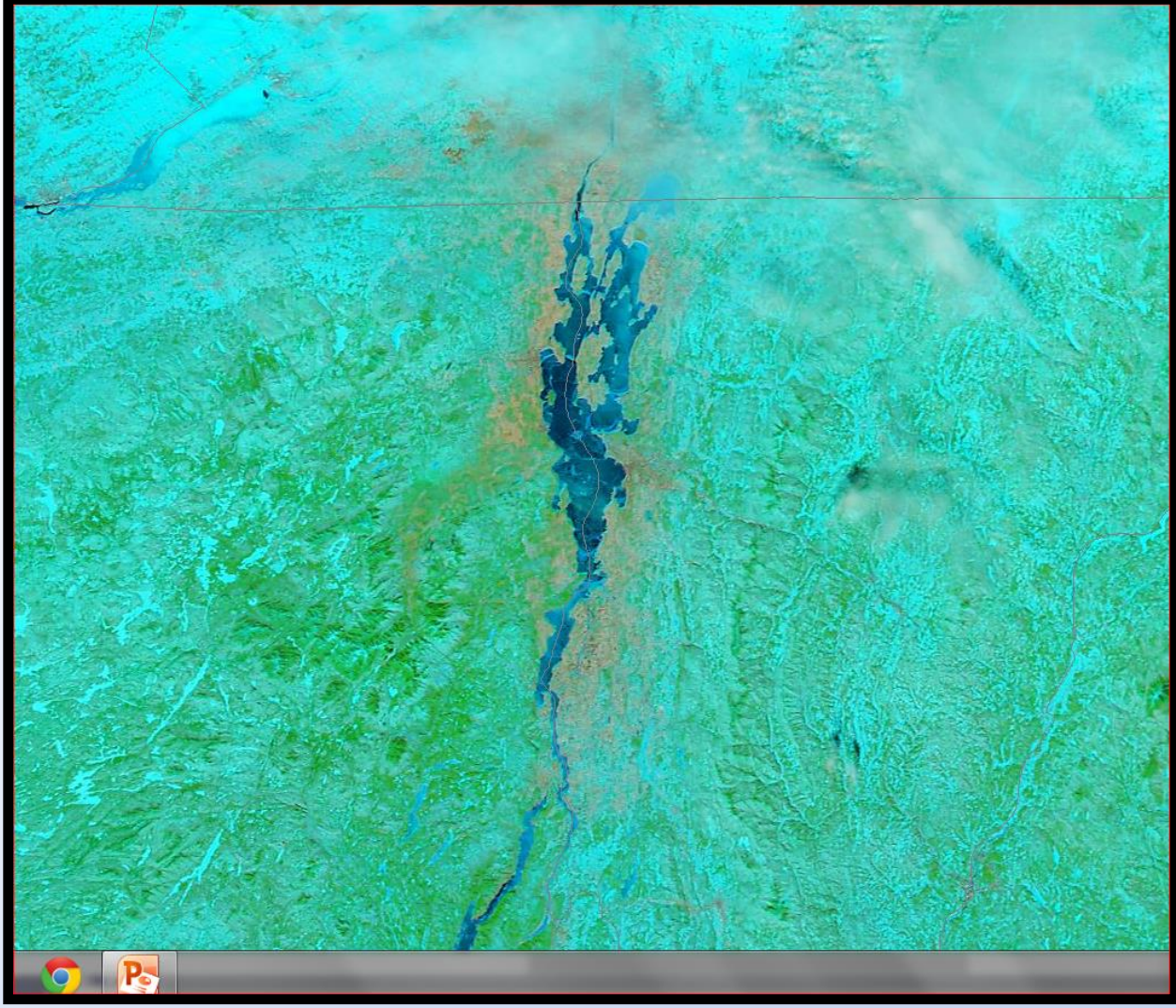
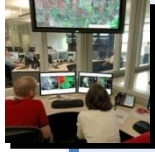
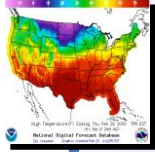
# National Weather Service

*Protecting Lives and Property*



# National Weather Service

*Protecting Lives and Property*



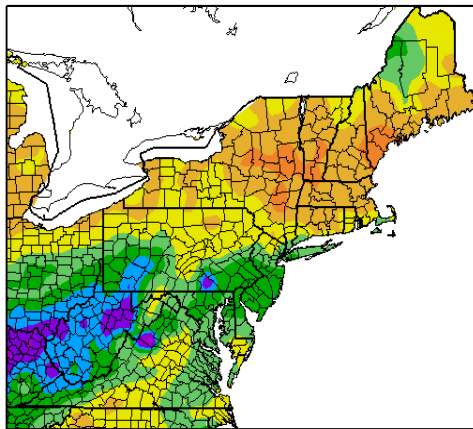
# Service Area Highlights

## ➤ Monthly Highlights to March 26th

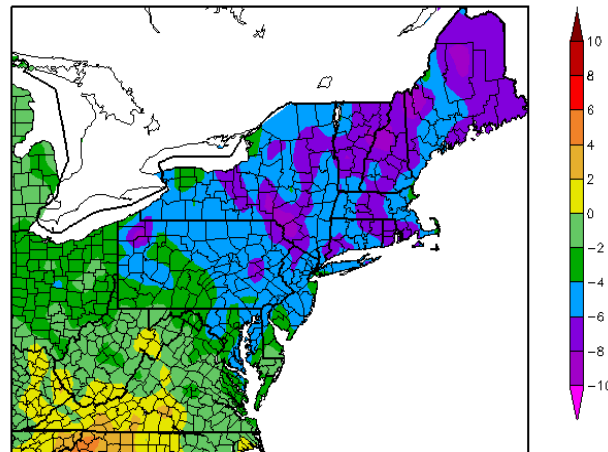
- **Below Normal Temps for March**
- **2<sup>nd</sup> Mild Interlude of March is here...and stronger**
- **Snow Events continued north rain/snow mix south**
- **Snow Depths/SWE ... slow melt...NO MELT an issue**
- **Another cold shot coming this weekend/early next week**
- **Precipitation mostly below normal for March**

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ecting Lives and Property

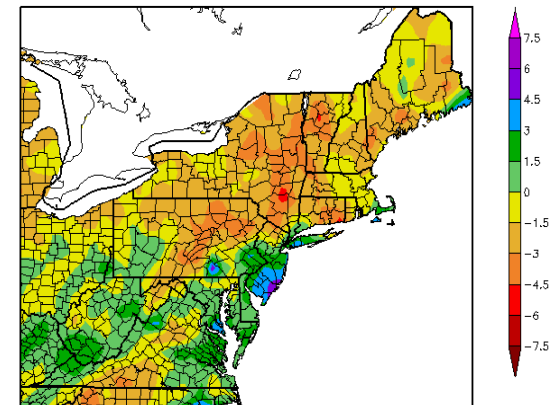
Departure from Normal Precipitation (in)  
3/1/2015 - 3/23/2015



Departure from Normal Temperature (F)  
3/1/2015 - 3/23/2015



Departure from Normal Precipitation (in)  
12/24/2014 - 3/23/2015



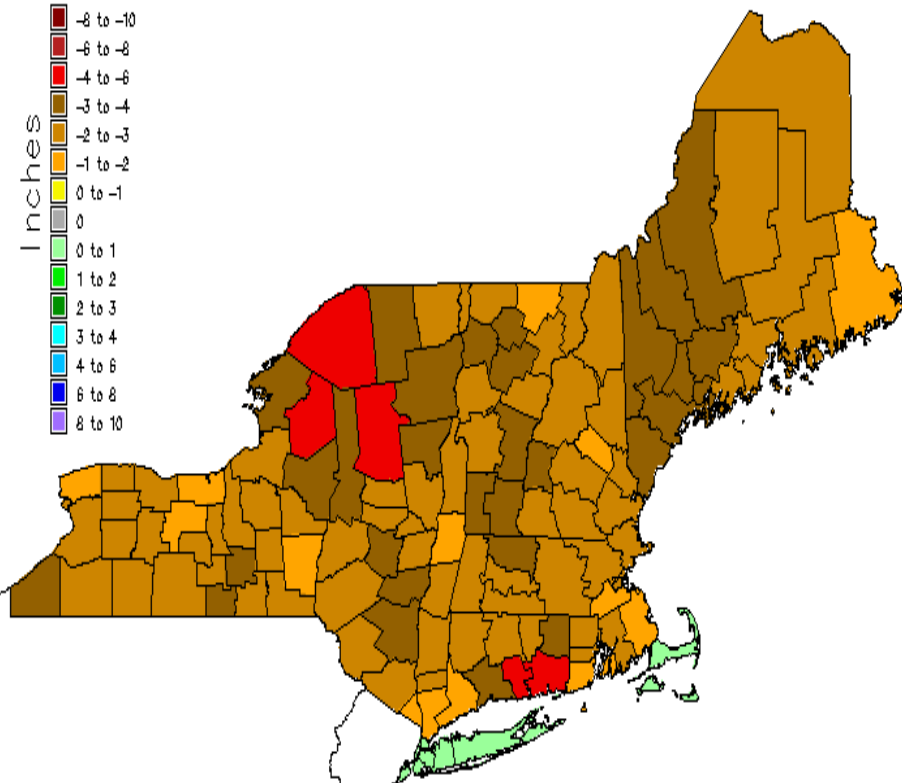
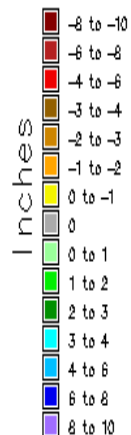
dated 3/24/2015 at HPRCC using provisional data.

Regional Climate Centers

# 90 and 180 Day Precipitation Departures



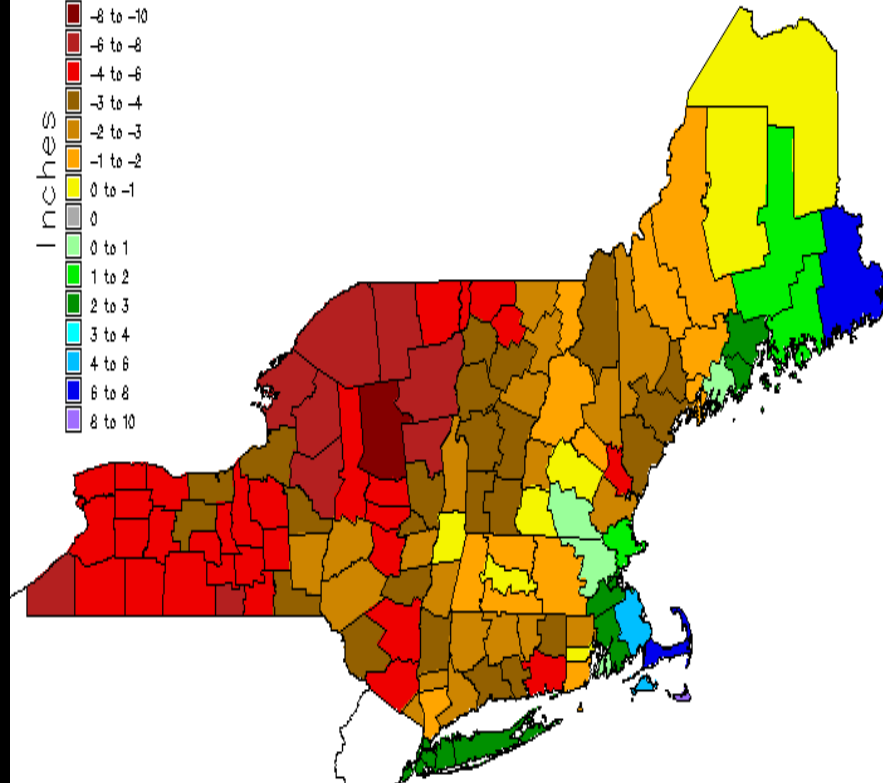
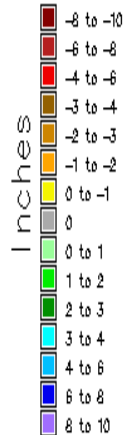
90 Day Departures from Normal  
Ending 2015-03-23



Source: NOAA Northeast River Forecast Center, Taunton, MA



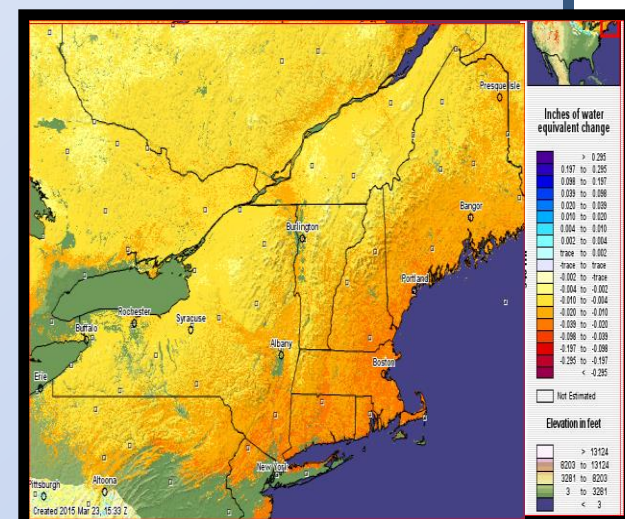
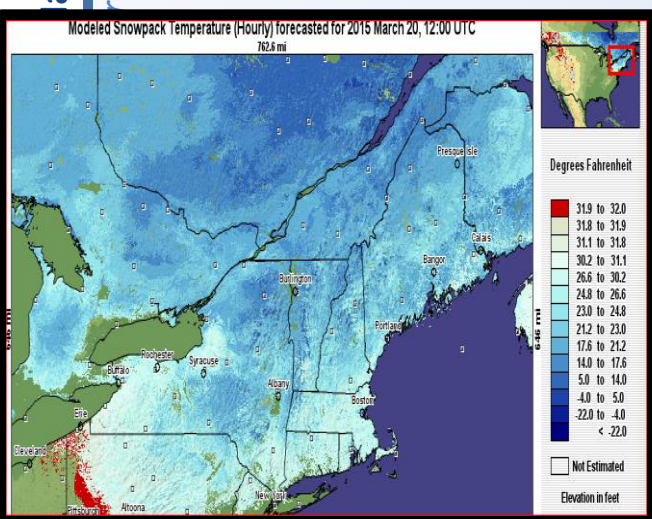
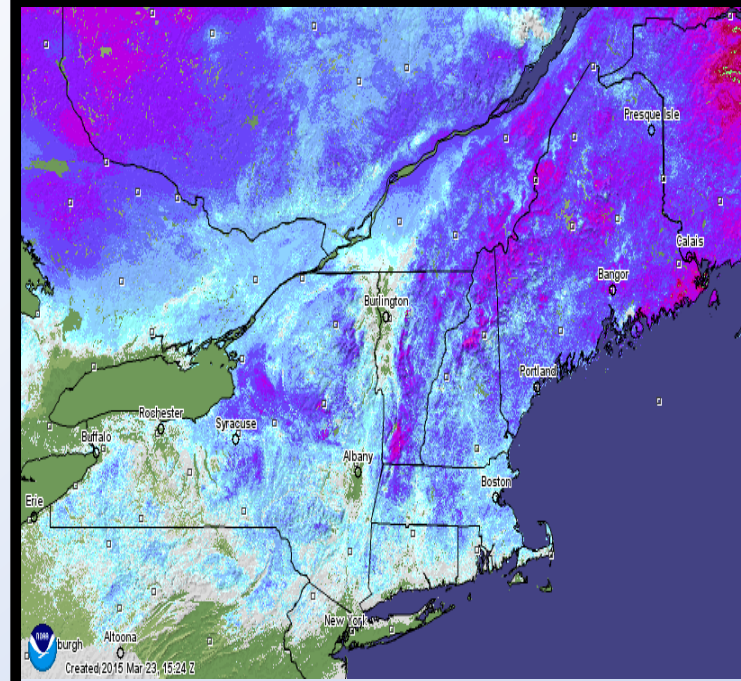
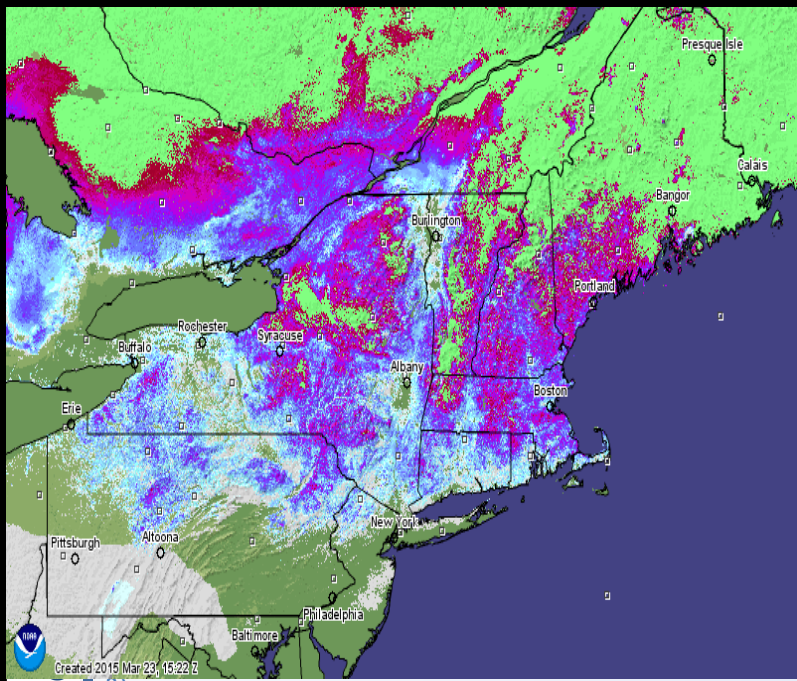
180 Day Departures from Normal  
Ending 2015-03-23



Source: NOAA Northeast River Forecast Center, Taunton, MA

# Snow Conditions

## ---Depth---SWE---Temperature---Melt

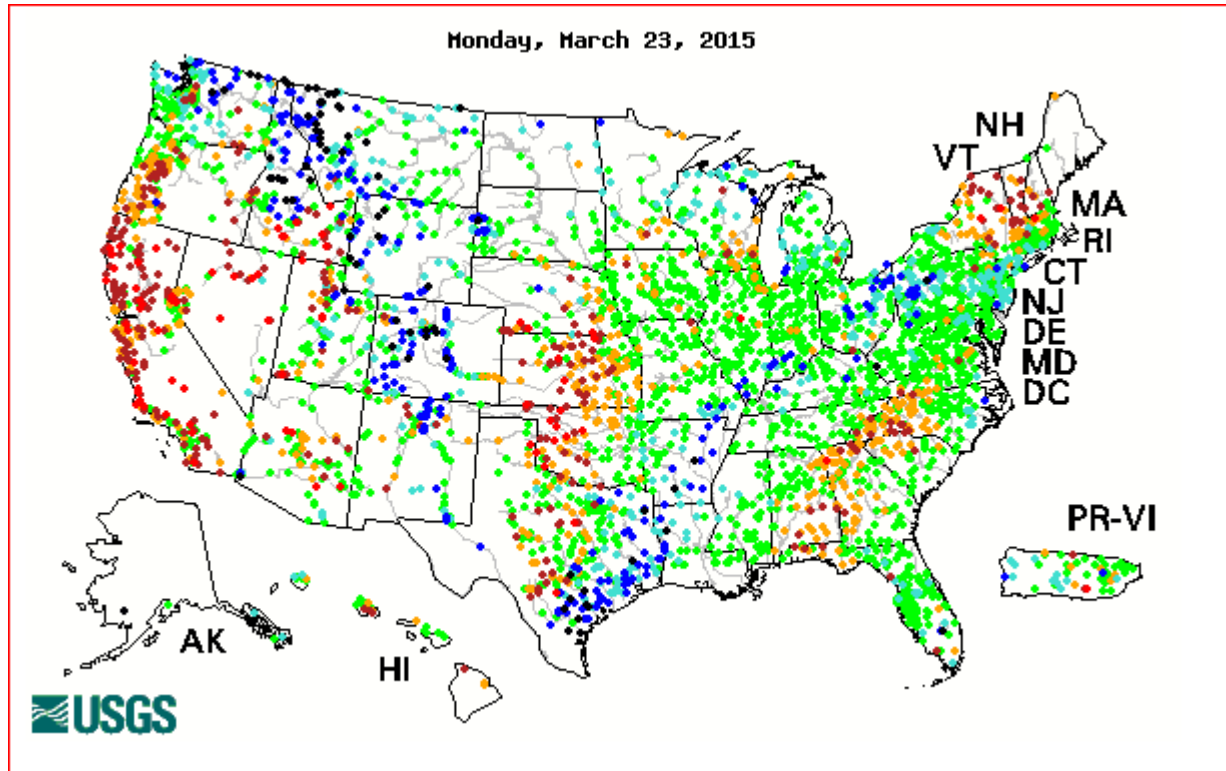




# USGS Current Streamflow Conditions

## Map of 7-day average streamflow compared to historical streamflow for the day of the year (United States)

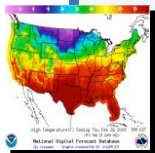
Monday, March 23, 2015



Choose a data retrieval option and select a location on the map

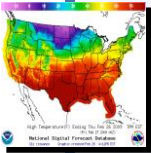
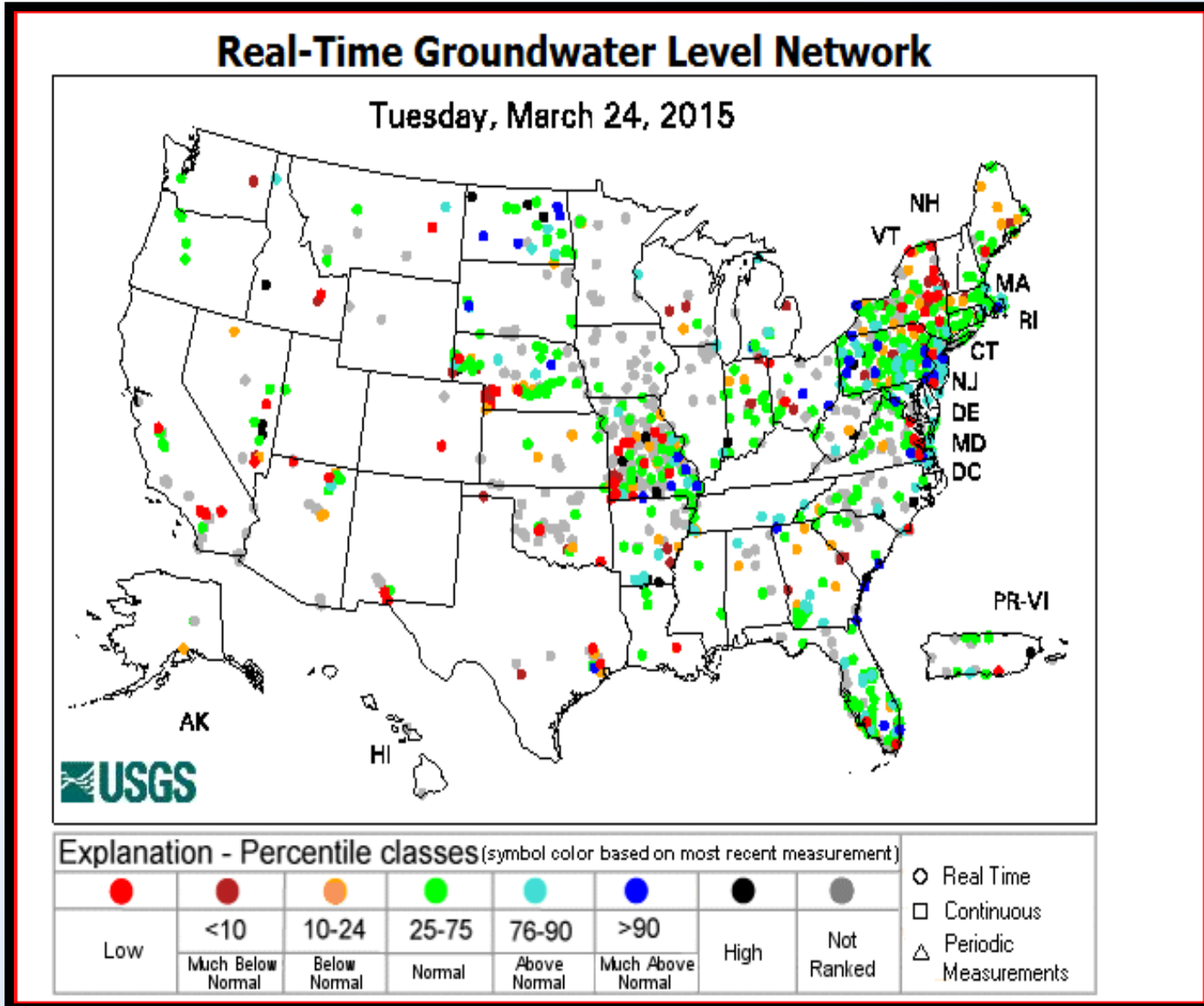
- List of all stations in state,  State map, or  Nearest stations

Explanation - Percentile classes						
Low	<10	10-24	25-75	76-90	>90	High
	Much below normal	Below normal	Normal	Above normal	Much above normal	



# USGS -- Current Groundwater Conditions

National Weather Service  
Protecting Lives and Property



# Water Supply/Lake Levels

## New York City's Water Supply System

March 23, 2015

<b>Total Storage</b>	(% of Capacity)	
Current:		73.6
Normal:		93.1
<b>Consumption</b>	(billion gallons)	
03/22/15		1.04
<b>Average Precipitation</b>	(inches)	
	Actual	Historical
January:	2.58	3.11
February:	1.60	2.50
March:	1.09	2.58

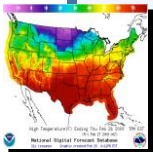
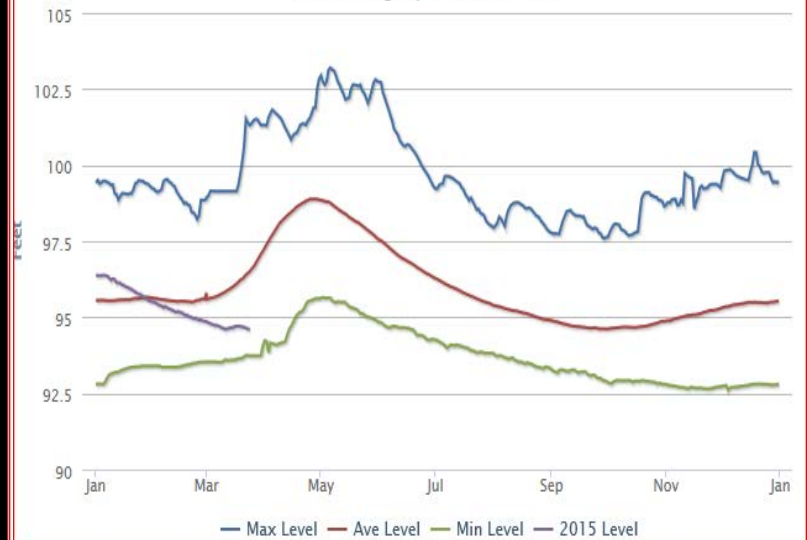
### Current Conditions Status = Normal Operations

Quabbin Level	Normal Operations	Below Normal	Drought Warning	Drought Emergency 1	Drought Emergency 2	Drought Emergency 3
	100%- 80%	80%-65%	65%-50%	50% -30%	38% -25%	25% -0%

Scituate Reservoir Elevation (feet)	280.96	(92.1 % of Capacity)
Plant Influent (mgd)	54.035088	(83.6 CFS)
Cumulative Reservoir Evap. (gal)	-46,830	
Downstream Discharge (mgd)	9.95	(15.39 CFS)

### Lake Champlain Extremes and Level

Click and drag in plot area to zoom in



# Soil Moisture/River Ice Thickness/Frost Depth

- Palmer/Crop Soil Moisture Indices -- Short/Long Term Normal/Wet south basins
- River Ice Thicknesses ---Jan- Mar AFDD Above Normal
  - 0.5' to 1.5' ft. Plus Ice Thickness --Central/Northern NY northeastward to Maine
  - Many openings ...Ice Free SNE

--Earlier Ice Jams (Breakup/Freezeup)

Walkill River

Cattaraugus Creek

Buffalo Creek

Casanovia Creek

St. Johns River

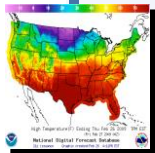
Aroostook River

Penobscot River

Kennebec

Frost

< 6 inches SNE

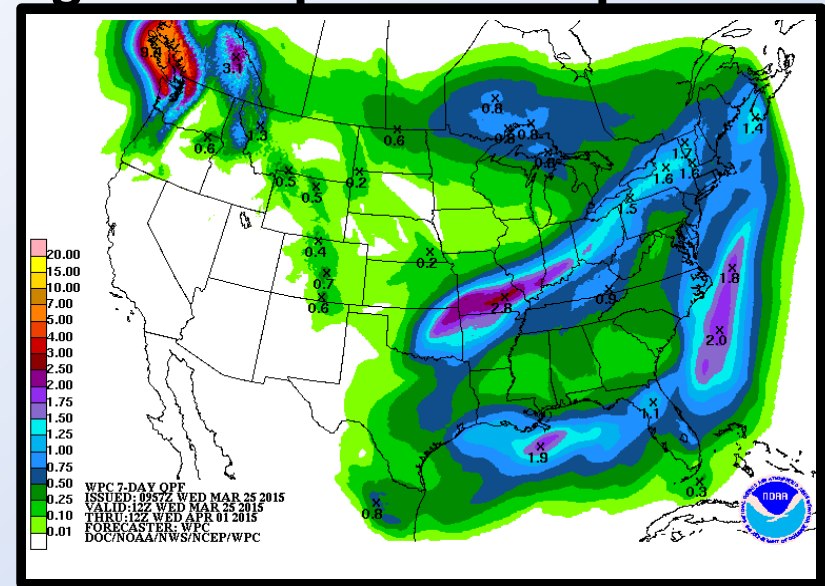
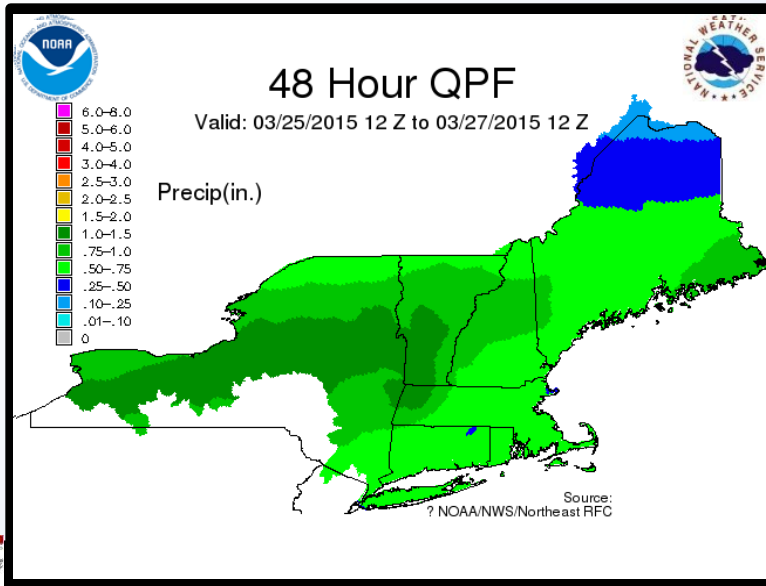


# Looking Ahead – Pattern Switching—BNTANP

## ➤ Week 1

➤ Brief...but significant warmup

➤ Near 1 Inch Rain Event...higher temps and dewpoints



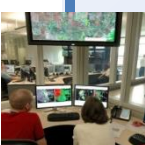
## ➤ Week 2

➤ – Below Normal Temps

➤ -- Above Normal Precipitation.

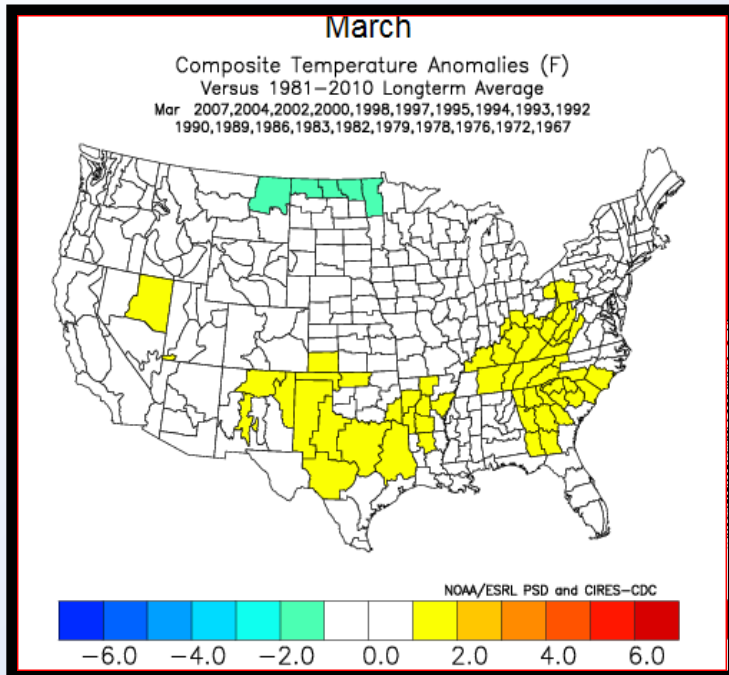
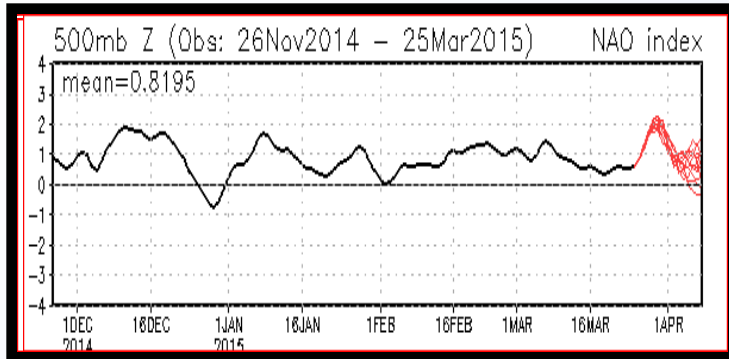
➤ Can we get another period of Controlled Melt?

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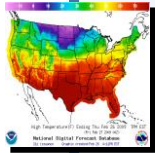
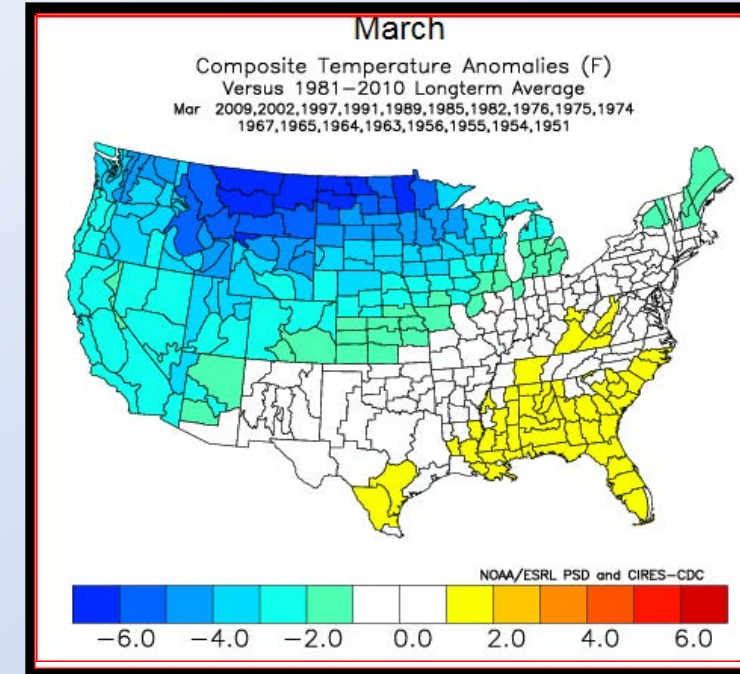
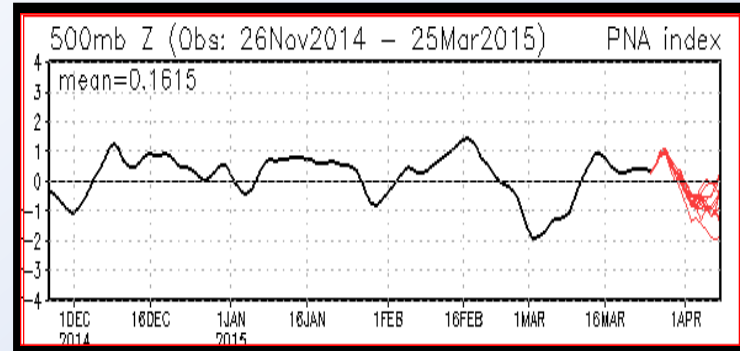


# North Atlantic Oscillation (NAO) Pacific-North American Pattern (PNA)

## ➤ NAO

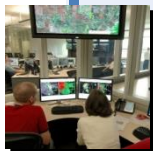
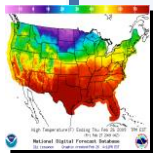
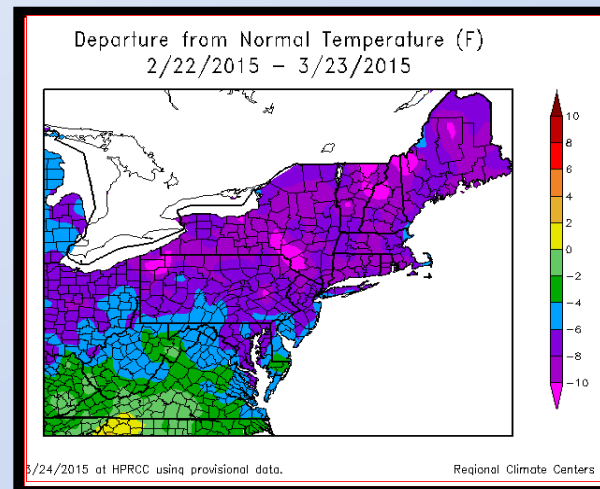
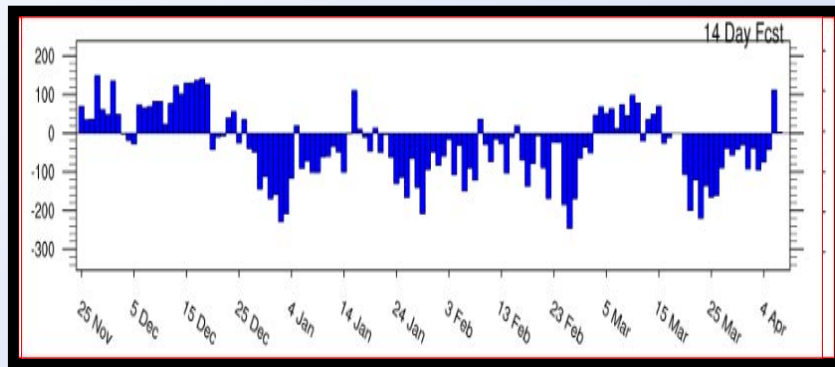
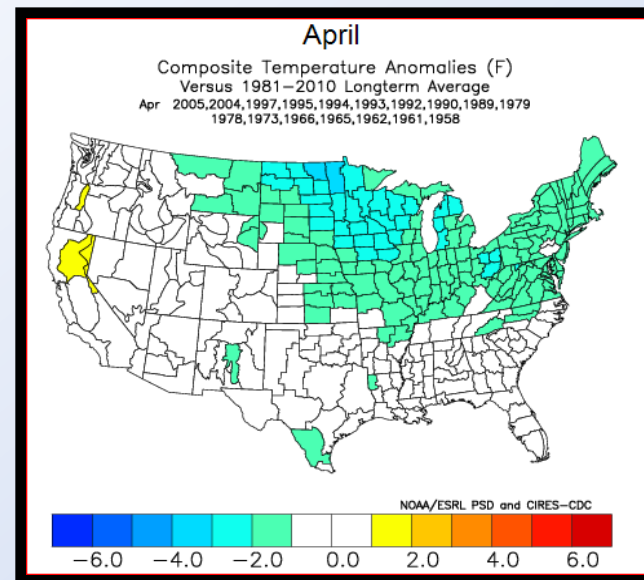
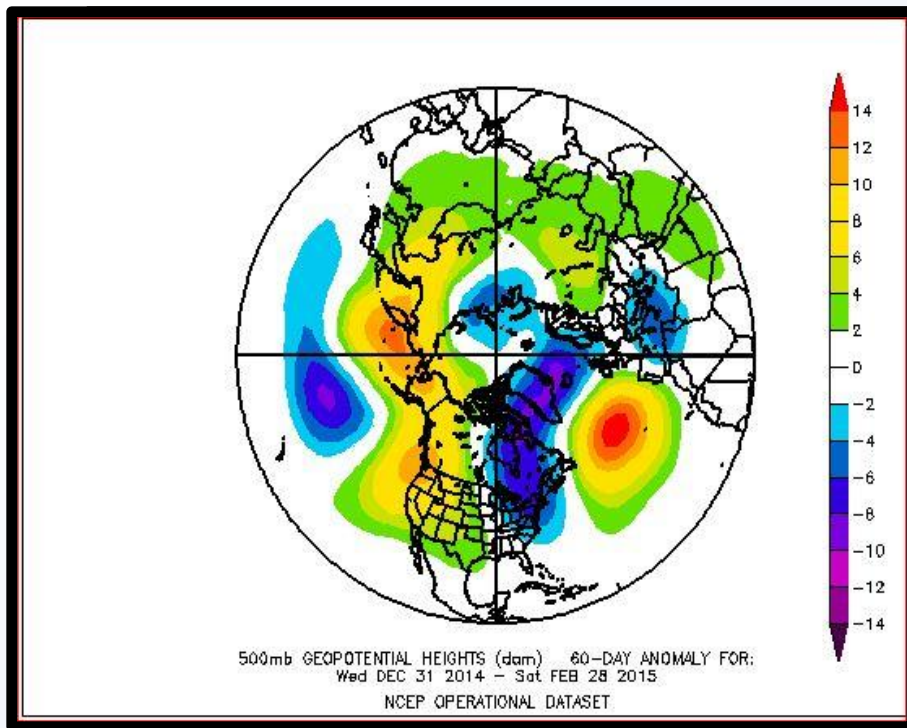


## PNA



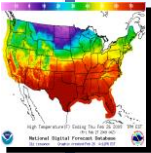
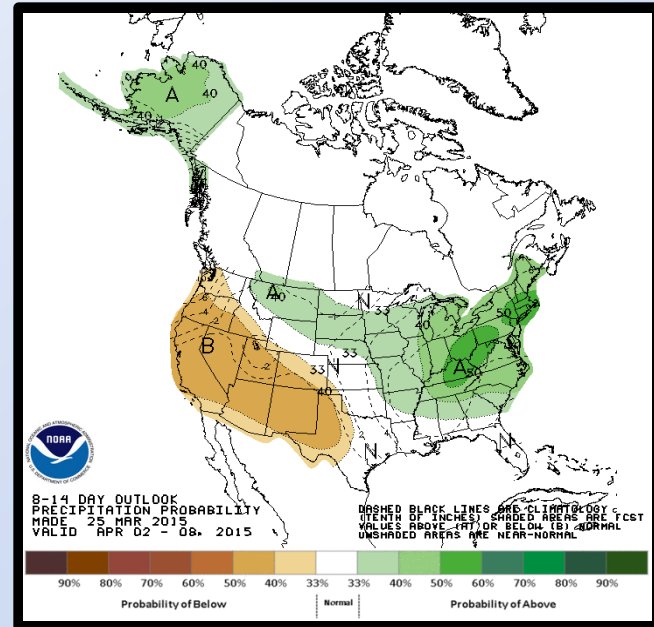
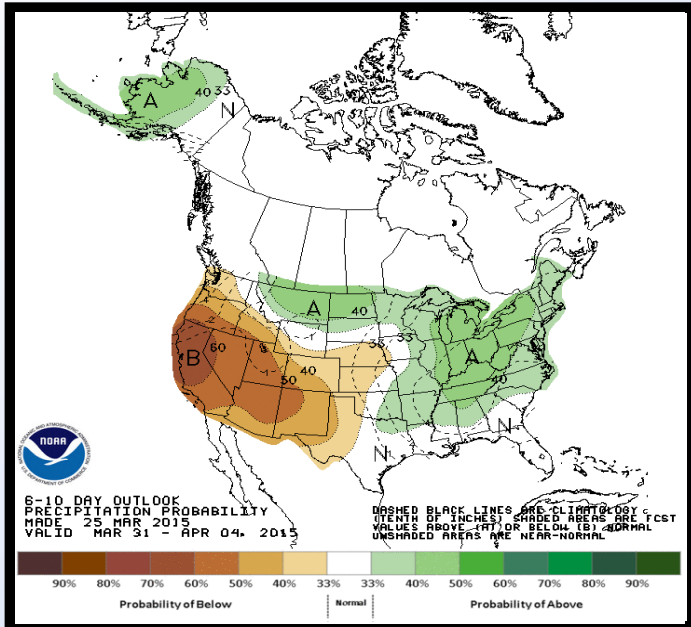
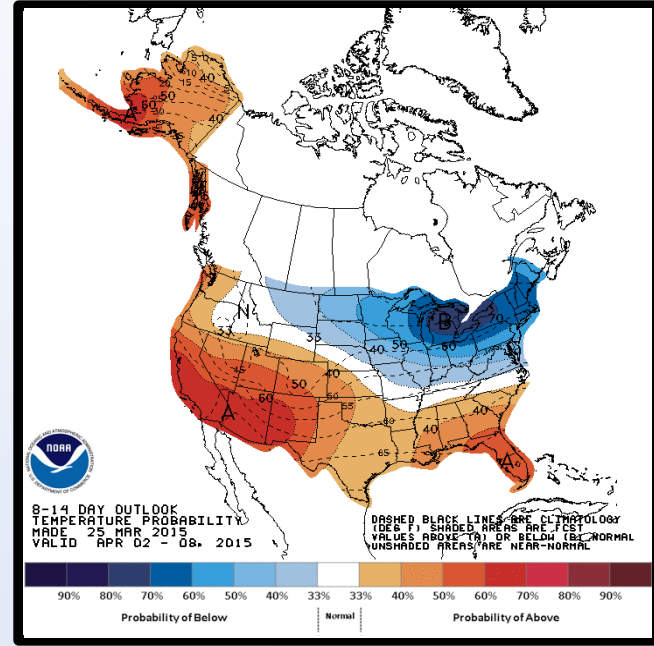
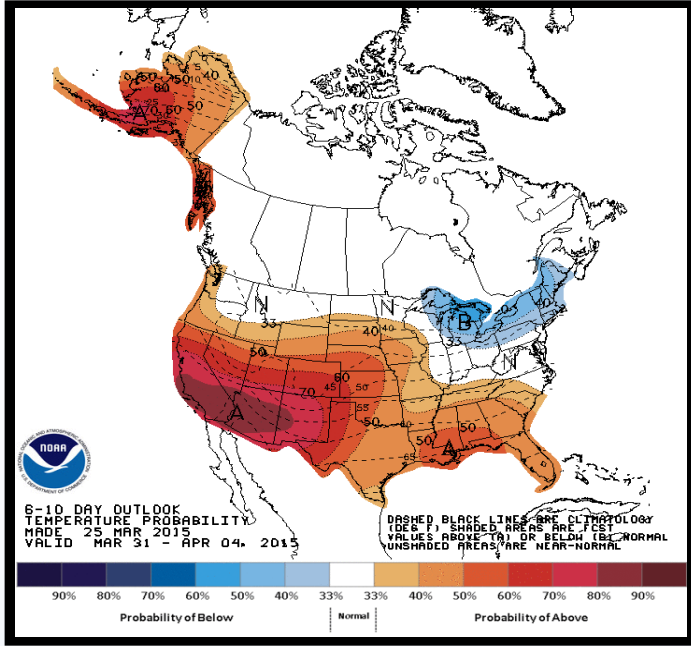
# Dominant Winter Wx Pattern

National Weather Service  
Protecting Lives and Property



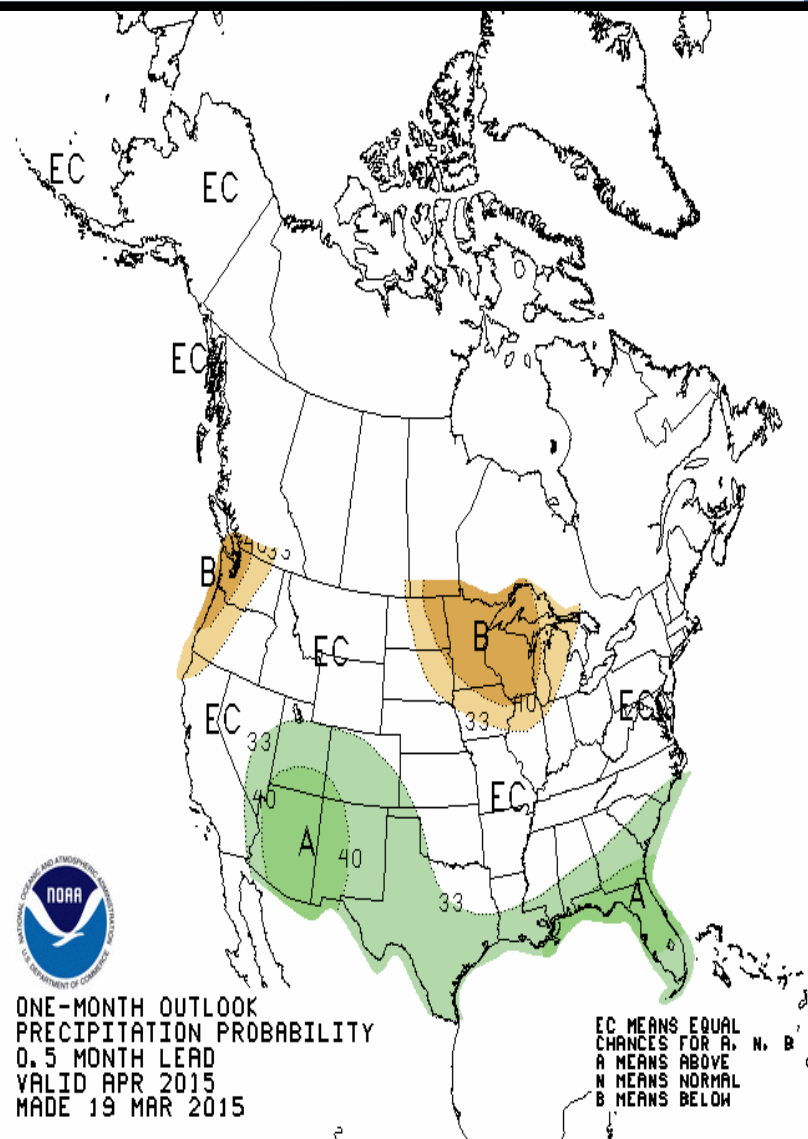
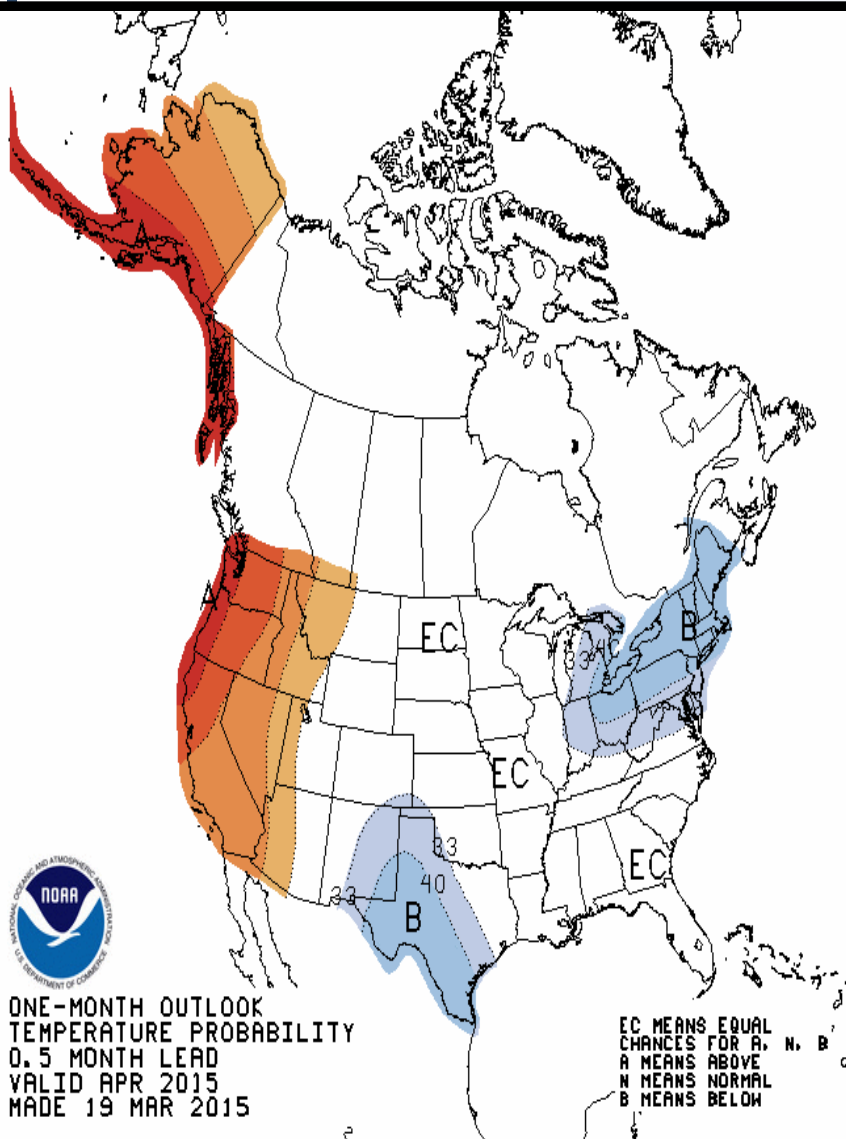
# Outlooks – 6-10 and 8-14 day

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Protecting Lives and Property

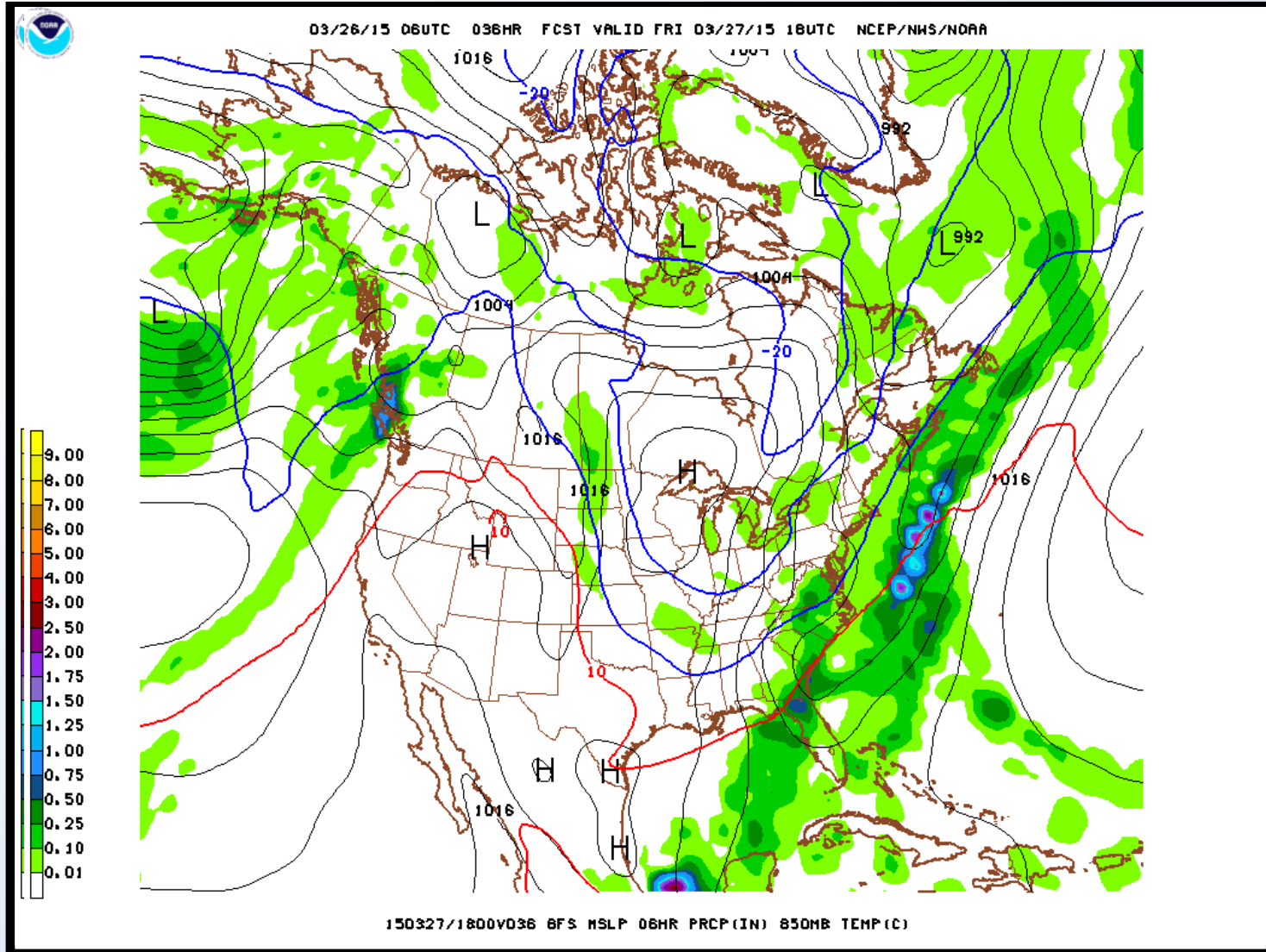




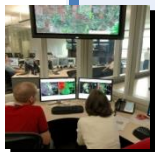
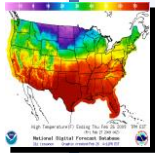
# CPC April 2015 Outlook



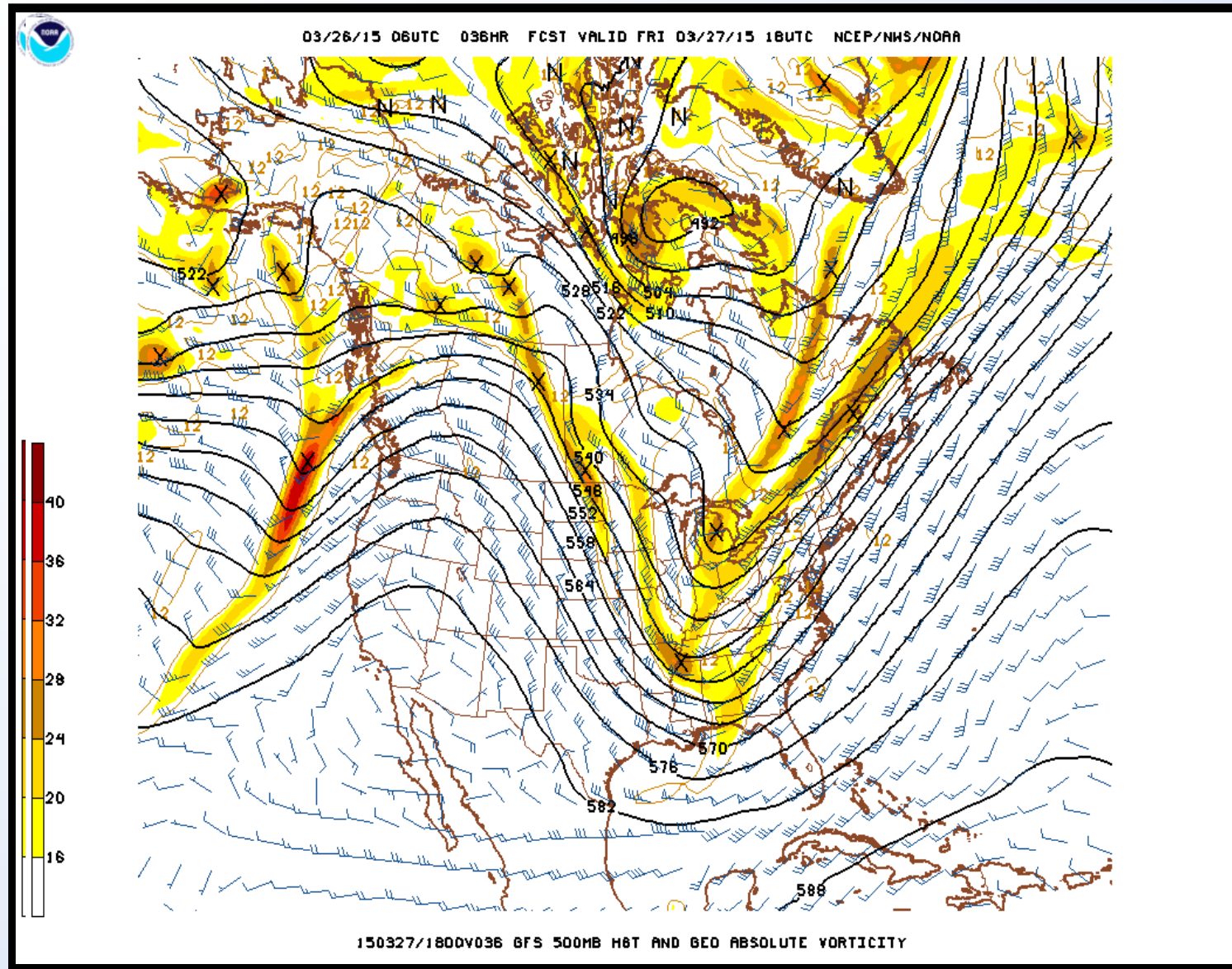
# Surface Map – Mar 27th



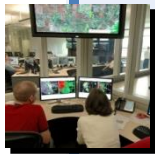
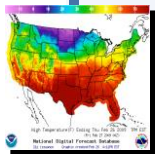
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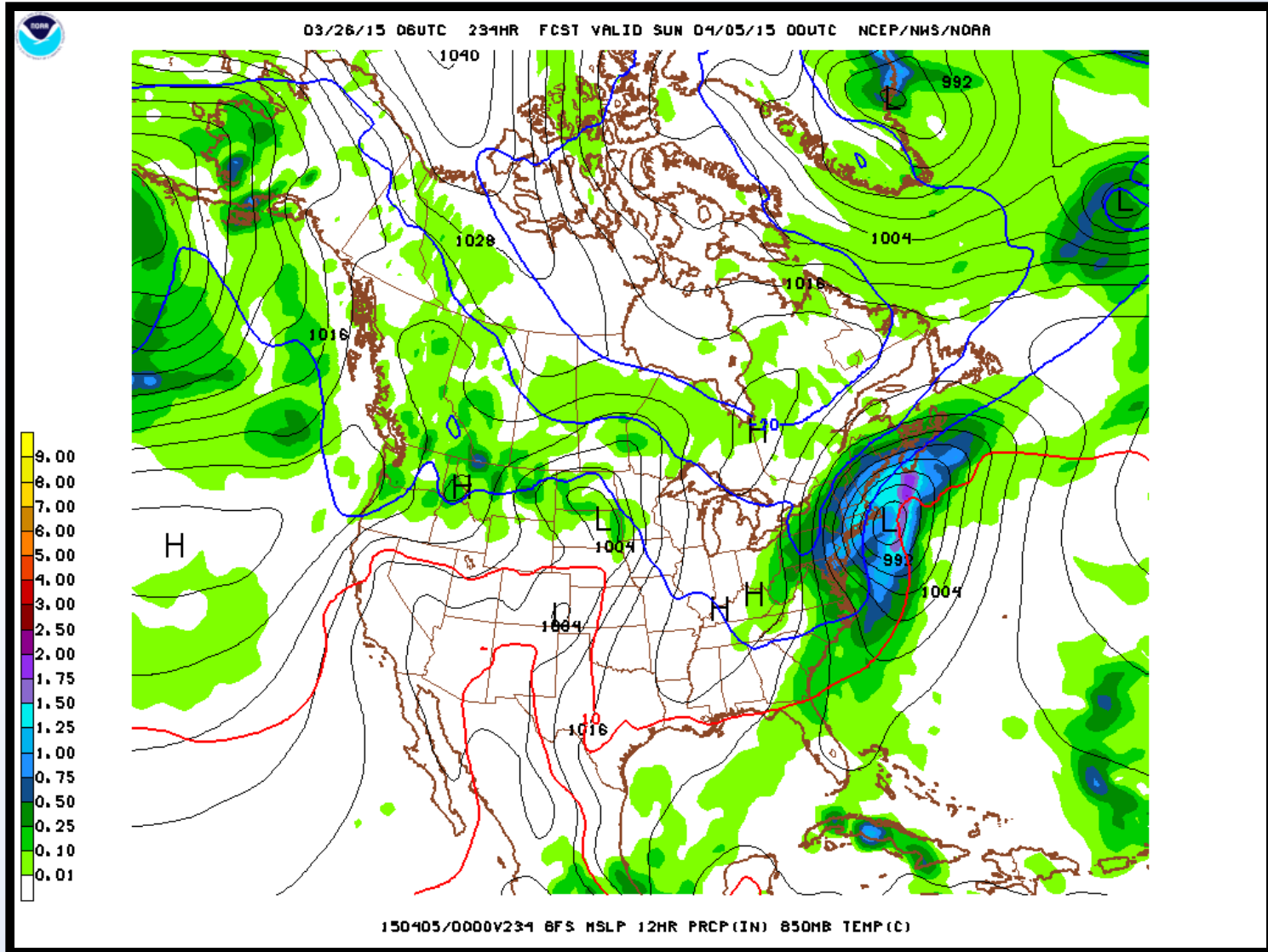
# 500 MB Height – Mar 27th



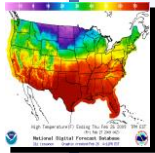
National Weather Service  
Protecting Lives and Property



# Surface Analysis --- Apr 5th

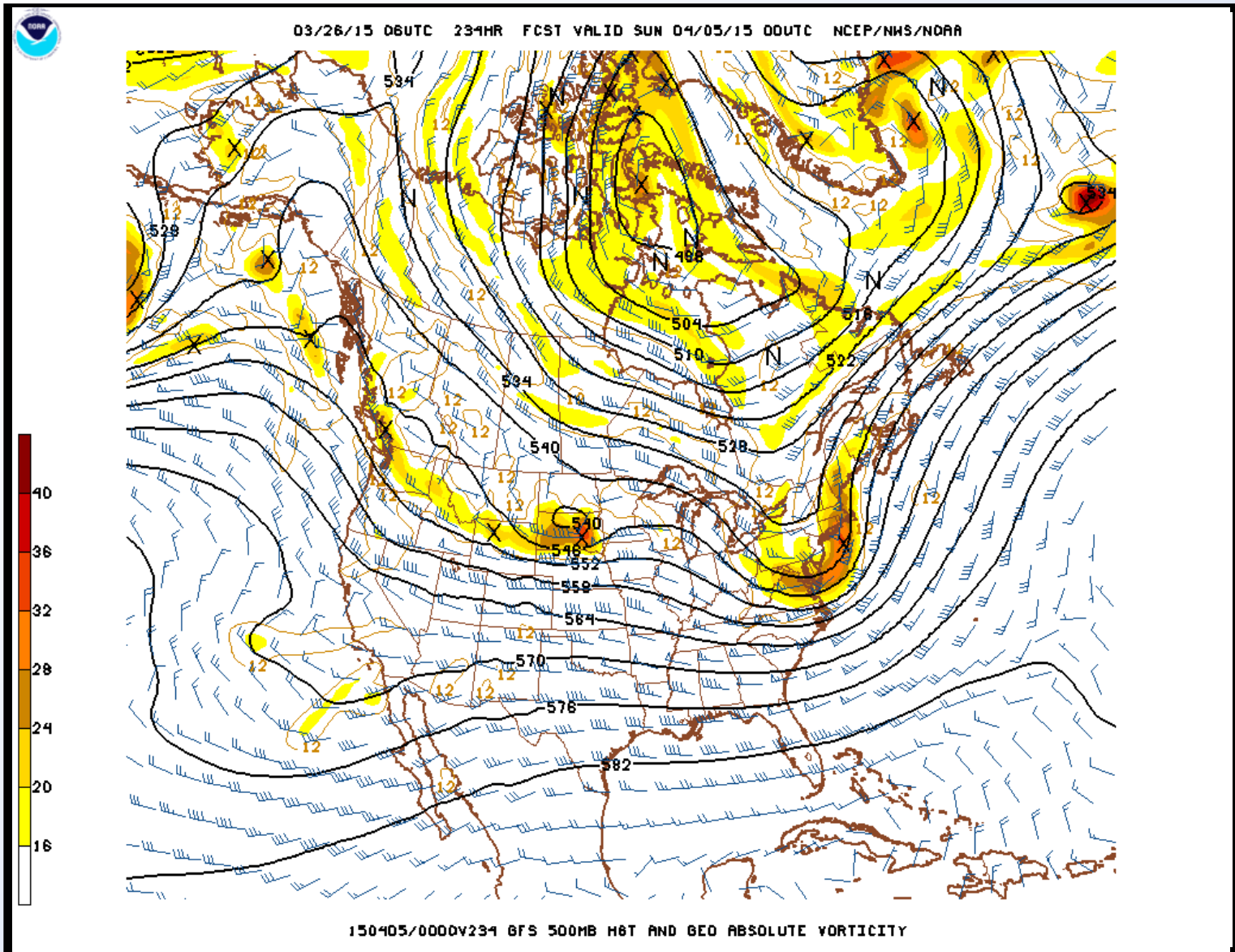
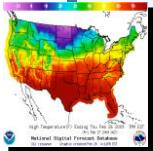


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# 500 MB Height – Apr 5th

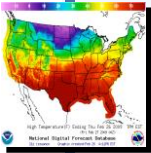
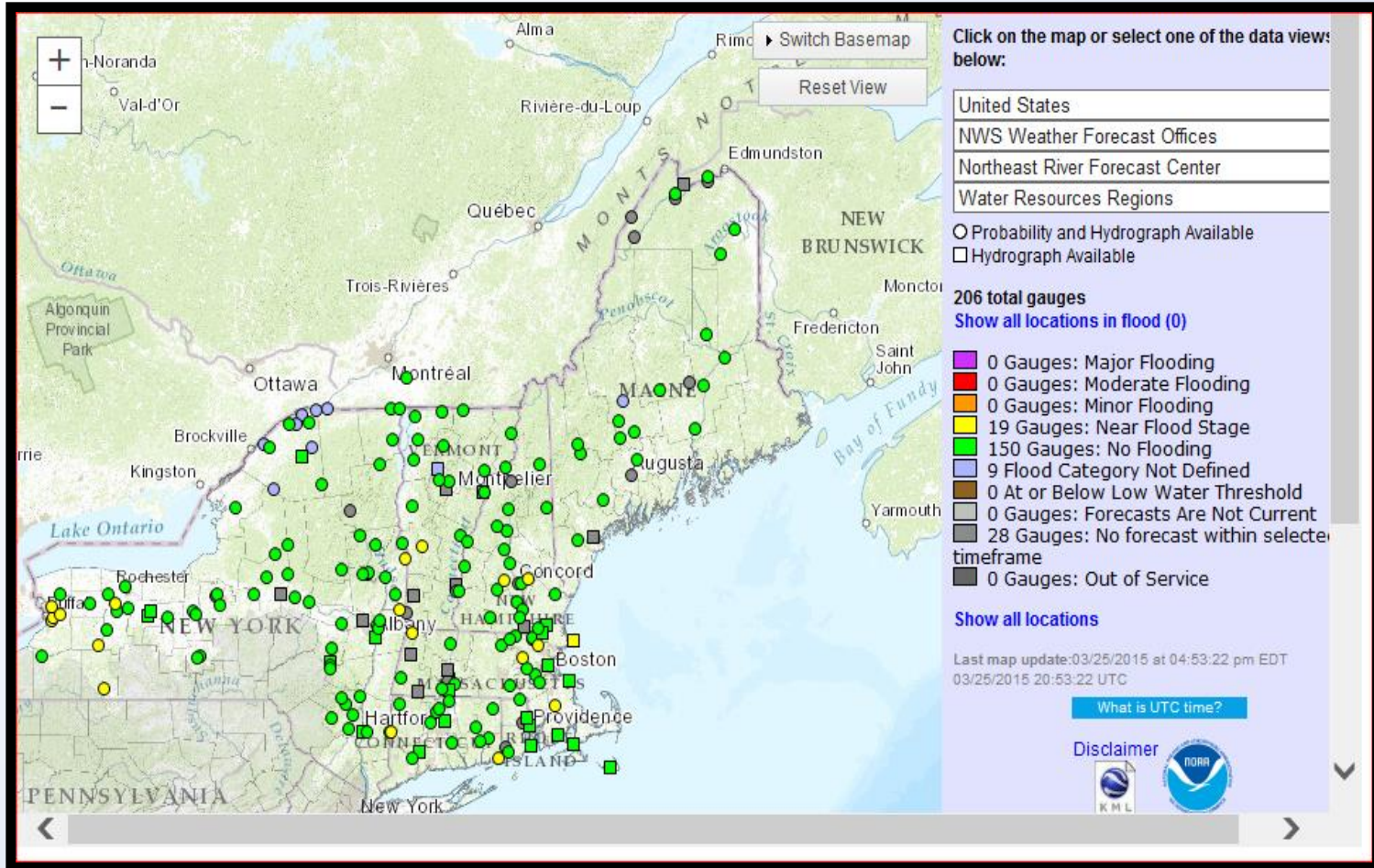
National Weather Service  
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# NERFC Daily Forecast

<http://www.weather.gov/nerfc/>

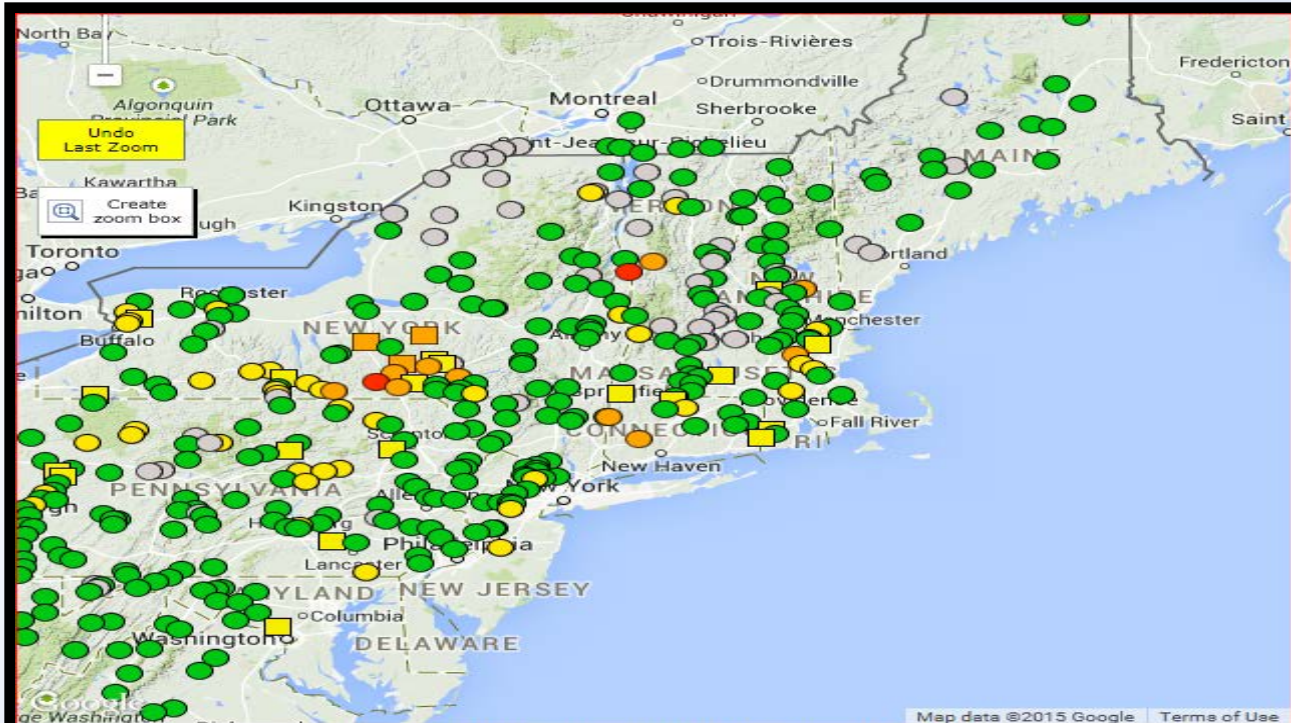
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# MMEFS – Met Model Ensemble Forecast System

<http://www.erh.noaa.gov/mmefs/index.php?Lat=44&Lon=-73&Zoom=6>

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Map Last Updated: Tuesday, March 24, 2015 at 1:11:20 PM

Turn Auto Refresh ON

Turn RFC Boundaries ON

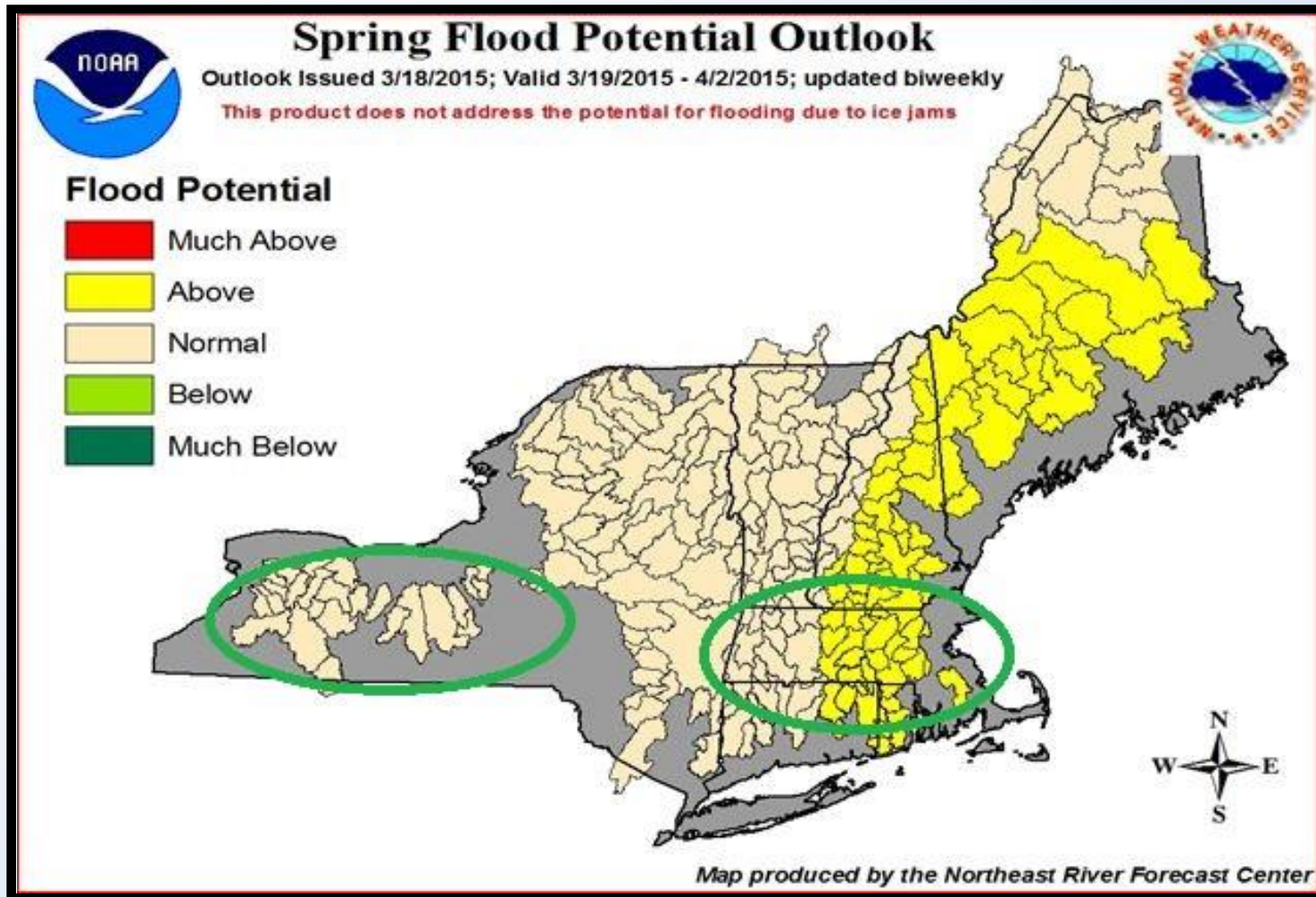
Make a link to this map view

News Legend		
News Items less than 24 hours old	News Items 1 to 7 days old	No current News Items
Map Legend		
Chance of Exceedance		
30%	Level	70%
	Action	
	Minor Flood	
	Moderate Flood	
	Major Flood	
● = less than 30% chance of reaching Action level		
○ = no critical levels defined for this point		
River Forecast Centers		

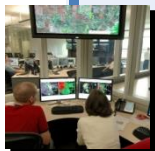
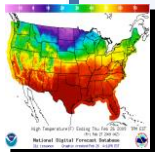


# Flood Potential Outlook

## Valid until Apr 2nd



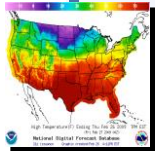
National Weather Service  
Protecting Lives and Property





# Upcoming Briefings Friday Morning Schedule

- **Winter/Spring Outlooks**
  - *Friday, April 3<sup>rd</sup> at 11:00AM*
  - *Every 2 Weeks into May 2014*
  - *Emphasis on Snowpack and Ice/Melt Issues*
  - *Fridays – Week of Snow Survey Measurements*





- ***Thank you***
- ***Ed Capone***
- ***Service Coordination Hydrologist***

