Carbon Footprint Data Walk

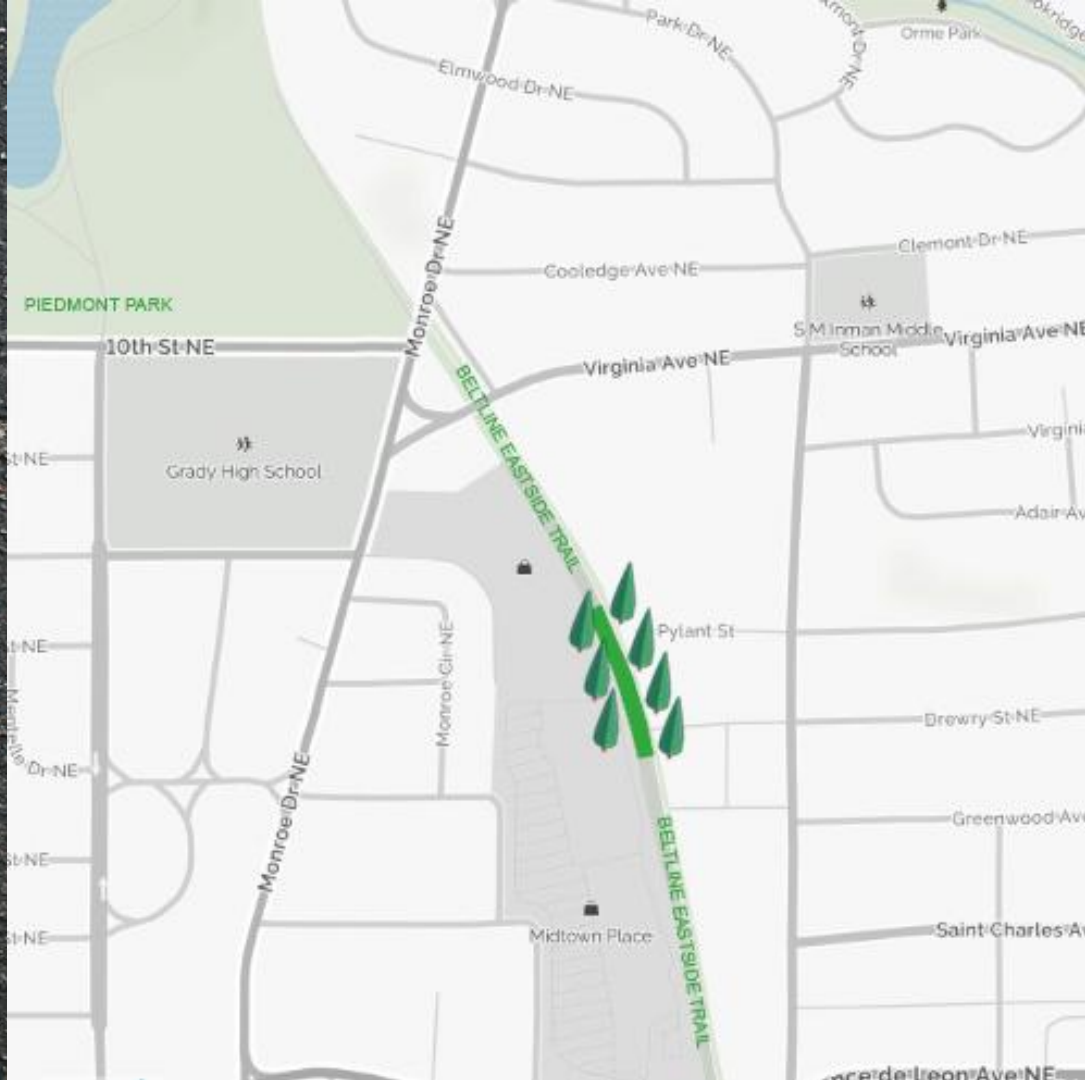
Stephanie Dykes, Phenix Tang


Do Trees Negate Our
Carbon Footprint?

Data Walk 2D Map

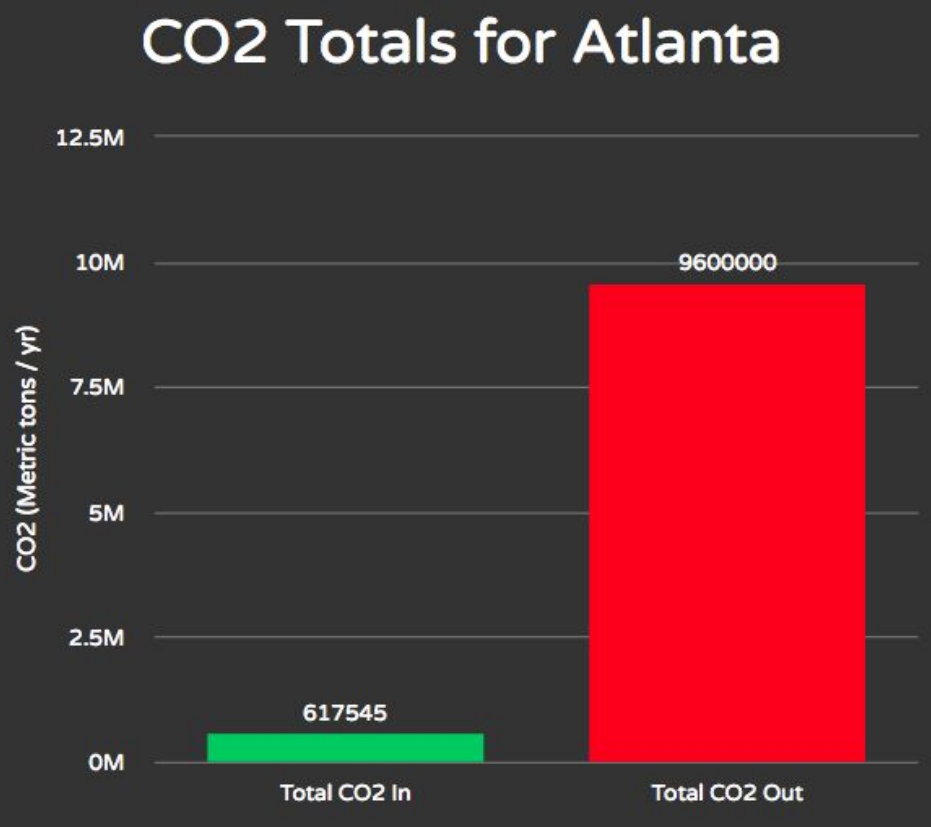
Data for CO2 emossions on the sidewalk

Individual trees

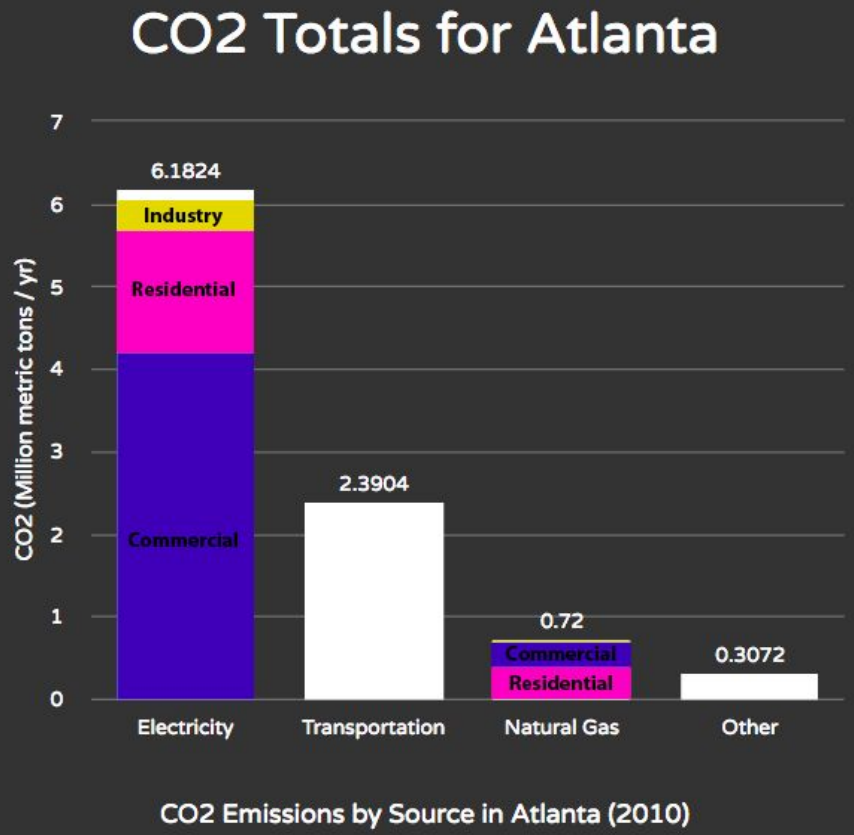



Do Trees Negate Our Carbon Footprint?

Tree genuses by year, along the Eastside BeltLine Trail



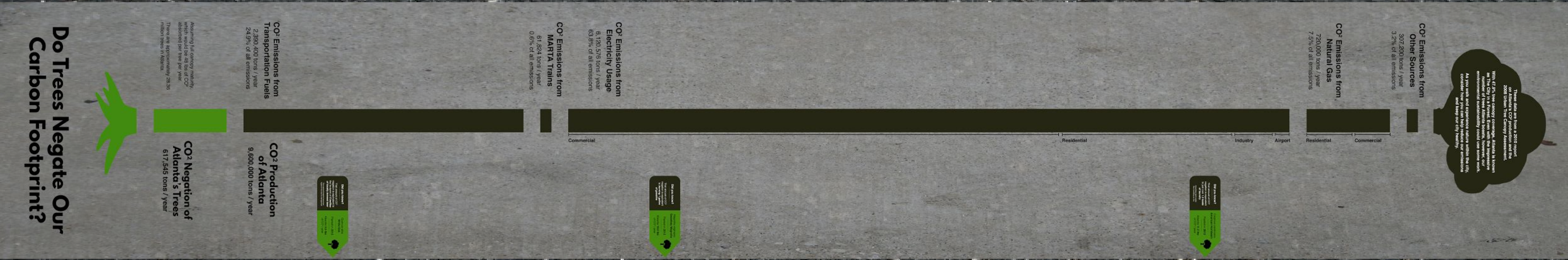
Amount of carbon dioxide produced vs negated by trees

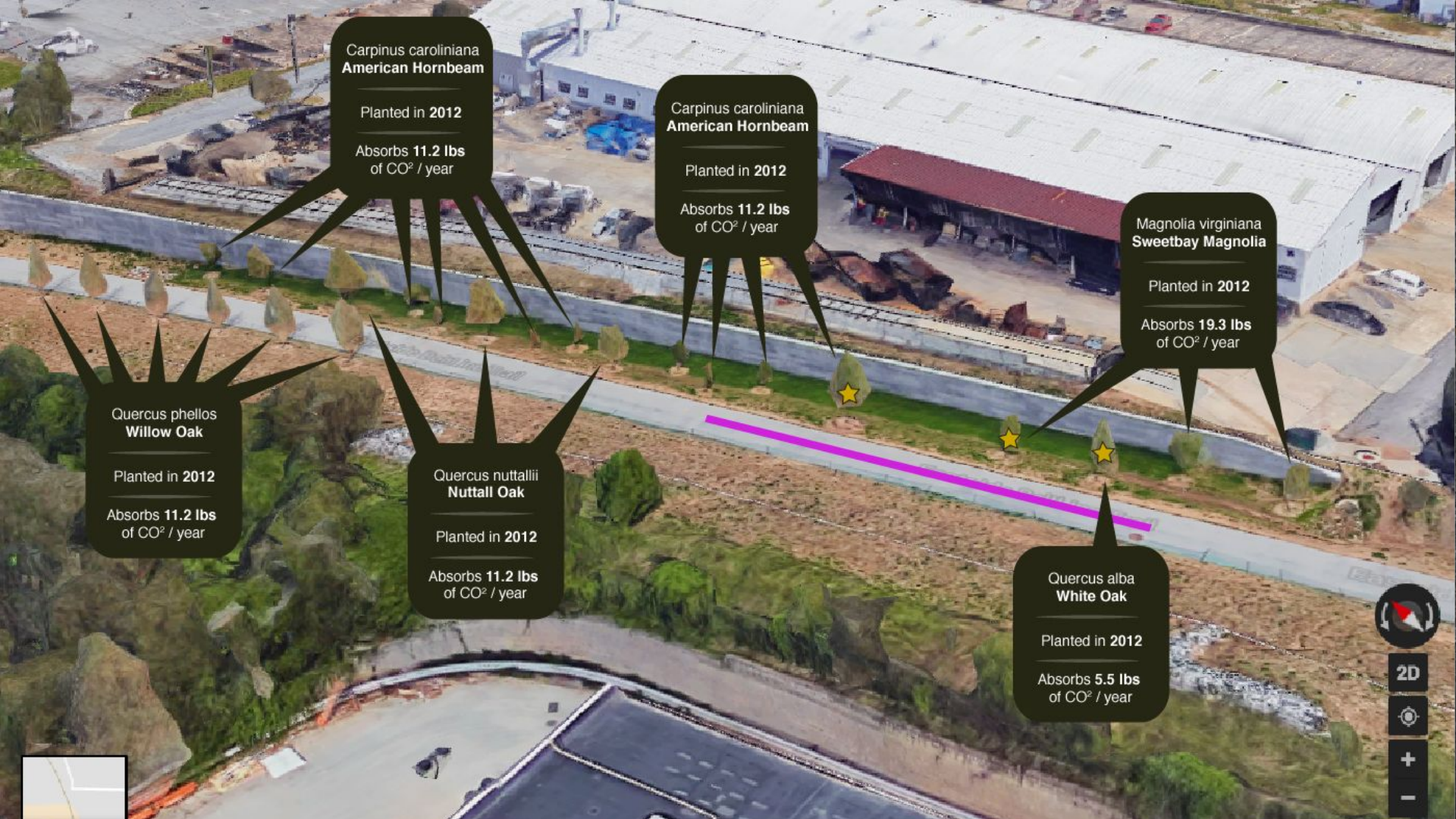


Sources for carbon dioxide production


CO^2 Emissions from Other Sources

Visualization




Carpinus caroliniana
American Hornbeam
Planted in **2012**
Absorbs **11.2 lbs** of CO^2 / year
Carpinus caroliniana
American Hornbeam
Planted in **2012**
Absorbs **11.2 lbs** of CO^2 / year
Magnolia virginiana
Sweetbay Magnolia
Planted in **2012**
Absorbs **19.3 lbs** of CO^2 / year
Quercus phellos
Willow Oak
Planted in **2012**
Absorbs **11.2 lbs** of CO^2 / year
Quercus nuttallii
Nuttall Oak
Planted in **2012**
Absorbs **11.2 lbs** of CO^2 / year
Quercus alba
White Oak
Planted in **2012**
Absorbs **5.5 lbs** of CO^2 / year
2D

Did you know?

That amount of CO^2 negation is equivalent to the footprint of ***5 bottles of locally brewed beer***

The carbon footprint becomes higher if the beer is transported

Quercus alba
White Oak

Planted in **2012**

Absorbs **5.5 lbs** of CO^2 / year

Did you know?

That amount of CO^2 negation is equivalent to ***burning 1 gallon of gasoline***

Magnolia virginiana
Sweetbay Magnolia

Planted in **2012**

Absorbs **19.3 lbs** of CO^2 / year

Did you know?

That amount of CO^2 negation is equivalent to the carbon footprint of ***1 pound of coffee***

That is about 36 8-oz cups of coffee

Quercus nuttallii
Nuttall Oak

Planted in **2012**

Absorbs **11.2 lbs** of CO^2 / year

Did you know?

That amount of CO^2 negation is equivalent to ***running the average dishwasher 5 times***

Assuming the wash temperature is 65°F

Quercus phellos
Willow Oak

Planted in **2012**

Absorbs **11.2 lbs** of CO^2 / year

Did you know?

That amount of CO^2 negation is equivalent to just over ***1.5 loads of laundry***

Assuming warm water then tumbling on low

Carpinus caroliniana
American Hornbeam

Planted in **2012**

Absorbs **11.2 lbs** of CO^2 / year

User Flow Diagram

Carbon Footprint Data Walk - Flow Diagram

Stephanie Dykes & Phenix Tang

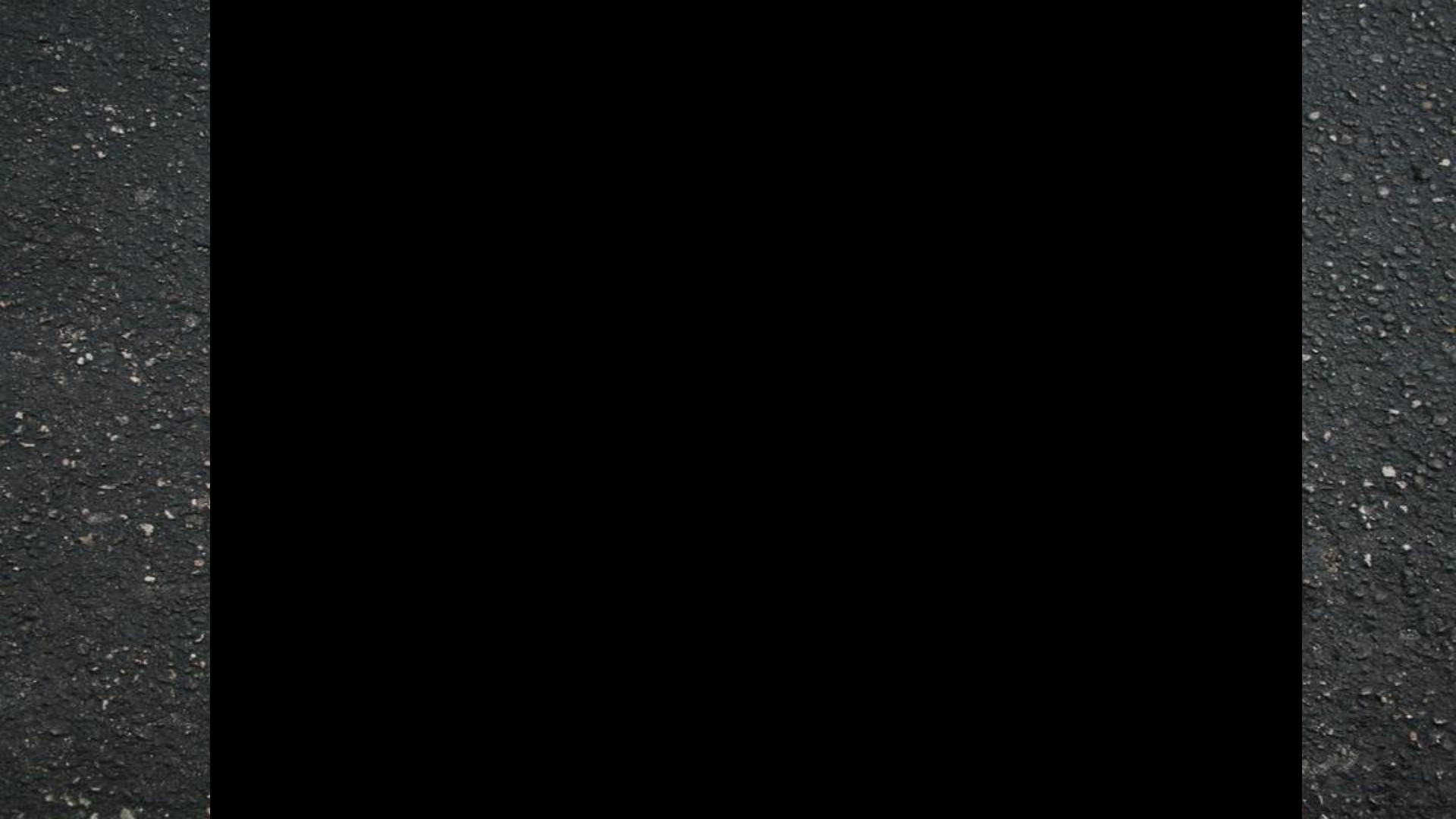
Walkers encounter a message prompting them to consider how trees relate to their carbon footprint.

An illustration along the trail allows walkers to traverse a scaled representation of CO^2 emissions in the city vs what the city's trees negate.

Trees along the way are indicated by markers on the pavement, stating their age, species, and average yearly CO^2 negation. The tree info is paired with a carbon emitting activity that is equivalent to the tree's yearly negation.

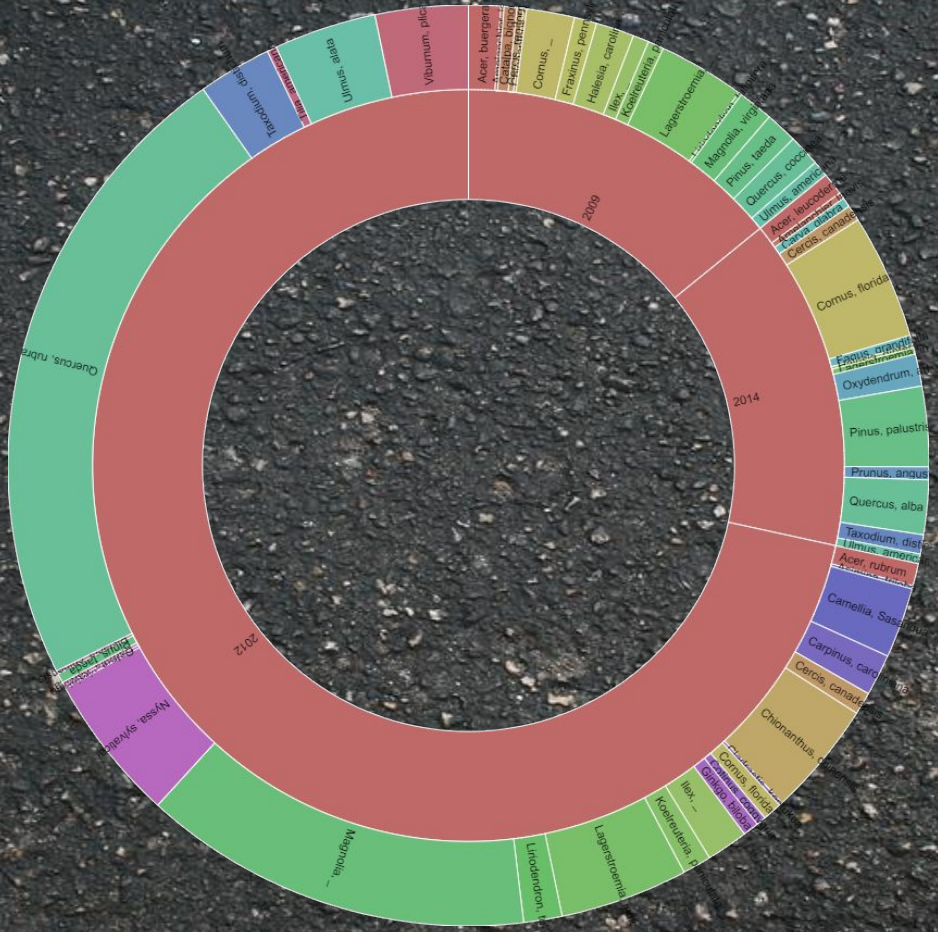
Viewers encounter CO^2 production bar graphs broken down by category and, where possible, listed as commercial vs residential vs industrial sources.

At the end walkers are met with an excerpt about the data sources, background on Atlanta's tree canopy, and a call to action about reducing emissions.

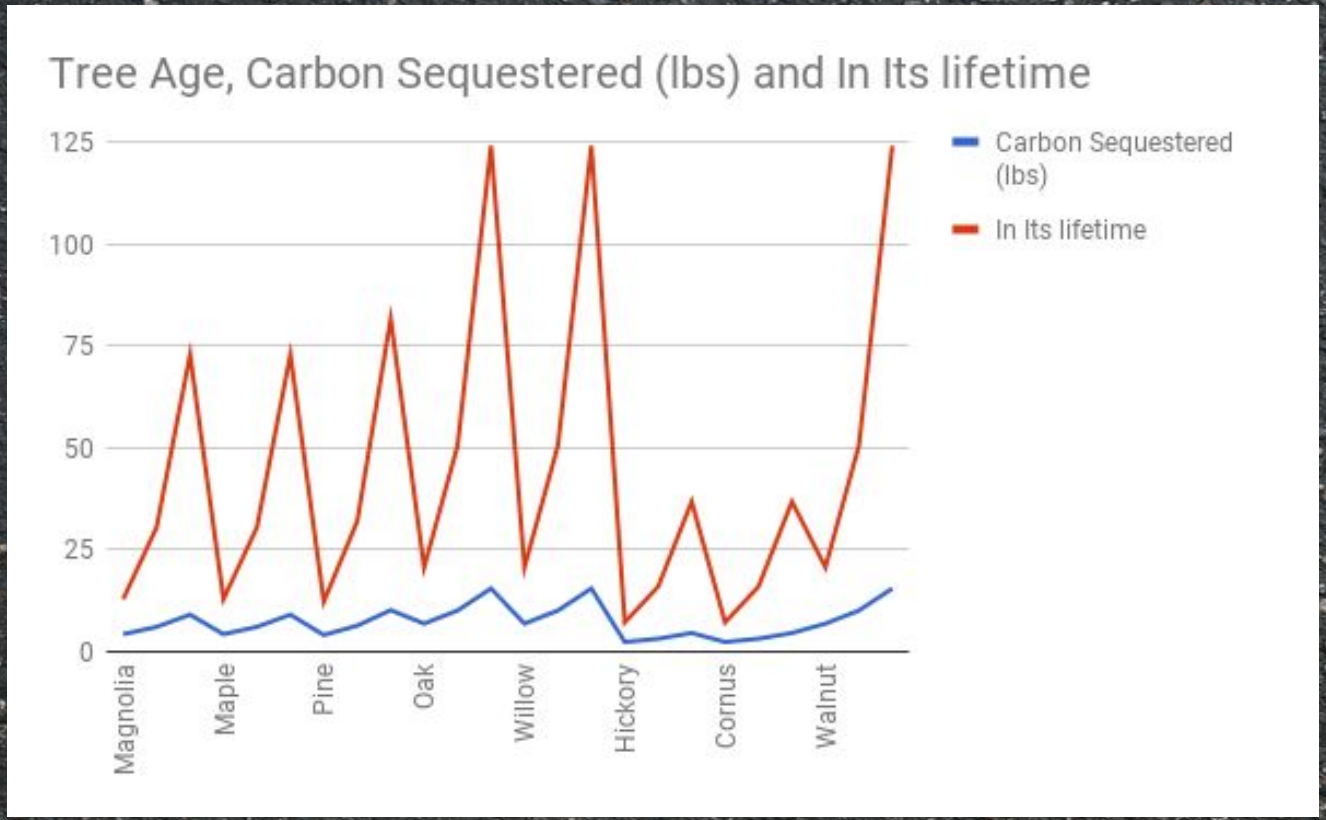


PAUSE FOR A
MASSAGE

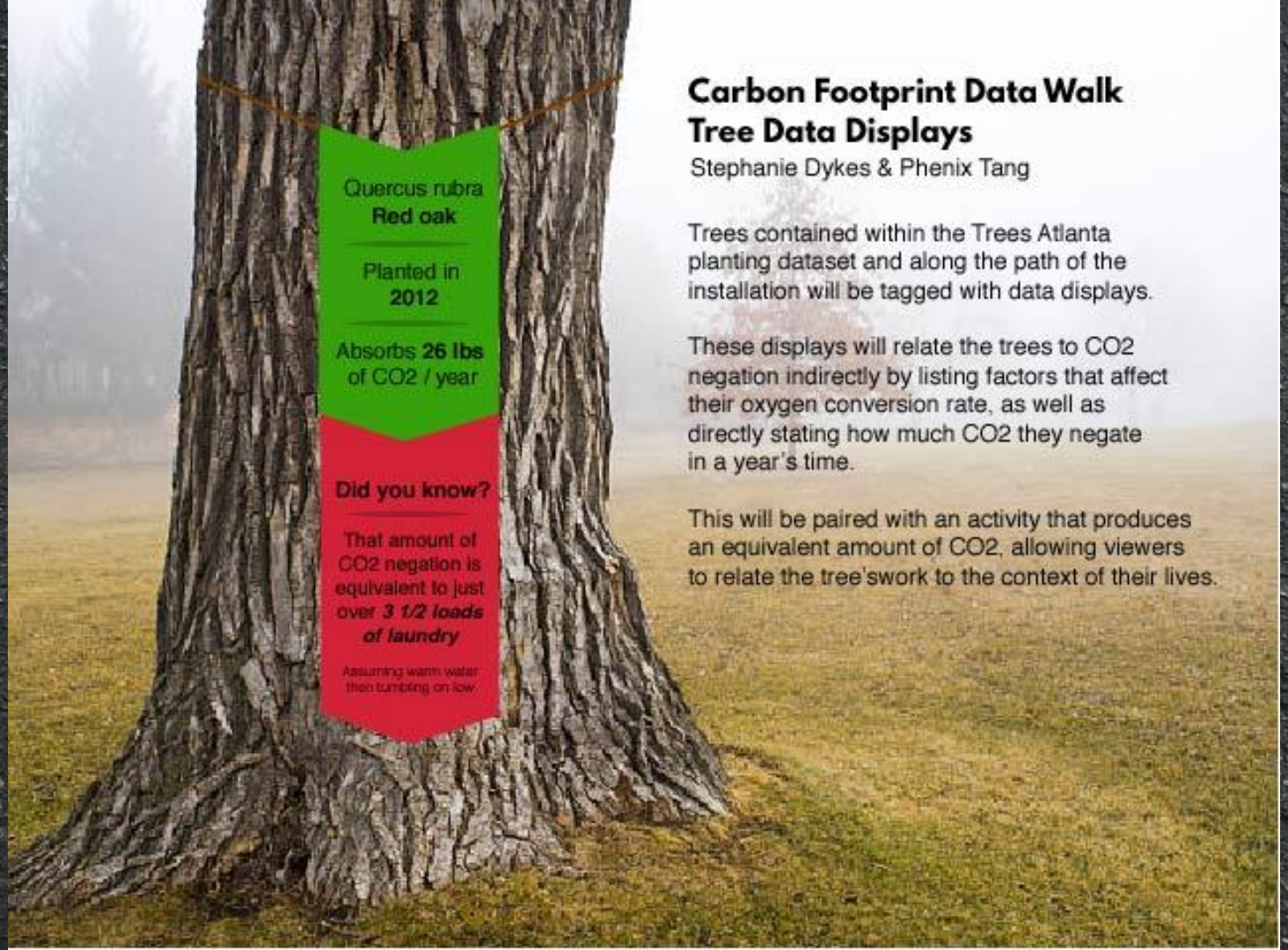
Do Trees Negate Our
Carbon Footprint?
OTHER SOURCES
NATURAL GAS
ELECTRICITY
MARTA
TRANSPORTATION
BY TREES
Atlanta's CO2
Negation
Atlanta's CO2
Production
Do Trees Negate Our
Carbon Footprint?



Tree genuses by year, along the Eastside BeltLine TrailC



Amount of carbon dioxide negated by individual trees based on its species and age.



Carbon Footprint Data Walk
Tree Data Displays

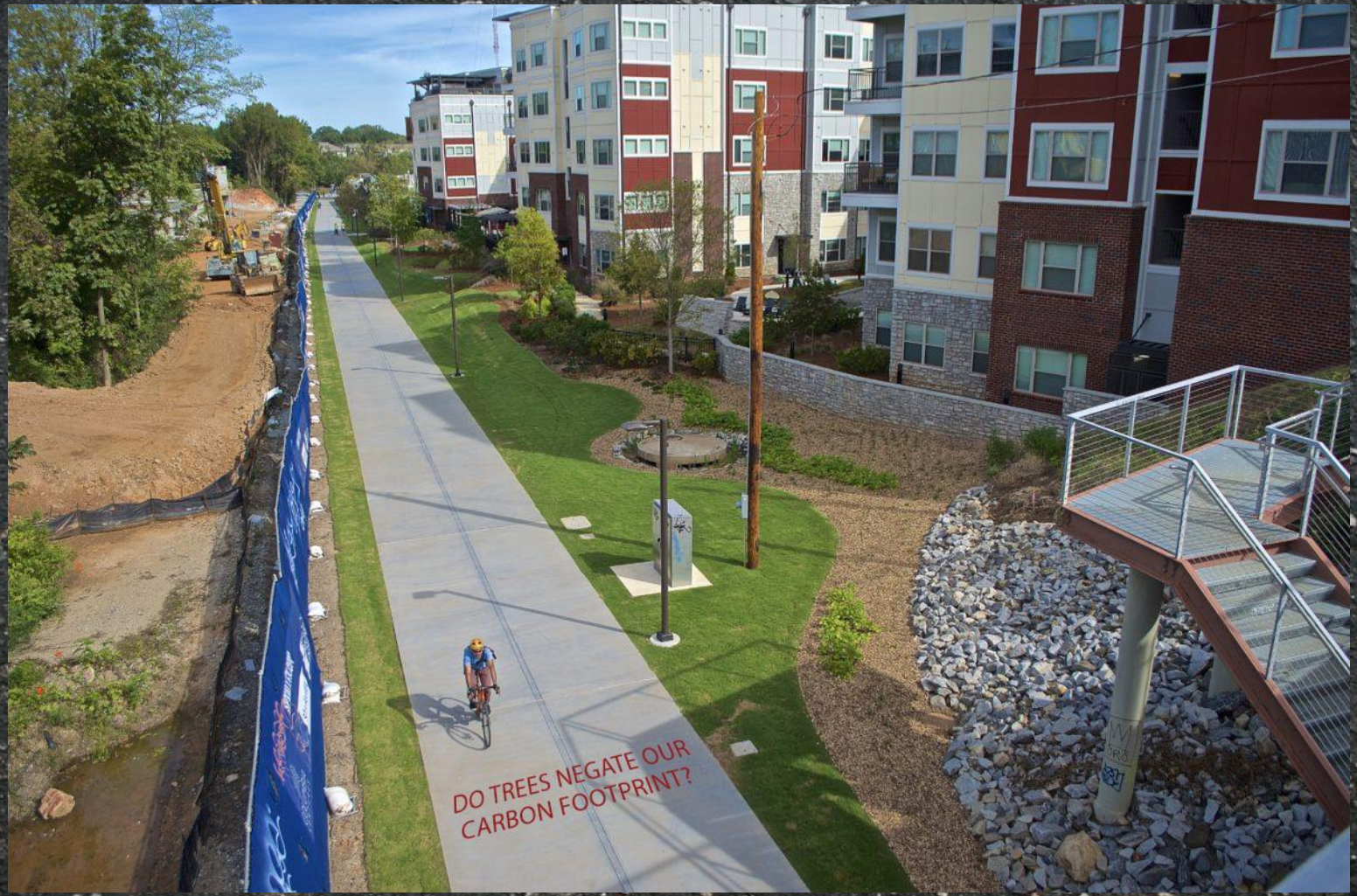
Stephanie Dykes & Phenix Tang

Trees contained within the Trees Atlanta planting dataset and along the path of the installation will be tagged with data displays.

These displays will relate the trees to CO2 negation indirectly by listing factors that affect their oxygen conversion rate, as well as directly stating how much CO2 they negate in a year's time.

This will be paired with an activity that produces an equivalent amount of CO2, allowing viewers to relate the tree'swork to the context of their lives.


DO TREES NEGATE
OUR CARBON FOOTPRINT?


DO TREES NEGATE OUR
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Carbon Footprint Data Walk - Flow Diagram

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Walkers encounter a message prompting them to consider how trees relate to our carbon footprint.

An illustration along the trail allows walkers to traverse a scaled representation of CO2 emissions in the city.

Trees along the way are tagged with data about their age, species, and average yearly CO2 negation. Walkers can stop to examine and contemplate how these specific trees relate to the overall welfare of the city.

An illustration on the sidewalk depicts how much the surrounding trees on this section of the BeltLine negate vs what one walker produces.

The starting message is displayed again for anyone who approches from the opposite direction, as well as to provoke walkers to reconsider their earlier answers.

DO TREES NEGATE OUR CARBON FOOTPRINT?

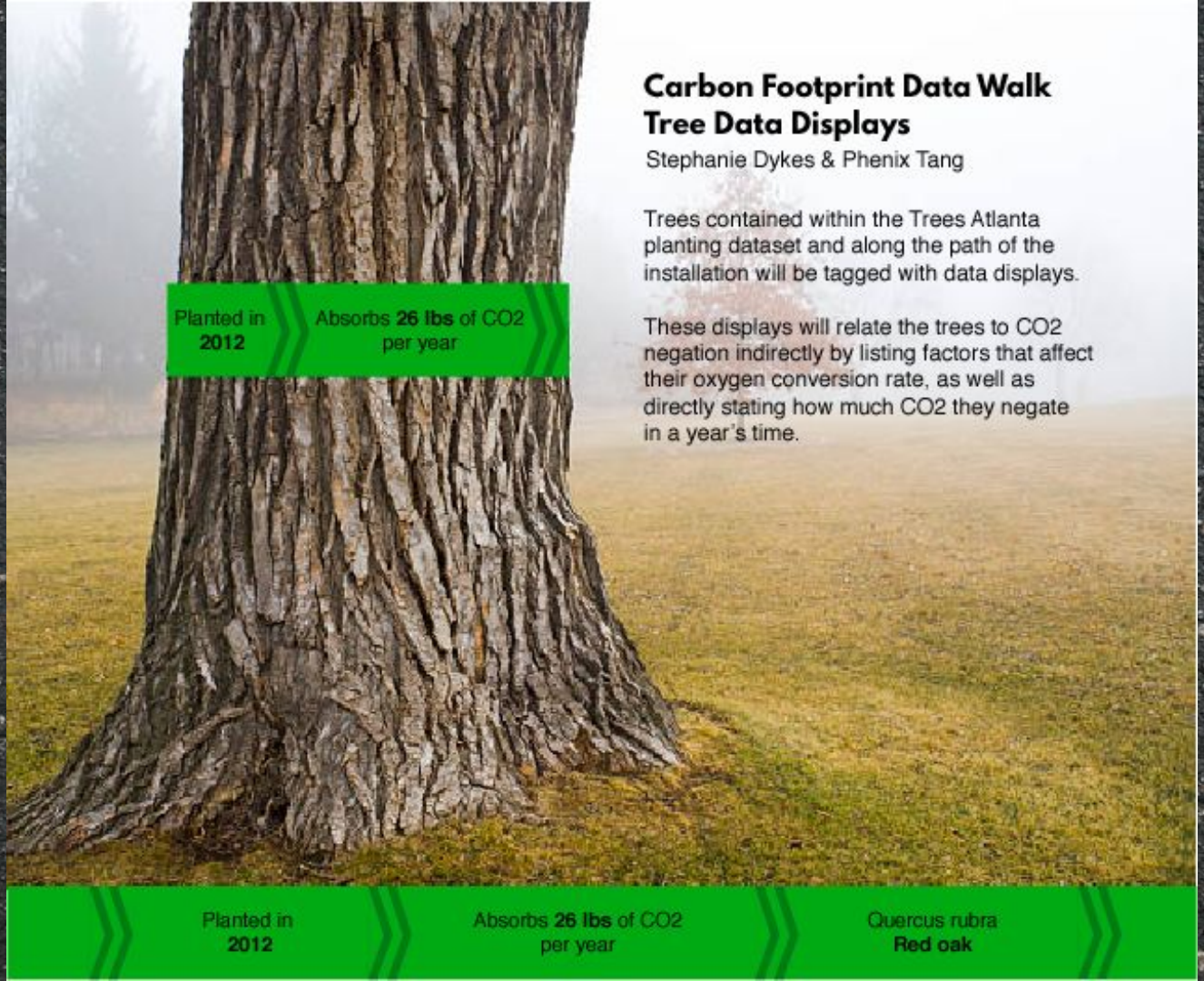
Total CO2 Negation of Atlanta Trees
617,545 tons / year

Total CO2 Production of Atlanta
9,600,000 tons / year

CO2 Negation of the 890 Eastside Belt-Line Trail Trees
10.5 tons / year

CO2 Production of 1 Atlanta Resident
22.7 tons / year

DO TREES NEGATE OUR CARBON FOOTPRINT?



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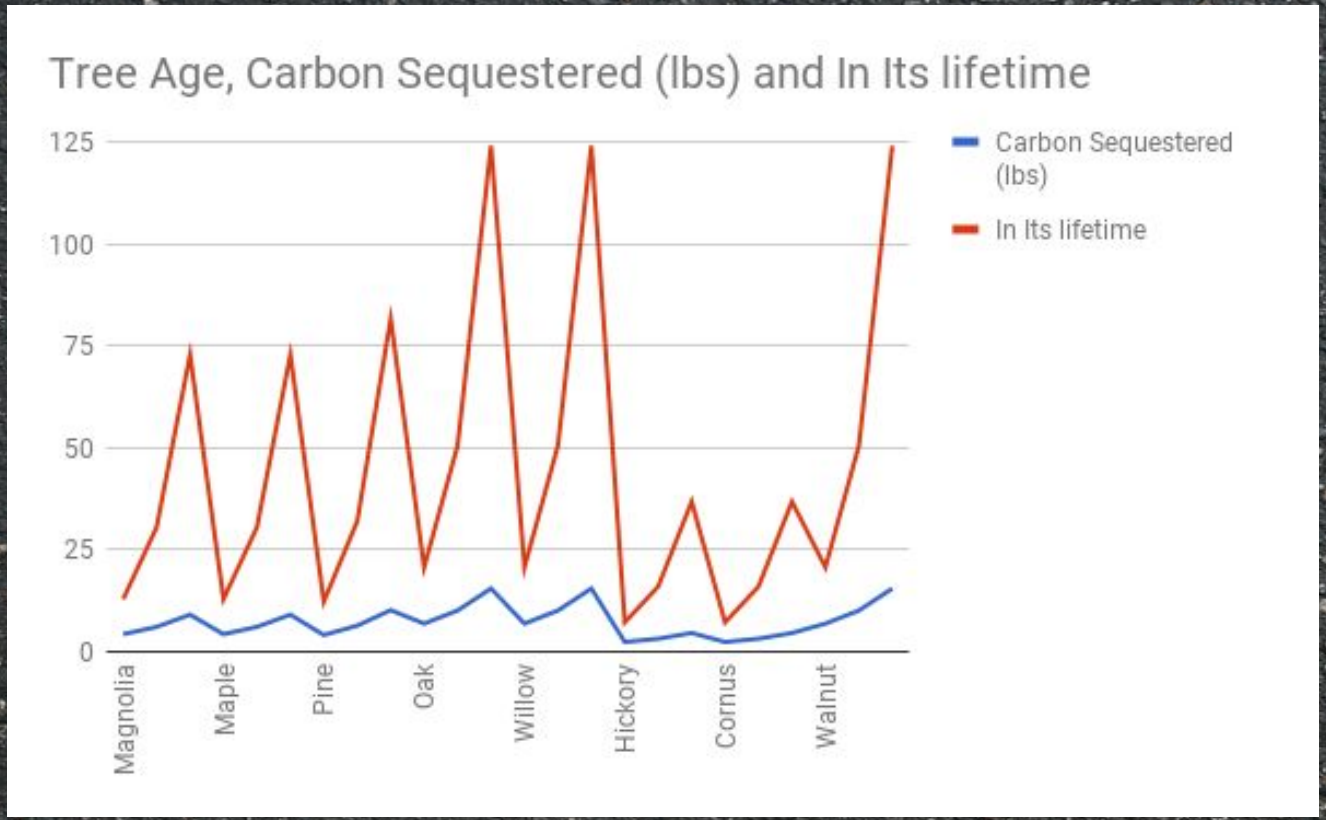

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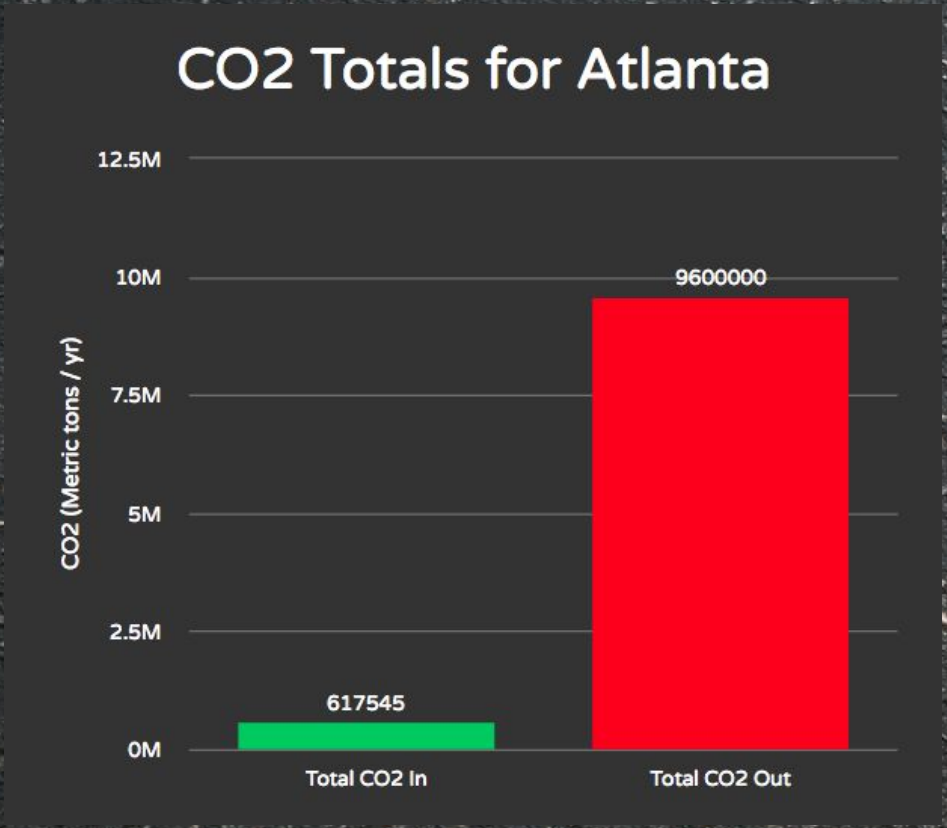

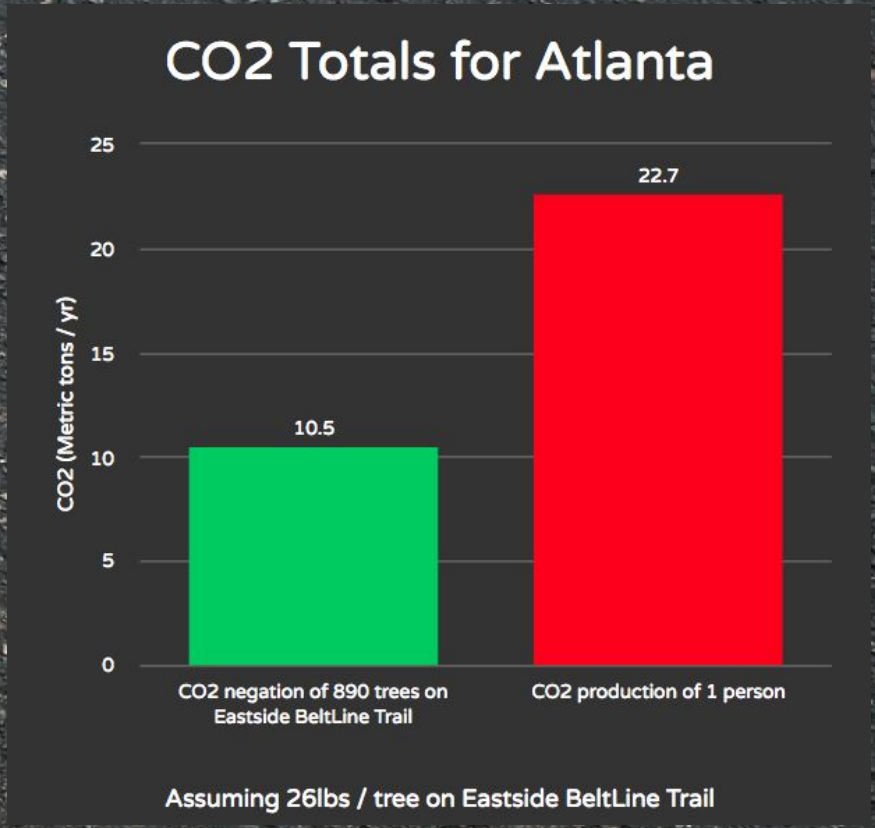

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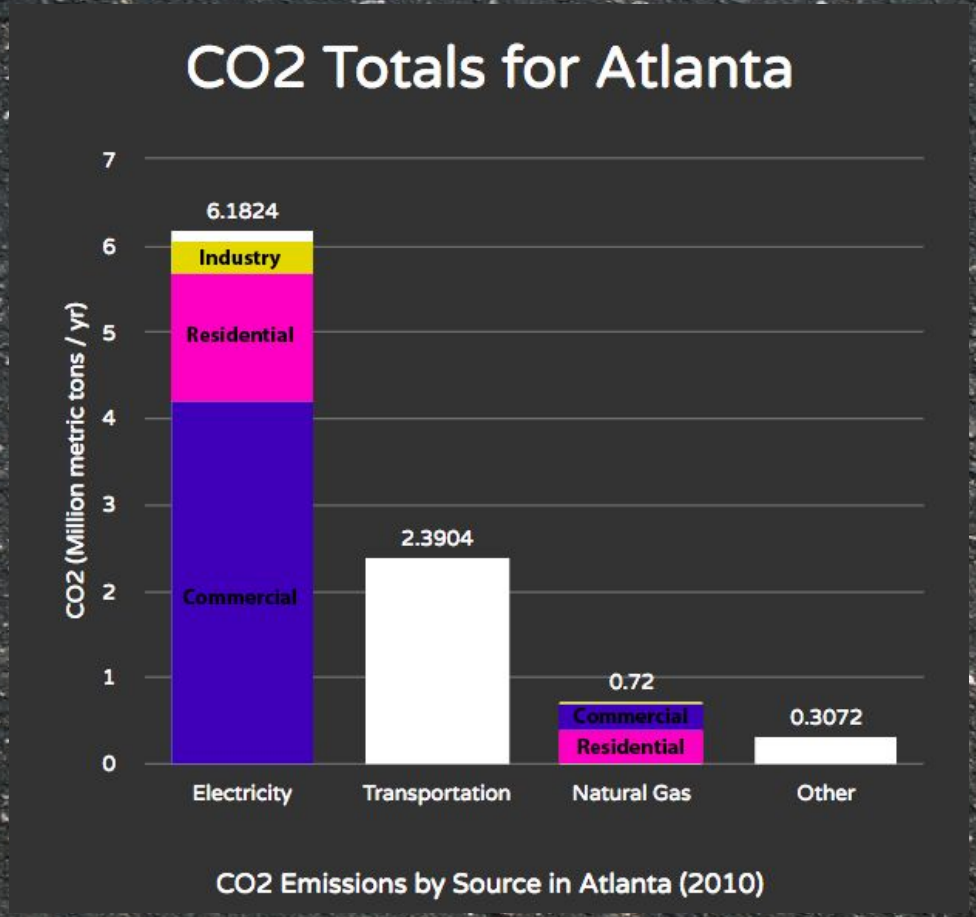

Sources for carbon dioxide production