

## Critical Weather Layer Definitions

Products	Description and Applications
Radar	Through advanced algorithms, Data can not only tell you the intensity of precipitation, but whether it's rain, ice, or snow.
Lightning	See where lightning is occurring in real-time as it relates to your vehicles.
Weather Observations	Displays temperature, dew point, wind speed/directions, weather condition, and visibility across the country.
IR Satellite	Satellite imagery is useful when tracking tropical storm activity.
NWS Watches and Warnings Map	Know when your vehicles are entering an area that's under an NWS watch or warning.
Current North American Temperature Map	From extreme cold to heat, temperatures impact your customers' operations. See how current temperatures vary across your service area.
Current North American Wind Speed Map	Wind Speed map gives you a visual of all winds more than ten mph, so customers can see where high or gusty winds may impact operations.
FutureScan Radar	FutureScan Radar provides a one-hour forecast of radar imagery. The product updates every 10 minutes. Do you want to know when that rain approaching your location will impact your area? This product can give you those details.
Severe Storm Probability	Know if your vehicles and employees are located in areas where dangerous weather is expected. Data's Severe Storm Probability provides a three-day severe weather forecast. Areas are highlight based on the following criteria—Storms, Slight Risk of Severe Storms, Enhanced Risk of Severe Storms, Moderate Risk of Severe Storms, and High Risk of Severe Storms.
Tropical Storm Forecast	See the official National Hurricane Center forecast- as it updates. An NHC forecast shows the expected strength and direction of a tropical event, including tropical storms and hurricanes.
Spaghetti Models	Spaghetti Models help your customers gauge their confidence in a National Hurricane Center Forecast. See all possible forecast tracks of a Hurricane or Tropical Storm.



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Forecast Snowfall Accumulation	Hourly snowfall accumulation allows you to see how much snow is expected to fall and when conditions will deteriorate.
Forecast Radar	Track rain, ice, and snow out over the next 60 hours and know the time precipitation will impact your service location.
Forecast Wind Speed and Direction	Track wind speed and direction out over the next 60 hours.
Forecast Rainfall Accumulation	Flash Flooding is one of the most deadly forms of severe weather. Rainfall Accumulation Maps helps you see where the heaviest rainfall will occur, helping drivers avoid dangerous areas.
Current Road Conditions	<p>Identify dangerous roads before the delays begin. Through advanced processes and a decade of road weather experience, your clients can know road surface conditions that are being experienced by their drivers.</p> <p>Track the following Road Conditions- wet, flooded, patchy ice, ice covered, snow, and heavy snow. <b>See below for additional information.</b></p>
Current Roadway Threats	Road Conditions, Fog, and Precipitation are not the only threats to a driver's safety and your customers' vehicles. Hail, Tornados, and High Winds can put your driver at risk. Know the locations of these dangers with respect to your assets. <b>See below for additional information.</b>
Current Driver Weather	Weather Conditions can change quickly. Know conditions experienced by your vehicles in real-time. Track the following weather- Precipitation Type/Intensity and Fog Density. Advanced weather processing provides the localized weather conditions that put drivers at risk of an accident. <b>See below for additional information.</b>
Road Condition Forecast	<p>Hourly updating 72-hour road condition prediction. The road condition forecast gives you the ability to make plans for disruptive winter weather well in advance.</p> <p>Track the following Road Conditions- wet, flooded, patchy ice, ice covered, snow, and heavy snow.</p>

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## Weather Definitions

### Current Driver Weather

- **Fog (current weather):** Visibility restriction affecting the sight-distance of a driver.
- **Heavy Fog (current weather):** Urgent visibility restriction reducing visibility on the order of car lengths.
- **Light Rain:** Rain that causes no visibility restriction, but makes the road slippery.
- **Moderate Rain:** Rain that causes some visibility restrictions.
- **Heavy Rain (current weather):** Rapid rate of rain that is capable of quickly covering the roadway. Hydroplane possibilities increased.
- **Snow:** Light to Moderate snow that may cause isolated travel problems.
- **Heavy Snow (current weather):** Rapid rate of snowfall that quickly accumulates and reduces visibility. Travel problems likely in these areas.
- **Ice:** Freezing rain, sleet, or mixed wintry precipitation, capable of producing isolated travel problems.
- **Heavy Ice (current weather):** Rapid rate of freezing rain, sleet, or mixed wintry precipitation, capable of quickly producing widespread travel problems and damage to trees and power lines.

### Road Conditions

- **Snow (road condition):** Snow in an amount covering (or just partially covering) secondary and less-travelled roads.
- **Heavy Snow (road condition):** Snow in an amount covering major roadways and interstates
- **Patch Ice (road condition):** Patchy ice, with bridges likely to experience issues and isolated patches of black ice.
- **Ice (road condition):** Ice covered roads resulting in significant travel impacts.
- **Flooded:** Ponding on roads in areas and possible flash flooding.
- **Wet:** Wet or damp roads, no ponding expected.



## Threats/Hazards

- **Dangerous Wind:** Crosswinds are exceeding 35mph, the critical threshold for high profile vehicles.
- **Hail:** Based on Data's patented storm tracking, highlights areas where Severe Hail is possible over the next fifteen minutes.
- **Twisting Wind:** Based on Data's patented storm tracking, highlights areas where Tornados are possible over the next fifteen minutes.