

# TRAVIS COUNTY FLOODPLAIN REFORESTATION PROGRAM - 2021 Initial Credit Project Design Document

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# INSTRUCTIONS

Project Operators complete and submit this Initial Credit Project Design Document (PDD) after planting has been completed. City Forest Credits then reviews this PDD for validation with all other required project documents. An approved third-party verifier then conducts verification. A separate amendment to the Project Design Document will need to be submitted for future verification at years 4, 6, and after year 25.

Please complete sections starting on page 5 where you find "[Enter text here]" as thoroughly as possible.

# PROTOCOL REQUIREMENTS

Below are a list of the eligibility requirements in the City Forest Credits (CFC) Tree Planting Protocol Version 9, dated February 7, 2021. Begin your responses on page 4 under PROJECT OVERVIEW.

# **Project Operator (Section 1.1)**

Identify a Project Operator for the project. This is the person or entity who takes responsibility for the project for the 25-year duration.

# Commit to 25-year Project Duration in the Project Implementation Agreement (Section 1.2 and Section 5)

Sign the Project Implementation Agreement – this is the 25-year agreement between the Project Operator and CFC for an urban forest carbon project.

### **Location Eligibility (Section 1.3)**

Project Areas must be located in parcels within or along the boundary of at least one of the following criteria.

- A. The Urban Area boundary ("Urban Area"), defined by the most recent publication of the United States Census Bureau
- B. The boundary of any incorporated city or town created under the law of its state;
- C. The boundary of any unincorporated city, town, or unincorporated urban area created or designated under the law of its state;
- D. The boundary of any regional metropolitan planning agency or council established by legislative action or public charter. Examples include the Metropolitan Area Planning Council in Boston and the Chicago Metropolitan Planning Agency;
- E. The boundary of land owned, designated, and used by a municipal or quasi-municipal entity such as a utility for source water or watershed protection;
- F. A transportation, power transmission, or utility right of way, provided the right of way begins, ends, or passes through some portion of A through E above.

# Ownership Eligibility (Section 2)

Project Operator must demonstrate ownership of property and eligibility to receive potential credits by meeting at least one of the following:

- A. Own the land, the trees, and potential credits upon which the Project trees are located; or
- B. Own an easement or equivalent property interest for a public right of way within which Project trees are located, own the Project trees and credits within that easement, and accept ownership of those Project trees by assuming responsibility for maintenance and liability for them; or

C. Have a written and signed agreement from the landowner granting ownership to the Project Operator of any credits for carbon storage or other benefits delivered by Project trees on that landowner's land. If Project trees are on private property, this agreement must be recorded in the property records of the county in which the land containing Project trees is located.

# Additionality (Section 4 and Appendix D)

Legally Required Trees NOT Eligible - project trees cannot be required by law or ordinance to be planted.

Performance Standard Baseline - project trees must be additional based on the performance standard baseline attached.

# Multiple planting sites may be aggregated into one project (Section 8)

Planting sites can be on public and private land, in different cities, and aggregated into one project, provided that planting on all properties occurs within a 36-month period and that all properties comply with protocol requirements.

# Carbon Quantification (Section 12 and Appendix B)

CFC has developed spreadsheets and methods for quantifying carbon stored and credited. The project design including tree spacing and goals will determine the quantification and monitoring requirements. Project Operators will quantify  $CO_2$  using the method appropriate for the project type. CFC supplies all quantification tools. The three main project designs are:

- Single Tree trees are scattered and spaced apart more than 10 feet, as in streets, yards, some parks, and schools, individual trees are tracked and randomly sampled
- Clustered Parks trees are relatively contiguous in park-like settings and change in canopy is tracked
- Canopy trees are planted very close together, often but not required to be in riparian areas, significant mortality is expected, and change in canopy is tracked. The two main goals are to create a forest ecosystem and generate canopy

### **Verification by third-party verifiers (Section 13)**

All projects must be verified before receiving credits.

### Imaging Requirements (based on planting method)

In order to receive credits, additional information is required at Years 4, 6, and 26. Below are the imaging requirements by planting method:

- 1) Single Tree (spaced 10' or more apart, i.e. street trees or linear plantings)
  - a. <u>Initial Credit:</u> The carbon quantification tool for your project contains a worksheet called "Data Collection" for use in tracking each tree. In that file, document the GPS coordinates for each tree planted.
  - b. Years 4, 6, and 26: Geocoded photos or imaging of a minimum sample of 20% of the trees is required at Years 4, 6, and 26. The tracking file includes a column where each tree is assigned a unique serial number to help with tracking each coordinate and tree picture or image.
- 2) Clustered Parks (spaced 10' apart but continuously so to generate canopy over time, i.e. natural areas)

- a. <u>Initial Credit</u>: Projects must document the planting through photos or imaging. Select points and take geo-coded photos that when taken together capture the newly planted trees in the project area. If site is rectilinear, take a photo at each of the corners. If the site is large, take photos at points along the perimeter looking into the project area. If necessary to capture the trees, take photos facing each of the cardinal directions while standing in the middle of the project area. If site is nonrectilinear, identify critical points along property boundaries and take photographs at each point facing in towards the middle of the site. Next, take photographs from the middle of the project area facing out at each cardinal direction.
- b. At Years 4, 6, and 26: Project provides images of the Project Area from any telemetry, imaging, remote sensing, i-Tree Canopy, or UAV service, such as Google Earth and estimate the area in tree canopy cover (acres). Imaging from Google Earth with leaf-on may be used. Project operators will calculate the percent of canopy cover from the Google Earth imaging. Projects can use i-Tree Canopy and point sampling to calculate canopy cover. Using i-Tree Canopy, continue adding points until the standard error of the estimate for both the tree and non-tree cover is less than 5%. i-Tree Canopy will supply you with the standard errors. If tree canopy cover is determined using another approach, such as image classification, a short description of the approach should be provided, as well as the QA/QC measures that were used. A tree cover classification accuracy assessment should be conducted, as with randomly placed points, and the percentage tree cover classification accuracy reported.
- 3) Canopy (closely planted with spacing less than 10' apart so to generate canopy and forest ecosystem, high tree mortality expected, i.e. riparian areas)
  - a. <u>Initial Credit</u>: Projects must document the planting through photos or imaging. Select points and take geo-coded photos that when taken together capture the newly planted trees in the project area. If site is rectilinear, take a photo at each of the corners. If the site is large, take photos at points along the perimeter looking into the project area. If necessary to capture the trees, take photos facing each of the cardinal directions while standing in the middle of the project area. If site is nonrectilinear, identify critical points along property boundaries and take photographs at each point facing in towards the middle of the site. Next, take photographs from the middle of the project area facing out at each cardinal direction.
  - b. At Years 4, 6, and 26: Project provides images of the Project Area from any telemetry, imaging, remote sensing, i-Tree Canopy, or UAV service, such as Google Earth and estimate the area in tree canopy cover (acres). Imaging from Google Earth with leaf-on may be used. Project operators will calculate the percent of canopy cover from the Google Earth imaging. Projects can use i-Tree Canopy and point sampling to calculate canopy cover. Using i-Tree Canopy, continue adding points until the standard error of the estimate for both the tree and non-tree cover is less than 5%. i-Tree Canopy will supply you with the standard errors. If tree canopy cover is determined using another approach, such as image classification, a short description of the approach should be provided, as well as the QA/QC measures that were used. A tree cover classification accuracy assessment should be conducted, as with randomly placed points, and the percentage tree cover classification accuracy reported.

# PROJECT OVERVIEW

# **Basic Project Details**

**Project Name**: Travis County Floodplain Reforestation Program - 2021

Project Number (CFC to provide): 014

**Project Type:** Planting Project (under the Planting Protocol – version 9, dated February 7, 2021)

**Project Start Date:** January 26, 2021 - February 22, 2021 **Project Location** (city, town, or jurisdiction): Travis County, TX

**Project Operator Name:** TreeFolks

Project Operator Contact Information: Valerie Tamburri, valerie@treefolks.org, 512-443-5323

# **Project Description**

Describe overall project goals, where the project will take place, what method of planting (per Protocol), partners, time period of when the trees have been or will be planted, and any other relevant information. (minimum of 2 paragraphs)

TreeFolks and Austin Office of Sustainability are in the second year of the Travis County Floodplain Reforestation Program - 2021 to restore healthy forest buffers of local rivers and streams in eastern Travis County. During last year's program pilot, TreeFolks partnered with the City of Austin Watershed Department and Travis County parks, but due to new city protocols and county land availability, we are unable to partner again this season. TreeFolks plans to resume these partnerships next year and continue to plant on public land. Carbon+ credits generated from this project will be sold to the City of Austin to help meet the city's 2020 carbon neutrality goal. Using funds allocated for carbon offsets to purchase local credits from these riparian plantings keeps the City of Austin's investments localized while addressing global climate change.

The program, operated by TreeFolks, will reforest floodplains on private lands. Due to COVID-19 restrictions, TreeFolks will not host any volunteer planting events this season, but will continue working with contractor crews and youth service organizations to plant native saplings, and provide the reforestation services to landowners free of charge. These services include, for those applicants who choose to participate and are selected, free trees, free planting services, and free consultations.

The tree planting projects will increase canopy cover and diversity in an ecosystem that has become degraded by farming and overgrazing for more than a century. The City of Austin Watershed Protection Department recently concluded that diverse wooded corridors along creeks and riparian zones here are rare.

The reforestation project also serves to engage local community members with the environment, complementing Austin's participation in the Biophilic Cities Network and the Children and Nature collaborative, and aligning with citywide green infrastructure efforts. Reforesting Austin's local stream corridors will create lasting change, both within the city limits and across eastern Travis County floodplains.

The project will encompass privately owned parcels totaling 35.91 acres. We planted over 23,000 saplings at densities ranging from  $5' \times 8'$  spacing to  $7' \times 10'$  spacing, in order to provide canopy style coverage in these riparian zones.

# LOCATION AND OWNERSHIP OF PROJECT AREA (Section 1.3 and Section 2)

# **Project Area Location**

Describe where the Project Area is located and how it meets the location criteria.

The Project Area, including all plantings, are located in the Eastern portion of Travis County, TX along degraded riparian corridors. The property addresses are listed below:

17312 Littig Rd	Elgin	78621
11911 Jones Rd	Manor	78653
18452 GREAT FALLS DR	Manor	78653
22412 Trailriders CV / 30.36241, -97.46322	Manor	78653
11002 FM 969	Austin	78724
6013 Loyola Lane	Austin	78724

The Travis County Floodplain Reforestation Program - 2021 meets the following location criteria:

A) The Urban Area boundary ("Urban Area"), defined by the most recent publication of the United States Census Bureau

a. Elgin Code: 26659b. Manor Code: 54050c. Austin Code: 04384

The plantings are also within or adjacent to Austin's Watershed Protection jurisdiction.

# **Project Area Ownership and Right to Receive Credits**

Describe the property ownership and include relevant documentation including numbered title/filename as an attachment (Ex: 1 - Attestation of Land Ownership, or 1 - Agreement from Owner to Transfer Credits).

Private Land: The landowner agrees to allow TreeFolks to transfer credits and signs a Deed Restriction. The Deed Restriction is encouraged by the nonprofit TreeFolks as a financial protection – once the nonprofit registers credits with CFC and trades them to the City of Austin, TreeFolks would be liable for the value of those credits should a landowner cut the trees down within a 25-year period. In our experience through the Blanco River Reforestation Program, landowners had a tendency to grow tired of the brush and mow the project down about 11% of the time. This season, all Deed Restriction contracts will state a \$3,144/acre penalty (instead of the \$150/acre penalty used during the pilot year) to recoup the true value of Carbon+ Credits if trees are removed before the 25 year period.

Please see attachments: Agreement to Transfer Credits Deed Template

# Maps

Provide a detailed map of the Project Area. Also provide a regional-scale map that shows the Project Area within the context of relevant urban/town boundaries. Include numbered title/filename of attachments (Ex: 2 - Regional Scale Map)

TCFRP Pilot Project Area.pdf TCFRP Planting Parcels 2020-2021.pdf TCFRP Planting Snapshot 2020-2021.pdf

**Additional Notes** 

# PROJECT DURATION (Section 1.2 and 5)

Project Operator commits to the 25-year project duration requirement through a signed Project Implementation Agreement with City Forest Credits.

# **ATTESTATIONS**

Complete and attach the following attestations: Attestation of No Double Counting of Credits, Attestation of No Net Harm, Attestation of Planting, and Attestation of Planting Affirmation. Provide any additional notes as relevant.

N/A

# ADDITIONALITY (Section 4 and Appendix D)

Legally Required Trees <u>NOT</u> Eligible - project trees are not required by law or ordinance to be planted. See Attestation of Planting.

Performance Standard Baseline - project trees are additional based on the performance standard baseline attached to this PDD.

# PLANTING DESIGN

Describe detailed planting design, including spacing between trees. Will the trees be planted as scattered individual trees, clustered in groups like in natural areas, or tightly clustered to restore a forest ecosystem?

- Single Tree trees are scattered and spaced apart more than 10', as in streets, yards, some parks, and schools, individual trees are tracked and randomly sampled
- Clustered Parks trees are relatively contiguous in park-like settings and change in canopy is tracked
- Canopy trees are planted very close together, often but not required to be in riparian areas, significant mortality is expected, and change in canopy is tracked. The two main goals are to create a forest ecosystem and generate canopy

Describe your data collection on Project Trees and show it in the quantification section below. For example, Project Operator can use the data collection sheet contained in the CFC quantification tool or your own approved method.

Planting occurs during the winter months (Nov-Feb) through volunteer events and contracted labor. Due to COVID-19, we will not be hosting volunteer planting events this season. Planting is done on a maximum spacing of 8'x 10' grid-like system with only 25% of the seedlings expected to reach maturity. The dense planting accounts for such a high mortality rate due to the fact that the seedlings are not cared for once planted. This method is called the Rapid Riparian Revegetation method (Guillozet et al., 2014) and it is intended to speed up the rate of natural recruitment by mimicking nature and adding

native woody competition. Over time, the grasses and shrubs that initially take over the riparian area begin to lend way to other (more permanent) species that make up the future riparian forest. Sites will be chosen for reforestation if the planting area is within a floodplain, not already forested, and not be a highly-incised bank (due to lack of connection to the water table).

TreeFolks will use a range of tools to collect data on Project Trees, including imaging of the trees through geocoded photographs geographic information systems (GIS), and the Theodolite app. Imaging of the trees will be completed either by selecting points around the site perimeter that when taken together capture the newly planted trees in the project area. If the sites are rectilinear, photos will be taken at each of the corners looking in the middle and while in the middle of the site facing each cardinal direction. If the sites are large, multiple photo points will be located along the perimeter looking into the site. If the site is nonrectilinear, critical points will be identified along the property boundaries and photos will be taken facing towards the middle of the site. Photos will also be taken from the middle facing each of the cardinal directions. GIS will be used to continually update Project maps and store data. The Theodolite app will be used to record photo points for all planting areas. The app includes a range of information on each photo, including coordinates and cardinal directions.

# CARBON QUANTIFICATION DOCUMENTATION (Section 12 and Appendix B)

Describe which quantification approach you anticipate using, list the project's climate zone, and outline the estimated total number of credits to be issued to the project as well as the amount to be issued upon successful verification. When requesting credits after planting, attach one of the three quantification tool documents below and provide the data you have collected for Project Trees.

- Single Tree trees are scattered and spaced apart more than 10 feet, as in streets, yards, some parks, and schools, individual trees are tracked and randomly sampled
- Clustered Parks trees are relatively contiguous in park-like settings and change in canopy is tracked
- Canopy trees are planted very close together, often but not required to be in riparian areas, significant mortality is expected, and change in canopy is tracked. The two main goals are to create a forest ecosystem and generate canopy

Total number of trees planted	23,491
CO2 Index, tCO2e/acre	106.70
Project area (acres), if applicable	35.91
Total number of trees per acre, if applicable	654.16
Credits attributed to the project (tCO2e)	3,831.60
Contribution to Registry Reversal Pool (5%) (tCO2e)	191.58
Total credits to be issued to the Project Operator (tCO2e)	3,640.02
Total credits requested to be issued in Year 1 (10% of above)	364.00

The 2021 Travis County Floodplain Reforestation Program planting species list and planting method is largely the same as the one used for the 2019 season. Therefore, TreeFolks is using the same quantification data provided by CFC's forest scientist in order to estimate the CO2 index (CI) and determine the forecasted amount of CO2 stored after 25-years. The documentation provided by the forest scientist is included in this PDD.

## **Most Common Species:**

Retama – Parkinsonia aculeata – 2,377 Mountain Laurel – Sophora secundiflora – 1,710 Honey Locust – Gleditsia tiacanthos – 1,429 Huisache – Acacia farnesiana – 1,401 Bur oak – Quercus macrocarpa – 1,279

Species: Scientific Name	Common Name	Planted
Callicarpa americana	American beautyberry	907
Platanus occidentali	American sycamore	90
Ehretia anacua	Anacua or sandpaper tree	686
Juglans major	Arizona walnut	176
Taxodium distichu	Bald cypress	103
Juglans nigra	Black walnut	28
Acer negrundo	Box elder maple	294
Condalia hookeri	Brazilwood	1068
Quercus macrocarpa	Bur oak	1279
Cephalantus occidentalis	Buttonbush, common	49
Frangula caroliniana	Carolina buckthorn	7
Acacia gregii	Catclaw acacia	1141
Quercus muehlenbergii	Chinquapin oak	1127
Chilopsis linearis	Desert willow	316
Styphnolobium affine	Eve's necklace	254
Rhus lanceolata	Flameleaf sumac	127
Fraxinus pennsylvanica	Green ash	942
Acacia berlanderi	Guajillo	245
Gleditsia triacanthos	Honey locust	1429
Prosopis glandulosa	Honey mesquite	735
Acacia farnesiana	Huisache	1401
Quercus fusiformis	Live oak	637
Ungnadia speciosa	Mexican buckeye	762
Prunus mexicana	Mexican plum	16
Quercus polymorpha	Monterey or Mexican white oak	245
Maclura pomifera	Osage orange	630
Carya illinoinensis	Pecan, native	1055
Parkinsonia aculeata	Retama or palo verde	2377
Cornus drummondii	Roughleaf dogwood	5
Quercus shumardii	Shumard red oak	994
Sophora secundiflora	Texas mountain laurel	1710
Juglans microcarpa Diospyros texana	Texas or little walnut Texas persimmon	133 476
Cercis canadensis var texensis	Texas redbud	519
Ptelea trifoliata	Wafer ash or hoptree	49
Sapindus saponaria var drummondii	Western soapberry	723
Aloysia gratissima	Whitebrush or beebush	756
Total		23491

# CARBON CO-BENEFITS QUANTIFICATION DOCUMENTATION (Section 12 and Appendix B)

Summarize co-benefit results based on the project's planting method and provide supporting documentation. CFC can provide co-benefits quantification for Project Operator for rainfall interception, air quality improvements, and energy savings.

- Single Tree trees are scattered and spaced apart more than 10', as in streets, yards, some parks, and schools, individual trees are tracked and randomly sampled
- Clustered Parks trees are relatively contiguous in park-like settings and change in canopy is tracked
- Canopy trees are planted very close together, often but not required to be in riparian areas, significant mortality is expected, and change in canopy is tracked. The two main goals are to create a forest ecosystem and generate canopy

Ecosystem Services	Resource Units	Value
Rainfall Interception (m3/yr)	3,978.70	\$10,406.73
Air Quality (t/yr)	0.9276	\$2,248.10
CO2 Avoided from Energy Savings	18.1	\$362.53
Cooling – Electricity (kWh/yr)	42,529	\$3,227.98
Heating – Natural Gas (kBtu/yr)	22,557	\$234.38
Grand Total (\$/yr)		\$16,479.72

The total estimated ecosystem services over the 25-year period is \$411,993.03. Estimates are taken from the CFC carbon co-benefit quantification tool and based on deciduous and coniferous tree cover and number of acres.

Co-Benefits per year with current tree canopy cover.

	Resource	Res Unit/Acre		\$/	Acre Tree
Ecosystem Services	<b>Units Totals</b>	Tree Canopy	Total \$		Canopy
Rain Interception (m3/yr)	3,978.7	110.8	\$10,406.73	\$	289.80
CO2 Avoided (t, \$20/t/yr)	18.1	0.5	\$362.53	\$	10.10
Air Quality (t/yr)					
О3	0.5190	0.0145	\$1,542.07	\$	42.94
NOx	0.1278	0.0036	\$379.74	\$	10.57
PM10	0.2753	0.0077	\$310.95	\$	8.66
Net VOCs	0.0054	0.0002	\$15.34	\$	0.43
Air Quality Total	0.9276	0.0258	\$2,248.10		\$62.60
Energy (kWh/yr & kBtu/yr)					
Cooling - Elec.	42,529	1,184	\$3,227.98	\$	89.89
Heating - Nat. Gas	22,557	628	\$234.38	\$	6.53
Energy Total (\$/yr)			\$3,462.36		\$96.42
Grand Total (\$/yr)			\$16,479.72		\$458.92

# MONITORING AND REPORTING PLANS (Appendix A)

Project Operator is required to submit an annual monitoring report by the anniversary of the first approved verification report. For example, if the verification report is dated January 1, 2021, the first monitoring report will be due by January 1, 2022 and each January 1<sup>st</sup> thereafter for the duration of the project.

### **Anticipated Reporting Schedule**

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Monitoring Report – Year 2	2022	Monitoring Report – Year 15	2035
Monitoring Report – Year 3	2023	Monitoring Report – Year 16	2036
Monitoring Report – Year 4*	2024	Monitoring Report – Year 17	2037
Monitoring Report – Year 5	2025	Monitoring Report – Year 18	2038
Monitoring Report – Year 6*	2026	Monitoring Report – Year 19	2039
Monitoring Report – Year 7	2027	Monitoring Report – Year 20	2040
Monitoring Report – Year 8	2028	Monitoring Report – Year 21	2041
Monitoring Report – Year 9	2029	Monitoring Report – Year 22	2042
Monitoring Report – Year 10	2030	Monitoring Report – Year 23	2043
Monitoring Report – Year 11	2031	Monitoring Report – Year 24	2044
Monitoring Report – Year 12	2032	Monitoring Report – Year 25	2045
Monitoring Report – Year 13	2033	Monitoring Report – Year 26*	2046
Monitoring Report – Year 14	2034		

<sup>\*</sup> Denotes a year where additional information is required in order to receive credits

# **Monitoring Reports**

The report must contain any changes in eligibility status of the Project Operator and any significant tree loss. Monitoring report questions are listed below. The following are questions contained in CFC's annual monitoring report template:

- 1. Has the contact information for the Project Operator changed? If so, provide new information.
- 2. Have there been changes in land ownership of the Project Area?
- 3. Have there been any changes in the Project Design?
- 4. Have there been any changes in the implementation of management of the Project?
- 5. Have there been any significant changes to the site (such as flooding or human changes)?
- 6. Have there been any significant tree or canopy losses?
- 7. Any other significant elements to report?

Confirm and describe your plans for annual monitoring of this project and specifics on how imaging (see Imaging Requirements in the Protocol Requirements section above) will be conducted based on your project's planting method.

Monitoring of Project Trees will be done with geographic information systems (GIS), the Theodolite app, and canopy will be analyzed in year 4 and onward using i-Tree as well as any canopy information provided by USGS. GIS will be used to continually update Project maps and store data. The Theodolite app will be used to record photo points for all planting areas. The app includes a range of information on each photo, including coordinates and cardinal directions to ease the ongoing collection of survival data.

Imaging of the trees will be completed either by selecting points around the site perimeter that when taken together capture the newly planted trees in the project area. If the sites are rectilinear, photos

will be taken at each of the corners looking in the middle and while in the middle of the site facing each cardinal direction. If the sites are large, multiple photo points will be located along the perimeter looking into the site. If the site is nonrectilinear, critical points will be identified along the property boundaries and photos will be taken facing towards the middle of the site. Photos will also be taken from the middle facing each of the cardinal directions.

# ADDITIONAL INFORMATION

Include additional noteworthy aspects of the project. Examples include collaborative partnerships, community engagement, or project funders.

Partnerships. Strong partnerships with Travis County and City of Austin has meant regular and substantive support as we go about implementing the program. We have had the support of County and City administrations as we begin talks for program funding sustainability and the City of Austin's Watershed Protection Department has been regularly available for technical assistance. Even though we were unable to plant public land with Travis County or City of Austin this season, due to new protocols and land availability, we plan to resume working with them next season.

Outreach. Data from Travis County Appraisal District was used to identify eligible parcels, due to the lack of canopy cover along the riparian/floodplain area. From the Travis County 100-year floodplain database, 769 parcels were selected for their Farm and Ranch Improvement, Vacant or Agricultural designation (as to avoid sending mailers to highly urban residential or commercial lots). Direct mailers were prepared for all 769 parcels and sent on 06/5/20.

Other outreach methods included active outreach to community groups including Wilbarger Creek Conservation Alliance, Pines and Prairies Land Trust, Austin-Bastrop River Corridor Partnership, Gilleland Creek Neighborhood Association, and the Colorado River Land Trust. Other outreach methods included advertising through TreeFolks' newsletter and social media channels and contacting waitlist applicants and prior participants wishing to expand their planting areas this season.

# PROJECT OPERATOR SIGNATURE

Signed by <u>Valerie Tamburri, Reforestation Manager</u> , for <u>TreeFolks</u> .
Wi-
Valerie Tamburri (Dec 9, 2021 15:53 CST)
Signature
512-443-5323
Phone
valerie@treefolks.org
Email

# **ATTACHMENTS**

- 1 Agreement to Transfer Credits
- 2 TCFRP Planting Parcels Map
- 3 TCFRP Planting Snapshot Map
- 4 TCFRP Project Area Map
- 5 Attestation of No Double Counting of Credits
- 6 Attestation of No Net Harm
- 7 Attestation of Planting
- 8 Attestation of Planting Affirmation Superior Forestry
- 9 Attestation of Planting Affirmation TXCC
- 10 City Forest Credits Planting Protocol Riparian Planting Quantification and Monitoring
- 11 Co-Benefit Quantification Initial Credits Tool

# PERFORMANCE STANDARD BASELINE METHODOLOGY (Section 4 and Appendix D)

There is a second additionality methodology set out in the WRI GHG Protocol guidelines – the Performance Standard methodology. This Performance Standard essentially allows the project developer, or in this case, the developers of the protocol, to create a performance standard baseline using the data from similar activities over geographic and temporal ranges.

A common perception, particularly in the U.S., is that projects must meet a project specific test. Project-specific additionality is easy to grasp conceptually. The 2014 Climate Action Reserve urban forest protocol essentially uses project-specific requirements and methods.

However, the WRI GHG Protocol clearly states that <u>either</u> a project-specific test or a performance standard baseline is acceptable. One key reason for this is that regional or national data can give a more accurate picture of existing activity than a narrow focus on one project or organization.

Narrowing the lens of additionality to one project or one tree-planting entity can give excellent data on that project or entity, which data can also be compared to other projects or entities (common practice). But plucking one project or entity out of its regional or national context ignores all comparable regional or national data. And that regional or national data may give a more accurate standard than data from one project or entity.

By analogy: one pixel on a screen may be dark. If all you look at is the dark pixel, you see darkness. But the rest of screen may consist of white pixels and be white. Similarly, one active tree-planting organization does not mean its trees are additional on a regional basis. If the region is losing trees, the baseline of activity may be negative regardless of what one active project or entity is doing.

Here is the methodology described in the WRI GHG Protocol to determine a Performance Standard baseline, together with the application of each factor to urban forestry:

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<sup>&</sup>lt;sup>1</sup> WRI GHG Protocol, Chapter 2.14 at 16 and Chapter 3.2 at 19.

**Table 2.1 Performance Standard Factors** 

WRI Performance Standard Factor	As Applied to Urban Forestry
Describe the project activity	Increase in urban trees
Identify the types of candidates	Cities and towns, quasi-governmental entities like utilities, watersheds, and educational institutions, and private property owners
Set the geographic scope (a national scope is explicitly approved as the starting point)	Could use national data for urban forestry, or regional data
Set the temporal scope (start with 5-7 years and justify longer or shorter)	Use 4-7 years for urban forestry
Identify a list of multiple baseline candidates	Many urban areas, which could be blended mathematically to produce a performance standard baseline

The Performance Standard methodology approves of the use of data from many different baseline candidates. In the case of urban forestry, those baseline candidates are other urban areas.<sup>2</sup>

As stated above, the project activity defined is obtaining an increase in urban trees. The best data to show the increase in urban trees via urban forest project activities is national or regional data on tree canopy in urban areas. National or regional data will give a more comprehensive picture of the relevant activity (increase in urban trees) than data from one city, in the same way that a satellite photo of a city shows a more accurate picture of tree canopy in a city than an aerial photo of one neighborhood. Tree canopy data measures the tree cover in urban areas, so it includes multiple baseline candidates such as city governments and private property owners. Tree canopy data, over time, would show the increase or decrease in tree cover.

Data on Tree Canopy Change over Time in Urban Areas

The CFC quantitative team determined that there were data on urban tree canopy cover with a temporal range of four to six years available from four geographic regions. The data are set forth below:

<sup>&</sup>lt;sup>2</sup> See Nowak, et al. "Tree and Impervious Cover Change in U.S. Cities," Urban Forestry and Urban Greening, 11 (2012), 21-30 Copyright © 2021 City Forest Credits. All rights reserved.

Table 2.2 Changes in Urban Tree Canopy (UTC) by region (Nowak and Greenfield, 2012)

City	Abs Change	Relative Change	Ann. Rate (ha	Ann. Rate (m2	Data Years
	UTC (%)	UTC (%)	UTC/yr)	UTC/cap/yr)	
EAST					
Baltimore, MD	-1.9	-6.3	-100	-1.5	(2001–2005)
Boston, MA	-0.9	-3.2	-20	-0.3	(2003–2008)
New York, NY	-1.2	-5.5	-180	-0.2	(2004–2009)
Pittsburgh, PA	-0.3	-0.8	-10	-0.3	(2004–2008)
Syracuse, NY	1.0	4.0	10	0.7	(2003–2009)
Mean changes	-0.7	-2.4	-60.0	-0.3	
Std Error	0.5	1.9	35.4	0.3	
SOUTH					
Atlanta, GA	-1.8	-3.4	-150	-3.1	(2005–2009)
Houston, TX	-3.0	-9.8	-890	-4.3	(2004–2009)
Miami, FL	-1.7	-7.1	-30	-0.8	(2003–2009)
Nashville, TN	-1.2	-2.4	-300	-5.3	(2003–2008)
New Orleans, LA	-9.6	-29.2	-1120	-24.6	(2005-2009)
Mean changes	-3.5	-10.4	-160.0	-7.6	
Std Error	1.6	4.9	60.5	4.3	
MIDWEST					
Chicago, IL	-0.5	-2.7	-70	-0.2	(2005–2009)
Detroit, MI	-0.7	-3.0	-60	-0.7	(2005–2009)
Kansas City, MO	-1.2	-4.2	-160	-3.5	(2003–2009)
Minneapolis, MN	-1.1	-3.1	-30	-0.8	(2003–2008)
Mean changes	-0.9	-3.3	-80.0	-1.3	
Std Error	0.2	0.3	28.0	0.7	
WEST					
Albuquerque, NM	-2.7	-6.6	-420	-8.3	(2006–2009)
Denver, CO	-0.3	-3.1	-30	-0.5	(2005–2009)
Los Angeles, CA	-0.9	-4.2	-270	-0.7	(2005–2009)
Portland, OR	-0.6	-1.9	-50	-0.9	(2005–2009)
Spokane, WA	-0.6	-2.5	-20	-1.0	(2002–2007)
Tacoma, WA	-1.4	-5.8	-50	-2.6	(2001–2005)
Mean changes	-1.1	-4.0	-140.0	-2.3	
Std Error	0.4	0.8	67.8	1.2	

These data have been updated by Nowak and Greenfield.<sup>3</sup> The 2012 data show that urban tree canopy is experiencing negative growth in all four regions. The 2018 data document continued loss of urban tree cover. Table 3 of the 2018 article shows data for all states, with a national loss of urban and community tree cover of 175,000 acres per year during the study years of 2009-2014.

To put this loss in perspective, the total land area of urban and community tree cover loss during the study years totals 1,367 square miles – equal to the combined land area of New York City, Atlanta, Philadelphia, Miami, Boston, Cleveland, Pittsburgh, St. Louis, Portland (Oregon), San Francisco, Seattle, and Boise.

Even though there may be individual tree planting activities that increase the number of urban trees within small geographic locations, the performance of activities to increase tree cover shows a negative baseline. The Drafting Group did not use negative baselines for the Tree Planting Protocol, but determined to use baselines of zero.

Deployment of the Performance Standard baseline methodology for a City Forest Tree Planting Protocol is supported by conclusions that make sense and are anchored in the real world:

- With the data showing that tree loss exceeds gains from planting, new plantings are justified
  as additional to that decreasing canopy baseline. In fact, the negative baseline would justify
  as additional any trees that are protected from removal.
- Because almost no urban trees are planted now with carbon as a decisive factor, urban tree planting done to sequester carbon is additional;
- Almost no urban trees are currently planted with a contractual commitment for monitoring.
   Maintenance of trees is universally an intention, one that is frequently reached when
   budgets are cut, as in the Covid-19 era. The 25-year commitment required by this Protocol is
   entirely additional to any practice in place in the U.S. and will result in substantial additional
   trees surviving to maturity;
- Because the urban forest is a public resource, and because public funding falls far short of maintaining tree cover and stocking, carbon revenues will result in additional trees planted or in maintenance that will result in additional trees surviving to maturity;
- Because virtually all new large-scale urban tree planting is conducted by governmental
  entities or non-profits, or by private property developers complying with governmental
  regulations (which would not be eligible for carbon credits under our protocol), and because
  any carbon revenues will defray only a portion of the costs of tree planting, there is little
  danger of unjust enrichment to developers of city forest carbon projects.

Last, the WRI GHG Protocol recognizes explicitly that the principles underlying carbon protocols need to be adapted to different types of projects. The WRI Protocol further approves of balancing the stringency of requirements with the need to encourage participation in desirable carbon projects:

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<sup>&</sup>lt;sup>3</sup> Nowak et al. 2018. "Declining Urban and Community Tree Cover in the United States," *Urban Forestry and Urban Greening*, 32, 32-55

Setting the stringency of additionality rules involves a balancing act. Additionality criteria that are too lenient and grant recognition for "non-additional" GHG reductions will undermine the GHG program's effectiveness. On the other hand, making the criteria for additionality too stringent could unnecessarily limit the number of recognized GHG reductions, in some cases excluding project activities that are truly additional and highly desirable. In practice, no approach to additionality can completely avoid these kinds of errors. Generally, reducing one type of error will result in an increase of the other. Ultimately, there is no technically correct level of stringency for additionality rules. GHG programs may decide based on their policy objectives that it is better to avoid one type of error than the other.<sup>4</sup>

The policy considerations weigh heavily in favor of "highly desirable" planting projects to reverse tree loss for the public resource of city forests.

<sup>4</sup> WRI GHG Protocol, Chapter 3.1 at 19.

# QUANTIFYING CARBON DIOXIDE STORAGE AND CO-BENEFITS FOR URBAN TREE PLANTING PROJECTS (Appendix B)

#### Introduction

Ecoservices provided by trees to human beneficiaries are classified according to their spatial scale as global and local (Costanza 2008) (citations in Part 1 are listed in References at page 16). Removal of carbon dioxide (CO<sub>2</sub>) from the atmosphere by urban forests is global because the atmosphere is so well-mixed it does not matter where the trees are located. The effects of urban forests on building energy use is a local-scale service because it depends on the proximity of trees to buildings. To quantify these and other ecoservices City Forest Credits (CFC) has relied on peer-reviewed research that has combined measurements and modeling of urban tree biomass, and effects of trees on building energy use, rainfall interception, and air quality. CFC has used the most current science available on urban tree growth in its estimates of CO<sub>2</sub> storage (McPherson et al., 2016a). CFC's quantification tools provide estimates of cobenefits after 25 years in Resource Units (i.e., kWh of electricity saved) and dollars per year. Values for co-benefits are first-order approximations extracted from the i-Tree Streets (i-Tree Eco) datasets for each of the 16 U.S. reference cities/climate zones (https://www.itreetools.org/tools/i-tree-eco) (Maco and McPherson, 2003). Modeling approaches and error estimates associated with quantification of CO<sub>2</sub> storage and co-benefits have been documented in numerous publications (see References below) and are summarized here.

# Carbon Dioxide Storage

There are three different methods for quantifying carbon dioxide (CO<sub>2</sub>) storage in urban forest carbon projects:

- Single Tree Method planted trees are scattered among many existing trees, as in street, yard, some parks, and school plantings, individual trees are tracked and randomly sampled
- Clustered Parks Planting Method planted trees are relatively contiguous in park-like settings and change in canopy is tracked
- Canopy Method trees are planted very close together, often but not required to be in riparian
  areas, significant mortality is expected, and change in canopy is tracked. The two main goals are
  to create a forest ecosystem and generate canopy
- Area Reforestation Method large areas are planted to generate a forest ecosystem, for example converting from agriculture and in upland areas. This quantification method is under development

In all cases, the estimated amount of  $CO_2$  stored 25-years after planting is calculated. The forecasted amount of  $CO_2$  stored during this time is the value from which the Registry issues credits in the amounts of 10%, 40% and 30% at Years 1, 4, and 6 after planting, respectively. A 20% mortality deduction is applied before calculation of Year 1 Credits in the Single Tree and Clustered Parks Planting Methods. A 5% buffer pool deduction is applied in all three methods before calculation of any crediting, with these funds going into a program-wide pool to insure against catastrophic loss of trees. At the end of the project, in year 25, Operators will receive credits for all  $CO_2$  stored, minus credits already issued.

In the Single Tree Method, the amount of  $CO_2$  stored in project trees 25-years after planting is calculated as the product of tree numbers and the 25-year  $CO_2$  index (kg/tree) for each tree-type (e.g., Broadleaf Deciduous Large = BDL). The Registry requires the user to apply a 20% tree mortality deduction before

calculation of Year 1 Credits. Year 4 and Year 6 Credits depend on sampling and mortality data. A 5% buffer pool deduction is applied as well before calculation at any stage.

In the Clustered Parks Planting Method, the amount of  $CO_2$  stored after 25-years by planted project trees is based on the anticipated amount of tree canopy area (TC). Because different tree-types store different amounts of  $CO_2$  based on their size and wood density, TC is weighted based on species mix. The estimated amount of TC area occupied by each tree-type is the product of the total TC and each tree-type's percentage TC. This calculation distributes the TC area among tree-types based on the percentage of trees planted and each tree-type's crown projection area. Subsequent calculations reduce the amount of  $CO_2$  estimated to be stored after 25 years based on the 20% anticipated mortality rate and the 5% buffer pool deduction.

In the Canopy Method, the forecasted amount of CO<sub>2</sub> stored at 25-years is the product of the amount of TC and the CO<sub>2</sub> Index (CI, t CO<sub>2</sub> per acre). This approach recognizes that forest dynamics for riparian projects are different than for park projects. In many cases, native species are planted close together and early competition results in high mortality and rapid canopy closure. Unlike urban park plantings, substantial amounts of carbon can be stored in the riparian understory vegetation and forest floor. To provide an accurate and complete accounting, we use the USDA Forest Service General Technical Report NE-343, with biometric data for 51 forest ecosystems derived from U.S. Forest Inventory and Assessment plots (Smith et al., 2006). The tables provide carbon stored per hectare for each of six carbon pools as a function of stand age. We use values for 25-year old stands that account for carbon in down dead wood and forest floor material, as well as the understory vegetation and soil. If local plot data are provided, values for live wood, dead standing and dead down wood are adjusted following guidance in GTR NE-343. More information on methods used to prepare the tables and make adjustments can be found in Smith et al., 2006. See Attachment A at the end of this Appendix for more information on the Canopy Method.

# Source Materials for Single Tree Method and Clustered Parks Planting Methods

Estimates of stored (amount accumulated over many years) and sequestered  $CO_2$  (i.e., net amount stored by tree growth over one year) are based on the U.S. Forest Service's recently published technical manual and the extensive Urban Tree Database (UTD), which catalogs urban trees with their projected growth tailored to specific geographic regions (McPherson et al. 2016a, b). The products are a culmination of 14 years of work, analyzing more than 14,000 trees across the United States. Whereas prior growth models typically featured only a few species specific to a given city or region, the newly released database features 171 distinct species across 16 U.S. climate zones. The trees studied also spanned a range of ages with data collected from a consistent set of measurements. Advances in statistical modeling have given the projected growth dimensions a level of accuracy never before seen. Moving beyond just calculating a tree's diameter or age to determine expected growth, the research incorporates 365 sets of tree growth equations to project growth.

Users select their climate zone from the 16 U.S. climate zones (Fig. 1). Calculations of  $CO_2$  stored are for a representative species for each tree-type that was one of the predominant street tree species per reference city (<u>Peper et al., 2001</u>). The "Reference city" refers to the city selected for intensive study within each climate zone (<u>McPherson, 2010</u>). About 20 of the most abundant species were selected for sampling in each reference city. The sample was stratified into nine diameter at breast height (DBH) classes (0 to 7.6, 7.6 to 15.2, 15.2 to 30.5, 30.5 to 45.7, 45.7 to 61.0, 61.0 to 76.2, 76.2 to 91.4, 91.4 to 106.7, and >106.7 cm). Typically 10 to 15 trees per DBH class were randomly chosen. Data were

collected for 16 to 74 trees in total from each species. Measurements included: species name, age, DBH [to the nearest 0.1 cm (0.39 in)], tree height [to the nearest 0.5 m (1.64 ft.)], crown height [to the nearest 0.5 m (1.64 ft.)], and crown diameter in two directions [parallel and perpendicular to nearest street to the nearest 0.5 m (1.64 ft.)]. Tree age was determined from local residents, the city's urban forester, street and home construction dates, historical planting records, and aerial and historical photos.

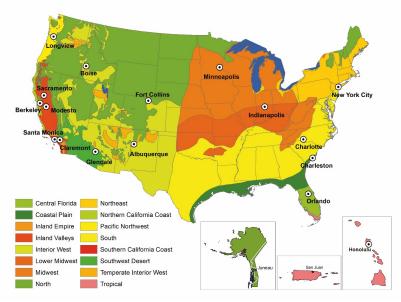


Fig. 1. Climate zones of the United States and Puerto Rico were aggregated from 45 Sunset climate zones into 16 zones. Each zone has a reference city where tree data were collected. Sacramento, California was added as a second reference city (with Modesto) to the Inland Valleys zone. Zones for Alaska, Puerto Rico and Hawaii are shown in the insets (map courtesy of Pacific Southwest Research Station).

# Species Assignment by Tree-Type

Representative species for each tree-type in the South climate zone (reference city is Charlotte, NC) are shown in Table 1. They were chosen because extensive measurements were taken on them to generate growth equations, and their mature size and form was deemed typical of other trees in that tree-type. Representative species were not available for some tree-types because none were measured. In that case, a species of similar mature size and form from the same climate zone was selected, or one from another climate zone was selected. For example, no Broadleaf Evergreen Large (BEL) species was measured in the South reference city. Because of its large mature size, *Quercus nigra* was selected to represent the BEL tree-type, although it is deciduous for a short time. *Pinus contorta*, which was measured in the PNW climate zone, was selected for the CES tree-type, because no CES species was measured in the South.

Table 1. Nine tree-types and abbreviations. Representative species assigned to each tree-type in the South climate zone are listed. The biomass equations (species, urban general broadleaf [UGB], urban general conifer [UGC]) and dry weight density (kg/m³) used to calculate biomass are listed for each treetype.

Tree-Type	Tree-Type Abbreviation	Species Assigned	DW Density	Biomass Equations
Brdlf Decid Large (>50 ft)	BDL	Quercus phellos	600	Quercus macrocarpa <sup>1.</sup>
Brdlf Decid Med (30-50 ft)	BDM	Pyrus calleryana	600	UGB <sup>2.</sup>
Brdlf Decid Small (<30 ft)	BDS	Cornus florida	545	UGB <sup>2.</sup>
Brdlf Evgrn Large (>50 ft)	BEL	Quercus nigra	797	UGB <sup>2.</sup>
Brdlf Evgrn Med (30-50 ft)	BEM	Magnolia grandiflora	523	UGB <sup>2.</sup>
Brdlf Evgrn Small (<30 ft)	BES	Ilex opaca	580	UGB <sup>2.</sup>
Conif Evgrn Large (>50 ft)	CEL	Pinus taeda	389	UGC <sup>2.</sup>
Conif Evgrn Med (30-50 ft)	CEM	Juniperus virginiana	393	UGC <sup>2.</sup>
Conif Evgrn Small (<30 ft)	CES	Pinus contorta	397	UGC <sup>2.</sup>
1.from Lefsky M & McHale I	V 2008	•	•	

from Lefsky, M., & McHale, M.,2008.

# Calculating Biomass and Carbon Dioxide Stored

To estimate CO<sub>2</sub> stored, the biomass for each tree-type was calculated using urban-based allometric equations because open-growing city trees partition carbon differently than forest trees (McPherson et al., 2017a). Input variables included climate zone, species, and DBH. To project tree size at 25-years after planting, we used DBH obtained from UTD growth curves for each representative species.

Biomass equations were compiled for 26 open-grown urban trees species from literature sources (Aguaron and McPherson, 2012). General equations (Urban Gen Broadleaf and Urban Gen Conifer) were developed from the 26 urban-based equations that were species specific (McPherson et al., 2016a). These equations were used if the species of interest could not be matched taxonomically or through wood form to one of the urban species with a biomass equation. Hence, urban general equations were an alternative to applying species-specific equations because many species did not have an equation.

These allometric equations yielded aboveground wood volume. Species-specific dry weight (DW) density factors (Table 1) were used to convert green volume into dry weight ( $\frac{7}{2}$ a). The urban general equations required looking up a dry weight density factor (in Jenkins et al. 2004 first, but if not available then the Global Wood Density Database). The amount of belowground biomass in roots of urban trees is not well researched. This work assumed that root biomass was 28% of total tree biomass (Cairns et al., 1997; Husch et al., 2003; Wenger, 1984). Wood volume (dry weight) was converted to C by multiplying by the constant 0.50 (Leith, 1975), and C was converted to CO<sub>2</sub> by multiplying by 3.667.

## **Error Estimates and Limitations**

The lack of biometric data from the field remains a serious limitation to our ability to calibrate biomass equations and assign error estimates for urban trees. Differences between modeled and actual tree growth adds uncertainty to CO<sub>2</sub> sequestration estimates. Species assignment errors result from matching species planted with the tree-type used for biomass and growth calculations. The magnitude

<sup>&</sup>lt;sup>2</sup> from Aguaron, E., & McPherson, E. G., 2012

of this error depends on the goodness of fit in terms of matching size and growth rate. In previous urban studies the prediction bias for estimates of  $CO_2$  storage ranged from -9% to +15%, with inaccuracies as much as 51% RMSE (Timilsina et al., 2014). Hence, a conservative estimate of error of  $\pm$  20% can be applied to estimates of total  $CO_2$  stored as an indicator of precision.

It should be noted that estimates of CO<sub>2</sub> stored using the Tree Canopy Approach have several limitations that may reduce their accuracy. They rely on allometric relationships for open-growing trees, so storage estimates may not be as accurate when trees are closely spaced. Also, they assume that the distribution of tree canopy cover among tree-types remains constant, when in fact mortality may afflict certain species more than others. For these reasons, periodic "truing-up" of estimates by field sampling is suggested.

# Co-Benefit: Energy Savings

Trees and forests can offer energy savings in two important ways. In warmer climates or hotter months, trees can reduce air conditioning bills by keeping buildings cooler through reducing regional air temperatures and offering shade. In colder climates or cooler months, trees can confer savings on the fuel needed to heat buildings by reducing the amount of cold winds that can strip away heat.

Energy conservation by trees is important because building energy use is a major contributor to greenhouse gas emissions. Oil or gas furnaces and most forms of electricity generation produce  $CO_2$  and other pollutants as by-products. Reducing the amount of energy consumed by buildings in urban areas is one of the most effective methods of combatting climate change. Energy consumption is also a costly burden on many low-income families, especially during mid-summer or mid-winter. Furthermore, electricity consumption during mid-summer can sometimes over-extend local power grids leading to rolling brownouts and other problems.

Energy savings are calculated through numerical models and simulations built from observational data on proximity of trees to buildings, tree shapes, tree sizes, building age classes, and meteorological data from McPherson et al. (2017) and McPherson and Simpson (2003). The main parameters affecting the overall amount of energy savings are crown shape, building proximity, azimuth, local climate, and season. Shading effects are based on the distribution of street trees with respect to buildings recorded from aerial photographs for each reference city (McPherson and Simpson, 2003). If a sampled tree was located within 18 m of a conditioned building, information on its distance and compass bearing relative to a building, building age class (which influences energy use) and types of heating and cooling equipment were collected and used as inputs to calculate effects of shade on annual heating and cooling energy effects. Because these distributions were unique to each city, energy values are considered first-order approximations.

In addition to localized shade effects, which were assumed to accrue only to trees within 18 m of a building, lowered air temperatures and windspeeds from increased neighborhood tree cover (referred to as climate effects) can produce a net decrease in demand for winter heating and summer cooling (reduced wind speeds by themselves may increase or decrease cooling demand, depending on the circumstances). Climate effects on energy use, air temperature, and wind speed, as a function of neighborhood canopy cover, were estimated from published values for each reference city. The percentages of canopy cover increase were calculated for 20-year-old large, medium, and small trees, based on their crown projection areas and effective lot size (actual lot size plus a portion of adjacent street and other rights-of-way) of 10,000 ft² (929 m²), and one tree on average was assumed per lot.

Climate effects were estimated by simulating effects of wind and air-temperature reductions on building energy use.

In the case of urban Tree Preservation Projects, trees may not be close enough to buildings to provide shading effects, but they may influence neighborhood climate. Because these effects are highly site-specific, we conservatively apply an 80% reduction to the energy effects of trees for Preservation Projects.

Energy savings are calculated as a real-dollar amount. This is calculated by applying overall reductions in oil and gas usage or electricity usage to the regional cost of oil and gas or electricity for residential customers. Colder regions tend to see larger savings in heating and warmer regions tend to see larger savings in cooling.

# **Error Estimates and Limitations**

Formulaic errors occur in modeling of energy effects. For example, relations between different levels of tree canopy cover and summertime air temperatures are not well-researched. Another source of error stems from differences between the airport climate data (i.e., Los Angeles International Airport) used to model energy effects and the actual climate of the study area (i.e., Los Angeles urban area). Because of the uncertainty associated with modeling effects of trees on building energy use, energy estimates may be accurate within ± 25 percent (Hildebrandt & Sarkovich, 1998).

#### Co-Benefit: CO<sub>2</sub> Avoided

Energy savings result in reduced emissions of CO<sub>2</sub> and criteria air pollutants (volatile organic hydrocarbons [VOCs], NO<sub>2</sub>, SO<sub>2</sub>, PM<sub>10</sub>) from power plants and space-heating equipment. Cooling savings reduce emissions from power plants that produce electricity, the amount depending on the fuel mix. Electricity emissions reductions were based on the fuel mixes and emission factors for each utility in the 16 reference cities/climate zones across the U.S. The dollar values of electrical energy and natural gas were based on retail residential electricity and natural gas prices obtained from each utility. Utility-specific emission factors, fuel prices and other data are available in the Community Tree Guides for each region (https://www.fs.fed.us/psw/topics/urban\_forestry/products/tree\_guides.shtml). To convert the amount of CO<sub>2</sub> avoided to a dollar amount in the spreadsheet tools, City Forest Credits uses the price of \$20 per metric ton of CO<sub>2</sub>.

#### **Error Estimates and Limitations**

Estimates of avoided  $CO_2$  emissions have the same uncertainties that are associated with modeling effects of trees on building energy use. Also, utility-specific emission factors are changing as many utilities incorporate renewable fuels sources into their portfolios. Values reported in CFC tools may overestimate actual benefits in areas where emission factors have become lower.

## Co-Benefit: Rainfall Interception

Forest canopies normally intercept 10-40% of rainfall before it hits the ground, thereby reducing stormwater runoff. The large amount of water that a tree crown can capture during a rainfall event makes tree planting a best management practice for urban stormwater control.

City Forest Credits uses a numerical interception model to calculate the amount of annual rainfall intercepted by trees, as well as throughfall and stem flow (Xiao et al., 2000). This model uses species-specific leaf surface areas and other parameters from the Urban Tree Database. For example, deciduous

trees in climate zones with longer "in-leaf" seasons will tend to intercept more rainfall than similar species in colder areas shorter foliation periods. Model results were compared to observed patterns of rainfall interception and found to be accurate. This method quantifies only the amount of rainfall intercepted by the tree crown, and does not incorporate surface and subsurface effects on overland flow.

The rainfall interception benefit was priced by estimating costs of controlling stormwater runoff. Water quality and/or flood control costs were calculated per unit volume of runoff controlled and this price was multiplied by the amount of rainfall intercepted annually.

#### **Error Estimates and Limitations**

Estimates of rainfall interception are sensitive to uncertainties regarding rainfall patterns, tree leaf area and surface storage capacities. Rainfall amount, intensity and duration can vary considerably within a climate zone, a factor not considered by the model. Although tree leaf area estimates were derived from extensive measurements on over 14,000 street trees across the U.S. (McPherson et al., 2016a), actual leaf area may differ because of differences in tree health and management. Leaf surface storage capacity, the depth of water that foliage can capture, was recently found to vary threefold among 20 tree species (Xiao & McPherson, 2016). A shortcoming is that this model used the same value (1 mm) for all species. Given these limitations, interception estimates may have uncertainty as great as ± 20 percent.

#### Co-Benefit: Air Quality

The uptake of air pollutants by urban forests can lower concentrations and affect human health (Derkzen et al., 2015; Nowak et al., 2014). However, pollutant concentrations can be increased if the tree canopy restricts polluted air from mixing with the surrounding atmosphere (Vos et al., 2013). Urban forests are capable of improving air quality by lowering pollutant concentrations enough to significantly affect human health. Generally, trees are able to reduce ozone, nitric oxides, and particulate matter. Some trees can reduce net volatile organic compounds (VOCs), but others can increase them through natural processes. Regardless of the net VOC production, urban forests usually confer a net positive benefit to air quality. Urban forests reduce pollutants through dry deposition on surfaces and uptake of pollutants into leaf stomata.

A numerical model calculated hourly pollutant dry deposition per tree at the regional scale using deposition velocities, hourly meteorological data and pollutant concentrations from local monitoring stations (Scott et al., 1998). The monetary value of tree effects on air quality reflects the value that society places on clean air, as indicated by willingness to pay for pollutant reductions. The monetary value of air quality effects were derived from models that calculated the marginal damage control costs of different pollutants to meet air quality standards (Wang and Santini 1995). Higher costs were associated with higher pollutant concentrations and larger populations exposed to these contaminants.

# **Error Estimates and Limitations**

Pollutant deposition estimates are sensitive to uncertainties associated with canopy resistance, resuspension rates and the spatial distribution of air pollutants and trees. For example, deposition to urban forests during warm periods may be underestimated if the stomata of well-watered trees remain open. In the model, hourly meteorological data from a single station for each climate zone may not be spatially representative of conditions in local atmospheric surface layers. Estimates of air pollutant uptake may be accurate within ± 25 percent.

# Conclusions

Our estimates of carbon dioxide storage and co-benefits reflect an incomplete understanding of the processes by which ecoservices are generated and valued (Schulp et al., 2014). Our choice of co-benefits to quantify was limited to those for which numerical models were available. There are many important benefits produced by trees that are not quantified and monetized. These include effects of urban forests on local economies, wildlife, biodiversity and human health and well-being. For instance, effects of urban trees on increased property values have proven to be substantial (Anderson & Cordell, 1988). Previous analyses modeled these "other" benefits of trees by applying the contribution to residential sales prices of a large front yard tree (0.88%) (McPherson et al., 2005). We have not incorporated this benefit because property values are highly variable. It is likely that co-benefits reported here are conservative estimates of the actual ecoservices resulting from local tree planting projects.

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# TCFRP 2021 Initial Credit Project Design Document - Final

Final Audit Report 2021-12-09

Created: 2021-12-09

By: Christine Cole (christine@cityforestcredits.org)

Status: Signed

Transaction ID: CBJCHBCAABAALi9EuDQ4VI6YtgfmLf53iMAgkH2pUF26

# "TCFRP 2021 Initial Credit Project Design Document - Final" His tory

- Document created by Christine Cole (christine@cityforestcredits.org)
  2021-12-09 9:51:12 PM GMT- IP address: 67.183.7.143
- Document emailed to Valerie Tamburri (valerie@treefolks.org) for signature 2021-12-09 9:51:49 PM GMT
- Email viewed by Valerie Tamburri (valerie@treefolks.org)
  2021-12-09 9:52:51 PM GMT- IP address: 66.249.80.64
- Document e-signed by Valerie Tamburri (valerie@treefolks.org)

  Signature Date: 2021-12-09 9:53:20 PM GMT Time Source: server- IP address: 72.133.85.83
- Agreement completed. 2021-12-09 - 9:53:20 PM GMT



# AGREEMENT AND DECLARATION OF COVENANTS

ASB

THIS "Agreement" is made this day of January 2021, by Pipe Dream, LLC, a Texas limited liability company, having an address at 11318 Jones Road, Manor, Travis County, Texas 78653, hereinafter called "Landowner," and accepted by TreeFolks, a Texas nonprofit corporation, with an address of P. O. Box 1395, Del Valle, Texas 78617, hereinafter sometimes referred to as "TreeFolks." Landowner and TreeFolks are sometimes referred to herein collectively as "Parties" and individually as "Party".

#### RECITALS

- A. Landowner is the owner of a tract of land consisting of twenty-two (22) acres, more or less, out of that certain 244.437 acre parcel of land located in Travis County, Texas, as more particularly described on <a href="Exhibit "A" attached hereto">Exhibit "A"</a> attached hereto, which twenty-two (22) acres is depicted on <a href="Exhibit "B" and hereafter referred to as the "Property."</a>
- B. Landowner desires to participate in the Travis County Floodplain Reforestation Program, which is a collaborative effort between TreeFolks, Travis County, the City of Austin, and City Forest Credits of Seattle, Washington, and which is designed to restore riparian areas and thereby enhance air and water quality, provide wildlife habitat, mitigate floods and droughts, and increase the resilience of the ecosystem.
- C. TreeFolks desires to provide trees, planting services, and consultation services to Landowner at no charge, and Landowner desires to allow the planting of such trees on the twenty-two acre Property and, as provided herein, commits to allow the trees to remain on the Property for a period of at least twenty-five (25) years.
- D. In consideration for the trees, planting services and consultation provided by TreeFolks, Landowner desires to transfer to TreeFolks all of Landowner's rights to receive an interest in the carbon credits that will be generated by this reforestation project on the Property and may be issued by City Forest Credits, or any other issuer of such carbon credits ("Carbon Credits"), which are expected to be sold by TreeFolks to the City of Austin and used to fund future tree plantings.

#### AGREEMENT

- NOW, THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the mutual receipt of which is hereby acknowledged, Landowner hereby declares that the Property is and shall be held and occupied subject to the terms of this Agreement, and Landowner hereby further declares that Landowner's interest in and rights to any and all Carbon Credits associated with this Property are and shall be transferred, sold and conveyed to TreeFolks, all subject to the terms and conditions hereinafter set forth:
- 1. During the period of time beginning on the date of the recording of this Agreement in the Official Public Records of Travis County and ending twenty-five (25) years thereafter on the twenty-fifth anniversary of the recording date of this Agreement, the trees planted on the Property by TreeFolks or its representatives shall not be removed, harvested, or intentionally damaged by Landowner or Landowner's assignees or successors in interest, and such Parties will not take any action that would result in damage to or destruction of the trees. If the Landowner cuts, harvests, or damages the trees for any reasons other than those specified in Section 6, or if it defaults for other reasons, Landowner shall compensate TreeFolks in an amount not to exceed \$3,144 per acre of land, or a pro rata share of that amount for any discrete portion of land, where trees are cut, harvested, or damaged or where the Tree Project cannot continue.

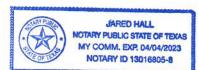
- 2. TreeFolks agrees to provide and arrange for the planting of trees on the Property as outlined in **Exhibit "A"** and depicted on **Exhibit "B"** in areas that are acceptable to Landowner and to TreeFolks, and Landowner agrees to allow the planting of such trees on the Property. Landowner is not responsible for affirmatively caring for the trees planted by TreeFolks.
- 3. Landowner hereby assigns, transfers, and conveys to TreeFolks all of Landowner's interests in and rights to any and all Carbon Credits that may be issued by City Forest Credits or any other issuer of such Carbon Credits as a result of the planting of the trees pursuant to this Agreement. Landowner acknowledges that TreeFolks intends to receive such Carbon Credits and then re-sell the Carbon Credits to the City of Austin or other buyer of such Carbon Credits for funds that will be paid to TreeFolks in return for the sale of the Carbon Credits by TreeFolks.
- 4. Subject to the foregoing, the terms of this Agreement shall run with the land and shall be binding upon Landowner, landowner's successors and assigns, and all parties claiming by, through, or under Landowner shall be taken to hold, agree, and covenant with Landowner, its successors and assigns, to conform to and observe the terms and conditions of this Agreement as to the preservation of the trees planted pursuant to this Agreement, and Landowner, its successors and assigns, as well as TreeFolks, the City of Austin, and their successors and assigns, shall have the right to enforce this Agreement, including the right to sue for and obtain an injunction prohibitive or mandatory, to prevent the breach of this Agreement, without any showing of special damages.
- 5. This Agreement shall take effect when it is recorded in the Official Public Record of Travis County, Texas, and shall run with the land until the twenty-fifth anniversary of the date of the recording of this Agreement, after which time it shall automatically terminate. This Agreement may not be amended in whole or in part except by written agreement of the Landowner and TreeFolks, or their successors in interest.
- 6. TreeFolks agrees to indemnify and hold Landowner and its officers, members, employees and agents harmless from any liability, loss or damage Landowner may suffer as a result of claims, demands, costs or judgments against Landowner arising out of the activities to be carried out by TreeFolks pursuant to the obligations of this Agreement, including, but not limited to, the planting of trees on the Property and monitoring growth of the plantings; provided, however, that any such liability, loss or damage resulting from the negligence or willful malfeasance of Landowner, its officers, members, employees and agents is excluded from this Agreement to indemnify and hold harmless.
- 7. Nothing herein shall be construed to entitle any Party to institute any enforcement proceedings against Landowner for any changes to the Property due to causes beyond Landowner's control, such as changes caused by fire, flood, storm, earthquake, or the unauthorized wrongful acts of third persons. If either Party is in default of this Agreement, the other Party may notify the defaulting Party of the specific nature of the default. The defaulting Party has 30 days from the date of notice to correct the default. If the default is not corrected in 30 days, the non-defaulting Party may cancel this Agreement. Notice of cancellation shall be delivered in writing to the current contact address of the defaulting Party.
- 8. If any provision of this Agreement is found to be invalid, the remaining provisions shall not be altered thereby. This instrument sets forth the entire agreement of the Parties and supersedes all prior discussions, negotiations, understandings, or agreements, all of which are merged herein.

Signed by the Parties:

Landowner: Pipe Dream, LLC, a Texas limited liability company By: Signature: Printed Name: TreeFolks: TreeFolks, Inc. Andrew Smiley, Executive Director **ACKNOWLEDGMENTS** This instrument was acknowledged before me on this 8Th in her capacity as Manager of Pipe Dream, LLC, a Texas limited liability company, on behalf of such Company.

day of January, 2021, by

[SEAL]



Notary Public, State of Texas

This instrument was acknowledged before me on this\_ Smiley, in his capacity as Executive Director of TreeFolks, Inc.

[SEAL]



Notary Public, State of Texas

# EXHIBIT "A"

# A twenty-two (22) +/- acre portion of the following 244.437 acre property

PROFESSIONAL LAND SURVEYORS

1515 Chestnut Street

(512) 303-0954

Bastrop, Texas 78602 Fax: (512) 332-0961

### LEGAL DESCRIPTION

244.437 ACRES OF LAND OUT OF THE AMOS ALEXANDER SURVEY NO. 22, ABSTRACT NO. 1 IN TRAVIS COUNTY, TEXAS, COMPRISED OF A PORTION OF THAT TRACT CONVEYED AS 671.170 ACRES TO ROBERT GILFILLAN AND JACKI NELL GILFILLAN BY DEED RECORDED IN DOCUMENT NO. 2003230144, OFFICIAL PUBLIC RECORDS OF TRAVIS COUNTY AND MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS AND AS SURVEYED UNDER THE SUPERVISION OF C. RICHARD RALPH, REGISTERED PROFESSIONAL LAND SURVEYOR DURING FEBRUARY, 2008:

BEGINNING at an iron rod found for the southwest corner hereof, the common west corner of said Gilfillan tract and that tract conveyed as 108.71 acres to James Eachus and Maureen Eachus by deed recorded in Volume 8327, Page 714, Real Property Records of Travis County and a point on the east line of Jones Road;

THENCE N 29°12'36" E, 2101.96 feet to an iron rod found and N 29°59'15" E, (bearing basis for this survey per said Document No. 2003230144) pass at 431.91 feet the south corner at the west termination of a 1.732 acre 30' Access Easement out of said 671.170 acres of record in Document No. 2005230431 of said Official Public Records, continue for a total of 462.04 feet along the east line of said Jones Road to an iron rod found for the northwest corner hereof and the southwest corner of that tract out of said 671.170 acres conveyed as 41.294 acres to Rocember Galvan and Lydia Galvan by deed recorded in Document No. 2004033752 of said Official Public Records, same being the north corner at the west termination of said Easement;

THENCE the following four (4) courses over and across said 671.170 acres common line hereof and of said 41.294 acres and the south line of that tract conveyed as 28.567 acres to Homer Owens and Michella Owens by deed recorded in Document No. 2005230429 of said Official Public Records, same being the north line of said Easement;

- S 54º43'56" E, (bearing basis for this survey per said Document No. 2003230144) 986.60 feet to an iron 1) rod found;
- S 85°27'53" E, 671.67 feet to an iron rod found; 2)
- S 58°42'55" E, 797.27 feet to an iron rod found for the common south corner of said 41.294 acres and; 3)
- S 61°41'45" E, pass at 60.00 feet the north corner at the east termination of said Easement, continue for a 4) total of 2311.95 feet to an iron rod found for the northeast corner hereof, a point on the south line of said 28.567 acres and the northwest corner of that tract conveyed as 98.286 acres to the City of Manor by deed recorded in Document No. 2006208605 of said Official Public Records;

THENCE the following seven (7) courses over and across said 671.170 acres along the common line hereof and of said 98,286 acres:

- S 64004'40" W, crossing Wilbarger Creek at approximately 20 to 45 feet, continue for a total of 693.24 1) feet to an iron rod found:
- S 43059'55" W, 754.37 feet to an iron rod found; 2)
- S 54027'46" W, 454.89 feet to an iron rod found; 3)
- S 25°40'30" E, 92.15 feet to an iron rod found; 4)
- S 25<sup>0</sup>47'36" B, 294.58 feet to an iron rod found; 5)
- S 27<sup>0</sup>54'25" W, 313.53 feet to an iron rod found; 6)
- S 62047'34" W, 56.32 feet to an iron rod found for the southeast corner hereof and the common west 7) corner of said 98.286 acres and that tract conveyed as 80,000 acres to David F. Letourneau and Sara M. Letourneau by deed recorded in Document No. 2004104515 of said Official Public Records;

# Exhibit "A" Continued: legal description of twenty-two acres out of 244.437 acres

THENCE the following twenty five (25) courses over and across said 671.170 acres along the common line hereof and of said 80,000 acres and the common line of said 671.170 acres and said 108.71 acres:

- S 67<sup>0</sup>53'14" W, 218.65 feet to an iron rod found;
- 2) S 80°58'38" W, 304.83 feet to an iron rod found;
- 3) N 76<sup>0</sup>39'38" W, 199.35 feet to an iron rod found;
- 4) N 07<sup>0</sup>40'21" E, cross said Wilbarger Creek at approximately 15 to 40 feet, continue for a total of 56.19 feet to an iron rod found;
- N 67<sup>0</sup>09'43" W, 272.57 feet to an iron rod found;
- N 59<sup>0</sup>51'10" W, 250.43 feet to an iron rod found;
- 7) N 88<sup>0</sup>36'17" W, 239.97 feet to an iron rod found;
- 8) N 57<sup>0</sup>57'58" W, 329.56 feet to an iron rod found;
- 9) N 54<sup>0</sup>31'48" W, 146.10 feet to an iron rod found for the northwest corner of said 80.000 acres and a point on the east line of said 108.71 acres;
- 10) N 30<sup>0</sup>53'23" E, 52.86 feet to an iron rod found:
- 11) N 23<sup>0</sup>11'18" E, 153.18 feet to an iron rod found;
- 12) N 29<sup>0</sup>13'23" E, 188.52 feet to an iron rod found for the northeast corner of said 108.71 acres;
- 13) N 58<sup>0</sup>31'09" W, 62.98 feet to an iron rod found;
- 14) N 69<sup>0</sup>35'24" W, 322.76 feet to an iron rod found;
- 15) N 66<sup>0</sup>35'24" W, 101.36 feet to an iron rod found;
- 16) N 71<sup>0</sup>39'24" W, 254.40 feet to an iron rod found;
- 17) N 70<sup>0</sup>56'24" W, 101.10 feet to an iron rod found;
- 18) N 70°51'24" W, 223.71 feet to an iron rod found;
- 19) N 69°38'24" W, 166.88 feet to an iron rod found;
- 20) N 70<sup>0</sup>09'24" W, 336.00 feet to an iron rod found;
- 21) N 70°06'24" W, 268.71 feet to an iron rod found;
- 22) N 70°11'24" W, 128.79 feet to an iron rod found;
- 23) N 64<sup>0</sup>27'24" W, 65.39 feet to an iron rod found;
- 24) N 71<sup>0</sup>44'24" W, 135.65 feet to an iron rod found;
- N 70°28'24" W, 269.39 feet to the POINT OF BEGINNING, containing 244.437 acres of land, more or less, with 1.732 acres contained within said 30' Access Easement and shown on the survey plat prepared herewith.

May 28, 2008

Surveyed by:

C. Richard Ralph

Registered Professional Land Surveyor No.

Project No. 20282441

### Exhibit "A" Continued: legal description of twenty-two acres out of 244.437 acres

Out of the above defined 244.437 acre parcel of land, that certain twenty-two (22) acre, more or less, tract is more specifically defined by the following GPS points:

Anywhere in this description and depiction where a geographical location is delineated or escribed by use of latitude and longitude coordinates, the Parties agree that the coordinates are accurate. However, when attempting to locate coordinate locations in the field by use of a Global Positioning System (GPS) receiver, the Parties agree that an error of several feet is possible. When there is a necessity of making a determination of a location on the Property or in a dispute about a location, the Parties agree that the GPS data given from a GPS receiver will be used and that the error factor will be construed in favor of the Landowner.



Carbon Status: YES

**Property Boundary** 

FEMA 100yr Floodplain

Total Planting Area (Fullest Allowed)

Planting Area Suitable for Upland Plants

0 340 680 Meters

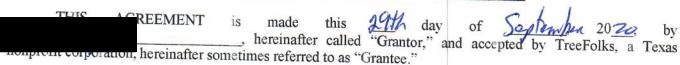
Acres	Trees	
22.38	14,302	
22.38	14,302	



Date Created: 12/2/2020

Author: Valerie Tamburri, TreeFolks

### AGREEMENT AND DECLARATION OF COVENANTS



WHEREAS, Grantor desires to participate in the Travis County Floodplain Reforestation Program, which is a collaborative effort between TreeFolks, Travis County, the City of Austin, and City Forest Credits of Seattle, Washington, and which is designed to restore riparian areas and thereby enhance air and water quality, provide wildlife habitat, mitigate floods and droughts, and increase the resilience of the ecosystem, and,

WHEREAS, TreeFolks desires to provide trees, planting services, and consultation services to Grantor at no charge, and Grantor desires to allow the planting of such trees on the Property and, as provided herein, commits to allow the trees to remain on the Property for a period of at least twenty-five (25) years, and,

WHEREAS, Grantor desires to transfer to TreeFolks all of Grantor's rights to receive and interest in the carbon credits that will be generated by this reforestation project on the Property and may be issued by City Forest Credits, which credits are expected to be sold by TreeFolks to the City of Austin and used to fund future tree plantings.

NOW, THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the mutual receipt of which is hereby acknowledged, Grantor hereby declares that the Property is and shall be held, transferred, sold, conveyed, and occupied subject to the terms and conditions hereinafter set forth:

- 1. During the period of time beginning on the date of this Agreement and ending twenty-five (25) years thereafter on the twenty-fifth anniversary of the date of this Agreement, the trees planted on the Property by TreeFolks or its representatives shall not be removed, harvested, or intentionally damaged by Grantor or Grantor's assignees or successors in interest, and such parties will not take any action that would result in damage to or destruction of the trees. If the Landowner cuts, harvests, or damages the trees for any reasons other than those specified in Section 6, or if it defaults for other reasons, it shall compensate TreeFolks in an amount not to exceed \$3,144 per acre of land where trees are cut, harvested, or damaged or where
- 2. TreeFolks agrees to provide and arrange for the planting of trees on the Property as outlined in Exhibit "A" in areas that are acceptable to Grantor and to TreeFolks, and Grantor agrees to allow the planting of such trees on the Property.
- 3. Grantor hereby assigns, transfers, and conveys to TreeFolks all of Grantor's interests in and rights to any and all carbon credits that may be issued by City Forest Credits or any other issuer of such credits as a result of the planting of the trees pursuant to this Agreement. Grantor acknowledges that TreeFolks intends to receive such credits and then re-sell the credits to the City of Austin or other buyer of such credits for funds that will be paid to TreeFolks in return for the sale of the credits by TreeFolks.
- 4. Subject to the foregoing, the terms of this Agreement shall run with the land and shall be binding upon Grantor, Grantor's successors and assigns, and all parties claiming by, through, or under Grantor shall be taken to hold, agree, and covenant with Grantor, its successors and assigns, to conform to and observe the terms and conditions of this Agreement as to the preservation of the trees planted pursuant to this Agreement, and Grantor, its successors and assigns, as well as Grantee, the City of Austin, and their successors and assigns, shall have the

right to enforce this Agreement, including the right to sue for and obtain an injunction prohibitive or mandatory, to prevent the breach of this Agreement, without any showing of special damages.

- 5. This Agreement shall run with the land until the twenty-fifth anniversary of the date of this Agreement, after which time it shall automatically terminate. This Agreement may not be amended in whole or in part except by written agreement of the Grantor and the Grantee.
- 6. Nothing herein shall be construed to entitle any party to institute any enforcement proceedings against Grantor for any changes to the Property due to causes beyond Grantor's control, such as changes caused by fire, flood, storm, earthquake, or the unauthorized wrongful acts of third persons. If either party is in default of this agreement, the other party may notify the defaulting party of the specific nature of the default. The defaulting Party has 30 days from the date of notice to correct the default. If the default is not corrected in 30 days, the non-defaulting party may cancel this agreement. Notice of cancellation shall be delivered in writing to the current contact address of the defaulting party.

in whichig to the current contact address of the defaulting party.
Signed by the parties to be effective as of the date first stated above.
Grantor: Signature(s):
Printed Name:
Grantee: Treefolks Inc.
Signature(s):
Printed Name: Andrew Smiley, Executive Director
<u>ACKNOWLEDGMENTS</u>
acknowledged before me on this 29th day of September, 2000, by  ARRY PUBLO  Notary Public, State of Texas
This instrument was acknowledged before me on this 19 day of MAKCH, 20 21 by ANDLEW Source, the EXEC DIRECTROFT TreeFolks.
Notary Public, State of Texas  Notary Public, State of Texas

### EXHIBIT "A"

## Legal description of property and Planting area map

Property ID: 545548

Legal Description: ABS 22 SUR 29 TANNEHILL J C ACR 25.00

Geographic ID: 0217300101

Type: Real

Location Address: ED BLUESTEIN BLVD TX

Neighborhood: Land Region 305

Owner Name:

Owner ID: 524281

Mailing Address:

Ownership: 100.00000000000%

Type: LAND 25.0000 Acres



Carbon Status: YES

0 87.5 175 Meters

Property Boundary

Total Planting Area (Fullest Allowed)

Planting Area Suitable for Upland Plants

 Acres
 Trees

 0.87
 570

 0.87
 570



Date Created: 1/7/2021

Author: Valerie Tamburri, TreeFolks

THIS

**AGREEMENT** 

is

made



### AGREEMENT AND DECLARATION OF COVENANTS

22

day

JANUARY.

2021.

nonprofit corporation, hereinafter sometimes referred to as "Grantee."	accepted by TreeFolks, a Texas
WHEREAS, Grantor is the owner of a tract of land consisting of	acres, more or less, located in Travis hereto, hereafter referred to as the

this

WHEREAS, Grantor desires to participate in the Travis County Floodplain Reforestation Program, which is a collaborative effort between TreeFolks, Travis County, the City of Austin, and City Forest Credits of Seattle, Washington, and which is designed to restore riparian areas and thereby enhance air and water quality, provide wildlife habitat, mitigate floods and droughts, and increase the resilience of the ecosystem, and,

WHEREAS, TreeFolks desires to provide trees, planting services, and consultation services to Grantor at no charge, and Grantor desires to allow the planting of such trees on the Property and, as provided herein, commits to allow the trees to remain on the Property for a period of at least twenty-five (25) years, and,

WHEREAS, Grantor desires to transfer to TreeFolks all of Grantor's rights to receive and interest in the carbon credits that will be generated by this reforestation project on the Property and may be issued by City Forest Credits, which credits are expected to be sold by TreeFolks to the City of Austin and used to fund future tree plantings.

NOW, THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the mutual receipt of which is hereby acknowledged, Grantor hereby declares that the Property is and shall be held, transferred, sold, conveyed, and occupied subject to the terms and conditions hereinafter set forth:

- 1. During the period of time beginning on the date of this Agreement and ending twenty-five (25) years thereafter on the twenty-fifth anniversary of the date of this Agreement, the trees planted on the Property by TreeFolks or its representatives shall not be removed, harvested, or intentionally damaged by Grantor or Grantor's assignees or successors in interest, and such parties will not take any action that would result in damage to or destruction of the trees. If the Landowner cuts, harvests, or damages the trees for any reasons other than those specified in Section 6, or if it defaults for other reasons, it shall compensate TreeFolks in an amount not to exceed \$3,144 per acre of land where trees are cut, harvested, or damaged or where a Tree Project cannot continue.
- 2. TreeFolks agrees to provide and arrange for the planting of trees on the Property as outlined in Exhibit "A" in areas that are acceptable to Grantor and to TreeFolks, and Grantor agrees to allow the planting of such trees on the Property.
- 3. Grantor hereby assigns, transfers, and conveys to TreeFolks all of Grantor's interests in and rights to any and all carbon credits that may be issued by City Forest Credits or any other issuer of such credits as a result of the planting of the trees pursuant to this Agreement. Grantor acknowledges that TreeFolks intends to receive such credits and then re-sell the credits to the City of Austin or other buyer of such credits for funds that will be paid to TreeFolks in return for the sale of the credits by TreeFolks.
- 4. Subject to the foregoing, the terms of this Agreement shall run with the land and shall be binding upon Grantor, Grantor's successors and assigns, and all parties claiming by, through, or under Grantor shall be taken to hold, agree, and covenant with Grantor, its successors and assigns, to conform to and observe the terms and conditions of this Agreement as to the preservation of the trees planted pursuant to this Agreement, and Grantor, its successors and assigns, as well as Grantee, the City of Austin, and their successors and assigns, shall have the

right to enforce this Agreement, including the right to sue for and obtain an injunction prohibitive or mandatory, to prevent the breach of this Agreement, without any showing of special damages.

- 5. This Agreement shall run with the land until the twenty-fifth anniversary of the date of this Agreement, after which time it shall automatically terminate. This Agreement may not be amended in whole or in part except by written agreement of the Grantor and the Grantee.
- 6. Nothing herein shall be construed to entitle any party to institute any enforcement proceedings against Grantor for any changes to the Property due to causes beyond Grantor's control, such as changes caused by fire, flood, storm, earthquake, or the unauthorized wrongful acts of third persons.

  If either party is in default of this agreement, the other party may notify the defaulting party of the specific nature of the default. The defaulting Party has 30 days from the date of notice to correct the default. If the default is not corrected in 30 days, the non-defaulting party may cancel this agreement. Notice of cancellation shall be delivered in writing to the current contact address of the defaulting party.

Signed by the parties to be effective as of the date first stated above.

2-gard by the parties to be effective as of the date first stated above.
Grantor: Signature(s)
Printed Nam
Grantee: Treefolks, Inc. Signature(s):
Printed Name: ANDREW U. SMILEY, Executive Director
<u>ACKNOWLEDGMENTS</u>
This instrument was already before me on this $22$ day of $3$ day, $30$ , by
SEAL  JAELEN CHASE Notary Public, State of Texa Comm. Expires 01-11-2023 Notary ID 131851673
This instrument was acknowledged before me on this 23 day of April , 2021, by ANDREW W. SMILEY, the EXEC DIRECTOR of TreeFolks.
KRYSTAL DOMINGUEZ NOTARY PUBLIC STATE OF TEXAS

Notary Public, State of 12xas

### EXHIBIT "A"

## Legal description of property and Planting area map

Property ID: 737243

Legal Description: LOT 79 BLK E BRIARCREEK SUBD SEC 5 (COMMON AREA,

DRAINAGE & SLOPE EASEMENT)

Geographic ID: 0227720124

Type: Real

Location Address: 18452 GREAT FALLS DR TX 78653

Neighborhood: Briarcreek

Owner Name:

Owner ID: 499160

Mailing Address:

Ownership: 100.0000000000%

Type: LAND 210.5230 Acres

Property ID: 737243

18452 GREAT FALLS DR 78653





**Property Boundary** 

FEMA 100yr Floodplain

Total Planting Area (Fullest Allowed)

Planting Area Suitable for Upland Plants

Acres Trees

4.44 3025

4.44 3025

TREEFOLKS

Date Created: 12/2/2020

Author: Valerie Tamburri, TreeFolks

### AGREEMENT AND DECLARATION OF COVENANTS



nonprofit corporation, hereinafter s	is sometii	made hereinafter nes referred	called	"Grantee."	or," and		d by Tre	20 <u>≁</u> , eFolks, a	by Texas
WHEREAS, Grantor is the County, Texas, as more particula "Property," and,	e owner arly de	r of a tract o escribed on	f land c Exhibit	onsisting t "A" at	g of	acres, mo	ore or less, ereafter re	located in eferred to	Travis as the

WHEREAS, Grantor desires to participate in the Travis County Floodplain Reforestation Program, which is a collaborative effort between TreeFolks, Travis County, the City of Austin, and City Forest Credits of Seattle, Washington, and which is designed to restore riparian areas and thereby enhance air and water quality, provide wildlife habitat, mitigate floods and droughts, and increase the resilience of the ecosystem, and,

WHEREAS, TreeFolks desires to provide trees, planting services, and consultation services to Grantor at no charge, and Grantor desires to allow the planting of such trees on the Property and, as provided herein, commits to allow the trees to remain on the Property for a period of at least twenty-five (25) years, and,

WHEREAS, Grantor desires to transfer to TreeFolks all of Grantor's rights to receive and interest in the carbon credits that will be generated by this reforestation project on the Property and may be issued by City Forest Credits, which credits are expected to be sold by TreeFolks to the City of Austin and used to fund future tree plantings.

NOW, THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the mutual receipt of which is hereby acknowledged, Grantor hereby declares that the Property is and shall be held, transferred, sold, conveyed, and occupied subject to the terms and conditions hereinafter set forth:

- 1. During the period of time beginning on the date of this Agreement and ending twenty-five (25) years thereafter on the twenty-fifth anniversary of the date of this Agreement, the trees planted on the Property by TreeFolks or its representatives shall not be removed, harvested, or intentionally damaged by Grantor or Grantor's assignees or successors in interest, and such parties will not take any action that would result in damage to or destruction of the trees. If the Landowner cuts, harvests, or damages the trees for any reasons other than those specified in Section 6, or if it defaults for other reasons, it shall compensate TreeFolks in an amount not to exceed \$3,144 per acre of land where trees are cut, harvested, or damaged or where a Tree Project cannot continue.
- 2. TreeFolks agrees to provide and arrange for the planting of trees on the Property as outlined in Exhibit "A" in areas that are acceptable to Grantor and to TreeFolks, and Grantor agrees to allow the planting of such trees on the Property.
- 3. Grantor hereby assigns, transfers, and conveys to TreeFolks all of Grantor's interests in and rights to any and all carbon credits that may be issued by City Forest Credits or any other issuer of such credits as a result of the planting of the trees pursuant to this Agreement. Grantor acknowledges that TreeFolks intends to receive such credits and then re-sell the credits to the City of Austin or other buyer of such credits for funds that will be paid to TreeFolks in return for the sale of the credits by TreeFolks.
- 4. Subject to the foregoing, the terms of this Agreement shall run with the land and shall be binding upon Grantor, Grantor's successors and assigns, and all parties claiming by, through, or under Grantor shall be taken to hold, agree, and covenant with Grantor, its successors and assigns, to conform to and observe the terms and conditions of this Agreement as to the preservation of the trees planted pursuant to this Agreement, and Grantor, its successors and assigns, as well as Grantee, the City of Austin, and their successors and assigns, shall have the

right to enforce this Agreement, including the right to sue for and obtain an injunction prohibitive or mandatory, to prevent the breach of this Agreement, without any showing of special damages.

- 5. This Agreement shall run with the land until the twenty-fifth anniversary of the date of this Agreement, after which time it shall automatically terminate. This Agreement may not be amended in whole or in part except by written agreement of the Grantor and the Grantee.
- 6. Nothing herein shall be construed to entitle any party to institute any enforcement proceedings against Grantor for any changes to the Property due to causes beyond Grantor's control, such as changes caused by fire, flood, storm, earthquake, or the unauthorized wrongful acts of third persons.

  If either party is in default of this agreement, the other party may notify the defaulting party of the specific nature of the default. The defaulting Party has 30 days from the date of notice to correct the default. If the default is not corrected in 30 days, the non-defaulting party may cancel this agreement. Notice of cancellation shall be delivered in writing to the current contact address of the defaulting party.

Signed by the parties to be effective as of the date first stated above.

Grantor: Signature(s): Printed Name:	
Grantee: Signature(s): Printed Name:	ANDREW SMILEY, Executive Director

### ACKNOWLEDGMENTS

This instrument was acknowledged before me on this 28 day of Sept, 2020 by

JAELEN CHASE
Notary Public, State of Texas
Comm. Expires 01-11-2023
Notary ID 131851673

This instrument was acknowledged before me on this 19th day of MARCH, 2021, by ANREW SMILEY, the EXEC. DIRECTOR TreeFolks.



Notary Public, State of Texas

### EXHIBIT "A"

## Legal description of property and Planting area map

Property ID: 190357

Legal Description: LOT B AMENDING PLAT FOR LTS 4-6 IRION JAMES III SUBD NO 1

Geographic ID: 0202410215

Type: Real

Location Address: 11002 FM RD 969 TX 78724

Neighborhood: Land Region 405

Owner Name:

Owner ID: 1013574

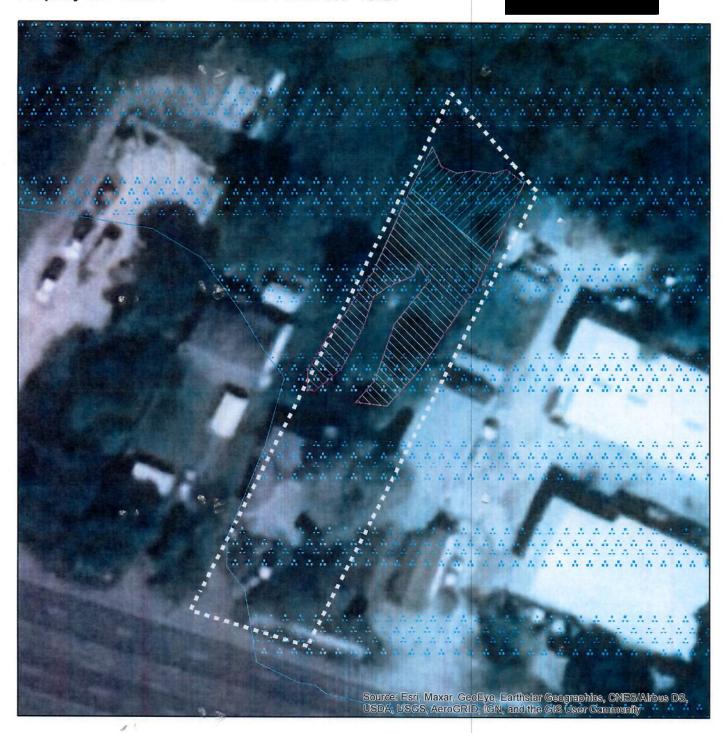
Mailing Address:

Ownership: 100.0000000000%

Type: LAND 0.4000 Acres

Property ID: 190357

11002 F M RD 969 78724





 Acres
 Trees

 0.13
 85

 0.09
 60

 0.04
 25

15



30 ⊐ Meters

Date Created: 12/2/2020

Author: Valerie Tamburri, TreeFolks

### AGREEMENT AND DECLARATION OF COVENANTS



is made this 22 day of 5 to 2020, by hereinafter called "Grantor," and accepted by TreeFolks, a Texas nonprofit corporation, hereinafter sometimes referred to as "Grantee."

WHEREAS, Grantor is the owner of a tract of land consisting of \_\_\_\_\_acres, more or less, located in Travis County, Texas, as more particularly described on Exhibit "A" attached hereto, hereafter referred to as the "Property," and,

WHEREAS, Grantor desires to participate in the Travis County Floodplain Reforestation Program, which is a collaborative effort between TreeFolks, Travis County, the City of Austin, and City Forest Credits of Seattle, Washington, and which is designed to restore riparian areas and thereby enhance air and water quality, provide wildlife habitat, mitigate floods and droughts, and increase the resilience of the ecosystem, and,

WHEREAS, TreeFolks desires to provide trees, planting services, and consultation services to Grantor at no charge, and Grantor desires to allow the planting of such trees on the Property and, as provided herein, commits to allow the trees to remain on the Property for a period of at least twenty-five (25) years, and,

WHEREAS, Grantor desires to transfer to TreeFolks all of Grantor's rights to receive and interest in the carbon credits that will be generated by this reforestation project on the Property and may be issued by City Forest Credits, which credits are expected to be sold by TreeFolks to the City of Austin and used to fund future tree plantings.

NOW, THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the mutual receipt of which is hereby acknowledged, Grantor hereby declares that the Property is and shall be held, transferred, sold, conveyed, and occupied subject to the terms and conditions hereinafter set forth:

- 1. During the period of time beginning on the date of this Agreement and ending twenty-five (25) years thereafter on the twenty-fifth anniversary of the date of this Agreement, the trees planted on the Property by TreeFolks or its representatives shall not be removed, harvested, or intentionally damaged by Grantor or Grantor's assignees or successors in interest, and such parties will not take any action that would result in damage to or destruction of the trees. If the Landowner cuts, harvests, or damages the trees for any reasons other than those specified in Section 6, or if it defaults for other reasons, it shall compensate TreeFolks in an amount not to exceed \$3,144 per acre of land where trees are cut, harvested, or damaged or where a Tree Project cannot continue.
- 2. TreeFolks agrees to provide and arrange for the planting of trees on the Property as outlined in Exhibit "A" in areas that are acceptable to Grantor and to TreeFolks, and Grantor agrees to allow the planting of such trees on the Property.
- 3. Grantor hereby assigns, transfers, and conveys to TreeFolks all of Grantor's interests in and rights to any and all carbon credits that may be issued by City Forest Credits or any other issuer of such credits as a result of the planting of the trees pursuant to this Agreement. Grantor acknowledges that TreeFolks intends to receive such credits and then re-sell the credits to the City of Austin or other buyer of such credits for funds that will be paid to TreeFolks in return for the sale of the credits by TreeFolks.
- 4. Subject to the foregoing, the terms of this Agreement shall run with the land and shall be binding upon Grantor, Grantor's successors and assigns, and all parties claiming by, through, or under Grantor shall be taken to hold, agree, and covenant with Grantor, its successors and assigns, to conform to and observe the terms and conditions of this Agreement as to the preservation of the trees planted pursuant to this Agreement, and Grantor, its successors and assigns, as well as Grantee, the City of Austin, and their successors and assigns, shall have the right to enforce this Agreement, including the right to sue for and obtain an injunction prohibitive or mandatory,

to prevent the breach of this Agreement, without any showing of special damages.

- 5. This Agreement shall run with the land until the twenty-fifth anniversary of the date of this Agreement, after which time it shall automatically terminate. This Agreement may not be amended in whole or in part except by written agreement of the Grantor and the Grantee.
- 6. Nothing herein shall be construed to entitle any party to institute any enforcement proceedings against Grantor for any changes to the Property due to causes beyond Grantor's control, such as changes caused by fire, flood, storm, earthquake, or the unauthorized wrongful acts of third persons. If either party is in default of this agreement, the other party may notify the defaulting party of the specific nature of the default. The defaulting Party has 30 days from the date of notice to correct the default. If the default is not corrected in 30 days, the non-defaulting party may cancel this agreement. Notice of cancellation shall be delivered in writing to the current contact address of the defaulting party.

Signed by the parties to be effective as of the date first stated above.

Grantor: Signature(s)  Name:
Grantee: Treefolks, Inc.  Signature(s):  Printed Name:   ANDREW Sangey, Executive Director
ACKNOWLEDGMENTS
This instrument was acknowledged before me on this 22 day of 50t., 200, by
Notary Public, State of
This instrument was acknowledged before me on this  This instrument wa
Notary Public, State of Texas  EXHIBIT "A"  Notary Public, State of Texas

### EXHIBIT "A"

## Legal description of property and Planting area map

Property ID: 724522

Legal Description: ABS 1 SUR 22 ALEXANDER A ACR 100.8910 (1-d-1w)

Geographic ID: 0226900320

Type: Real

Location Address: BITTING SCHOOL RD TX 78653

Neighborhood: Land Region 307

Owner Name:

Owner ID: 214250

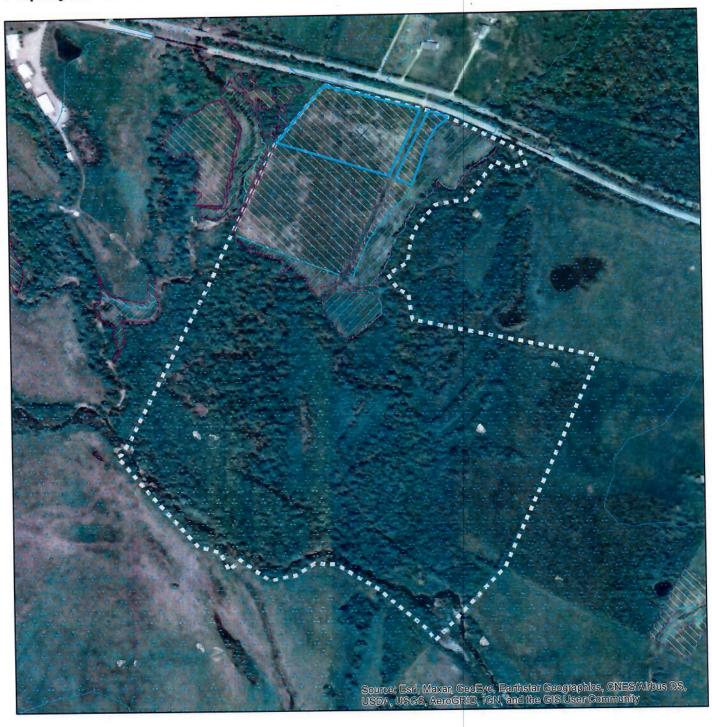
Mailing Address:

% Ownership: 100.0000000000%

Type: WILDLIFE 100.8910 Acres

Property ID: 724522

BITTING SCHOOL RD 78653





Acres Trees

6.21 4330

6.21 4330

TREEFOLKS

190

380

Date Created: 12/2/2020 Author: Valerie Tamburri, TreeFolks

## AGREEMENT AND DECLARATION OF COVENANTS

made this <u>I</u> day of <u>October</u>, 20<u>ZO</u> by hereinafter called "Grantor," and accepted by TreeFolks, a Texas nonpront corporation, hereinafter sometimes referred to as "Grantee."

WHEREAS, Grantor is the owner of a tract of land consisting of 1.5 acres, more or less, located in Travis County, Texas, as more particularly described on Exhibit "A" attached hereto, hereafter referred to as the "Property," and,

WHEREAS, Grantor desires to participate in the Travis County Floodplain Reforestation Program, which is a collaborative effort between TreeFolks, Travis County, the City of Austin, and City Forest Credits of Seattle, Washington, and which is designed to restore riparian areas and thereby enhance air and water quality, provide wildlife habitat, mitigate floods and droughts, and increase the resilience of the ecosystem, and,

WHEREAS, TreeFolks desires to provide trees, planting services, and consultation services to Grantor at no charge, and Grantor desires to allow the planting of such trees on the Property and, as provided herein, commits to allow the trees to remain on the Property for a period of at least twenty-five (25) years, and,

WHEREAS, Grantor desires to transfer to TreeFolks all of Grantor's rights to receive and interest in the carbon credits that will be generated by this reforestation project on the Property and may be issued by City Forest Credits, which credits are expected to be sold by TreeFolks to the City of Austin and used to fund future tree plantings.

NOW, THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the mutual receipt of which is hereby acknowledged, Grantor hereby declares that the Property is and shall be held, transferred, sold, conveyed, and occupied subject to the terms and conditions hereinafter set forth:

- 1. During the period of time beginning on the date of this Agreement and ending twenty-five (25) years thereafter on the twenty-fifth anniversary of the date of this Agreement, the trees planted on the Property by TreeFolks or its representatives shall not be removed, harvested, or intentionally damaged by Grantor or Grantor's assignees or successors in interest, and such parties will not take any action that would result in damage to or destruction of the trees. If the Landowner cuts, harvests, or damages the trees for any reasons other than those specified in Section 6, or if it defaults for other reasons, it shall compensate TreeFolks in an amount not to exceed \$3,144 per acre of land where trees are cut, harvested, or damaged or where a Tree Project cannot continue.
- 2. TreeFolks agrees to provide and arrange for the planting of trees on the Property as outlined in Exhibit "A" in areas that are acceptable to Grantor and to TreeFolks, and Grantor agrees to allow the planting of such trees on the Property.
- 3. Grantor hereby assigns, transfers, and conveys to TreeFolks all of Grantor's interests in and rights to any and all carbon credits that may be issued by City Forest Credits or any other issuer of such credits as a result of the planting of the trees pursuant to this Agreement. Grantor acknowledges that TreeFolks intends to receive such credits and then re-sell the credits to the City of Austin or other buyer of such credits for funds that will be paid to TreeFolks in return for the sale of the credits by TreeFolks.
- 4. Subject to the foregoing, the terms of this Agreement shall run with the land and shall be binding upon Grantor, Grantor's successors and assigns, and all parties claiming by, through, or under Grantor shall be taken to hold, agree, and covenant with Grantor, its successors and assigns, to conform to and observe the terms and conditions of this Agreement as to the preservation of the trees planted pursuant to this Agreement, and Grantor, its successors and assigns, as well as Grantee, the City of Austin, and their successors and assigns, shall have the

right to enforce this Agreement, including the right to sue for and obtain an injunction prohibitive or mandatory, to prevent the breach of this Agreement, without any showing of special damages.

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- 6. Nothing herein shall be construed to entitle any party to institute any enforcement proceedings against Grantor for any changes to the Property due to causes beyond Grantor's control, such as changes caused by fire, flood, storm, earthquake, or the unauthorized wrongful acts of third persons.

  If either party is in default of this agreement, the other party may notify the defaulting party of the specific nature of the default. The defaulting Party has 30 days from the date of notice to correct the default. If the default is not corrected in 30 days, the non-defaulting party may cancel this agreement. Notice of cancellation shall be delivered in writing to the current contact address of the defaulting party.



Grantee:

Treefolks, Inc.

Signature(s): •

Printed Name:

. Executive Director

### <u>ACKNOWLEDGMENTS</u>

This instrument was acknowledged before me on this 1st day of October, 2020 by



Notary Public, State of Texas

This instrument was acknowledged before me on this 19th day of MARCH, 2021, by LNIHW SMILEY, the EXEC, DIRECTOR TreeFolks.



Notary Public, State of Texas

### EXHIBIT "A"

### Legal description of property and Planting area map

Property ID: 500931

Legal Description: LOT 8 TRAILRIDERS SUBD [1-D-1]

Geographic ID: 0242900327

Type: Real

Location Address: 22412 TRAILRIDERS CV TX 78653

Neighborhood: Land Region 320

Owner Name:

Owner ID: 470649

Mailing Address:

Ownership: 100.0000000000%

Type: LAND 3.0000 Acres; IMPROVED PASTURE 20.9810 Acres

Property ID: 500931

22412 TRAILRIDERS CV 78621





 Acres
 Trees

 1.88
 1407

 1.88
 1407

85

170

Meters

Date Created: 12/2/2020

Author: Valerie Tamburri, TreeFolks



### Travis County Floodplain Reforestation Program - 2021 Attestation of No Double Counting of Credits

I am the Reforestation Manager of TreeFolks and make this attestation regarding the no double counting of credits from tree planting project, Travis County Floodplain Reforestation Program - 2021.

### 1. Project Description

The Project that is the subject of this attestation is described more fully in both our Application and our Project Design Document (PDD), both of which are incorporated into this attestation.

- 2. No Double Counting by Applying for Credits from another registry TreeFolks will not seek credits for  $CO_2$  for the project trees or for this project from any other organization or registry issuing credits for  $CO_2$  storage.
- 3. No Double Counting by Seeking Credits for the Same Trees or Same  $CO_2$  Storage TreeFolks will not apply for a project including the same trees as this project nor will it seek credits for  $CO_2$  storage for the project trees or for this project in any other project or more than once.

Signed on October 14, 2021, by Valerie Tamburri, Reforestation Manager, for TreeFolks.

₩· <u>·</u>	
Valerie Tamburri (Oct 14, 2021 16:13 CDT)	
Signature	
Valerie Tamburri	
Printed Name	
512-443-5323	
Phone	
Valerie@treefolks.org	
Email	

### Exhibit A

Specification of Property (can be maps, legal description, and/or other reasonably specific delineations of the property upon which the project is taking place)

### **Project Locations:**

17312 Littig Rd	Elgin	78621
11911 Jones Rd	Manor	78653
18452 GREAT FALLS DR	Manor	78653
22412 Trailriders CV / 30.36241, -97.46322	Manor	78653
11002 FM 969	Austin	78724
6013 Loyola Lane	Austin	78724

# 20-21 CFC Attestation of No Double Counting of Credits

Final Audit Report 2021-10-14

Created: 2021-10-14

By: Christine Cole (christine@cityforestcredits.org)

Status: Signed

Transaction ID: CBJCHBCAABAAqZtup-3w6nxogZQfHVHkeAW\_Wsn4tlnC

## "20-21 CFC Attestation of No Double Counting of Credits" History

- Document created by Christine Cole (christine@cityforestcredits.org)
  2021-10-14 8:41:16 PM GMT- IP address: 67.183.7.143
- Document emailed to Valerie Tamburri (valerie@treefolks.org) for signature 2021-10-14 8:42:23 PM GMT
- Email viewed by Valerie Tamburri (valerie@treefolks.org)
  2021-10-14 9:12:42 PM GMT- IP address: 66.249.80.11
- Document e-signed by Valerie Tamburri (valerie@treefolks.org)

  Signature Date: 2021-10-14 9:13:48 PM GMT Time Source: server- IP address: 12.161.91.186
- Agreement completed. 2021-10-14 - 9:13:48 PM GMT



## Travis County Floodplain Reforestation Program - 2021 Attestation of No Net Harm

I am the Reforestation Manager of TreeFolks and make this attestation regarding the no net harm from tree planting project, Travis County Floodplain Reforestation Program - 2021.

### 1. Project Description

The Project that is the subject of this attestation is described more fully in both our Application and our Project Design Document (PDD), both of which are incorporated into this attestation.

#### 2. No Net Harm

The trees planted in this project will produce many benefits, as described in our Application and PDD. Like almost all urban trees, the project trees are planted not for harvest but for the benefits they deliver to people, communities, and the environment as living trees in a metropolitan area.

The project trees will produce many benefits and will not cause net harm. Specifically, they will not:

- Displace native or indigenous populations
- Deprive any communities of food sources
- Degrade a landscape or cause environmental damage

Signed on October 14, 2021, by Valerie Tamburri, Reforestation Manager, for TreeFolks.

Valerie Tamburri (Oct 14, 2021 16:48 CDT)	
Signature	
Valerie Tamburri	
Printed Name	
512-443-5323	
Phone	
valerie@treefolks.org	
Fmail	

### Exhibit A

Specification of Property (can be maps, legal description, and/or other reasonably specific delineations of the property upon which the project is taking place)

### **Project Locations:**

17312 Littig Rd	Elgin	78621
11911 Jones Rd	Manor	78653
18452 GREAT FALLS DR	Manor	78653
22412 Trailriders CV / 30.36241, -97.46322	Manor	78653
11002 FM 969	Austin	78724
6013 Loyola Lane	Austin	78724

## 20-21 CFC Planting Attestation of No Net Harm

Final Audit Report 2021-10-14

Created: 2021-10-14

By: Christine Cole (christine@cityforestcredits.org)

Status: Signed

Transaction ID: CBJCHBCAABAAQ0USaRjkJXqc2DWFoiRFlAuFdP\_eKZvl

## "20-21 CFC Planting Attestation of No Net Harm" History

Document created by Christine Cole (christine@cityforestcredits.org) 2021-10-14 - 8:42:48 PM GMT- IP address: 67.183.7.143

Document emailed to Valerie Tamburri (valerie@treefolks.org) for signature 2021-10-14 - 8:43:09 PM GMT

Email viewed by Valerie Tamburri (valerie@treefolks.org)
2021-10-14 - 9:47:58 PM GMT- IP address: 66.249.80.7

Document e-signed by Valerie Tamburri (valerie@treefolks.org)

Signature Date: 2021-10-14 - 9:48:16 PM GMT - Time Source: server- IP address: 12.161.91.186

Agreement completed. 2021-10-14 - 9:48:16 PM GMT



## Travis County Floodplain Reforestation Program - 2021 Project Operator Attestation of Planting

I, the undersigned Project Operator for the Planting Project named <u>Travis County Floodplain</u> <u>Reforestation Program - 2021</u>, located at <u>multiple private properties in east Travis County, TX</u>, and submitted to City Forest Credits by application dated <u>August 26, 2021</u>, attest to the following in order to confirm the planting of trees under this Project:

- Trees planted were not required by any law or ordinance to be planted;
- Trees were planted under this project on the following date (s): <u>January 26, 2021 February 22, 2021</u>;
- The organizations or groups that participated in the planting event(s) are listed in the attached documents;
- Planting events are shown in photos attached, which can include photos of tree stock and planting activities;
- The number of trees planted by species are, to a reasonable certainty, <u>total 23,491 (species & quantities listed in the attached document)</u>.

These planting numbers are confirmed by one or more of the following supporting and attached documents:

- 1. Invoices for trees planted, or
- 2. Invoices or a statement from the party who funded the tree purchase or supplied the trees attesting to the number of trees purchased, or
- 3. Any reporting to the owner or public body regarding the planting, invoices, costs, or other data re the planting, or
- 4. Any other reliable estimate of trees planted that is approved by the Registry

Signed on October 19th in 2021, by Valerie Tamburri, Reforestion Manager, for TreeFolks.

<b>₩</b> :	•	
Valerie Tamburri (Oct 1	9, 2021 12:56 CDT)	
Signature	512-443-5323	
Phone va	lerie@treefolks.or	g
Email		

### **Document Attachments:**

### Organizations or groups that participated in the planting events:

- 1. Superior Forestry Services
- 2. Texas Conservation Corps at American Youth Works

### **Project Locations:**

17312 Littig Rd	Elgin	78621
11911 Jones Rd	Manor	78653
18452 GREAT FALLS DR	Manor	78653
22412 Trailriders CV / 30.36241, -97.46322	Manor	78653
11002 FM 969	Austin	78724
6013 Loyola Lane	Austin	78724

### Photos of tree stock and planting activities:



























### Number of trees planted by species:

Callicarpa americana Platanus occidentali Ehretia anacua Juglans major Taxodium distichu Juglans nigra Acer negrundo Condalia hookeri Quercus macrocarpa	American beautyberry American sycamore Anacua or sandpaper tree Arizona walnut Bald cypress Black walnut Box elder maple Brazilwood Bur oak	907 90 686 176 103 28 294 1068
Ehretia anacua Juglans major Taxodium distichu Juglans nigra Acer negrundo Condalia hookeri Quercus macrocarpa	Anacua or sandpaper tree Arizona walnut Bald cypress Black walnut Box elder maple Brazilwood Bur oak	686 176 103 28 294 1068
Juglans major  Taxodium distichu  Juglans nigra  Acer negrundo  Condalia hookeri  Quercus macrocarpa	Arizona walnut Bald cypress Black walnut Box elder maple Brazilwood Bur oak	176 103 28 294 1068
Taxodium distichu Juglans nigra Acer negrundo Condalia hookeri Quercus macrocarpa	Bald cypress Black walnut Box elder maple Brazilwood Bur oak	103 28 294 1068
Juglans nigra Acer negrundo Condalia hookeri Quercus macrocarpa	Black walnut Box elder maple Brazilwood Bur oak	28 294 1068
Acer negrundo Condalia hookeri Quercus macrocarpa	Box elder maple Brazilwood Bur oak	294 1068
Acer negrundo Condalia hookeri Quercus macrocarpa	Brazilwood Bur oak	1068
Condalia hookeri Quercus macrocarpa	Brazilwood Bur oak	
•		
•		1279
Cephalantus occidentalis	Buttonbush, common	49
Frangula caroliniana	Carolina buckthorn	7
Acacia gregii	Catclaw acacia	1141
Quercus muehlenbergii	Chinquapin oak	1127
Chilopsis linearis	Desert willow	316
Styphnolobium affine	Eve's necklace	254
Rhus lanceolata	Flameleaf sumac	127
Fraxinus pennsylvanica	Green ash	942
Acacia berlanderi	Guajillo	245
Gleditsia triacanthos	Honey locust	1429
Prosopis glandulosa	Honey mesquite	735
Acacia farnesiana	Huisache	1401
Quercus fusiformis	Live oak	637
Jngnadia speciosa	Mexican buckeye	762
Prunus mexicana	Mexican plum	16
Quercus polymorpha	Monterey or Mexican white oak	
Maclura pomifera	Osage orange	630
Carya illinoinensis	Pecan, native	1055
Parkinsonia aculeata	Retama or palo verde	2377
Cornus drummondii Quercus shumardii	Roughleaf dogwood Shumard red oak	5 994
Sophora secundiflora	Texas mountain laurel	1710
Juglans microcarpa	Texas or little walnut	133
Diospyros texana	Texas persimmon	476
Siospyros texana Cercis canadensis var texens		519
Ptelea trifoliata	Wafer ash or hoptree	49
Sapindus saponaria var drumr	·	723
Aloysia gratissima	Whitebrush or beebush	756
Total		23491

### Statement from party funding trees:

DocuSign Envelope ID: 3D1B457D-8A99-42E3-AF35-90769A08F644



November 9, 2020

Carolyn Weaver Grants Coordinator, TreeFolks PO Box 1395 Del Valle, TX78617

Dear Carolyn,

The mission of the Arbor Day Foundation is to inspire people to plant, nurture, and celebrate trees. Thanks to partnerships with you and other reforestation organizations, the Arbor Day Foundation has helped to plant more than 100 million trees in forests all over the world. We look forward to working with you!

The Arbor Day Foundation ("Foundation") is pleased to inform TreeFolks ("TF") that the Foundation has conditionally approved TF's request for \$60,000 to plant at least 30,000 trees for the Central Texas Floodplain Reforestation Project ("Project"). To receive the funding, an authorized representative of TF must sign a counterpart of this Letter Agreement ("Agreement"), return the original signed copy to Foundation in accordance with the instructions set forth below, and fulfill the obligations outlined in this agreement. This signed Agreement sets forth the terms on which the partnership will be funded and administered.

### 1. TF shall:

- Procure trees and ensure that they are of sufficient quality and quantity to complete the Project.
- B. Procure tree planting and site preparation services and ensure that the services are adequately completed to obtain the optimal survival and growth of the planted trees for the Project.
- C. Provide for long-term management of reforested and afforested lands according to applicable federal, state, and local laws, rules, regulations and ordinances.
- D. Use funds provided by the Foundation exclusively for completing the Project in accordance with this Agreement.
- E. Within thirty (30) days after the completion of the Project, submit to the Foundation (i) an invoice related to the Project in order to obtain the funds approved herein and (ii) a completed "<u>Accomplishment Report</u>" which can be filled out online at www.arborday.org/report.

Contract# ADF21-133

The invoice can be sent to the following address or sent electronically:

Arbor Day Foundation Attn: Jennifer Moon, Program Coordinator 211 N. 12<sup>th</sup> Street Lincoln, NE 68508 jmoon@arborday.org

- F. If necessary, recognize the Foundation for its contributions through press releases and publications, as provided in this Agreement. Prior to releasing any press release or publication which recognizes the Foundation for its contributions or otherwise contains the Foundation's Marks (as defined herein), TF shall submit such press release or publication to the Foundation for the Foundation's written approval.
- The Foundation grants TF a limited, non-exclusive right to use the Foundation's trade names, trademarks, copyrights and logos (collectively, "<u>Marks</u>") solely in connection with TF's recognition of the Foundation's contribution to the Project, subject to the following conditions:
  - A. TF shall strictly comply with the Foundation's guidelines and instructions regarding the use of the Foundation's Marks as communicated to TF from time to time by the Foundation.
  - B. TF shall not register (or aid any third party in registering) the Foundation's Marks (or confusingly similar marks) or take any action inconsistent with the Foundation's ownership of its Marks in any way.
  - C. TF shall not assign or delegate any right, license or obligation arising under this Agreement without the prior written consent of the Foundation.
  - D. The Foundation reserves the right to review all materials containing the Foundation's Marks for approval or disapproval prior to the release of such materials.
  - E. The Foundation's Marks shall at all times remain the sole property of the Foundation.

Please sign and date this Agreement in the space provided below to finalize our relationship to plant trees in Winter 2021. Once both parties have signed the agreement, the Foundation will send an original copy to you for your records.

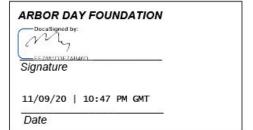
If you have questions or concerns, please feel free to contact me at 402-473-9619 or via e-mail at bbrandt@arborday.org.

Page 2 of 3

Best Regards,

Brad Brandt Manager of Forest Restoration Programs

TREEFOLKS  DocuSigned by:	
Andrew W. Smiley	
Signature	
11/09/20   1:58 PM PST	
Date	



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# 20-21 CFC Planting Attestation of Planting CFC Edits

Final Audit Report 2021-10-19

Created: 2021-10-19

By: Christine Cole (christine@cityforestcredits.org)

Status: Signed

Transaction ID: CBJCHBCAABAA-8gO5u\_8h\_Ccxeke6b\_JUP8dg9D-5ONp

## "20-21 CFC Planting Attestation of Planting CFC Edits" History

- Document created by Christine Cole (christine@cityforestcredits.org) 2021-10-19 4:53:52 PM GMT- IP address: 67.183.7.143
- Document emailed to Valerie Tamburri (valerie@treefolks.org) for signature 2021-10-19 4:54:30 PM GMT
- Email viewed by Valerie Tamburri (valerie@treefolks.org)

  2021-10-19 5:55:45 PM GMT- IP address: 66.249.80.3
- Document e-signed by Valerie Tamburri (valerie@treefolks.org)

  Signature Date: 2021-10-19 5:56:17 PM GMT Time Source: server- IP address: 72.133.85.83
- Agreement completed. 2021-10-19 - 5:56:17 PM GMT



### **Attestation of Planting Affirmation**

I, the undersigned working on behalf of operations department at Superior Forestry Service, Inc., attest and confirm that tree planting(s) occurred on the following dates under the project named in the City Forest Credits registry <a href="Travis County Floodplain Reforestation Program">Travis County Floodplain Reforestation Program</a> by the Project Operator, <a href="TreeFolks">TreeFolks</a>.

Trees were planted under this project on the following date(s): 2/5/21-2/22/21

The approximate number of trees planted is: 31,093

Signed on August 23 in 2021, by Andrew Harnage, Area Manager, for Superior Forestry Service, Inc.

Indiew Mark	
Signature	
479-219-5263 Phone	
aharnage@superiorforestry.com Email	



### Attestation of Planting Affirmation

I, the undersigned working on behalf of Reforestation Department at Texas Conservation Corps, attest and confirm that tree planting(s) occurred on the following dates under the project named in the City Forest Credits registry Travis County Floodplain Reforestation Program by the Project Operator, TreeFolks.

Trees were planted under this project on the following date(s): 01/26/21, 01/27/21 and 01/28/21

The approximate number of trees planted is: 1,160

Signed on August 26th in 2021, by Trevor Rice, TxCC Conservation & Disaster Field Coordinator, for TreeFolks.

Signature

Phone: 512.289.5817

Email: trice@americanyouthworks.org