



# BLUE PAPER

## Part 2 - Which Trees Matter

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*Article & photos from Don Luepke*

In a previous Blue Paper, we posed and discussed the question: “Why Trees Matter?” Learn more here. Now we ask, “Which Trees Matter?”

There are tens of thousands of wondrous trees in Clear Lake Township. Many are magnificent structures of shade and beauty. They are cleansers of the air taking in carbon dioxide and emitting oxygen. They have stood there as towers of strength as well as peace and tranquility for literally hundreds of years. Which ones are they? Simply, they are the trees that are **native** to this region.



And so that is the answer to the titled question – native, native, native! And why? Native trees and plants in general are best suited for the environment, that is the soil and climate conditions, in which they live. Having already adapted to our local ecological requirements, native trees require less water, limited fertilizer, and relatively little or no pesticides. And they are necessary for appropriate populations of healthy wildlife whether in the form of pollinating insects, birds, reptiles, or mammals. They help prevent the spread of exotic and invasive plants.

And so, when township residents think about adding to the value of their property by planting trees, it is only logical to strongly consider that valuable addition to be a native to our region. Certainly, there are both pros and cons to such a selection. Let us review both.

### **On the positive side:**

- 🌳 For an ecosystem to remain balanced and in proper function, it must have a wide diversity of wildlife to interact and work in harmony. Many insects, birds, and animals depend on native trees as shelter for their homes and food for their sustenance. They will thank you for planting them as many songbirds, butterflies, and moths show up to take shelter, feed, and raise their young. Research by entomologist Doug Tallamy has shown that native oak trees support over 500 species of caterpillars whereas ginkgos, a commonly planted landscape tree from Asia, host only 5 species. When it takes over 6,000 caterpillars to raise one brood of chickadees, the choice is clear.
- 🌳 In another study, when non-native plants constituted more than 30% of the plant biomass, the Carolina Chickadee population growth declined. Non-native plants reduce habitat quality for birds. Prioritizing native plants will support local food webs.
- 🌳 Sometimes our climate is a bit of a roller-coaster ride – extensive hot and dry periods and then also cold and damp conditions. Native trees are well-adapted to the local climate, which means they will have the best chance at survival.

🌳 Once established, native trees are easier and cheaper to grow as they are already adapted to your soil and climate. They do not need extra fertilizers and pesticides to grow and thrive. One study of larger properties by Applied Ecological Services (Brodhead, WI) estimates that over a 20-year period, the cumulative cost of maintaining a prairie or a wetland totals \$3,000 per acre versus \$20,000 per acre for non-native turf grasses. The economic benefits of native plants can also be measured against the damage that certain non-native plants do. The cost to control invasive plants is estimated to be \$137 billion annually across the US.



🌳 One of the most significant problems with non-natives is that they crowd out the desirable native trees that are less prolific in reproduction. Why do non-natives become invasive? Turns out that the relationship between native trees and their enemy pathogens are tightly co-evolved; so that they do not recognize or attack introduced tree species. The introduced species do not have enemies in the soil, so their seeds can fall densely and thrive.

#### Of course, there are some negatives as well:

🌳 Native trees can be a little hard to find. Several local nurseries and landscape outlets do not carry these stalwarts. There is a tendency to offer more flashy, exotic varieties. While sometimes visually desirable, they do not have the same strength and durability as natives. See resources listed below.

🌳 And just because the tree is a native, it might not be the right tree for your situation. Considerations include amount of sunlight, amount of moisture in the soil, soil type (sand vs. clay), and the amount of space for the tree to grow. There are well over 70 native trees from which to choose, but not all are appropriate for the Clear Lake Township. Recommended canopy tree varieties include the oak and hickory families, along with some maples (sugar and red), tulip trees, and others depending on location and soil conditions. Lower story native trees, pictured right, include flowering dogwood, eastern redbud, and some crabapple varieties.



Now that you know more about which trees matter, there are some trees that **are not recommended**. The Callery Pear, including Bradford and Cleveland Pear, is a popular ornamental, but it is highly invasive and tends to split and die prematurely. Other invasives are Norway maple and autumn olive. Consider natives and, if feasible, remove present trees.

Which trees matter? **Go native!** Their variety, longevity, and pure beauty will enhance Clear Lake Township for decades and centuries to come.

#### References & Resources:

[Trees of Indiana](#) by Maryrose and Fred Wampler

[Tinkering with Eden](#) by Kim Todd

[101 Trees of Indiana: A Field Guide](#) by Marion T. Jackson

<https://www.indianawildlife.org/wildlife/native-plants/>

<https://www.in.gov/dnr/forestry/files/Fo-NativeTreesofIndiana0606.pdf>

<https://www.wnit.org/outdoorelements/pdf/nativeplants.pdf>

<http://mc-iris.org/callery-pear-aka-bradford-pear.html>

<https://indiananativeplants.org/landscaping/where-to-buy/>

