

You often hear meteorologists talk about [Cold Fronts](#) and [Warm Fronts](#) and occasionally [Stationary Fronts](#) and [Occluded Fronts](#). Each of these is different, but each brings inclement weather. Just so you know what is being talked about the next time you hear someone talk about fronts, below is a little description of each. If you want more information and illustrations of fronts, click on the links above...

A **Cold Front** is the leading edge of a colder air mass. In the winter, there can be much colder air behind these fronts, yet in the summer the temperature may only drop a few degrees. When it's warm outside, a cold front often produces rain and thunderstorms, usually right along and ahead of the front. There can be rain in the winter too, but if the air ahead of the front is below freezing, then snow, sleet or freezing rain may fall as the front passes. Cold air, being heavier than warm air, stays close to the ground and can move very quickly causing the warm air ahead of it to rise rapidly creating showers and thunderstorms which can be very heavy or severe at times. On weather maps, cold fronts are blue lines with triangles that point in the direction the front is moving.

A **Warm Front** is the boundary of warmer air that is trying to push into a colder air mass. Since warm air is lighter than cold air, it rises over the colder air below. As the warm air is pushed into cold air, clouds, rain and thunderstorms (or snow in the winter) develop well in advance of the front, as well as right along the warm front itself. Therefore, warm fronts can produce large areas of rain or snow before the warm air finally moves into the area. Unlike the rapid change that cold fronts produce, warmer air advances more slowly and there is generally less severe weather with warm fronts, but never let your guard down. IN certain situations, warm fronts provide rotation to strong thunderstorms, causing tornado development. On weather maps, warm fronts are red lines with half-circles pointing in the direction the front is moving.

A **Stationary Front** is a cold or warm front that has slowed to less than 7 miles per hour or has stalled altogether. Cold and warm air are on opposite sides of the front, but neither has a stronger push, so the front remains stalled until one of the air masses starts to move or a high or low pressure system pushes the front along, making it a cold or warm front once again. Since the stationary front is barely moving, rain and thunderstorms (or snow) may be on either side of the front for a long time. That can cause flooding, or in the winter, heavy snow accumulations. These fronts are more common, however, in the warmer months when weather patterns are weaker and storm systems move more slowly. On the weather map, you will see these fronts as alternating lines of red (semi-circles) and blue (triangles) on opposite sides of the line. Since the red and blue "barbs" usually tell us which way a front is moving, the fact that they are pointing in opposite directions implies that there is little or no movement.

You hear very little about the **Occluded Front** because it is not often seen on our weather maps. Earlier I mentioned that cold air is heavier than warm air. Well,

because it is heavier, it stays closer to the ground and moves more quickly than warm air. As a storm system moves across the United States, the colder air behind the cold front will wrap around the low pressure center and eventually catch up to the slower-moving warm front, which is typically found on the southeast or east side of the storm system. The cold front then overtakes the warm front, and the two merge. You might think that two fronts combining would mean bad weather, but this front is actually a sign of a weakening (dying) low-pressure system, and it brings clouds and generally light rain or snow. It is not known for producing heavy precipitation though that's always possible. On weather maps, occluded fronts are usually light purple with half-circles and triangles on the same side of the line, pointing in the direction of movement.

[Click here](#) for more information on storm systems.

[Rich Apuzzo](#) 😊

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