

Weather vs Climate

Weather and Climate: What's the Difference?

Weather is what's happening outside now. It's the combination of moisture, heat, air pressure, and wind in the atmosphere. Weather tells you that you need to put on a raincoat or sun hat before you go out.

Climate is weather over a much longer period of time. Climate describes general patterns of moisture, heat, air pressure, and wind in the atmosphere over years and decades. Climate tells you whether you're more likely to own a lot of mittens and snow gear or a lot of shorts and warm-weather clothing. Earth's climate has been warming especially in recent decades.

**Muir Glacier, Alaska: August 13, 1941
and August 31, 2004**



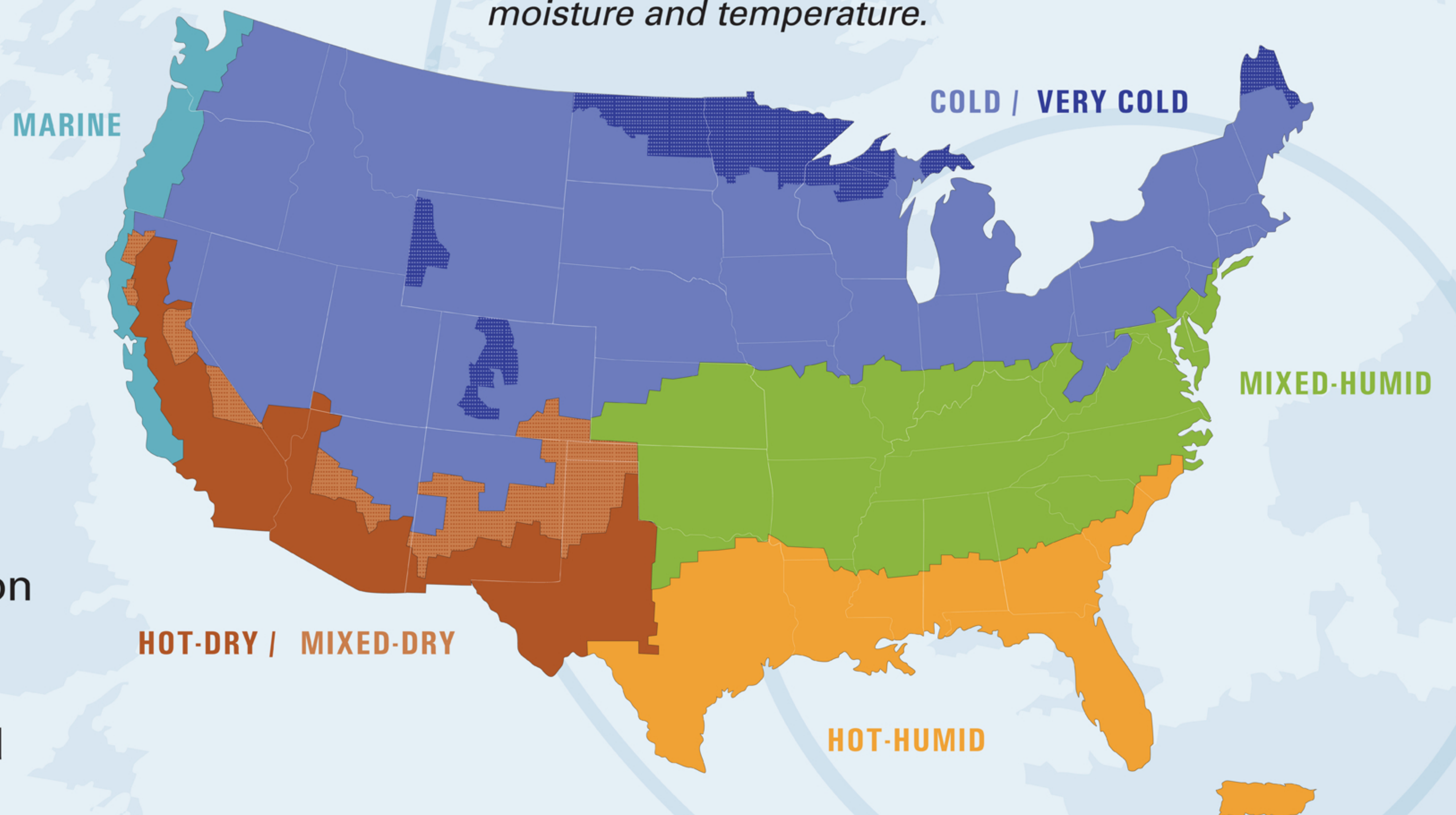
Credit: William O. Field

Credit: Bruce F. Molnia

Many people think climate change only affects polar regions (like the glacial retreat seen at left) and that polar bears are the only animals whose food chain is at risk. But humans are feeling the effects too. The planting maps at right show how hardiness regions for crops have migrated in only a 10 year time frame. Take a look at Iowa, one of our biggest crop producers. Farmers have had to make decisions to grow entirely different crops due to climate change.

U.S. Climate Map

These climate zones are defined by the region's average moisture and temperature.

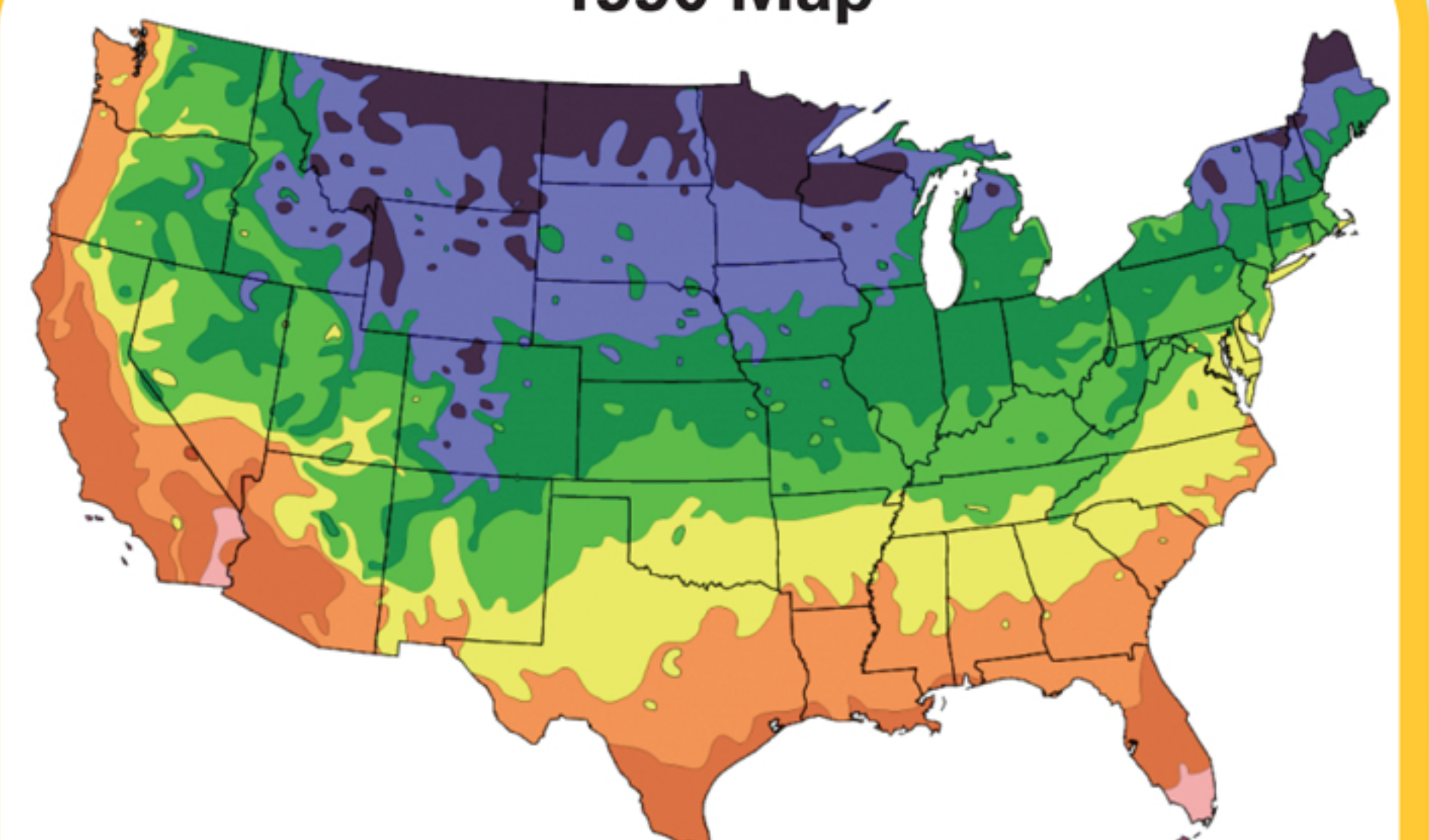


What's Your Climate Zone?

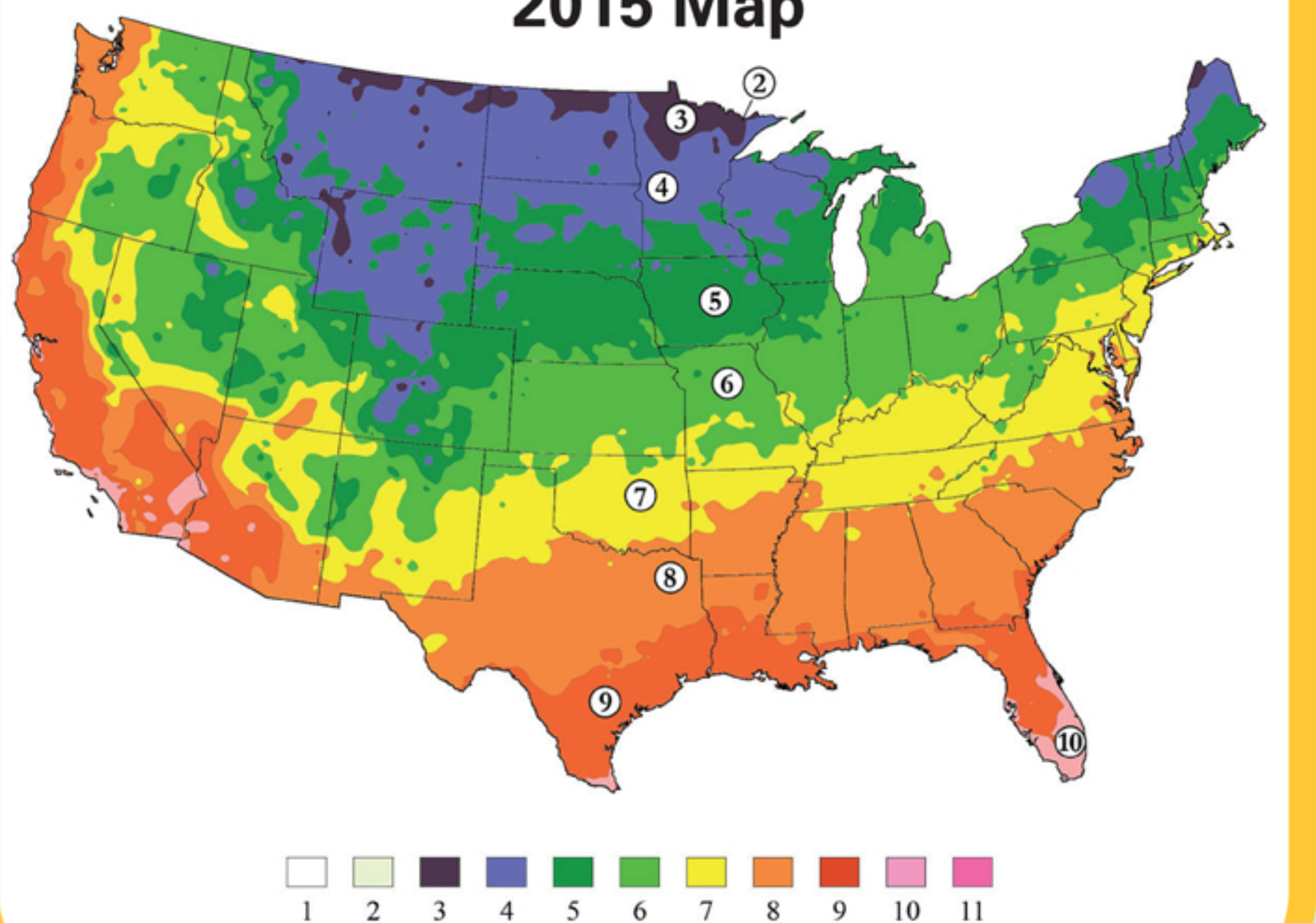
When visitors are planning to come to your home town, what do you tell them to expect? Do you brag about warm winters or complain about cool summers? Do you live in a ski town? Or prepare for hurricanes? Find your town on the map above to see how scientists describe the usual weather - the climate - in your home town.

USDA Plant Hardiness Zone Maps

1990 Map



2015 Map



Credit: The National Arbor Day Foundation