

UT-City CoLab

Briefing for the Climate, Water,
Environment, & Parks Committee

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Agenda

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Local Climate Impacts & Our New Reality

02

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Closing



Climate Impacts



Heat

2011
2023



Flood

2013
2015
2016
2025



Cold/Ice

2021
2023

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Wildfire

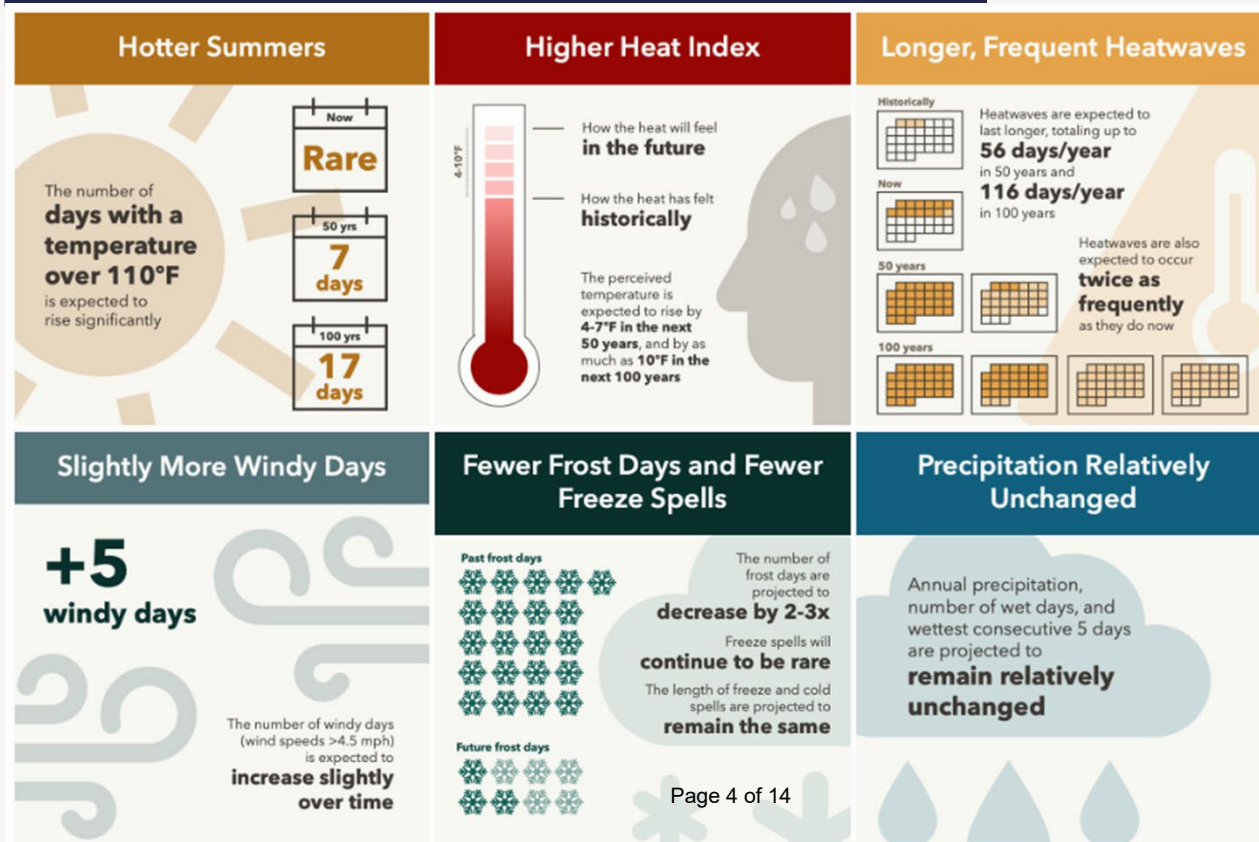
2011



Drought

2010	2022
2011	2023
2012	2024
2013	2025
2014	

Climate Projections



Developed by Dr. Niyogi using downscaled global climate models.

Historically used for agriculture, there is an emerging nationwide need for local climate projection data.

City decision makers use the past to predict the future, and with climate change, that is a risky proposition.



The infrastructure that will serve us in 50 years
is being designed now

What are the needs?

City of Austin / Departments

- Myriad of research questions about an uncertain future
- Consultants are expensive and not the most cutting-edge
- Relationships with researchers lead to long-term innovation and a pipeline of talent

UT Researchers

- Desire to focus on applied research projects connected to local communities (also Federal grant requirement)
- Can leverage partnerships to unlock much larger funding opportunities
- Graduate students interested and ready to go

UT-City CoLab

The UT-City CoLab connects **faculty, municipal staff, and community groups** to create **Austin-specific climate information, data products, tools, and assessments** to drive innovation in research, policy and governance, funding, and education.



CoLab Structure

Annual Funding: \$300k in ongoing ACAR
Budget under Contract with UT through the
Interlocal Agreement

Leadership Team: 3 COA staff + 4 UT Faculty

One Full-Time Project Manager: Overseen by
Leadership Team

**Funding for individual projects that go
through a selection process**

- Climate change relevance
- Direct benefit to the City
- Have a COA and UT sponsor



Higher Daily Temperatures

Temperatures are projected to steadily rise across both high emission and intermediate emission scenarios.

Daily Temperature Range (min-max)	2020	2030	2050
High Emission	~50°F - 70°F	~55°F - 75°F	~60°F - 80°F
Intermediate Emission	~45°F - 65°F	~50°F - 70°F	~55°F - 75°F

More Heatwaves

Heatwaves are projected to increase significantly by 2050, with a 2x increase in frequency.

Increased Heat Index

How the heat is expected to feel in the future.

How the heat feels historically.

20°F increase

Heatwave = 40°F or greater for 3 or more consecutive days with maximum heat conditions (daily minimum < 78.1°F, daily maximum > 122.3°F)

Precipitated temperature is projected to increase by 2-3°F in the future.

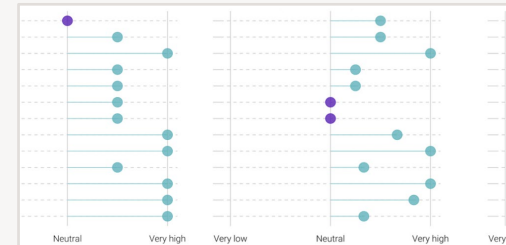
2025 Projects



Mapping Forest Health



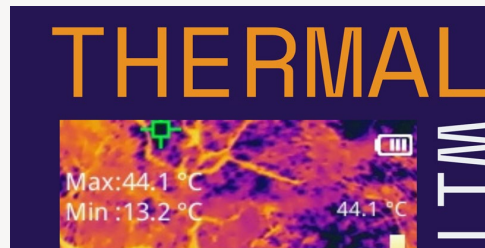
Demolition + Carbon



Scenario Planning



Wildfire Mitigation



Community + Heat

Lessons Learned

1. Builds trust and personal relationships across the organizations
2. Elevates and promotes innovation, often with cross-departmental benefits
3. Not consultants, but collaborators
4. Seed funding (~\$15K each) leverages additional funding - sometimes COA, sometimes grants
5. Transferable to other cities, countries
6. Academia becomes notably competitive in winning federal scientific research grants



2026 Projects

	Research Title	UT Dept	COA Dept
1	Measuring indoor heat	UT School of Architecture, UTHealth	Austin Energy, Austin Public Health, Austin Housing
2	City Inundation Risk Mapper	Jackson School of Geosciences, Cockrell School of Engineering	Austin Watershed Protection, Austin Emergency Management, Austin Fire
3	Cool Pavements - Heat	Jackson School of Geosciences, Cockrell School of Engineering	Austin Transportation Public Works
4	Cool Pavement - Water Quality	Jackson School of Geosciences	Austin Watershed Protection, Austin Transportation Public Works
5	Flood Wildfire Risk + Preservation Plan	Lyndon B. Johnson School of Public Affairs	Austin Planning
6	Tree Research (Cont.)	Department of Integrative Biology	Austin Climate Action & Resilience
7	Airport Structure Reuse	Cockrell School of Engineering	Austin Aviation
8	Building Energy	Cockrell School of Engineering	Austin Energy
9	Data to decision: AFD + EM	Jackson School of Geosciences	Austin Emergency Management, Austin Fire



City of Austin
Climate, Water, Environment, and Parks Committee Meeting Backup: January 28, 2026



Closing

This collaboration turns academic research into real-world climate action, benefiting faculty, students, and the City.

We need partnerships like this now more than ever, serving as a global model for cooperation to solve the world's biggest challenges.



Thank you!



utcitycolab.org