



The 14 Super Trees of the Houston Region

A Super Tree is one that has a high rate of carbon absorption, flood mitigation, and greenhouse gas absorption ability.

When ranking Houston-Region native trees in each of these categories, the first 10 species fall in the top 26 for all three categories (data recorded for 10 year old trees).

(*) Indicates tree species that do well in wet areas



1) Live Oak

CO2 Sequestered per year (lbs.): 268 (annual); 1,023 (10 yr)
Water Absorption per year (gals.): 2,656
GHG Absorption per year (lbs.): 1.9
Flower: N/A
Height at Maturity: 60-80 ft
Canopy Width: 60-120 ft
Soil Tolerance: Acidic, Alkaline, Clay
Light: Full-Partial Sun



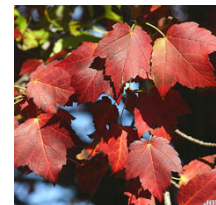
2) Boxelder

CO2 Sequestered per year (lbs.): 159 (annual); 899 (10 yr)
Water Absorption per year (gals.): 2051
GHG Absorption per year (lbs.): 1.3
Flower: Yellowish Green to Reddish Orange
Height at Maturity: 30-50 ft
Canopy Width: 30-50 ft
Soil Tolerance: Alkaline, Clay, Acidic
Light: Full-Partial Sun



3) *Laurel Oak

CO2 Sequestered per year (lbs.): 194 (annual); 875 (10 yr)
Water Absorption per year (gals.): 2,518
GHG Absorption per year (lbs.): 1.3
Flower: White
Height at Maturity: 60-70 ft
Canopy Width: 35-45 ft
Soil Tolerance: Acidic, (slightly) Alkaline, Clay
Light: Full-Partial Sun



4) Red Maple

CO2 Sequestered per year (lbs.): 139 (annual); 859 (10 yr)
Water Absorption per year (gals.): 2,592
GHG Absorption per year (lbs.): 1.6
Flower: Red
Height at Maturity: 40-60 ft
Canopy Width: 35-45 ft
Soil Tolerance: Acidic (prefers), Alkaline, Clay
Light: Full-Partial Sun



5) *River Birch

CO2 Sequestered per year (lbs.): 215 (annual); 925 (10 yr)
Water Absorption per year (gals.): 2646
GHG Absorption per year (lbs.): 1.3
Flower: Reddish green
Height at Maturity: 40- 70 ft
Canopy Width: 40 - 60 ft
Soil Tolerance: Acidic, Loamy
Light: Full - Partial Sun



6) American Elm

CO2 Sequestered per year (lbs.): 114 (annual); 669 (10 yr)
Water Absorption per year (gals.): 2364
GHG Absorption per year (lbs.): 1.4
Flower: Reddish Green
Height at Maturity: 70-90 ft
Canopy Width: 50-70 ft
Soil Tolerance: Alkaline, Clay
Light: Full Sun

Visit Houston Wilderness: <http://houstonwilderness.org/>

Tree Species Characteristic Sources: <http://mortonarb.org> - <http://arborday.org> - <http://hort.ufl.edu>

Ecosystems Services Data Sources: Air quality: https://www.fs.fed.us/nrs/pubs/jrnl/2014/nrs_2014_nowak_001.pdf Carbon:

https://www.epa.gov/sites/production/files/2016-12/documents/sc_co2_tsd_august_2016.pdf

<https://www.fs.usda.gov/ccrc/tools/tree-carbon-calculator-ctcc> VOC: <https://www.nrs.fs.fed.us/units/urban/local-resources/downloads/vocrates.pdf>

Stormwater: http://www.itreetools.org/eo/resources/iTree_Eco_Precipitation_Interception_Model_Descriptions.pdf



7) Slippery Elm

CO2 Sequestered per year (lbs.): 197 (annual); 669 (10 yr)

Water Absorption per year (gals.): 2,199

GHG Absorption per year (lbs.): 1.5

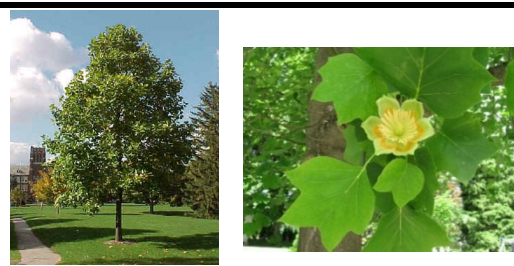
Flower: Reddish Orange

Height at Maturity: 40-60 ft

Canopy Width: 30-50 ft

Soil Tolerance: Alkaline, Acidic, Clay

Light: Full-Partial Sun



8) Tuliptree

CO2 Sequestered per year (lbs.): 81 (annual); 659 (10 yr)

Water Absorption per year (gals.): 3,006

GHG Absorption per year (lbs.): 1.9

Flower: Yellow-orange

Height at Maturity: 70-90 ft

Canopy Width: 40 ft

Soil Tolerance: Acidic, Clay

Light: Full Sun



9) American Sycamore

CO2 Sequestered per year (lbs.): 111 (annual); 652 (10 yr)

Water Absorption per year (gals.): 2,747

GHG Absorption per year (lbs.): 1.9

Flower: Green to Greenish Red

Height at Maturity: 75-100 ft

Canopy Width: 50-70 ft

Soil Tolerance: Alkaline (prefers), Acidic, Clay

Light: Full-Partial Sun



10) Green Ash

CO2 Sequestered per year (lbs.): 200 (annual); 624 (10 yr)

Water Absorption per year (gals.): 1,977

GHG Absorption per year (lbs.): 1.3

Flower: Greenish yellow

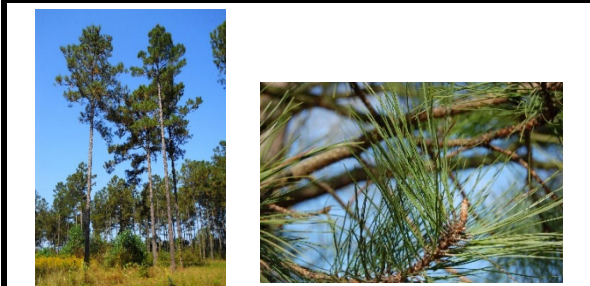
Height at Maturity: 50-60 ft

Canopy Width: 25-40 ft

Soil Tolerance: Alkaline, Clay, Acidic

Light: Full Sun

A **Super Carbon Tree** is one that has a high carbon absorption ability (ranked in the top 20), but ranks below the top 20 in flood mitigation and greenhouse gas absorption ability. Two that are native to the Houston Region are listed below.



11) Loblolly Pine

CO2 Sequestered per year (lbs.): 106 (annual); 479 (10 yr)

Water Absorption per year (gals.): 1,480

GHG Absorption per year (lbs.): 1.1

Flower: Yellowish Green

Height at Maturity: 60-90 ft

Canopy Width: 25-35 ft

Soil Tolerance: Acidic, Clay

Light: Full Sun



12) White Ash

CO2 Sequestered per year (lbs.): 118 (annual); 447 (10 yr)

Water Absorption per year (gals.): 1,839

GHG Absorption per year (lbs.): 1.3

Flower: White

Height at Maturity: 50-80 ft

Canopy Width: 40-50 ft

Soil Tolerance: Acidic, Alkaline

Light: Full-Partial Sun



13) *Water Oak



14) Sweetgum

CO2 Sequestered per year (lbs.): 173 (annual); 869 (10 yr)	CO2 Sequestered per year (lbs.): 150 (annual); 719 (10 yr)
Water Absorption per year (gals.): 2,879	Water Absorption per year (gals.): 2,395
GHG Absorption per year (lbs.): 1.4	GHG Absorption per year (lbs.): 1.5
Flower: Yellowish to Green	Flower: Green-Yellow
Height at Maturity: 60-100 ft	Height at Maturity: 60-75 ft
Canopy Width: 50-80 ft	Canopy Width: 40-75 ft
Soil Tolerance: Acidic, Loamy, Clay	Soil Tolerance: Acidic (prefers), Clay
Light: Full-Partial Sun	Light: Full Sun
Visit Houston Wilderness: http://houstonwilderness.org/	
Tree Species Characteristics Sources: http://mortonarb.org - http://arborday.org - http://hort.ufl.edu - http://friendslaarb.org/	
Ecosystems Services Data Sources: Air quality: https://www.fs.fed.us/nrs/pubs/jrnl/2014/nrs_2014_nowak_001.pdf Carbon: https://www.epa.gov/sites/production/files/2016-12/documents/sc_co2_tsd_august_2016.pdf	
Stormwater: https://www.fs.usda.gov/ccrc/tools/tree-carbon-calculator-ctcc VOC: https://www.nrs.fs.fed.us/units/urban/local-resources/downloads/vocrates.pdf	