Drought is a term that means a lack of rain over an extended period of time. Water stress can have different effects on trees, depending on the tolerance of the species. The leaves of hardwood trees may wilt, curl, turn brown on the edges, or fall off. The last few years have not been the best growing years in terms of water and water stress for many trees.

Now many of our trees are experiencing extended flooding conditions. Plants may be in flooded areas or in soil that is saturated with water. In either case, the normal air spaces in the soil have been replaced with water. Good growing soil is usually up to 25% air spaces that provide needed oxygen to plant roots and other soil organisms. Without oxygen, tree roots cannot take up water, so you may see the same effects on trees during extended flooding that you would see during drought. And what you don’t see below ground would be small dying roots.

Some trees are well adapted to flooding and have lived long lives despite hundreds of years with extreme weather events. The bald cypress grows ‘knees’ above the soil from which it can obtain oxygen when the surroundings are waterlogged. Water tupelo, green and white ash, pecan, persimmon, sweetgum, sycamore, red maple and hackberry are some trees that are very adapted to extended flooding.

Some trees that are unable to survive more than a few days without problems are flowering dogwood, loblolly pine, black cherry, blackjack oak, Shumard oak, post oak, and sassafras. After 3 or 4 weeks in waterlogged or flooded conditions, birch, winged elm, water oak, white and southern red oak may become stressed. Keep in mind that these trees may exhibit signs now, next year, in 5 years, or maybe never. The important thing is to give them care and attention for the next few years.

Water molds, including *Phytophthora* and *Pythium*, are fungi that can attack trees when the soil is very wet. These can cause the roots or crown to rot and decay. Another group of fungi that attacks stressed or weakened trees causes cankers to develop. Cankers are areas of dead and discolored bark.

There are so many factors involved with flooding that specific questions about how a tree will respond cannot be answered. The best recommendation is to keep your trees from experiencing additional stress. Remove cankered branches as soon as possible but wait until the dormant season for any additional pruning. Aerate the soil, mulch, and water during extended periods of drought. These practices may help the vigor of some trees, but if there is substantial dieback and the structure of the tree is weakened, it may be wise to remove it from the landscape. Replace with flood tolerant trees.