

The Disaster Center is dedicated to the idea that disaster mitigation is cost effective and individuals pursuing their own interest are the greatest potential force for disaster reduction.

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When disaster mitigation is cost effective, we are on the road to bringing disasters to an end.



# **FEMA**

## **Daily Operations Briefing**

**Wednesday, March 18, 2015**

**8:30 a.m. EDT**

# Significant Activity: Mar 17 -18



## **Significant Events:**

- Geomagnetic storms reaching the G4 level occurred

## **Significant Weather:**

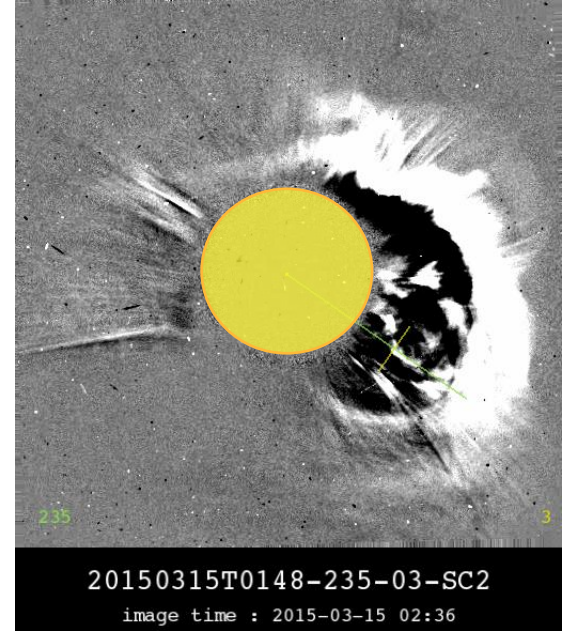
- Heavy snow – Northern Plains
- Snow – Northern Plains & Great Lakes to Northeast
- Flash flooding – Coastal Texas
- Rain/snow – Rockies to Upper Mississippi Valley
- Rain & thunderstorms – Pacific Northwest, California & Southwest to Ohio Valley & throughout Southeast
- Critical Fire Weather Areas/Red Flag Warnings: None
- Space Weather: past 24 hours - severe, G4 geomagnetic storms and R1 radio blackouts occurred; next 24 hours – minor, G1 geomagnetic storms and S1 solar radiation storms likely

**Tropical Activity:** No activity threatening U.S. territories

**Declaration Activity:** None

**FEMA Readiness:** No activity

# Space Weather – G4 (Severe) Event



One of the two CMEs from March 14

Space Weather Conditions:  
<http://www.swpc.noaa.gov>

Space Weather Scales:  
<http://www.swpc.noaa.gov/noaa-scales-explanation>

## Situation:

- On Mar 14, two eruptions produced Coronal Mass Ejections (CME) which appeared to have combined before reaching Earth
  - CME arrived 14-15 hours earlier and closer to Earth than forecast
  - Magnetic field of CME was favorable for G4 activity
- On March 17, Geomagnetic storming reached Severe (G4) levels at 10 a.m., 2 p.m. & 7:30 p.m. EDT
  - Strong (G3) Geomagnetic storms also occurred
  - Activity gradually tapering off as sunspot 2297 decays and moves out of view
- Last G4 occurred in fall of 2013
- Typical solar cycle (11-year period) averages 60 days with G4 events

## Impacts:

- 200 mV/km voltage fluctuations reported at power plants in Canada; no failures known at this time
- Severe ionospheric density depletion above 45° latitudes with likely radio communication disruptions; Ham radio operators noted high frequency (HF) disruptions in Northwest U.S.
- Spectacular auroral sightings from Michigan to Alaska and as far south as southern Colorado, early morning of 17-March.

## Response:

- NOAA SWPC continues to monitor and collect impact information
- No impacts to FEMA Regions or assets
- FEMA NWC continues to monitor and provide updates as required

# Space Weather Scales – Geomagnetic Storms



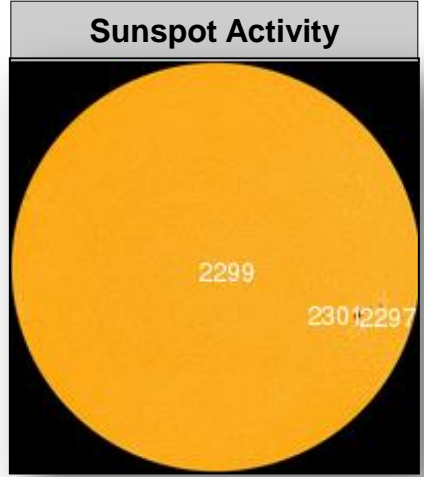
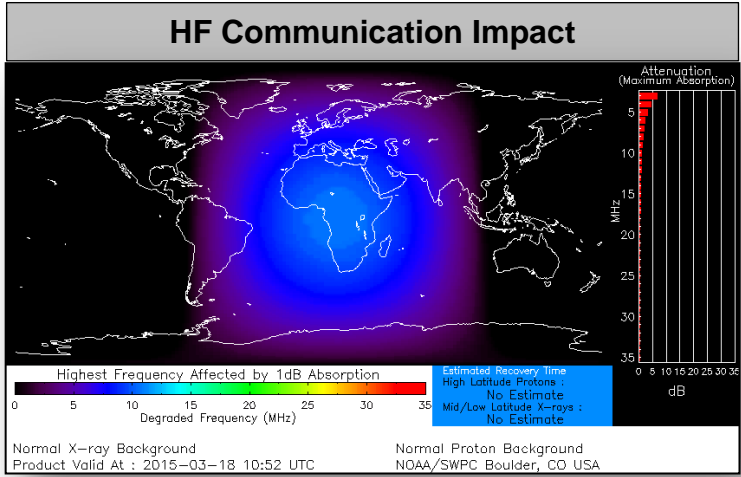
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G 5	Extreme	<p><b>Power systems:</b> Widespread voltage control problems and protective system problems can occur, some grid systems may experience complete collapse or blackouts. Transformers may experience damage.</p> <p><b>Spacecraft operations:</b> May experience extensive surface charging, problems with orientation, uplink/downlink and tracking satellites.</p> <p><b>Other systems:</b> Pipeline currents can reach hundreds of amps, HF (high frequency) radio propagation may be impossible in many areas for one to two days, satellite navigation may be degraded for days, low-frequency radio navigation can be out for hours, and aurora has been seen as low as Florida and southern Texas (typically 40° geomagnetic lat.).</p>
G 4	Severe	<p><b>Power systems:</b> Possible widespread voltage control problems and some protective systems will mistakenly trip out key assets from the grid.</p> <p><b>Spacecraft operations:</b> May experience surface charging and tracking problems, corrections may be needed for orientation problems.</p> <p><b>Other systems:</b> Induced pipeline currents affect preventive measures, HF radio propagation sporadic, satellite navigation degraded for hours, low-frequency radio navigation disrupted, and aurora has been seen as low as Alabama and northern California (typically 45° geomagnetic lat.).</p>
G 3	Strong	<p><b>Power systems:</b> Voltage corrections may be required, false alarms triggered on some protection devices.</p> <p><b>Spacecraft operations:</b> Surface charging may occur on satellite components, drag may increase on low-Earth-orbit satellites, and corrections may be needed for orientation problems.</p> <p><b>Other systems:</b> Intermittent satellite navigation and low-frequency radio navigation problems may occur, HF radio may be intermittent, and aurora has been seen as low as Illinois and Oregon (typically 50° geomagnetic lat.).</p>

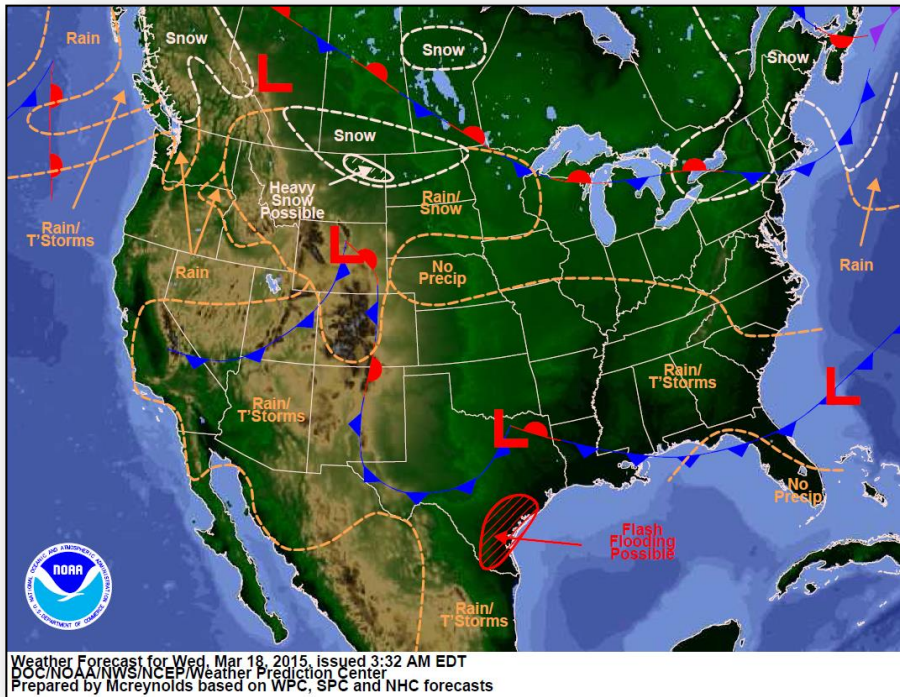
Source: <http://www.swpc.noaa.gov/noaa-scales-explanation>

# Space Weather

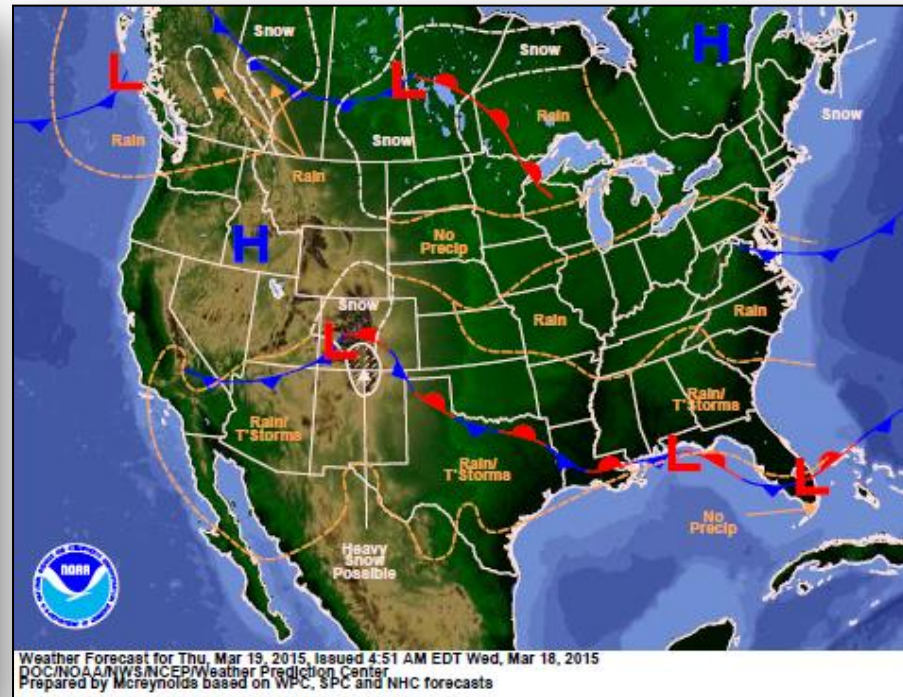
NOAA Scales Activity (Range: 1/minor to 5/extreme)	Past 24 Hours	Current	Next 24 Hours
Space Weather Activity:	Strong	None	Minor
• Geomagnetic Storms	G4	None	G1
• Solar Radiation Storms	None	None	S1
• Radio Blackouts	R1	None	None



# National Weather Forecast



*Today*

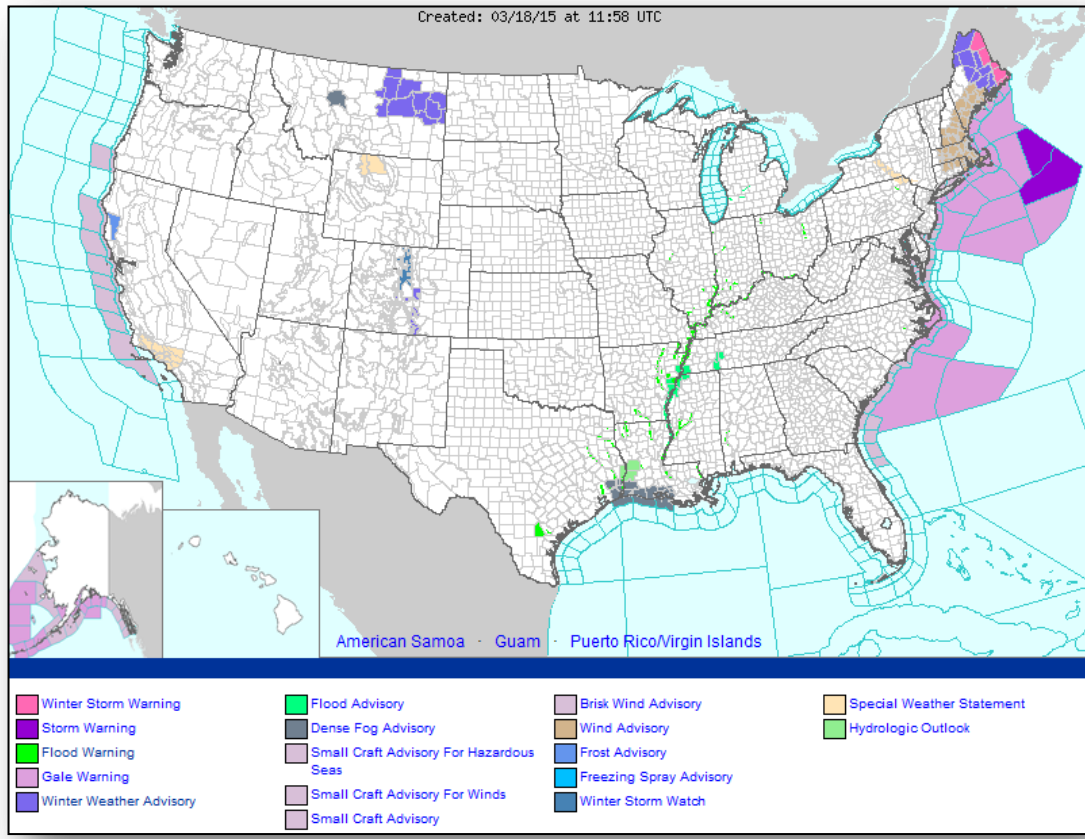


*Tomorrow*

# Active Watches/Warnings

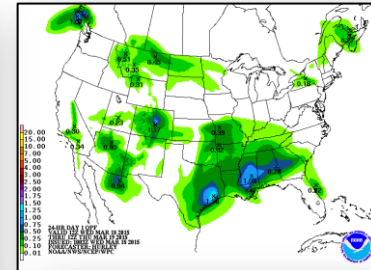
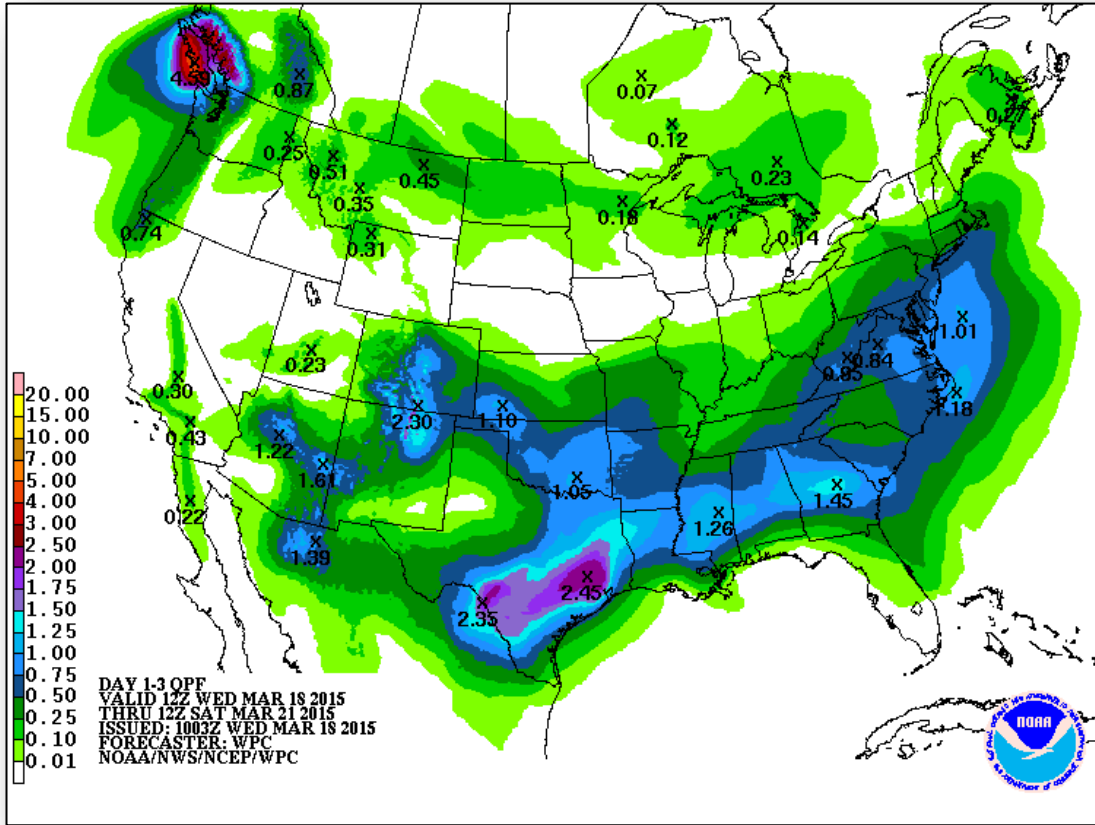


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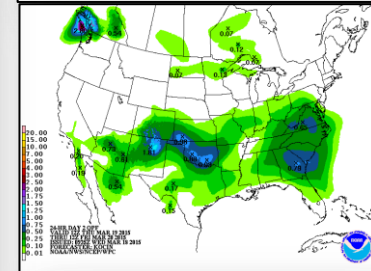




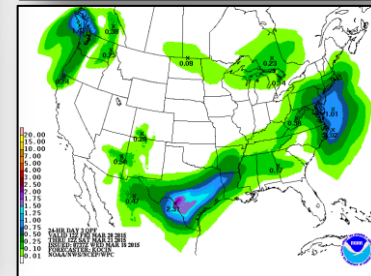
# Precipitation Forecast 1-3 Day



Day 1



Day 2

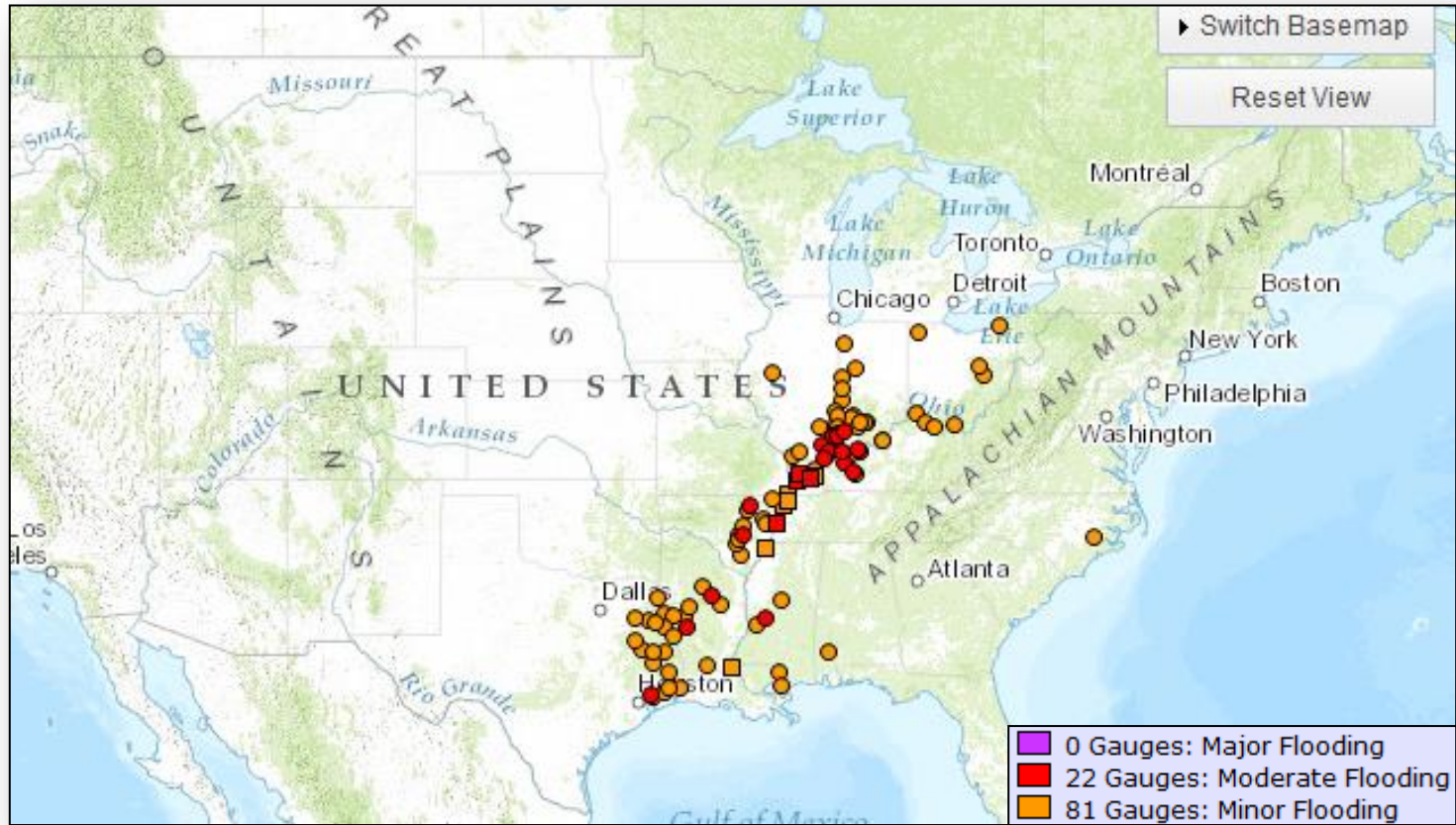


Day 3

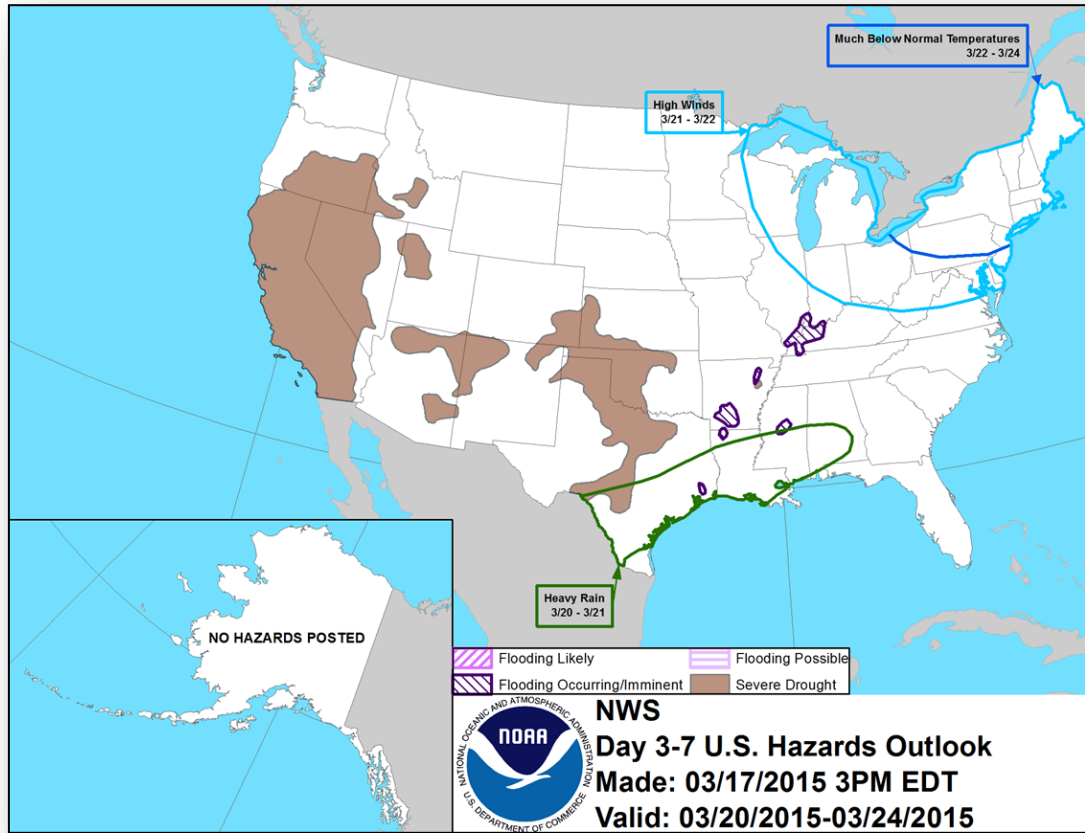
# River Forecast



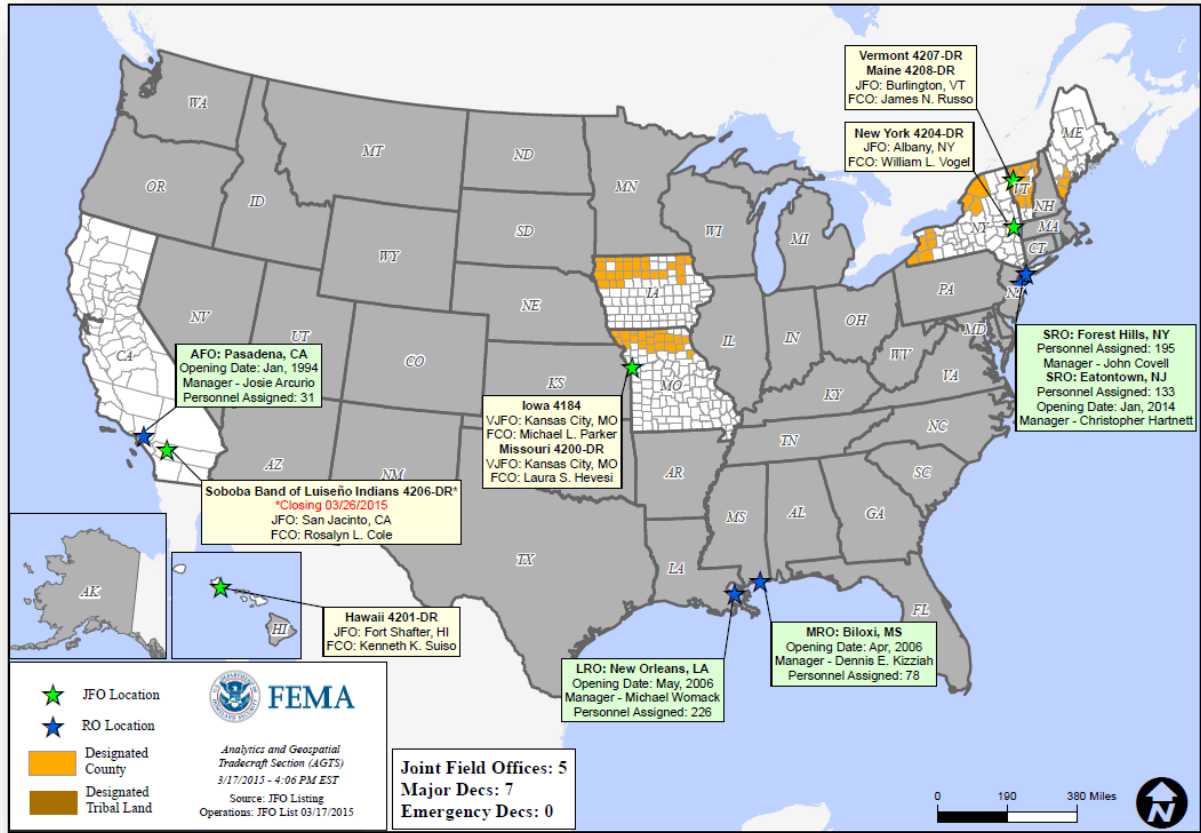
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# Hazard Outlook: Mar 20 - 24



# Open Field Offices as of March 18



# Disaster Requests & Declarations



<b>Declaration Requests in Process</b>		<b>Requests APPROVED (since last report)</b>	<b>Requests DENIED (since last report)</b>
<b>1</b>	<b>Date Requested</b>	<b>0</b>	<b>0</b>
<b>NH - DR Severe Winter Storm and Snowstorm</b>	<b>March 13, 2015</b>		

# Joint Preliminary Damage Assessments



Region	State / Location	Event	IA/PA	Number of Counties		Start – End
				Requested	Complete	
I	CT	January Blizzard January 25, 2015	PA	4	0	2/24 – 3/20
III	WV	Winter Storm March 4-7, 2015	PA	29	4 (+4)	3/16 - TBD
IV	TN	Winter Storm February 15, 2015	PA	48	14 (+14)	3/16 - TBD

# FEMA Readiness – Deployable Teams /Assets



Deployable Teams/Assets									
Resource	Status	Total	FMC Available		Partially Available	Not Available	Detailed, Deployed, Activated	Comments	Rating Criterion
FCO	Green	37	24	65%	0	1	12		OFDC Readiness: FCO Green Yellow Red Type 1 3+ 2 1 Type 2 4+ 3 2 Type 3 4 3 2 FDRC 3 2 1
FDRC	Green	10	10	100%	0	0	0		
US&R	Green	28	27	96%	0	1	0	NM-TF1 (Red – Personnel shortages)	<ul style="list-style-type: none"> <li>• Green = Available/FMC</li> <li>• Yellow = Available/PMC</li> <li>• Red = Out-of-Service</li> <li>• Blue = Assigned/Deployed</li> </ul>
National IMAT	Yellow	3	2	66%	0	0	1	IMAT East 2 – Deployed to GA	<ul style="list-style-type: none"> <li>• Green: 3 avail</li> <li>• Yellow: 1-2 avail</li> <li>• Red: 0 avail (<i>Individual N-IMAT red if 50% of Section Chiefs and/or Team Leader is unavailable for deployment.</i>)</li> </ul>
Regional IMAT	Green	13	10	77%	0	3	0	<u>Not Mission Capable (NMC):</u> <ul style="list-style-type: none"> <li>• Regions IV-3, VI-1 &amp; IX-1</li> </ul>	<ul style="list-style-type: none"> <li>• Green: 7 or more avail</li> <li>• Yellow: 4 - 6 teams available</li> <li>• Red: &gt; 8 teams deployed/unavailable</li> </ul> <p><i>R-IMAT also red if TL Ops/Log Chief is unavailable and has no qualified replacement</i></p>
MCOV	Green	60	57	95%	0	3	0		<ul style="list-style-type: none"> <li>• Green = 80 – 100% avail</li> <li>• Yellow = 60 – 79% avail</li> <li>• Red = 59% or below avail</li> <li>• Readiness remains 95%</li> </ul>

# FEMA Readiness – National/Regional Teams



National/Regional Teams									
Resource	Status	Total	FMC Available		Partially Available	Not Available	Deployed/ Activated	Comments	Rating Criterion
NWC		5	5	100%	0	0	Activated	Enhanced Watch (day shift only)	<ul style="list-style-type: none"> <li>• Green = FMC</li> <li>• Yellow = PMC</li> <li>• Red = NMC</li> </ul>
NRCC		2	344	89%	0	44	Not Activated		
HLT		1	N/A	N/A	0	0	Not Activated		
DEST							Not Activated		
RRCCs		10	10	100%	0	0	Not Activated		
RWCs/MOCs		10	10	100%	0	0	Activated		





# FEMA

**FEMA's mission is to support our citizens and first responders to ensure that as a nation we work together to build, sustain, and improve our capability to prepare for, protect against, respond to, recover from, and mitigate all hazards.**