



Government of India  
Ministry of Earth Sciences  
India Meteorological Department



Date: 18<sup>th</sup> February, 2024  
Time of Issue: 1330 hours IST

Special Message

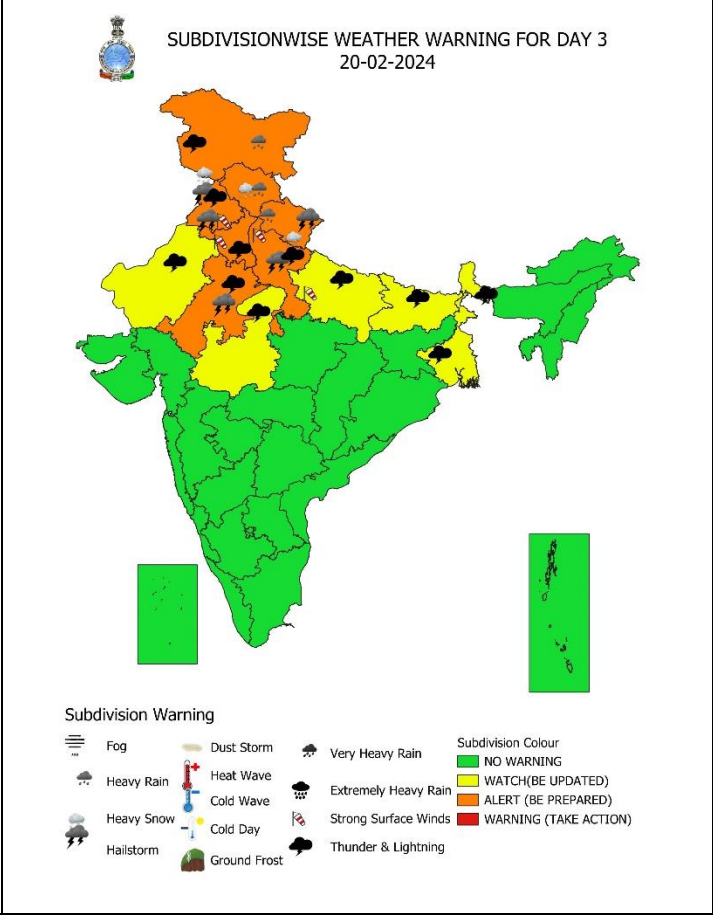
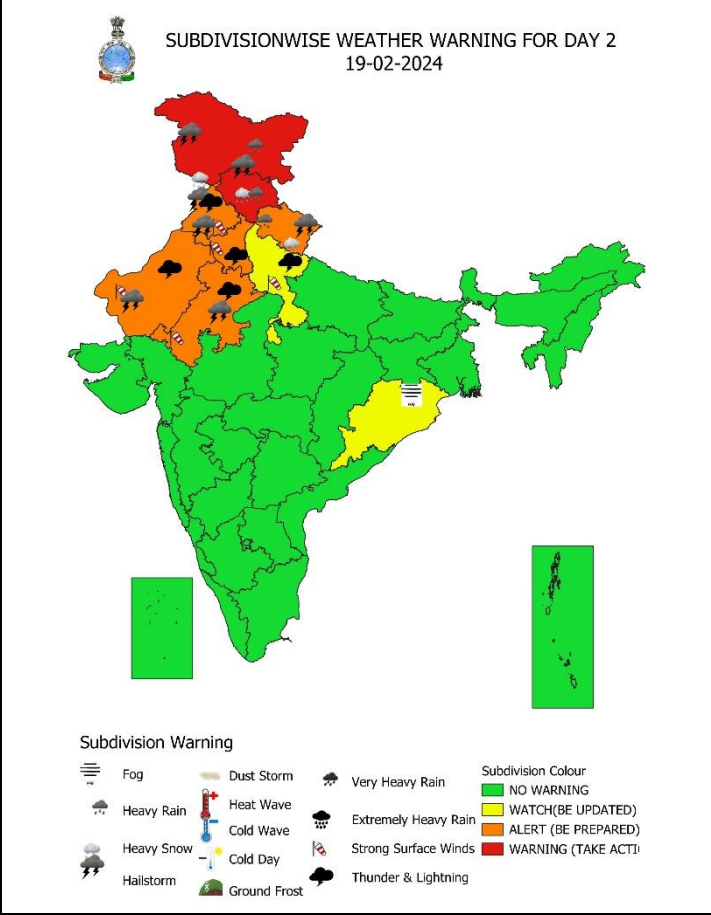
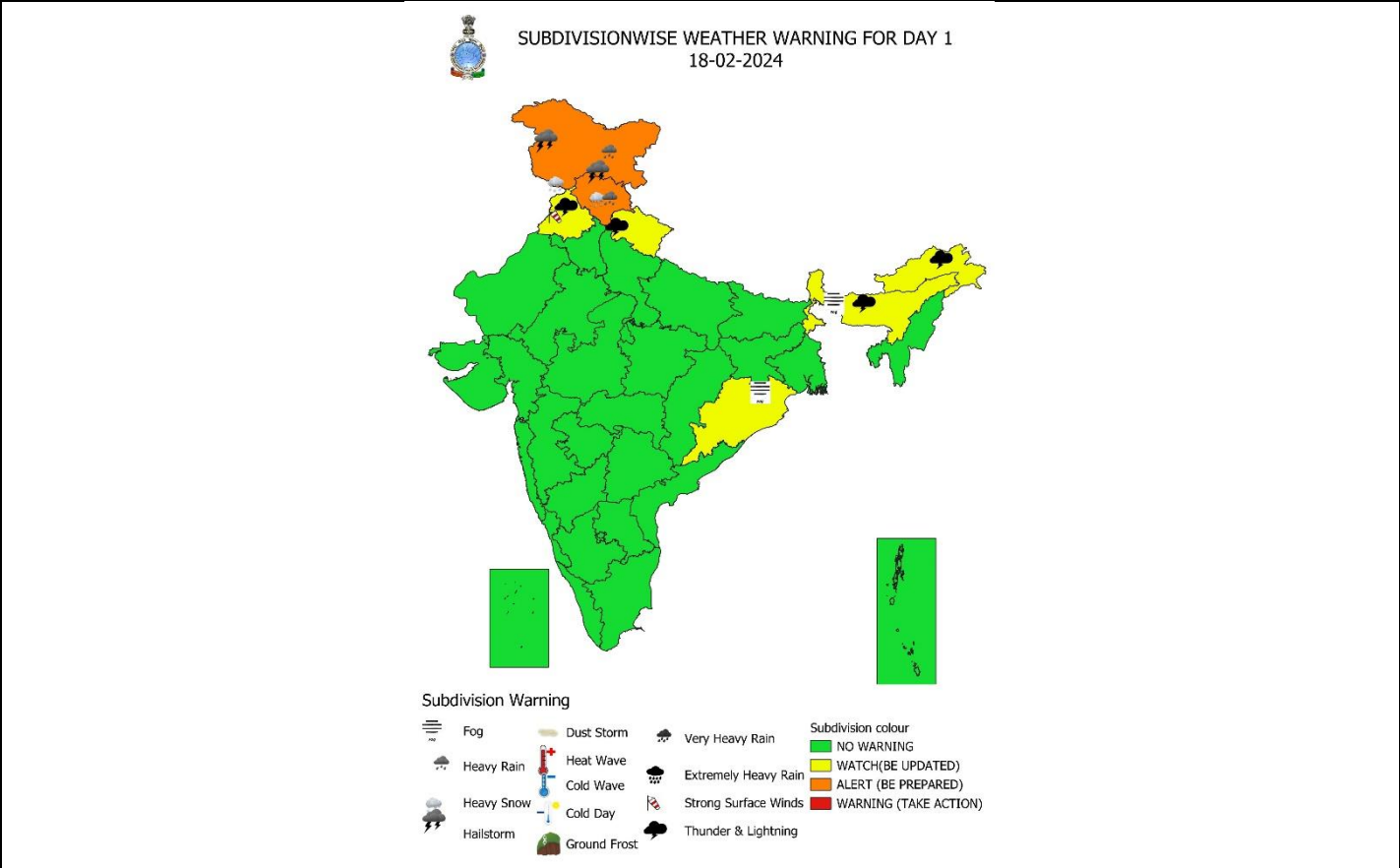
FROM: INDIA METEOROLOGICAL DEPARTMENT  
TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS  
CONTROL ROOM NDMA  
SECRETARY, MOES  
DIRECTOR GENERAL, DOORDARSHAN  
DIRECTOR GENERAL, AIR  
PIB MOES  
CHIEF SECRETARY, GOVT. OF JAMMU & KASHMIR  
CHIEF SECRETARY, GOVT. OF LADAKH  
CHIEF SECRETARY, GOVT. OF HIMACHAL PRADESH  
CHIEF SECRETARY, GOVT. OF UTTARAKHAND  
CHIEF SECRETARY, GOVT. OF PUNJAB  
CHIEF SECRETARY, GOVT. OF HARYANA  
CHIEF SECRETARY, GOVT. OF CHANDIGARH  
CHIEF SECRETARY, GOVT. OF DELHI  
CHIEF SECRETARY, GOVT. OF UTTAR PRADESH  
CHIEF SECRETARY, GOVT. OF RAJASTHAN  
CHIEF SECRETARY, GOVT. OF MADHYA PRADESH

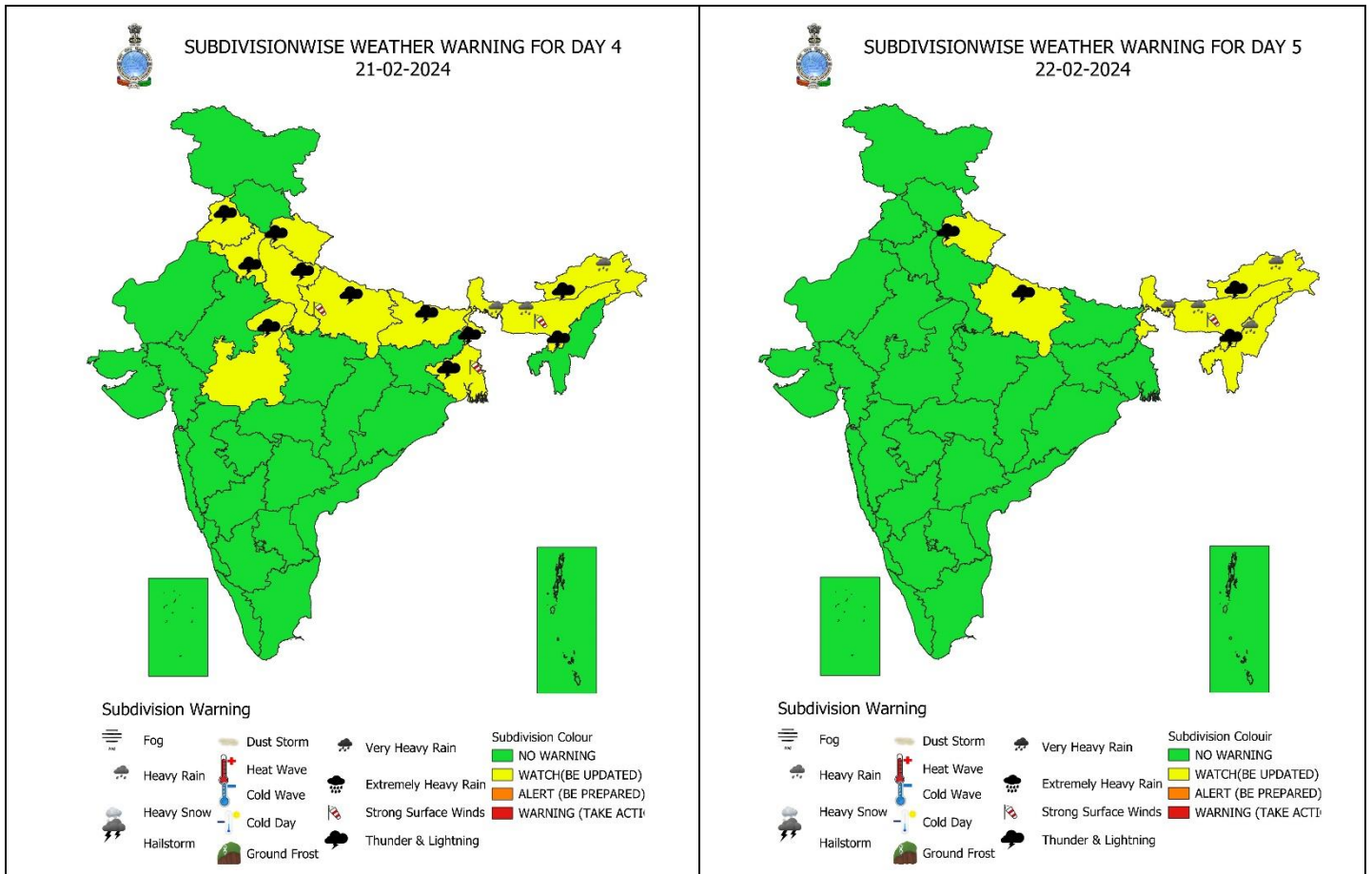
**Subject: An intense spell of rainfall/snowfall activity likely over Western Himalayan Region during 18<sup>th</sup>-21<sup>st</sup> & plains of Northwest India during 19<sup>th</sup>-21<sup>st</sup> February, 2024.**

- ❖ Two **Western Disturbances**, one as a trough in middle tropospheric westerlies runs along Long. 55°E to the north of Lat. 30°N and another as a cyclonic circulation lies over north Pakistan & neighbourhood in lower levels. An induced **cyclonic circulation** lies over central Pakistan in lower tropospheric levels. Under the influence of these systems:
  - Fairly widespread to widespread light/moderate rainfall/snowfall accompanied with **thunderstorms, lightning** very likely over Western Himalayan Region during 18<sup>th</sup>-21<sup>st</sup> February, 2024.
  - **Heavy rainfall/snowfall very likely at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and Himachal Pradesh during 18<sup>th</sup>-20<sup>th</sup> and over Uttarakhand on 19<sup>th</sup> & 20<sup>th</sup> February, 2024.**
  - **Very Heavy rainfall/snowfall also very likely at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and Uttarakhand on 19<sup>th</sup> February, 2024.**
  - **Hailstorm activity** very likely at isolated places over Jammu division and Himachal Pradesh on 18<sup>th</sup> & 19<sup>th</sup> and over Uttarakhand on 19<sup>th</sup> & 20<sup>th</sup> February, 2024.
  - Scattered to fairly widespread light/moderate rainfall very likely over Punjab, Haryana-Chandigarh-Delhi and West Uttar Pradesh during 19<sup>th</sup>-21<sup>st</sup>; East Uttar Pradesh during 20<sup>th</sup>-22<sup>nd</sup> and isolated light/moderate rainfall over north Rajasthan during 19<sup>th</sup>-21<sup>st</sup> and over northwest Madhya Pradesh during 20<sup>th</sup> -22<sup>nd</sup> February, 2024.
  - Isolated **thunderstorms, lightning and gusty winds** very likely over Punjab during 18<sup>th</sup>-21<sup>st</sup> and over Haryana-Chandigarh-Delhi and West Uttar Pradesh during 19<sup>th</sup>-21<sup>st</sup>; north Rajasthan on 19<sup>th</sup> & 20<sup>th</sup> and over East Uttar Pradesh during 20<sup>th</sup>-22<sup>nd</sup> February, 2024.
  - **Hailstorm activity very likely at isolated places over Punjab, Haryana-Chandigarh and north Rajasthan on 19<sup>th</sup> & 20<sup>th</sup> and over West Uttar Pradesh on 20<sup>th</sup> February, 2024.**

The state-wise forecast is given below:

S.No.	State/sub-division	Forecast
1.	Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad	<ul style="list-style-type: none"> <li>• Light to moderate rain/snowfall at many/most places accompanied with isolated thunderstorm &amp; lightning during 18<sup>th</sup> to 20<sup>th</sup> February.</li> <li>• <b>Very heavy rainfall/snowfall at isolated places on 19<sup>th</sup>; heavy rainfall/snowfall at isolated places on 18<sup>th</sup> &amp; 20<sup>th</sup> February.</b></li> <li>• <b>Hailstorm at isolated places on 18<sup>th</sup> &amp; 19<sup>th</sup> February.</b></li> </ul>
2.	Himachal Pradesh	<ul style="list-style-type: none"> <li>• Light to moderate rain/snowfall at many/most places accompanied with isolated thunderstorm &amp; lightning during 18<sup>th</sup>-20<sup>th</sup> February.</li> <li>• <b>Very heavy rainfall/snowfall at isolated places on 19<sup>th</sup>; heavy rainfall/snowfall at isolated places on 18<sup>th</sup> &amp; 20<sup>th</sup> February.</b></li> <li>• <b>Hailstorm at isolated places on 18<sup>th</sup> &amp; 19<sup>th</sup> February.</b></li> </ul>
3.	Uttarakhand	<ul style="list-style-type: none"> <li>• Light to moderate rain/snowfall at most places accompanied with isolated thunderstorm &amp; lightning on 19<sup>th</sup> &amp; 20<sup>th</sup> and at a few places on 21<sup>st</sup> February.</li> <li>• <b>Very heavy rainfall/snowfall at isolated places on 19<sup>th</sup>; heavy rainfall/snowfall at isolated places on 20<sup>th</sup> February.</b></li> <li>• <b>Hailstorm at isolated places on 19<sup>th</sup> &amp; 20<sup>th</sup> February.</b></li> </ul>
4.	Punjab	<ul style="list-style-type: none"> <li>• Light to moderate rain at some/many places accompanied with isolated thunderstorm, lightning &amp; gusty winds (40-50 kmph) during 18<sup>th</sup>-20<sup>th</sup> February.</li> <li>• <b>Hailstorm at isolated places on 19<sup>th</sup> &amp; 20<sup>th</sup> February.</b></li> </ul>
5.	Haryana, Chandigarh & Delhi	<ul style="list-style-type: none"> <li>• Light to moderate rain at some/many places accompanied with isolated thunderstorm, lightning &amp; gusty winds (40-50 kmph) at isolated places on 19<sup>th</sup> &amp; 20<sup>th</sup> February.</li> <li>• <b>Hailstorm at isolated places over Haryana-Chandigarh on 19<sup>th</sup> &amp; 20<sup>th</sup> February.</b></li> </ul>
6.	West Uttar Pradesh	<ul style="list-style-type: none"> <li>• Light to moderate rain at some/many places accompanied with isolated thunderstorm, lightning &amp; gusty winds (40-50 kmph) on 19<sup>th</sup> &amp; 20<sup>th</sup> February.</li> <li>• <b>Hailstorm at isolated places on 20<sup>th</sup> February.</b></li> </ul>
7.	East Uttar Pradesh	<ul style="list-style-type: none"> <li>• Light to moderate rain at some places accompanied with isolated thunderstorm, lightning &amp; gusty winds (30-40 kmph) on 20<sup>th</sup> &amp; 21<sup>st</sup> February.</li> </ul>
8.	northwest Rajasthan	<ul style="list-style-type: none"> <li>• Light to moderate rain at isolated places accompanied with isolated thunderstorm, lightning &amp; gusty winds (40-50 kmph) on 19<sup>th</sup> &amp; 20<sup>th</sup> February.</li> <li>• <b>Hailstorm at isolated places on 19<sup>th</sup> February.</b></li> </ul>
9.	northeast Rajasthan	<ul style="list-style-type: none"> <li>• Light to moderate rain at isolated places accompanied with isolated thunderstorm, lightning &amp; gusty winds (30-40 kmph) on 19<sup>th</sup> &amp; 20<sup>th</sup> February.</li> <li>• <b>Hailstorm at isolated places on 19<sup>th</sup> &amp; 20<sup>th</sup> February.</b></li> </ul>
10.	northwest Madhya Pradesh	<ul style="list-style-type: none"> <li>• Light to moderate rainfall at isolated places accompanied with isolated thunderstorm &amp; lightning during 20<sup>th</sup>-22<sup>nd</sup> February.</li> </ul>





**Impact & Action Suggested due to heavy/very heavy rainfall/snowfall:** Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and Himachal Pradesh during 18<sup>th</sup>-20<sup>th</sup>; over Uttarakhand on 19<sup>th</sup> & 20<sup>th</sup> February, 2024.

**Impacts Expected:**

- Disruption of Electricity.
- Landslide, rock fall and mudslides, Blocking/washout of roads/highways/bridges Nallahs.
- Disruption of traffic flow.
- Damage to Kuchcha and unsecured structures.

**Action Suggested:**

- Avoid roadway underpasses, drainage ditches, low lying areas and areas where water collects – they can unexpectedly flood or overflow.
- Stay away from power lines or electrical wires.
- Don't stay in kuchcha houses during heavy rainfall as it may collapse anytime soon
- Drive carefully.

**Impact expected and action suggested due to thunderstorm with lightning/gusty winds & Hailstorm:** Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and Himachal Pradesh on 18<sup>th</sup> & 19<sup>th</sup>; over Uttarakhand, Punjab and Haryana-Chandigarh and north Rajasthan on 19<sup>th</sup> & 20<sup>th</sup> and over West Uttar Pradesh on 20<sup>th</sup> February, 2024.

**Impact expected:**

- ❖ Strong wind/hail may damage plantation, horticulture and standing crops.
- ❖ Hail may injure people and cattle at open places.
- ❖ Partial damage to vulnerable structures due to strong winds.
- ❖ Minor damage to kutcha houses/walls and huts.
- ❖ Loose objects may fly.

**Action suggested:**

- ❖ Stay indoors, close windows & doors and avoid travel if possible.
- ❖ Take safe shelters; do not take shelter under trees.
- ❖ Do not lie on concrete floors and do not lean against concrete walls.
- ❖ Unplug electrical/ electronic appliances.
- ❖ Immediately get out of water bodies.
- ❖ Keep away from all the objects that conduct electricity.

**Legends:**

- ❖ **Heavy Rain:** 64.5 to 115.5 mm; **Very Heavy Rain:** 115.6 to 204.4 mm; **Extremely Heavy Rain:** >204.4mm.
- ❖ **Obsy:** Observatory; **AWS:** Automatic Weather Station; **dist:** District; **NH:** National Highway; **KVK:** Krishi Vigyan Kendra; **DVC:** Damodar Valley Corporation
- ❖ **Region wise classification of meteorological Sub-Divisions:**
  - **Northwest India:** Western Himalayan Region (Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and Uttarakhand); Punjab, Haryana-Chandigarh-Delhi; West Uttar Pradesh, East Uttar Pradesh, West Rajasthan and East Rajasthan.
  - **Central India:** West Madhya Pradesh, East Madhya Pradesh, Vidarbha and Chhattisgarh.
  - **East India:** Bihar, Jharkhand, Sub-Himalayan West Bengal & Sikkim; Gangetic West Bengal, Odisha and Andaman & Nicobar Islands.
  - **Northeast India:** Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
  - **West India:** Gujarat Region, Saurashtra & Kutch, Konkan & Goa, Madhya Maharashtra and Marathwada.
  - **South India:** Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Coastal Karnataka, North Interior Karnataka, South Interior Karnataka, Kerala & Mahe, Tamil Nadu, Puducherry & Karaikal and Lakshadweep.

SPATIAL DISTRIBUTION			
(% of Stations reporting)			
% Stations	Category	% Stations	Category
76-100	Widespread (WS/ Most Places)	26-50	Scattered (SCT/ A Few Places)
51-75	Fairly Widespread (FWS/ Many Places)	1-25	Isolated (ISOL)

Subdivision Warning	Dust Storm	Subdivision color
Heavy Rain	Strong Surface Winds	NO WARNING
Heavy Snow	Heat Wave	WATCH (BE UPDATED)
Thunderstorms & Lightning	Cold wave	ALERT (BE PREPARED)
Hailstorm	Fog	WARNING (TAKE ACTION)

Probabilistic Forecast	
Terms	Probability of Occurrence (%)
Unlikely	< 25
Likely	25 - 50
Very Likely	50 - 75
Most Likely	> 75

Flash Flood Risk	
	High Risk (Take Action)
	Moderate Risk (Be Prepared)
	Low Risk (Be Updated)

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