

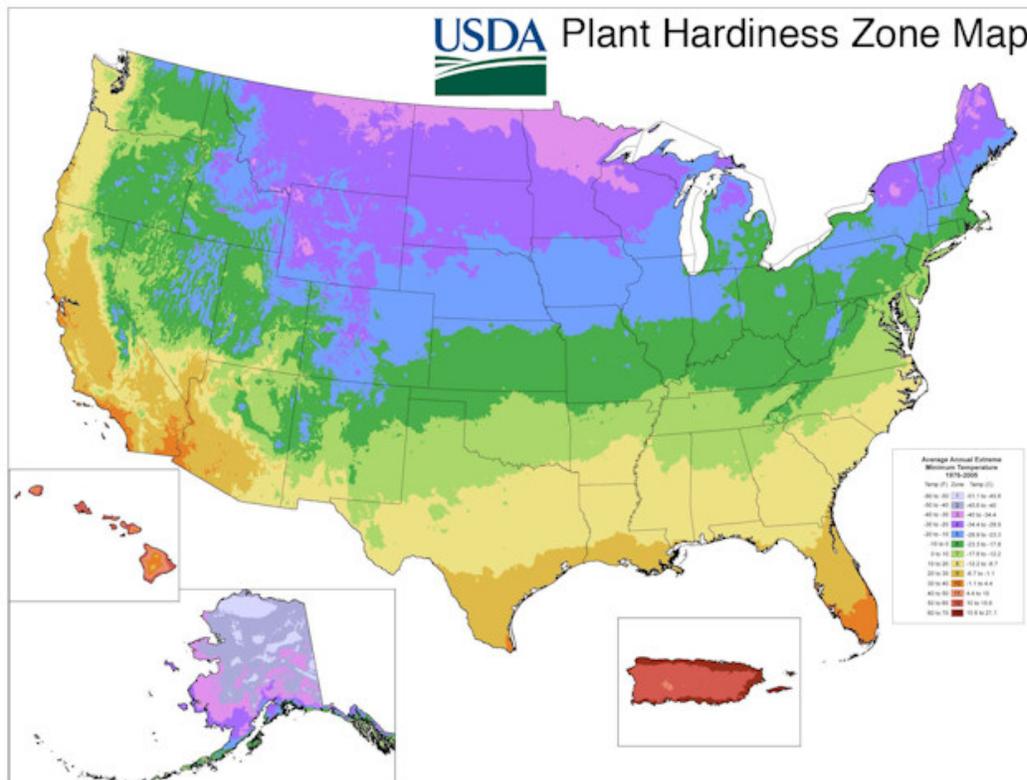
Site and Soil Conditions

When selecting plants, it is critical to analyze the site and soil conditions under which the plant will be growing. Soils, climate and other conditions will greatly influence the success of the landscape. Selecting the right plants based upon the site conditions is a landscaping best practice.

Climate

Climate varies from region to region and varies greatly within each region. Temperatures, variance in temperatures, rainfall, sun and shade exposure are all important considerations in selecting plant materials.

The United States Department of Agriculture has created a zone classification map of all of North America. There are eleven hardiness zones based on average winter temperatures. Zone 1 is the coldest and Zone 11 is the warmest.



Hardiness zone ratings are not the only determining factor in a plants success. Rainfall also must be considered. Plants that od well in a wet climate, may not do well in a dry climate. Even though the hardiness zone is the same. Choose plants that are best suited for local climatic conditions.

Microclimates refer to the climate of an area where the sunlight, moisture and wind can vary with a certain area. Many landscape properties have microclimates within them. Microclimates are influences by walls, fences, trees, buildings, pavement anything that can impact temperature, shade, sun, water air movement etc. remember that microclimates can change as the factors affecting them change.

Exposure

Exposure is often thought of as a plants exposure to sunlight. But it can also refer to the plants exposure to wind, water, slat or other factors. Remember that plants that prefer a sunny exposure, often do not thrive in a shady environment. Also remember that sun and shade patterns change over time as plants and trees mature.

Soils

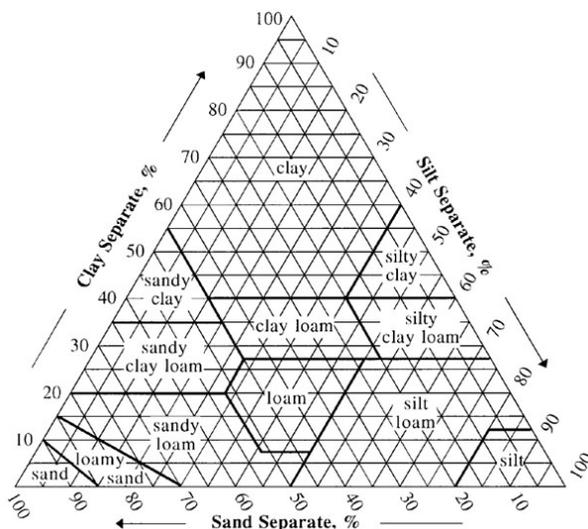
Soil condition can vary greatly in any given area. They can even vary from a front yard to a back yard. Soil texture, nutrient levels, pH all affect plant growth and stability.

Soil texture refers to the way a soil feels. It is determined by the properties of the soil particles. Clay soil particles are the smallest or fine, sand is the largest or coarse and silt lies in the middles being medium in size and texture.

Clay soils tend to drain poorly as their particles are small and fit tight together not allow for good air or water movement. Clay soils are often wet or extremely dry.

Sandy soils drain well and dry out quickly. Plants in sandy soils often need more frequent watering. Nutrients also move readily thru a sandy texture soil.

Loam is a soil that contain clay, sand and silt. Ideally a soil should contain near equal amounts of each. But ideal doesn't happen very often. Typically, soils may be a clayey loam. That means it contains more clay particles than sand and silt. A sandy loam would have more sand than clay and silt.



Alternative Medias

In today's landscape, not only do we plant trees in shrubs in the ground. But we also plant them in containers and on rooftop gardens. In these situation, we tend to use what is referred to as soilless media. Soilless media typically contains products such as peat moss, composted bark or other composted products. Sometime incorporated into the mix is vermiculite and or perlite which help with both drainage and weight.

Nutrients

Three primary nutrients are need for plant growth, nitrogen, phosphorus and potassium, as well as other nutrients in smaller amounts. Soil testing is always recommended to make sure you know what is in the soil and what needs to be added for good plant growth. Once you understand the soil nutrient value and the soil pH you can then add products to enrich the quality of the soil.

pH

The pH is the measurement of the soil's alkalinity or acidity. The pH scale ranges from 0-14 with 7 being neutral. Values above 7 are alkaline and values below 7 are acid. Extremes in pH can greatly affect the availability of nutrients in the soil. Most plants prefer a pH in the range of 5.5-6.5 or slightly acid.

Make sure you understand your soil conditions. It is important to regularly test soils to understand their pH and their nutrient content. Root growth is essential to good plant health. Good soil health is essential to good root systems.