

## Our Dying Urban Forest: Reasons (Albuquerque)

David Cristiani, revised 4/11/12

**Summary:** Tree choices have been mostly based on quick-fix solutions, instead of long-term benefits or with our dry environment in mind---we are paying for this with a rapidly declining urban forest.

**Q:** Why does my Norway Maple struggle - *do you think* it is from global warming?

**A:** It should struggle; Albuquerque is in the desert southwest, completely different than Scandinavia.

Many of Albuquerque's trees are dying. Much of this "urban forest" was planted during the city's first major growth period, during the early 20<sup>th</sup> Century under the direction of former Mayor Tingley, in response to a **real need for shade**. By adding much water, several easy-to-grow species were planted to quickly duplicate the shade-lined streets of a familiar, humid place in our remote, arid outpost.

Since those first trees, Albuquerque has continued to grow, and that tradition of a large tree canopy has expanded to cover the city; physically and mentally, **regardless** of high water requirements, invasive roots, disease, wind damage, sense-of-place, or short life span. Some of those species' **true preferences** for cooler and/or wetter places are found in their names. This partial list is not made of recommendations; it is what **not** to use. It includes many trees chosen in those early plantings, and some are **still** commonly sold and sought after in Albuquerque for "xeriscapes":

Common Name	Botanical name	Origin
<i>Evergreen Trees</i>		
LEYLAND CYPRESS	Cupressocyparis spp.	Hybrid of Alaska Yellow Cedar & Monterrey Cypress
SPRUCE	Picea spp.	Higher mountains of North America
BRISTLECONE PINE	Pinus contorta	Frozen tundra of the highest Western US mountains
AUSTRIAN PINE	Pinus nigra	Mountains of humid Europe
PONDEROSA PINE	Pinus ponderosa	Western US mountains, often w/ regular winter snow
SCOTCH PINE	Pinus sylvestris	Mountains of humid Europe
<i>Deciduous Trees</i>		
JAPANESE MAPLE	Acer palmatum	Humid areas of coastal Asia
NORWAY MAPLE	Acer platanoides	Humid, northern European tree
SILVER MAPLE	Acer saccharinum	Floodplain tree of the humid, eastern US
TREE OF HEAVEN	Ailanthus altissima	Eastern Asia
BIRCH	Betula spp.	Humid, often cool areas of the northern hemisphere
RUSSIAN OLIVE	Eleagnus angustifolia	Floodplains of central Asia and Siberia
GREEN ASH	Fraxinus pennsylvanica	Floodplains of the humid eastern & midwestern US
LONDON PLANE TREE	Platanus X acerfolia	A hybrid from humid regions of Eurasia
COTTONWOOD, POPLAR	Populus spp.	Floodplains of the world
ASPEN	Populus tremuloides	Higher mountains of North America, moister areas
BRADFORD PEAR	Pyrus X calleryana	A hybridized, fruitless tree of humid eastern China
SWAMP WHITE OAK	Quercus bicolor	A floodplain tree from the eastern US
GLOBE WILLOW	Salix X matsudana	A selection of a floodplain tree from Eurasia
SALT CEDAR	Tamarix pentadentra	Dryland washes of southern Eurasia
SIBERIAN ELM	Ulmus pumila	Cold winter areas of central Asia and Siberia

**Since Albuquerque is situated in a high desert**, such trees were destined to fail. This is not an environment that supports a continual oasis of leafy forest trees, especially species from wet places. Our soils are alkaline, often rocky or deficient in organic matter. We are definitely **arid**. Our summers and winters are consistently just warm enough to create a true southwestern desert climate. This permits a modest amount of southwestern trees to thrive in nature **and** in landscapes. Unfortunately, our high elevation and proximity to colder places consistently creates winters with too many hours of freezing temperatures to nourish some trees from the core of the desert southwest, especially the Sonoran Desert.

Demanding property owners and people in the landscape industry are learning few lessons from our decaying urban forest; they still require the same or similar species to those that are dying. Some local codes and ordinances actually require such species. Their mantras include, “bigger is better”, “shade at any cost”, “we have the equivalent of Lake Superior underground”, and “we don’t want to look like Phoenix.” Try not to laugh; those are just some of the thoughts that describe how some hold onto the dying trees we are now forced to replace, regardless of drought, our water situation, or our dry environment.

Some people are trying to change, but to not fully grasp the implications of other quick fixes to fast growing trees. While many strip bluegrass off their properties, it is replaced with rocks and plastic, or sometimes, a few scattered, mismatched flowering xeric plants...and a high water-use tree. Will such trees really stand up to our drought, or even normal conditions, without a great deal of care and time? Will doing the same thing somehow gain different results? The answers: no and no.

As the decay of our tree canopy becomes more obvious, many people propose ways to still have trees. The successful concepts **respond to the fact we are in a desert**, where trees are found only in a few specific locations. A few professionals envision a limited use of **smaller-scale trees** more adapted to our setting: where extra moisture concentrates, modeled after our arroyos and canyons. That is good!

The **solutions** to our dying urban forest are **real** and **easy** to start implementing, though **not free**. It costs money to remove dying trees, but many make great mulch when aged, which could then be used to help establish the root systems of better adapted replacement trees.

Progress will be made when the mindset of the public and landscape industry changes; by learning to appreciate, study and embrace a whole other set of tree choices and landscape design models that have proven to work well in our area, with minimal water.