

# DECISION-MAKING TOOLS FOR EXTREME HEAT AND STORMWATER FLOOD MITIGATION

November 19, 2025



North Central Texas  
Council of Governments





# AGENDA

- WELCOME & HOUSEKEEPING
- SMART SURFACES COALITION DEMONSTRATION
- Q & A SESSION
- RESOURCES & CONCLUSION



## WELCOME & HOUSEKEEPING

- Please keep your microphone on mute until the end of the presentations.
- We will have an open Q&A at the end of all presentations. Please type your question in the chat box or raise your hand to speak.
- The workshop slides and recording will be posted on the Conserve North Texas website under News/Events -> Event Archive at the link below. Follow-up emails to come.

<https://www.conservenorthtexas.org/event-archive>



# DEAN BERKOWITZ

## DATA PROJECT MANAGER

**Dean Berkowitz** is Data Project Manager at the [Smart Surfaces Coalition](#), where he leads the development of the Benefit-Cost Analysis Tool (BCAT) and Decision Support Tool (DST) for domestic and international projects. These platforms integrate high-resolution data on land cover, heat, stormwater, energy, and health to help cities conduct risk assessments, map priority areas, analyze policy scenarios, and evaluate the lifecycle costs and benefits of Smart Surfaces implementation. Before joining SSC, he served as Project Lead with NASA's DEVELOP Program in Idaho, applying satellite data to wildfire smoke forecasting, and as a Remote Sensing Analyst with NASA DEVELOP in North Carolina, where he built a composite moisture index to support drought and flood risk management. He holds a B.A. in Geography from the University of California, Berkeley, where he researched vascular plant biodiversity hotspots in the Mojave Desert to inform conservation priorities in the context of renewable energy development.





## DAN METZGER

### SMART SURFACES FELLOW

**Dan Metzger** is a Smart Surfaces Fellow at the [Sabin Center for Climate Change Law](#). He is an environmental lawyer with litigation and policy advocacy experience on a range of climate mitigation and adaptation topics. He has previously worked at the Sabin Center researching international climate change litigation, climate attribution science, and quantifying climate risk in the reinsurance industry. Dan has litigated cases seeking to encourage greater adoption of renewable energy under state and federal law. He is a graduate of Vanderbilt Law School and is based in New York City.



# North Central Texas Council of Governments

## Smart Surfaces Web Tool Demo

November 19, 2025

Smart Surface Coalition  
Dean Berkowitz, Data Manager

Columbia University Sabin Center for Climate  
Change Law  
Dan Metzger, Smart Surfaces Fellow



The Smart Surfaces Coalition is made up of more than 40 leading national and international organizations with a shared commitment to creating **cooler**, **healthier**, and **more resilient** cities by cost-effectively reducing the impacts of extreme urban heat and flooding.

# What are Smart Surfaces?

Infrastructure strategies that cost-effectively manage urban heat and stormwater while maximizing health, climate, and equity co-benefits

**Reflective/Cool Roofs**



**Green Roofs**



**Porous & Permeable Pavements**



**Solar Photovoltaics**



**Reflective/Cool Pavements**



**Trees**



**Green Stormwater Infrastructure**



**Zero & Negative-Carbon Concrete**



# Cities for Smart Surfaces

SSC is partnering with 10 metro areas across the US to facilitate the adoption of Smart Surfaces at the metropolitan level and working with communities in those regions to support community-led, local Smart Surface implementation projects.



# Cities for Smart Surfaces Program Partners

## Project Coordinator



## Data Visualization and Cost-Benefit Analysis



## City and Community Support



## Federal Funding



COLUMBIA LAW SCHOOL

SABIN CENTER FOR CLIMATE CHANGE LAW



## Policy + Legal



COLUMBIA LAW SCHOOL

SABIN CENTER FOR CLIMATE CHANGE LAW



## Health Research and Communications



# SSC Web Tools

- Decision Support Tool



- Benefit-Cost Analysis Tool



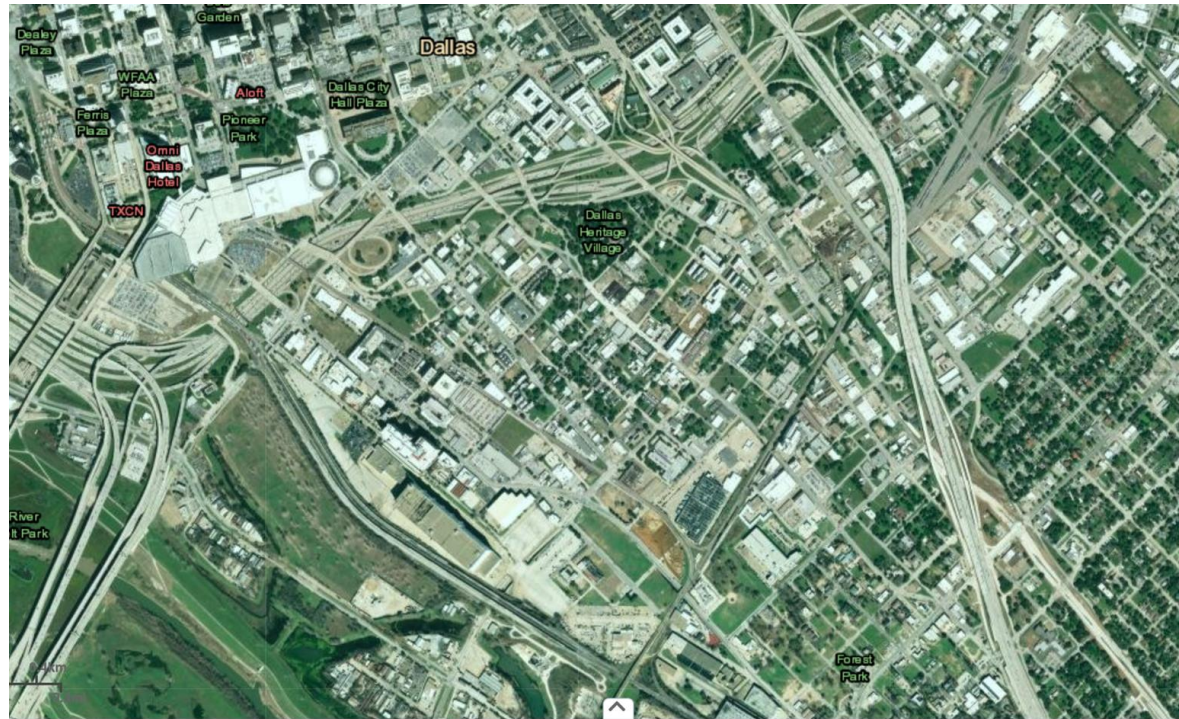
- Smart Surfaces Policy Tracker



Snapshots from Dallas' Custom Benefit-Cost Analysis Tool

Together, these tools can help cities and metro areas develop and implement climate, sustainability, and resilience policies. They also can support in strategic planning, grant applications and infrastructure investments.

# Land Use / Land Cover Classification



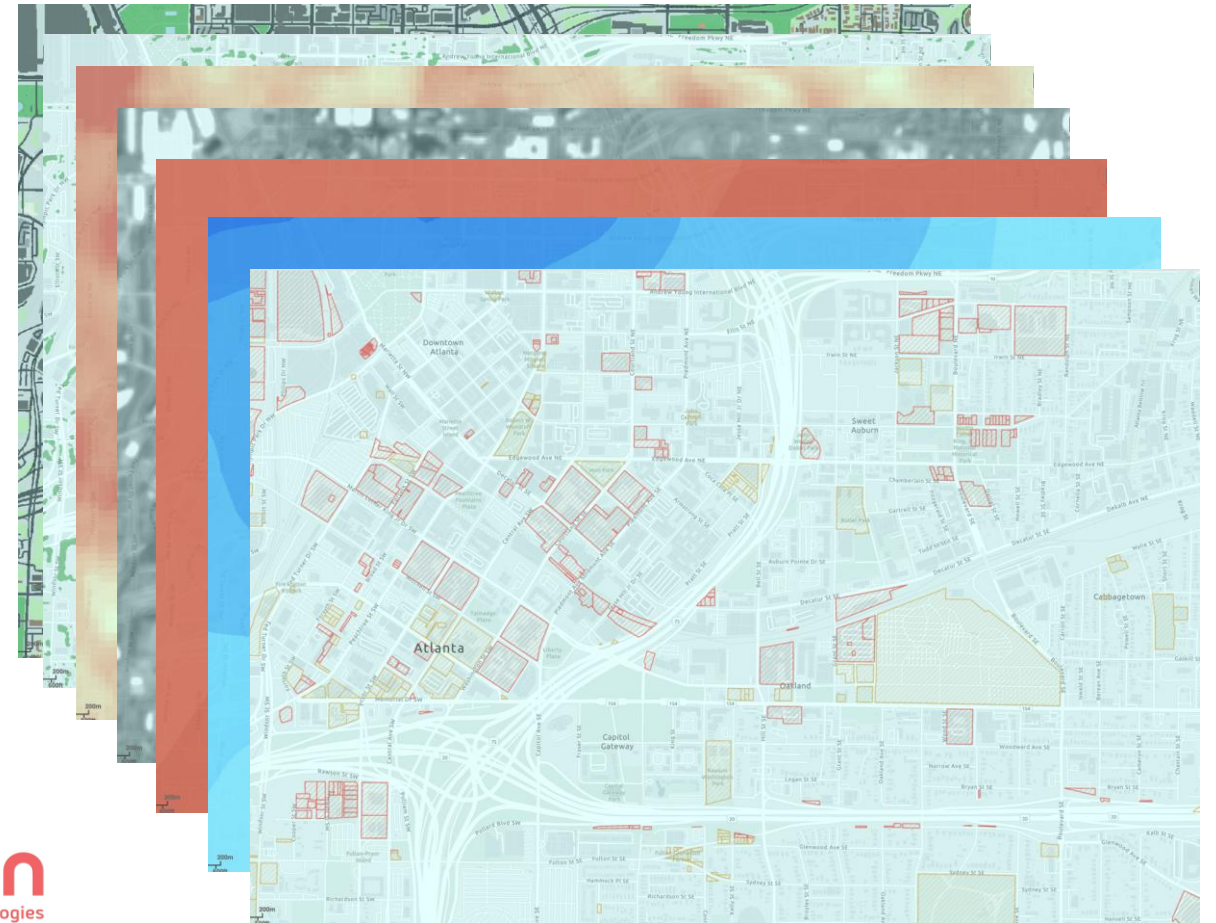
Source: OpenUrban LULC dataset, developed by WRI. Validated at 93% accuracy across 10 U.S. metropolitan areas (publication forthcoming).

# From Data to Decisions

**Mapping** (high-res surface characteristics)

**Modeling** (micrometeorological scenarios)

**Economics** (benefit-cost analysis)



# SSC Web Tool Demo

## **Decision Support Tool**

[web.tplgis.org/smart-surfaces-coalition/](http://web.tplgis.org/smart-surfaces-coalition/)

## **Benefit-Cost Analysis Tool**

<https://bca.smartsurfacescoalition.org/>

## **Smart Surfaces Policy Tracker**

<https://smartsurfacespolicy.org/policies/>

# QUESTION & ANSWER SESSION



# NCTCOG PROGRAMS & RESOURCES



# NCTCOG PROGRAMS & RESOURCES



## Regional Integration of Sustainability Efforts (RISE) Coalition

Engage local governments, universities, and non-profits in peer-exchange opportunities to support sustainability and environmental initiatives.

[Committee Webpage](#)

[Program Webpage](#)



## Regional Public Works Program

Provide expertise and support to NCTCOG's Executive Board and staff on a wide range of regional public works issues.

[Committee Webpage](#)

[Program Webpage](#)



## Regional Stormwater Management Program

Implement a cooperative and comprehensive program to manage stormwater quality issues affecting the region.

[Committee Webpage](#)

[Program Webpage](#)

# NCTCOG PROGRAMS & RESOURCES



## Community Rating System (CRS) User Group

Collaborate to meet local floodplain mitigation goals and support one another in qualifying for CRS credit.

[Program Webpage](#)



## integrating Transportation & Stormwater Infrastructure (TSI)

Identify projects to reduce future flood risk and potential funding sources to implement those projects.

[Program Webpage](#)

# NCTCOG PROGRAMS & RESOURCES

Environment and  
Development Mailing Lists:

<https://www.nctcog.org/envir/mail>

Environment and  
Development Events:

<https://nctcog.org/envir/events>

Conserve North Texas

[www.conservenorthtexas.org](http://www.conservenorthtexas.org)

# NCTCOG STAFF

## CORINNE BUCKLEY

Envr. & Dev. Planner II

RISE Coalition, Center of  
Development Excellence

[cbuckley@nctcog.org](mailto:cbuckley@nctcog.org)

## MADISSON DUNN

Envr. & Dev. Planner II

Public Works Program

[mdunn@nctcog.org](mailto:mdunn@nctcog.org)

## CASEY CANNON

Envr. & Dev. Planner III

Regional Stormwater  
Management Program

[ccannon@nctcog.org](mailto:ccannon@nctcog.org)

## ERIN BLACKMAN

Sr. Planner

TSI

[eblackman@nctcog.org](mailto:eblackman@nctcog.org)

## EMILIE FRYKSATER

Evir. & Dev. Planner II

FEMA, Floodplain  
Management

[efryksater@nctcog.org](mailto:efryksater@nctcog.org)

## CRYSTA GUZMAN

Sr. Planner

Center of Development  
Excellence, Public Works  
Program

[eblackman@nctcog.org](mailto:eblackman@nctcog.org)

## SUSAN ALVAREZ

Director Evir. & Dev.

[salvarez@nctcog.org](mailto:salvarez@nctcog.org)

## WEBINAR RESOURCES

- A recording of today's webinar and resources will be posted on the Conserve North Texas website under News/Events → Event Archive at the link below.

<https://www.conservenorthtexas.org/event-archive>

- Follow-up email to come.

THANK YOU