

CECAP: Dallas' efforts towards SDG 13



City of Dallas
Regional Center for Excellence
North Texas Summit
November 8, 2022

13 CLIMATE
ACTION



BACKGROUND: LOCAL CLIMATE CHALLENGES



COMMUNITIES OF COLOR

Some communities of color living in risk-prone areas face cumulative exposure to multiple pollutants.

Adaptation plans that consider these communities and improve access to healthcare help address social inequities.

OLDER ADULTS

Older adults are vulnerable to extreme events that cause power outages or require evacuation.

Checking on elderly neighbors and proper emergency communication can save lives.

CHILDREN

Children have higher risk of heat stroke and illness than adults.

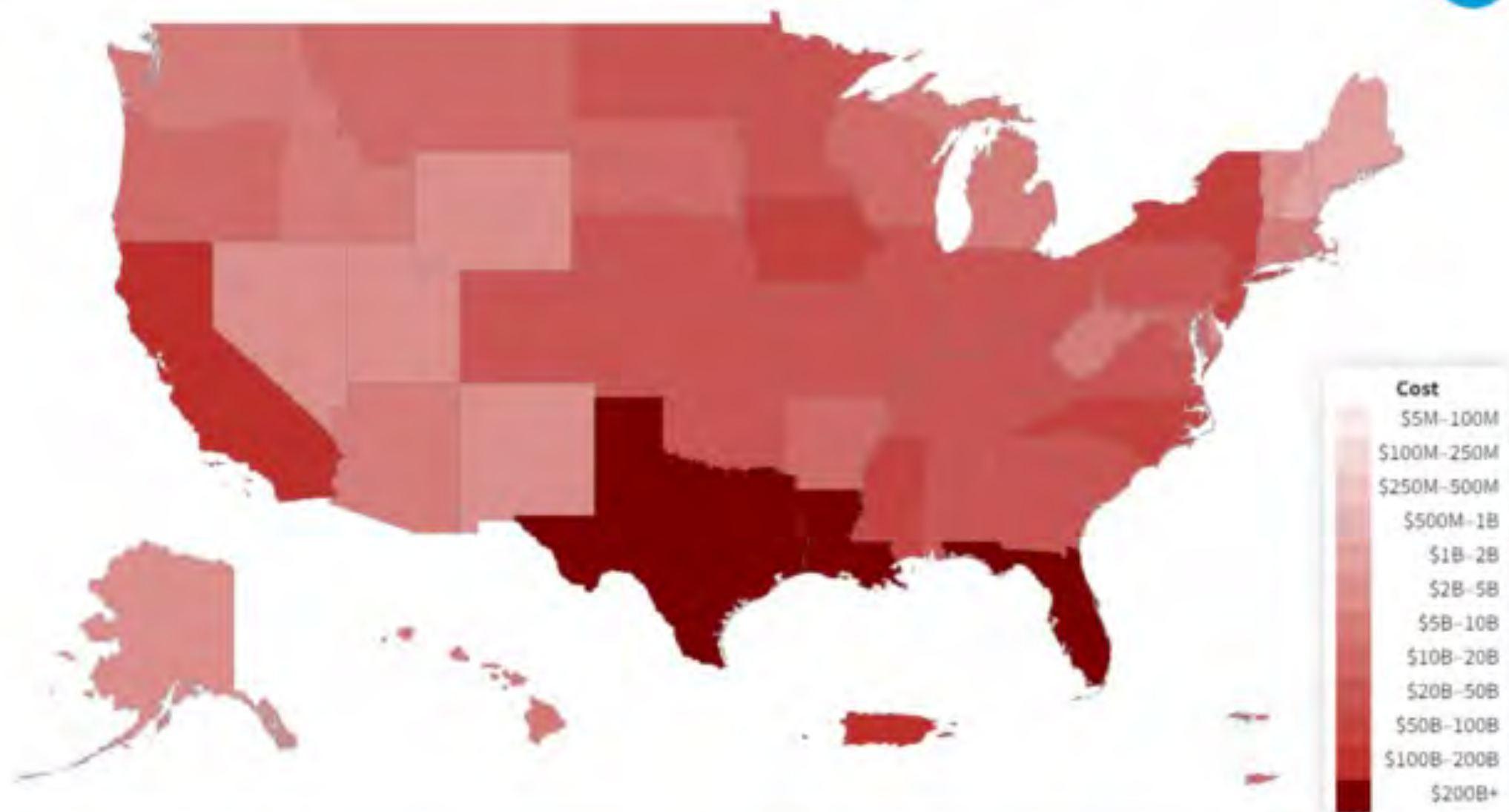
Adults can lessen risk by monitoring exertion and hydration.

LOW INCOME COMMUNITIES

Low income families are at risk of physical and mental illnesses during flooding and in crowded shelter conditions.

Comprehensive disaster management can improve resiliency for people with limited resources.

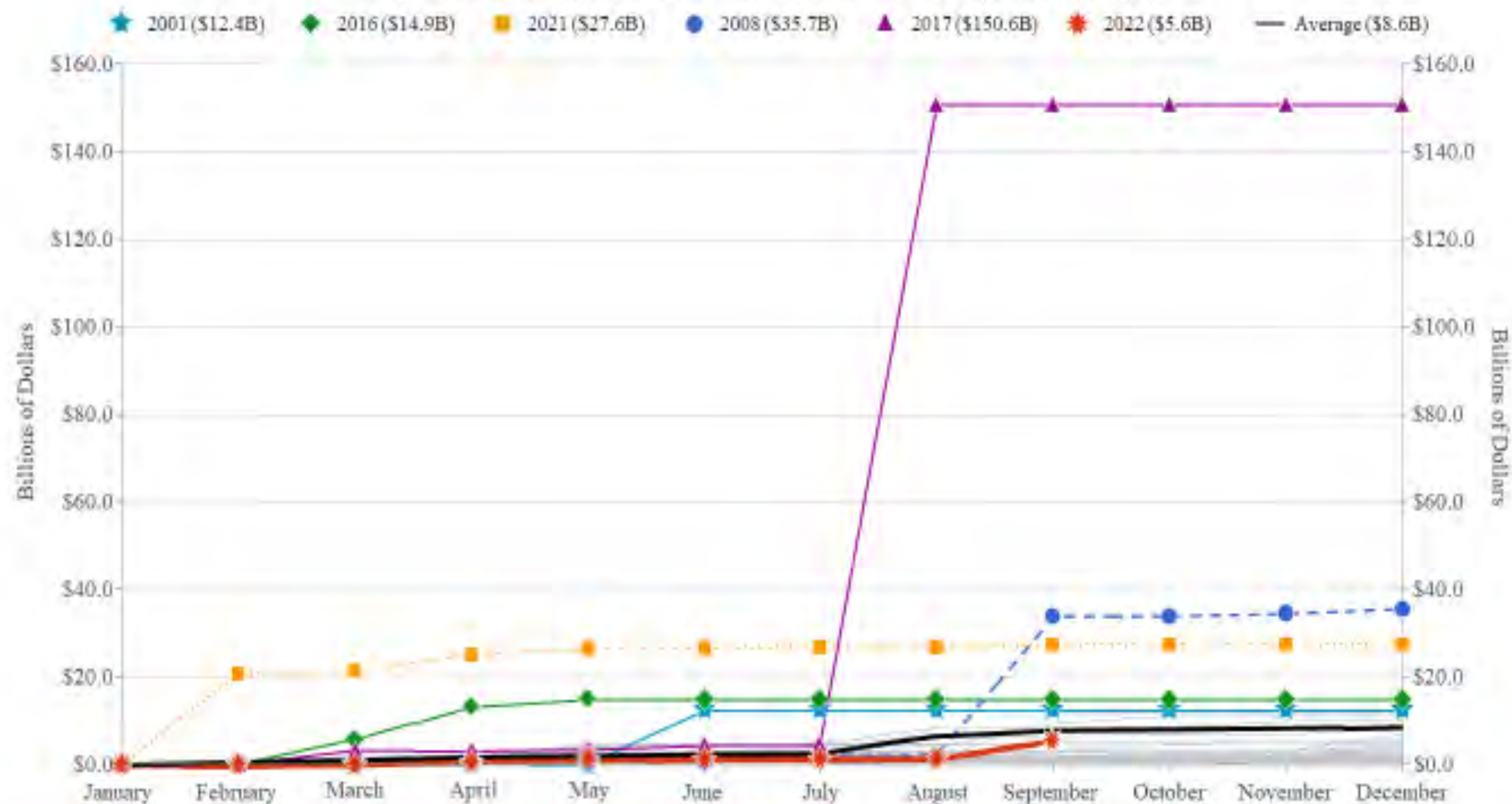
1980-2021* Billion-Dollar Weather and Climate Disaster Cost (CPI-Adjusted)



United States

Drought:	\$250B+	Flooding:	\$100B-200B	Freeze:	\$20B-50B	Severe Storm:	\$250B+
Tropical Cyclone:	\$1.1T+	Wildfire:	\$100B-200B	Winter Storm:	\$50B-100B	All Disasters:	\$2.1T+

1980-2022 Texas Billion-Dollar Disaster Event Cost (CPI-Adjusted)



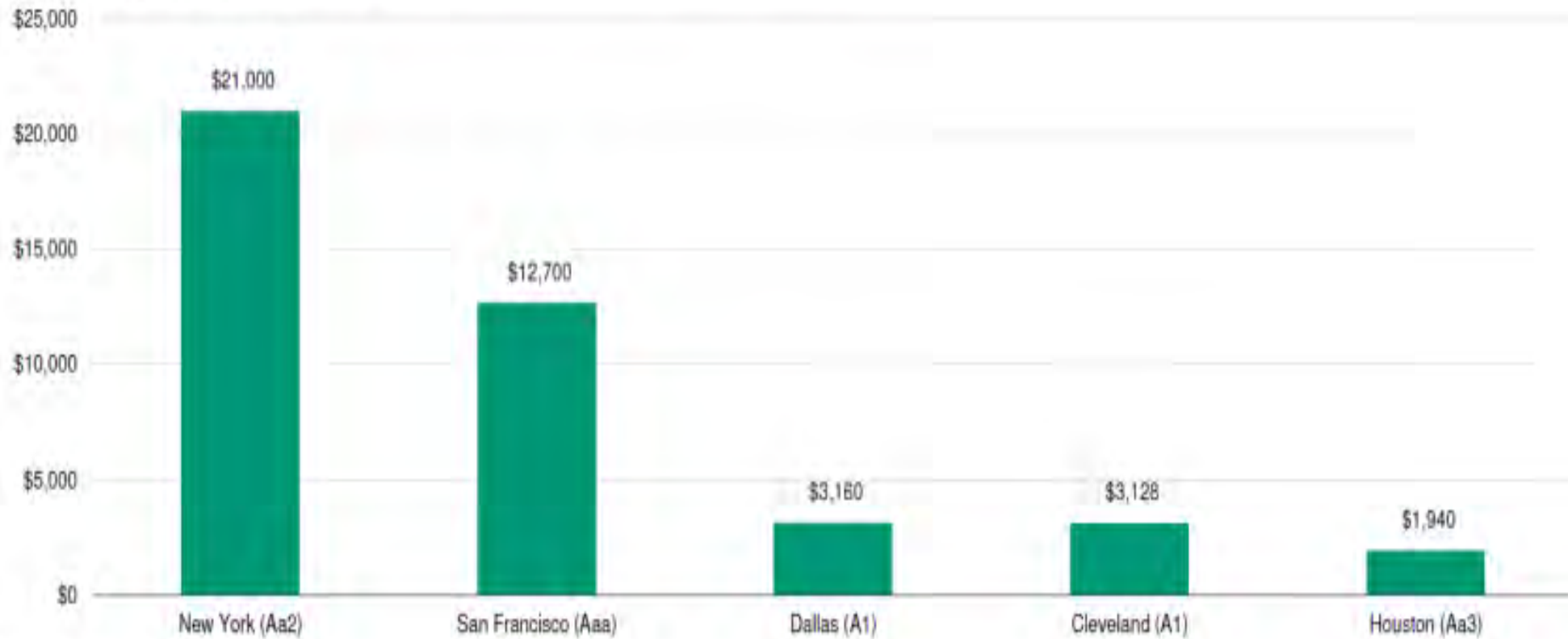
Updated: October 11, 2022

Event statistics are added according to the date on which they ended.

Moody Investors Series Inquiry

Exhibit 4

Cities with largest investment in climate mitigation projects planned or underway
Among survey respondents, \$ millions



Source: Moody's Investors Service

CECAP

Adopted unanimously by Dallas City Council on May 27, 2020

“With equity and inclusion as core values, the CECAP proposes solutions that will improve our natural environment, our education and economic outcomes, the affordability of our housing stock, and our transportation systems.”

-Mayor Eric Johnson



Robust Stakeholder Input

Stakeholder Advisory Group



City Environmental Task Force

- Transportation
- Dallas Water Utilities (Water, Wastewater, Drainage)
- Park & Recreation
- Economic Development
- Aviation
- Housing/Fair Housing
- Sustainable Development
- Planning + Urban Design
- Public Works
- Fleet
- Building Services
- And others!

GREENHOUSE GAS EMISSIONS



60%

Buildings + Energy



38%

Transportation



3%

Industrial processes



1%

Solid waste + wastewater treatment

APPROACH TO PLANNING



MITIGATION: Reduce emissions that cause climate change



Clean Energy
Sustainable Transportation
Energy Efficiency

EQUITY



Urban Forest Management
Water Conservation
Water Quality
Local Food Production
Food Access
Food Recovery

ADAPTATION:
Manage risks of climate change impacts



Disaster Management
Flood Protection
Infrastructure Upgrades



ENVIRONMENT: Improve Quality of Life + Public Health



CECAP Breakdown

97
CECAP
Actions

SECTORS / GOALS



16
BUILDINGS



11
ENERGY



19
TRANSPORTATION



09
SOLID WASTE



15
WATER RESOURCES



09
ECOSYSTEMS



14
FOOD + URBAN
AGRICULTURE



04
AIR QUALITY

PRIMARY BENEFIT



45
MITIGATION



21
ADAPTATION



20
ENVIRONMENTAL
QUALITY



11
ENVIRONMENTAL
JUSTICE

CO-BENEFITS



46
IMPROVE PUBLIC
HEALTH + WELL-BEING



40
PROVIDE COST
SAVINGS



31
IMPROVE
AIR QUALITY



28
PROVIDE EDUCATION,
SKILLS OR TRAINING



24 IMPROVE ACCESS
TO EMPLOYMENT /
JOB CREATION



15
REDUCE INEQUALITY
+ POVERTY



17
REDUCE GHG
EMISSIONS



08 INCREASE
NATURAL RESOURCE
CONSERVATION



11
IMPROVE WATER
QUALITY



13
REDUCE RESOURCE
CONSUMPTION

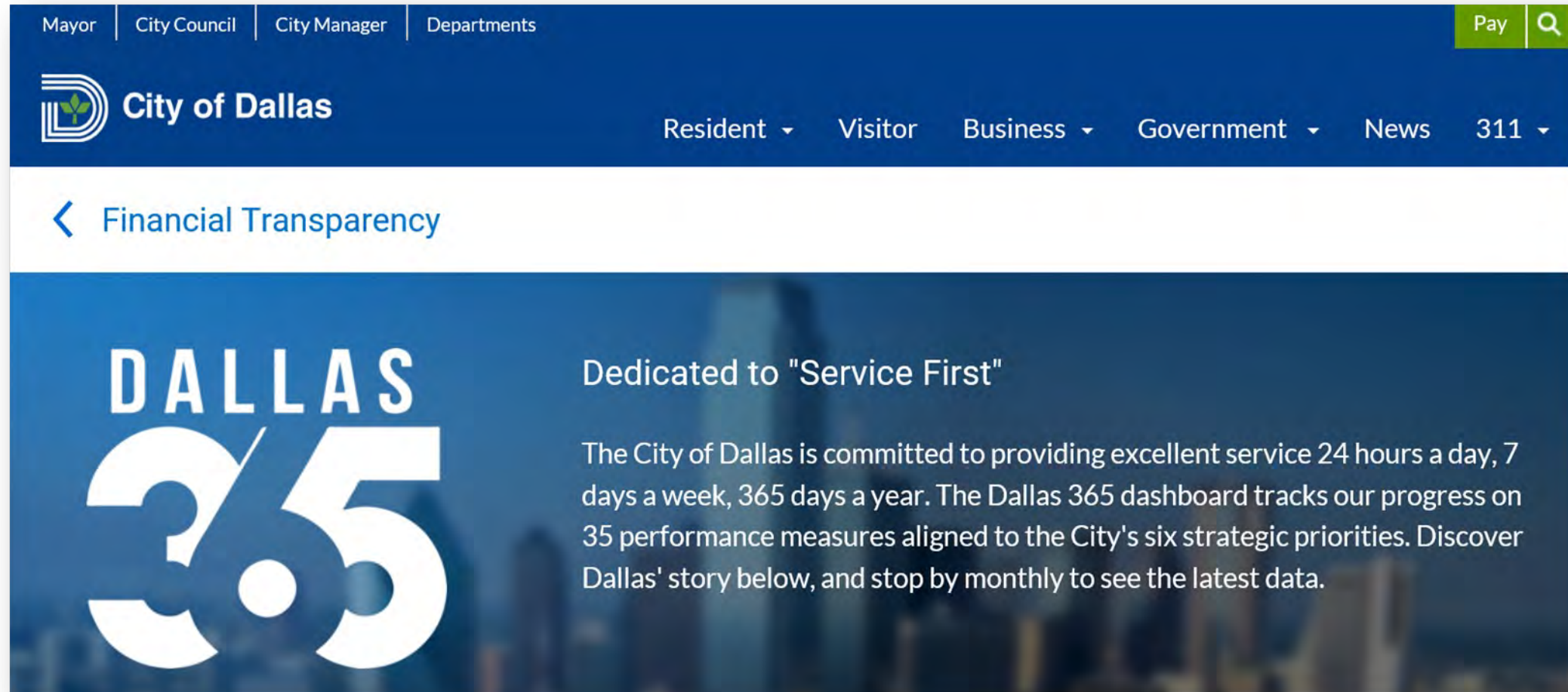


10 PROMOTES
ENVIRONMENTAL
STEWARDSHIP



10
REDUCE
VULNERABILITY

Background



Performance Measure: 92% CECAP FY Milestones Implemented

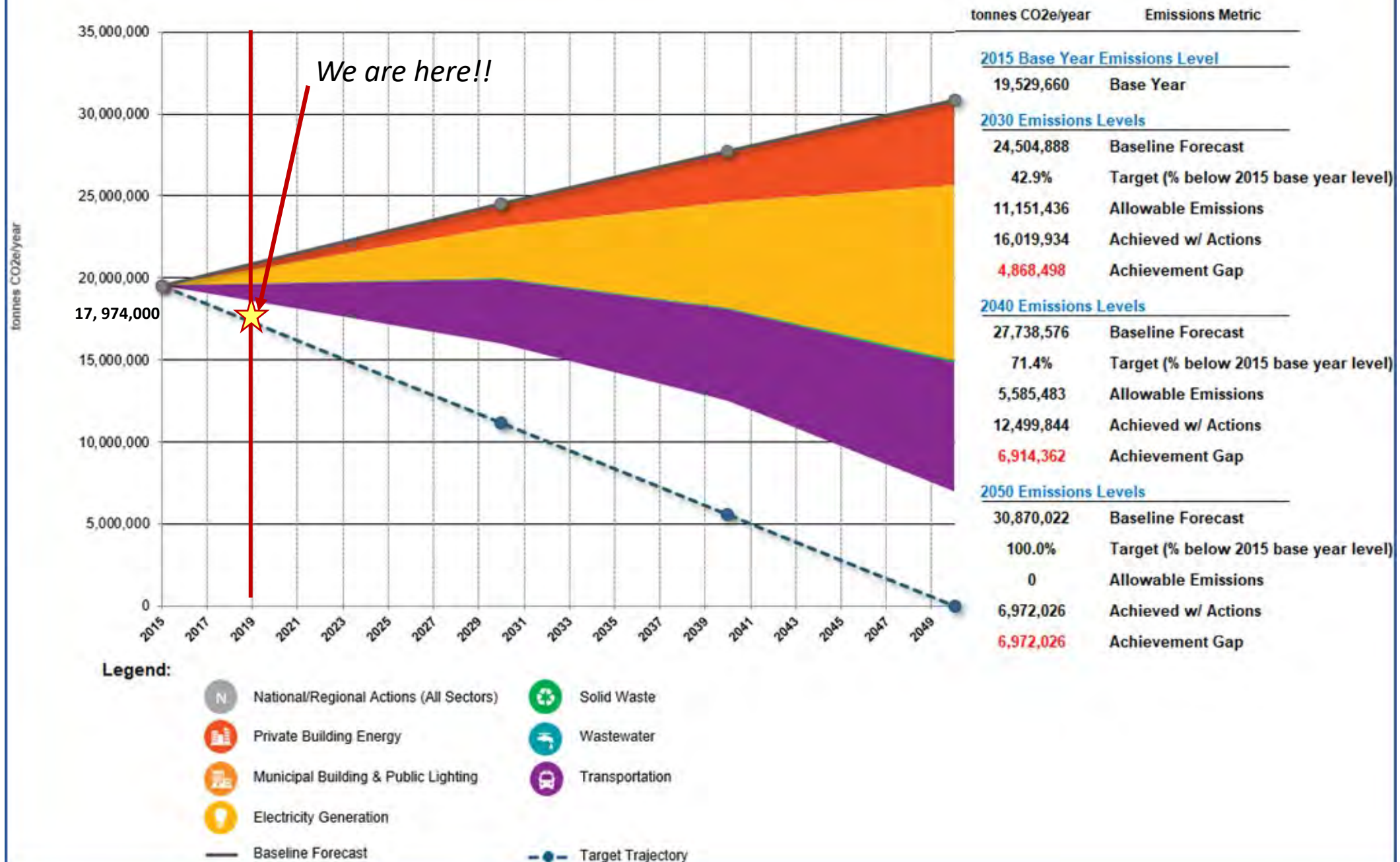
Approach to Implementation

- Update the GHG Inventory in 2021 using 2019 data
- Two-year updates will be included in CECAP
- Re-evaluate ERCOT, NCTCOG, and other data to update estimates
- Re-calibrate actions towards zero emission goals

The adaptive management cycle



Source: DIPVWE 2014 after Jones 2005, 2009



From the IPCC Sixth Report (April 4, 2022)

B.2 GHG emissions have increased since 2010 across all major sectors globally. An increasing share of emissions can be attributed to urban areas....in particular increases from rising global activity in industry, energy supply, transport, agriculture and buildings. (high confidence)

C.7. Buildings are projected to approach net zero GHG emissions in 2050 if policy combining ambitious sufficiency, efficiency, and renewable energy measures, are effectively implemented and barriers to decarbonization are removed.

....well-designed and effectively implemented mitigation interventions, have significant potential to contribute to achieving SDGs in all regions while adapting buildings to a future climate.



From the IPCC Sixth Report (April 4, 2022)

C.7.2 Integrated design approaches to the construction and retrofit of buildings have led to increasing examples of zero energy or zero carbon buildings...

- **Design mitigation interventions include:** building typology, form, and multi-functionality and repurposing unused existing buildings to avoid using GHG-intensive materials and additional land.
- **Construction mitigation interventions include:** low-emission construction materials, highly efficient building envelope and the integration of renewable energy solutions.
- **Operations interventions include:** highly efficient appliances/ equipment, the optimization of building use and low-emission energy

D.2.1 Sustainable urban planning and infrastructure design including green roofs and facades, networks of parks and open spaces, management of urban forests and wetlands, urban agriculture, and water-sensitive design can deliver both mitigation and adaptation benefits (*medium confidence*).



Draft CECAP Implementation Work Plan

- 30-year plan with 8 focus areas and 97 Actions
- 67 Actions will be activated in FY22-23
- 202 Total milestone activities
- 17 City Departments contributing

CECAP IMPLEMENTATION WORKPLAN FISCAL YEAR 2022-2023

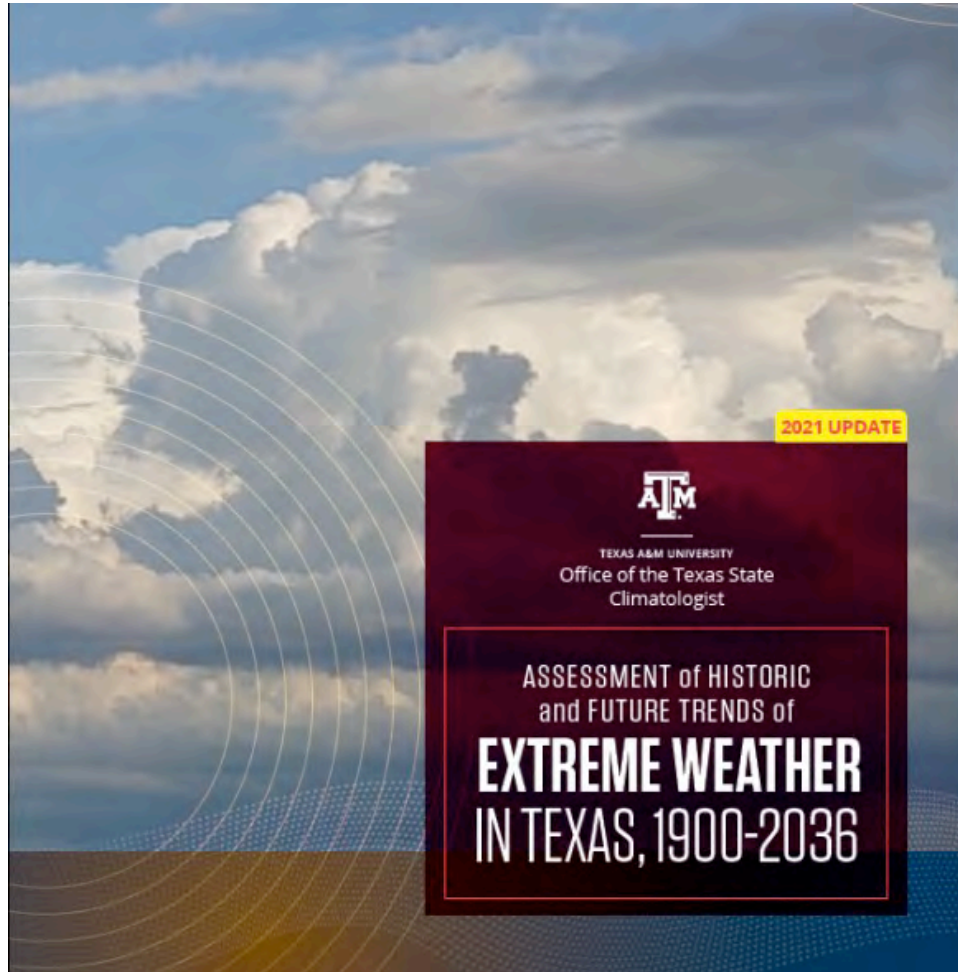


**BY OFFICE OF ENVIRONMENTAL QUALITY & SUSTAINABILITY
WITH ENVIRONMENTAL COMMISSION
AND LEADING ENVIRONMENTAL ACTIONS FORWARD**

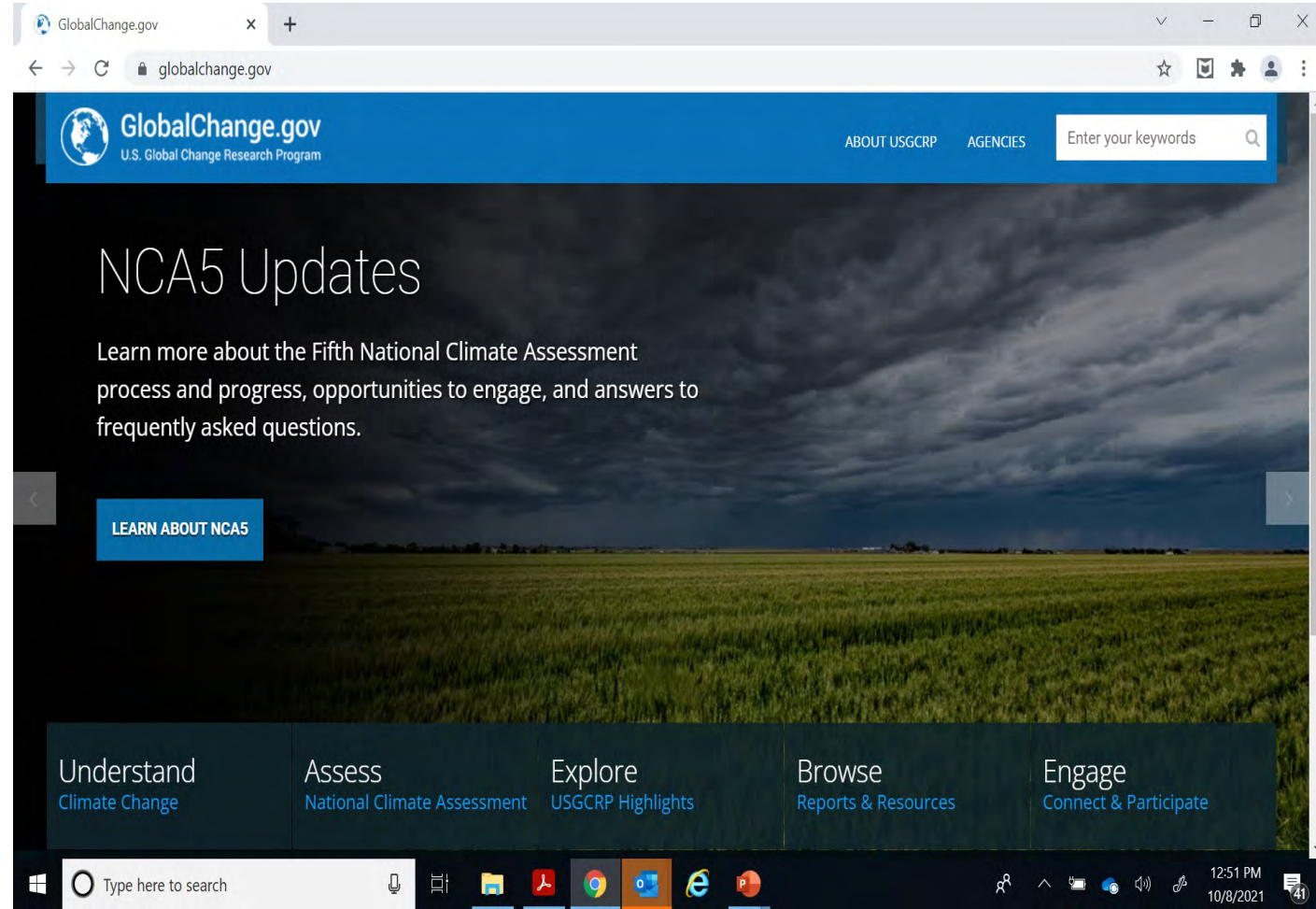
Opportunities Moving Forward – Continue...

- Updating Green Building Policy for Net Zero Carbon and related specifications
- Building energy equity such as community solar and weatherization program
- Diversifying travel mode and fleet electrification
- Quantifying water quality improvements under the Municipal Separate Storm Sewer System (MS4) Permit
- Exploring opportunities to divert organic materials, like plant and food waste
- Implementing Urban Forest Master Plan
- Expanding green space and protecting existing tree canopy
- Ensuring local healthy food access and increasing local production
- Implementing neighborhood air quality monitoring program
- Updating 2017 Heat Island Study to assess improvement

Other Cool New Stuff.....



<https://texas2036.org/texas-will-face-more-extreme-weather/>



<https://www.globalchange.gov/nca5>



Questions?

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