



UT-City CoLab

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

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Austin Climate Action & Resilience

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Agenda

01

Local Climate Impacts & Our New Reality

02

The UT-City CoLab

03

Project Highlights

04

Closing



Climate Impacts



Heat

2011
2023



Flood

2013
2015
2016
2025



Cold/Ice

2021
2023



Wildfire

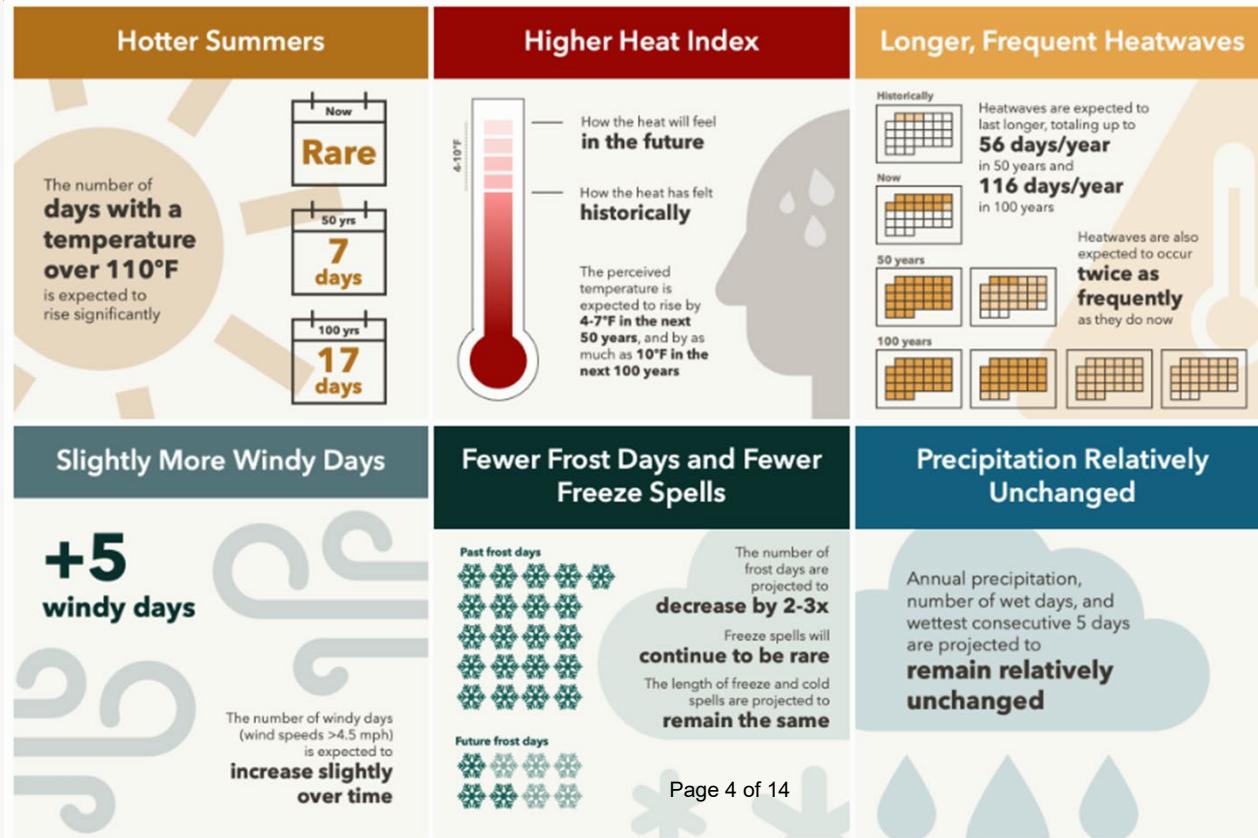
2011



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

2020-2021: Heat Project



2022: CoLab Start



2023: COA funding + NOAA



2024: Initial projects + NIST

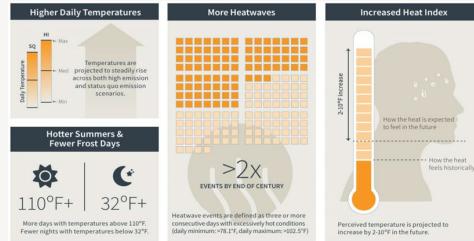


2025: 5 Projects + NASA



2026: 9 projects

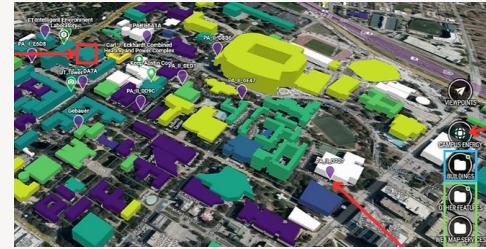
Initial Projects (2020-2024)



Climate Projections



Community network analysis | Climate Atlas



Austin Digital Twins



Heat impact on community

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Cool Pavement Pilot



Passive House Project

2025 Projects

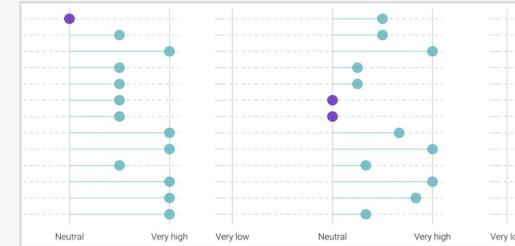


Mapping Forest Health

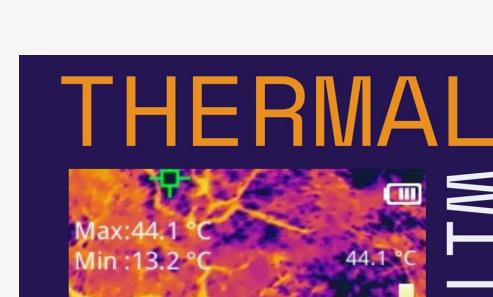
Construction & Demolition Waste



600 million tons of waste per year
Two times the amount of municipal waste



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	Page 12 of 14 Jackson School of Geosciences	Austin Emergency Management, Austin Fire



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