

#### **Potential to Fund Reforestation through Carbon Credit Generation:**

A Multi-Stakeholder Pilot Project in Austin, TX





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### Plant. Grow. Learn.

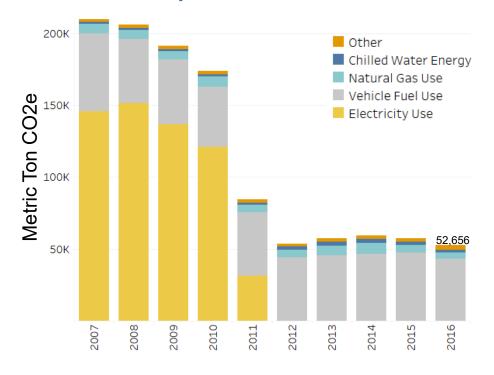
TreeFolks has engaged thousands of volunteers to plant more than 2.8 million trees in Central Texas. Planting trees is a powerful means of connecting people with their community.

Trees clean the air and water, provide habitat for wildlife, produce fresh fruit for neighbors, and shelter us from the hot Texas sun.





### City of Austin Municipal GHG Emissions



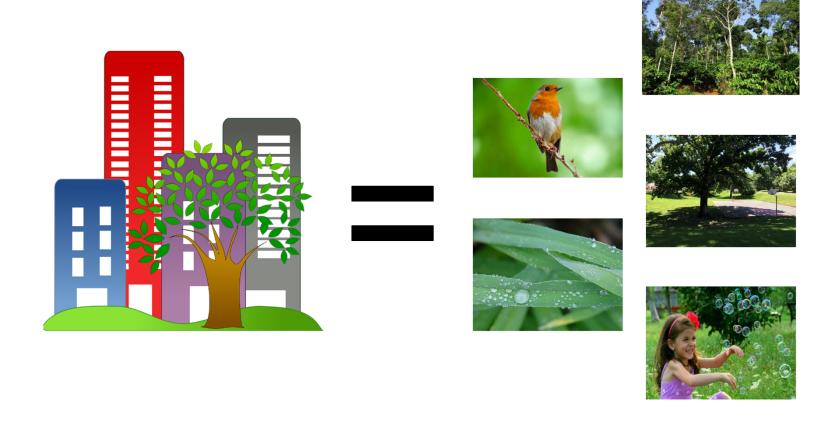
- 2016 Municipal Emissions dropped slightly from 2015 to 52,656 Metric Tons CO2e. This is the lowest they have ever been.
- 2007 Council Adopted Target of Carbon Neutral City Operations by 2020



## City of Austin needs carbon offsets

- A carbon offset is one metric ton of carbon dioxide removed or reduced from the atmosphere
  - Complies with a formalized protocol
  - Third party verified
  - Registered with a Registry
  - Tradeable and Transferrable for \$
- COA currently purchases ~5,000 tons per year for the Office of Sustainability and Convention Center through an International Carbon Registry – Carbon Trade Exchange
  - Positives Low Cost, Easy to manage
  - Negatives Projects are not in Austin, Projects are Industry, Landfills, and Large scale renewables
- For years, we have attempted to create our own carbon offsets, but we've lacked the protocols for measurement and verification.

## **Benefits of City Trees**





### Challenges and Opportunities

- Tree cover is declining in most cities
  - Growth and development
  - Tree loss exceeds preservation and planting
- City budgets cannot keep up
  - Trees are liability and maintenance expenses
  - Trees NOT carried as an asset on balance sheet

#### The Voluntary Carbon Market is a potential source of funds

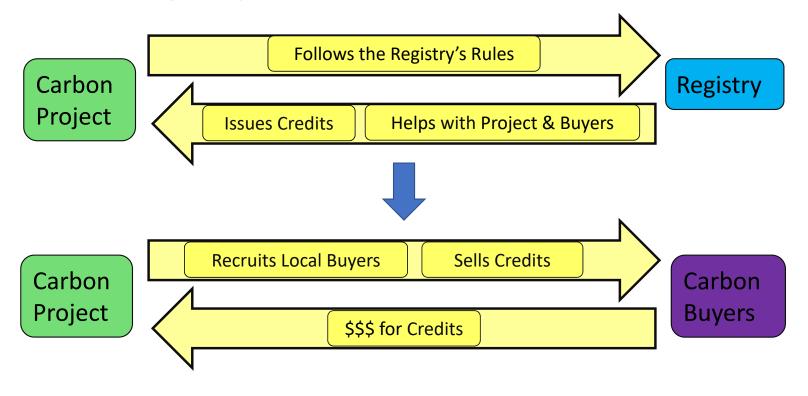
- \$700,000,000 spent in last decade in U.S.
- Example: Microsoft goes carbon neutral, buys forest credits in Indonesia and Madagascar





TREEFOLKS

## How the Registry Works





# Registering Planting Projects with City Forest Credits

- City Forest Credits will provide verified Forward Carbon+ Credits
- City of Austin will purchase all credits in attempt to reach their 2020 carbon neutrality goal
- Funding from the sale of credits will go to support the work of generating the credits (TreeFolks), and then tree planting projects









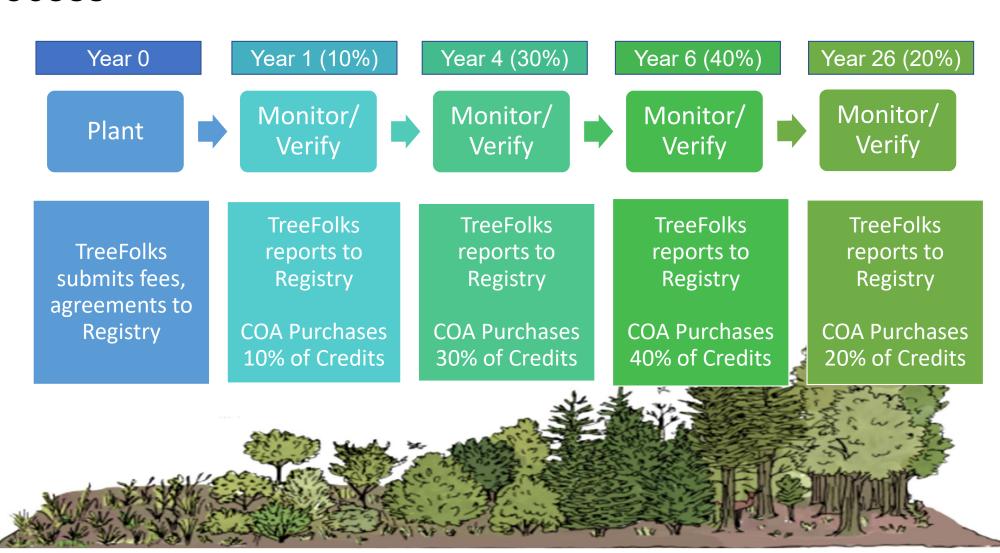


### Why a nonprofit?

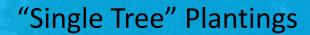
- Very long-term partnership with the City of Austin and existing work with several departments (Parks, Watershed Protection, Sustainability, and Community Tree Division)
- Experience in large-scale reforestation, particularly streamside/ riparian sapling planting
- Record of success in reforestation programs based on a low-cost, high return model of building forested land
- Not bound by municipal boundaries builds regional capacity



### Process







- Containerized stock
- Staked and caged
- Requires irrigation
- Does not result in full canopy over lifetime of project (25 yrs)
- Pilot (58 trees) offsets 140 tonnes CO2
- Yields \$4,200 on market



### "Single Tree" Plantings

"Canopy" Plantings

- Containerized stock
- Staked and caged
- Requires irrigation
- Does not result in full canopy over lifetime of project (25 yrs)
- Pilot (58 trees) offsets 140 tonnes CO2
- Yields \$4,200 on market

- Saplings
- No stakes or cages
- No irrigation (high mortality)
- Results in full canopy over lifetime of project (25 yrs)
- Pilot (23 acres) offsets 2,500 tonnes
   CO2
- Yields \$75,000 on market

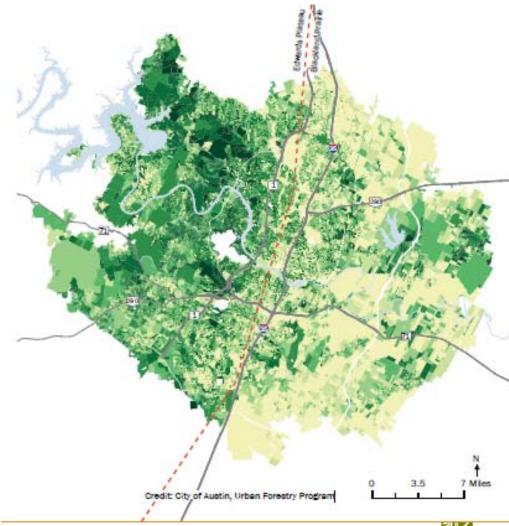
## Challenges so far

- Paperwork includes an Agreement to Transfer Credits from the land owner to TreeFolks. In large bureaucracies, it can be hard to find the right person to sign.
- Perception that the Project Operator is making lots of money and funding isn't needed to carry out the plantings.
- Credit generation may only be manageable at scale. If you are doing only a few container tree plantings, it may not be effective.



# How to reforest Travis County streams?

- High interest within the city to assist in reforesting Travis County streams that drained into Austin – outside of Austin's jurisdiction
- Usual streams of revenue for large scale reforestation not present, i.e. post-disaster FEMA funding
- Could sale of carbon credits be the answer?
- Early calculations show that while credit generation can not fund project in its entirety, they could contribute to sustainability over the long term.





### Long-lasting benefits

- Locally sourced credits: environmental benefits and carbon dollars stay local, where the people are
- Projects compliant with a national standard, to address a global problem, while delivering local benefits
- Innovative Solution from local elected and agency officials, community leaders, and NGOs implementing projects, all over many years as riparian areas, parks, streams, or neighborhoods are transformed
- Builds regional capacity by testing protocols, NGO can generate credits on lands not held by Austin that can be credited to CO2 goals while still staying local





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