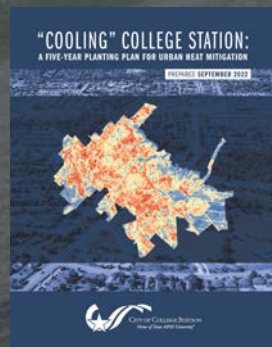


“Cooling” College Station

A Five-Year Planting Plan for Urban Heat Mitigation



Timeline

September 2021

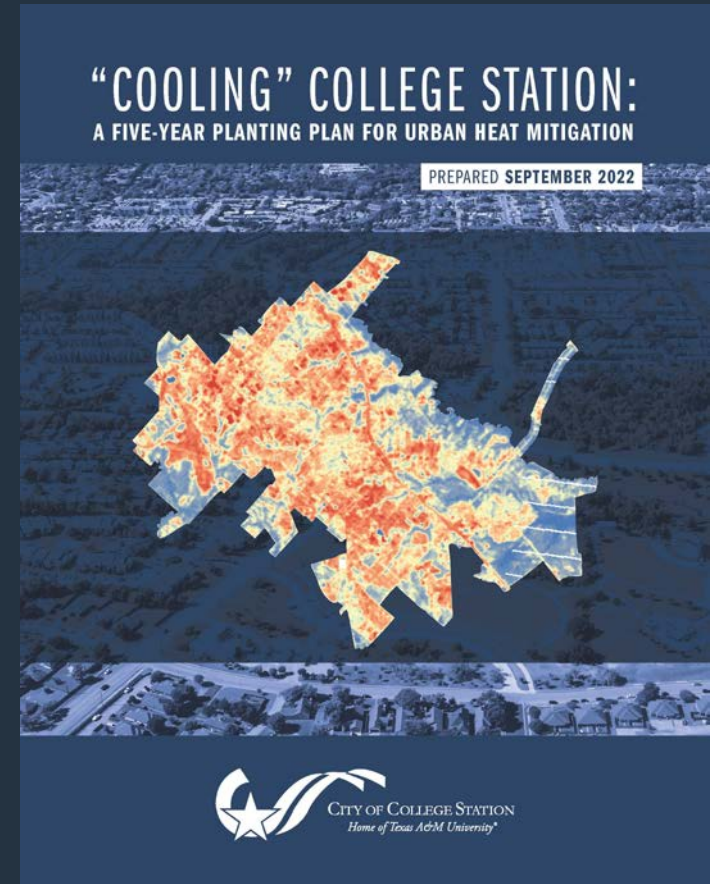
- Informational presentation on heat islands
- City Council requested five-year planting plan

April 2022

- Presentation on five-year planting plan and residential planting program
- 376 trees over five years, along with 2,500 trees for residential planting program
- City Council requested to increase the number of plantings

September 2022

- Presentation on additional areas and reduced spacing



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Home of Texas A&M University

Program Areas and Estimated Costs

Priority #	Park Name	Plantable Area (Sq Ft or Linear Ft)	Estimated # of Trees	FY22 Estimated Cost per Park
1	Edelweiss	92,108 SF & 739 LF	198	\$132,931
2	Sandstone	141,079 SF & 80 LF	288	\$193,355
3	Edelweiss Gartens	73,340 SF & 314 LF	155	\$104,062
4	Anderson	31,355 SF & 1,887 LF	75	\$50,353
5	Pebble Creek	56,736 SF & 229 LF	115	\$77,208
6	Tarrow & Wayne Smith Athletic Complex	27,161 SF & 345 LF	56	\$37,597
7	Wolf Pen Creek	6,563 SF & 376 LF	18	\$12,085
8	Veterans Park & Athletic Complex*	183,422 & 2,072 LF	384	\$257,806
TOTAL			1,289	\$865,397

Name	Plantable Area (Sq Ft or Linear Ft)	Estimated # of Trees	FY22 Estimated Cost
ROW / Other City Property	1,255,470 SF & 6,152 LF	2,806	\$1,883,866

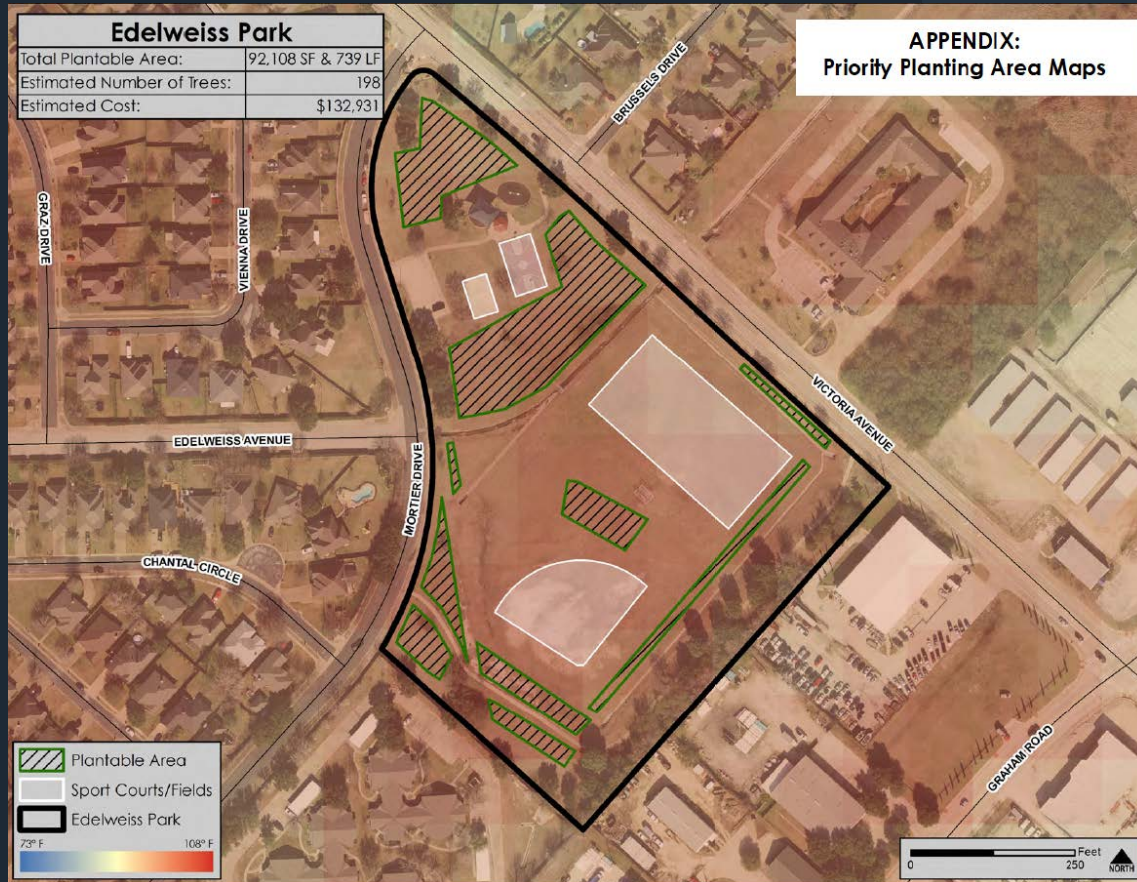
Park Name	Plantable Area (Sq Ft or Linear Ft)	Estimated # of Trees	FY22 Estimated Cost per Park
Art & Myra Bright	36,170 SF	74	\$49,681
Bee Creek	26,064 SF & 183 LF	61	\$40,954
Brison	5,316 SF & 42 LF	13	\$8,728
Castle Rock	5,192 SF & 164 LF	17	\$11,413
Crescent Pointe	4,180 SF	9	\$6,042
Eastgate	14,199 SF	29	\$19,470
Gabbard	13,971 SF	28	\$18,798
Jack & Dorothy Miller	73,005 SF	149	\$100,034
John Crompton	13,122 SF	27	\$18,127
Oaks	2,935 SF	6	\$4,028
Reatta Meadows	10,138 SF	21	\$14,099
Richard Carter	15,387 SF	31	\$20,812
Stephen C Beachy Central	10,447 SF & 455 LF	39	\$26,183
Aggie Field of Honor & Memorial Cemetery	79,452 SF	162	\$108,762
College Station Cemetery	657 LF	26	\$17,456
TOTAL		692	\$464,587

Program Total: 4,787 trees, \$3,213,850

Per Year: 958 trees, \$643,172



Sample Planting Areas



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Residential Planting Program

Assumptions

- \$75 per tree, plus inflation
- 500 trees per year (2,500 trees over five years)
- \$37,500 per year (2022 dollars)

FY2023	\$40,125
FY2024	\$42,131
FY2025	\$43,395
FY2026	\$44,697
FY2027	\$46,038
Estimated total five-year cost	\$216,386



<https://www.treefolks.org/get-a-tree/neighborwoods/>

Partnerships / Assistance

Texas A&M Forest Service

- \$15,000/year for two years
- 250 seedlings

HUD Climate Communities Technical Assistance Program

Proposal to Reduce Urban Heat Island in College Station

We Can Help!

Texas A&M Forest Service is offering the City of College Station \$15,000/year for two years to purchase and plant trees in areas to help combat urban heat island. This is roughly equivalent to 150 15-gallon trees (actual number is dependent on size and availability). Additionally, Texas A&M Forest Service offers 250 Texas Tested, Texas Tough seedlings for annual residential tree distribution events. These seedlings, a product of the Texas A&M Forest Service Urban Tree Improvement Program, are selected and improved to withstand harsh urban environments. This event could be independent or held in conjunction with a city recycling day or arbor day event. As much of the urban tree canopy in College Station is on private property, providing residents with trees to plant in yards can aid in the reduction of the urban heat island.

Where to Plant

Trees strategically planted in locations that generate or collect the most heat, such as roads and unshaded sidewalks, can mitigate the effects of urban heat islands. Consequently, areas within the city that will benefit the most from tree planting include:

- Right of Ways & Medians
- Greenspace Pathways
- Underplanted Parks
- Residential Yards

For Right of Ways and Medians, 15-gallon trees are recommended, while 3–5-gallon trees can be planted in Greenways and Parks. Residential trees are first-year seedlings in D-60 to D-40 containers, or similar.

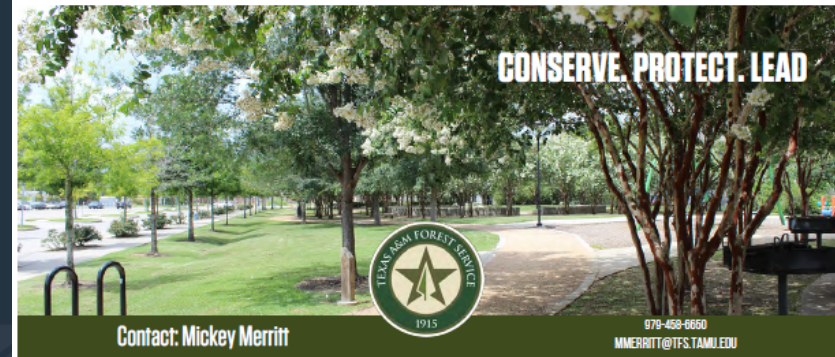
Great Species for Brazos County

- Pecan
- American Elm
- Live Oak
- Bur Oak
- Sycamore
- Shumard Oak
- Cedar Elm
- Texas Redbud
- Bald Cypress
- Chinkapin Oak
- Mexican White Oak

Did You Know?

Mature trees can reduce air temperatures by up to 10° F and provide \$243 million in energy savings yearly to Texas residents.

(Texas Statewide Assessment of Urban Forest Ecosystem Services, Texas A&M Forest Service 2022)



Direction

Five-Year Planting Plan

- *4,787 trees*

FY2023	\$688,194
FY2024	\$722,604
FY2025	\$744,282
FY2026	\$766,610
FY2027	\$789,609
Estimated total five-year cost	\$3,711,299

Residential Planting Program

- *2,500 trees*

FY2023	\$40,125
FY2024	\$42,131
FY2025	\$43,395
FY2026	\$44,697
FY2027	\$46,038
Estimated total five-year cost	\$216,386