

CLIMATE CHANGE & PLANT HARDINESS ZONES

By Agnes Palys-McLean

Most of us are familiar with plant hardiness zones that appear in many plant and seed catalogs. They serve as a guide to help determine which plants and trees are best suited for our growing area and which are likely to die due to the cold.

The United States Department of Agriculture (USDA) plant zone hardiness maps go back to the 1960s. They are based on the coldest temperatures of the year at each location, averaged over a 30-year period.

There are a total of 13 zones which are further subdivided into "a" and "b" categories. Each zone represents a 10 degree Fahrenheit (F) difference in average low temperatures. The "a" and "b" categories narrow it to 5 degree F increments. In the continental United States, the zones range from 2-10.

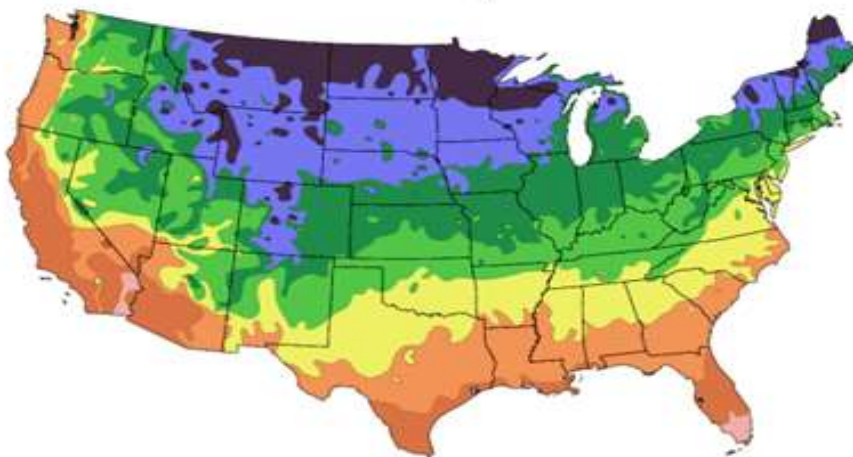
Over the years, climate change has caused these zones to creep northward as the average low temperatures are increasing. This change means that some plant species that did not previously grow in a certain zone can now be planted there. This can also mean that unwanted invasive species may now thrive where they had not before.

Up until 2012, San Antonio's hardiness zone category was designated as 8b. The average lowest temperature range was 15-20 degrees F. The San Antonio area was changed to 9a in 2012 (average low temperature of 20-25 degrees F) due to increasing temperatures from climate warming. Northern Bexar county remains in category 8b. Of course, these numbers are not absolute. Year to year volatility could mean that one cold year would wipe out some less hardy plants.

Keep in mind that many other factors can affect a plant's hardiness. Soil conditions, humidity, rainfall, elevation and light conditions must be taken into account. Microclimates also can exist within certain zones, with their own unique plants.

We can expect that the plant hardiness zones will continue to shift northward as our climate continues to warm. The last 10 years have seen the biggest increase in global temperatures and those changes will only be reflected in the next update from the USDA.

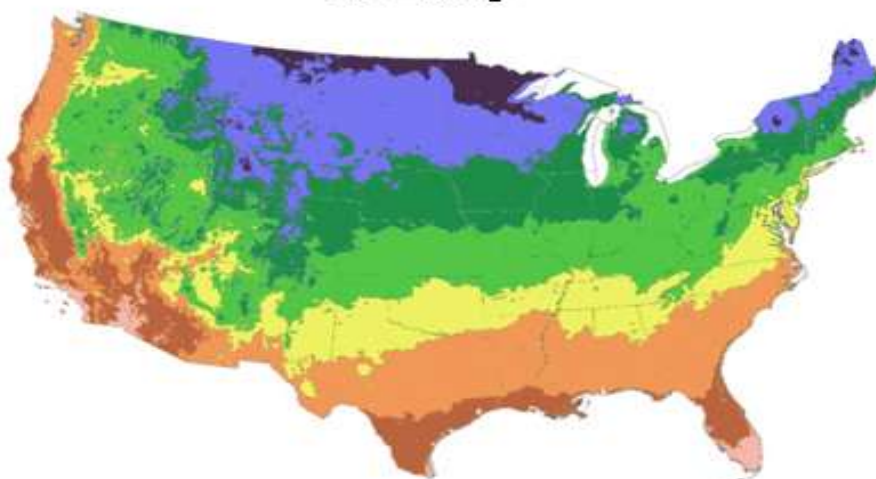
1990 Map



After USDA Plant Hardiness Zone Map, USDA Miscellaneous Publication No. 1475, Issued January 1990

© 2006 by The National Arbor Day Foundation®

2012 Map



Zone

