

Introduction to Environmental & Climate Planning Efforts

Environment & Sustainability
Committee

November 4, 2019

James McGuire, Director
Office of Environmental
Quality & Sustainability



City of Dallas

Purpose

- Overview of the Office of Environmental Quality & Sustainability (OEQS)
- Recent Council actions
- Introduction to Comprehensive Environmental & Climate Action Plan (CECAP)
- Next Steps



Overview of Office of Environmental Quality & Sustainability

Air Pollution Control

Air Quality Initiatives

EMS & Internal Compliance

Municipal Setting Designations

Spill Response

Sustainability, Outreach & Education

Stormwater Management

Water Conservation

Zero Waste

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Overview of OEQS



Urban Agriculture

- Develop urban agriculture plan to enhance and facilitate local food production
- Provide internal resource for urban agriculture and community garden issues
- Leverage potential public/private partnership opportunities



Big Tex Farms

Urban Agriculture



Urban Forest Management Planning

- Program in development – Texas Trees Foundation & 8 City Departments
- Branch Out Dallas
- Parks Replenishment
- Develop City's first Urban Forest Master Plan (UFMP)



Recent Environmental Council Actions

- **Air Quality Resolution**, adopted June 2016, embodied efforts towards emissions reduction
- **Multi-Family Recycling Ordinance**, adopted June 2018 requires multi-family developments with more than 8 units to provide recycling for residents
- **Landscape & Urban Forest Conservation Ordinance** (“Tree Ordinance”), adopted June 2018, amended code to enhance protections for Dallas trees
- **Park Land Dedication Ordinance**, adopted June 2018, amended code to require park land dedication/funding
- **Resilient Dallas Plan**, adopted August 2018
- **Office of Environmental Quality & Sustainability**, formed October 2018 along with funding and initial efforts toward comprehensive environmental plan began as part of FY2019 budget adoption

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Recent Environmental Council Actions

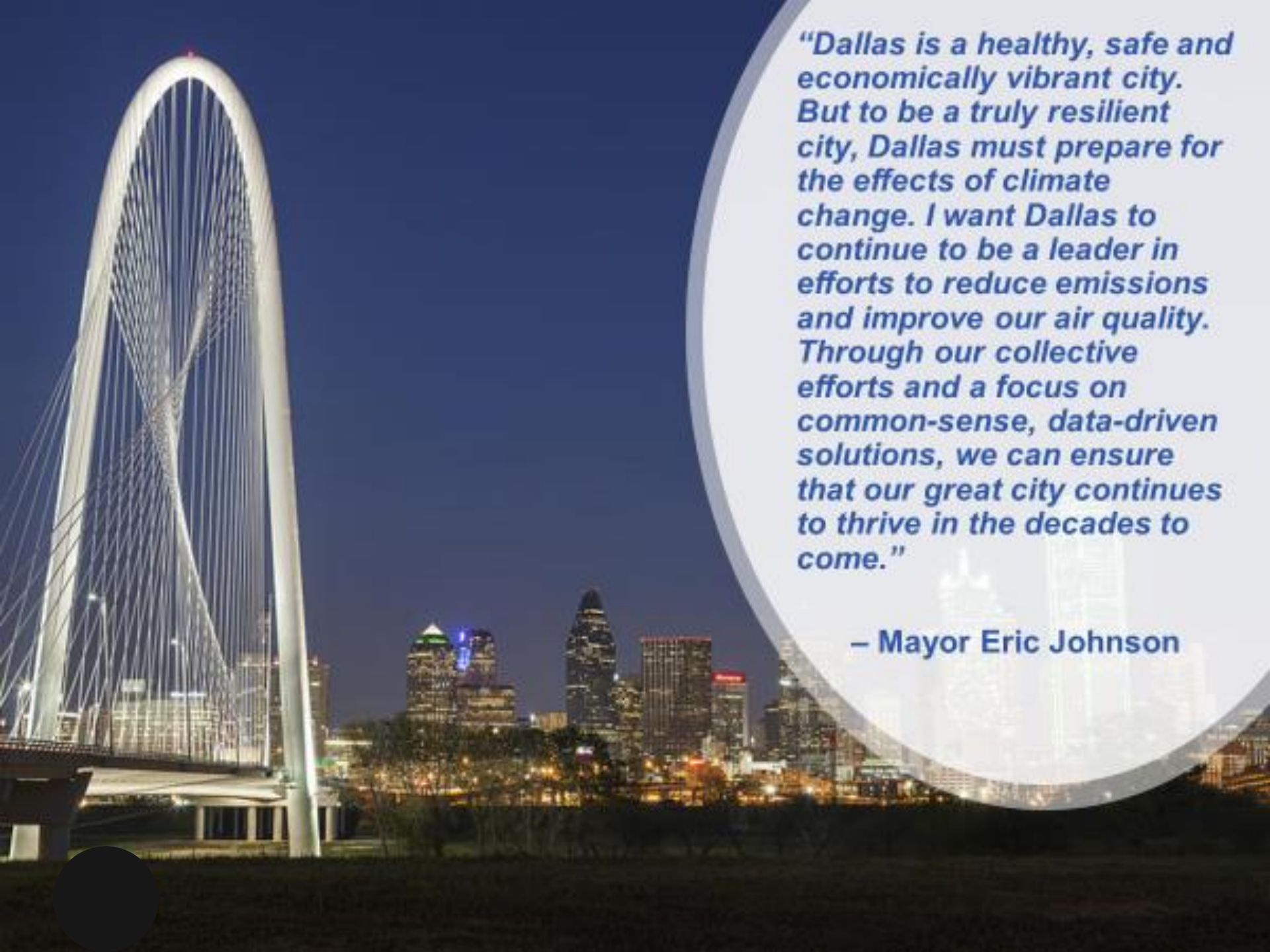
- **Climate Change Resolution**, adopted January 2019, directs staff to develop equitable and effective environmental and climate action plan, supports federal legislation, and directs City Manager to seek membership in C40
- **Comprehensive Environmental & Climate Planning Contract Award**, adopted January 2019, awards contract for climate planning to AECOM
- **Green Energy Policy**, adopted April 2019, requires 100% renewable energy use for municipal operations, directs City manager to set up energy management program, and to investigate feasibility of on- and off-site solar/renewable energy projects
- **Water Conservation Plan**, adopted April 2019, outlines City strategy to conserve and reduce water demand

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Comprehensive Environmental & Climate Action Plan (CECAP)

- Resilient Dallas Plan directed OEQS to measure emissions and identify emission reduction and climate mitigation strategies
- City Council called for OEQS to create equitable and effective CECAP in climate change resolution
- Mayor Johnson established this committee to: (1) ensure Dallas is a global leader in addressing climate change; and (2) create and oversee creation and implementation of CECAP

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“Dallas is a healthy, safe and economically vibrant city. But to be a truly resilient city, Dallas must prepare for the effects of climate change. I want Dallas to continue to be a leader in efforts to reduce emissions and improve our air quality. Through our collective efforts and a focus on common-sense, data-driven solutions, we can ensure that our great city continues to thrive in the decades to come.”

– Mayor Eric Johnson

Cities Leading

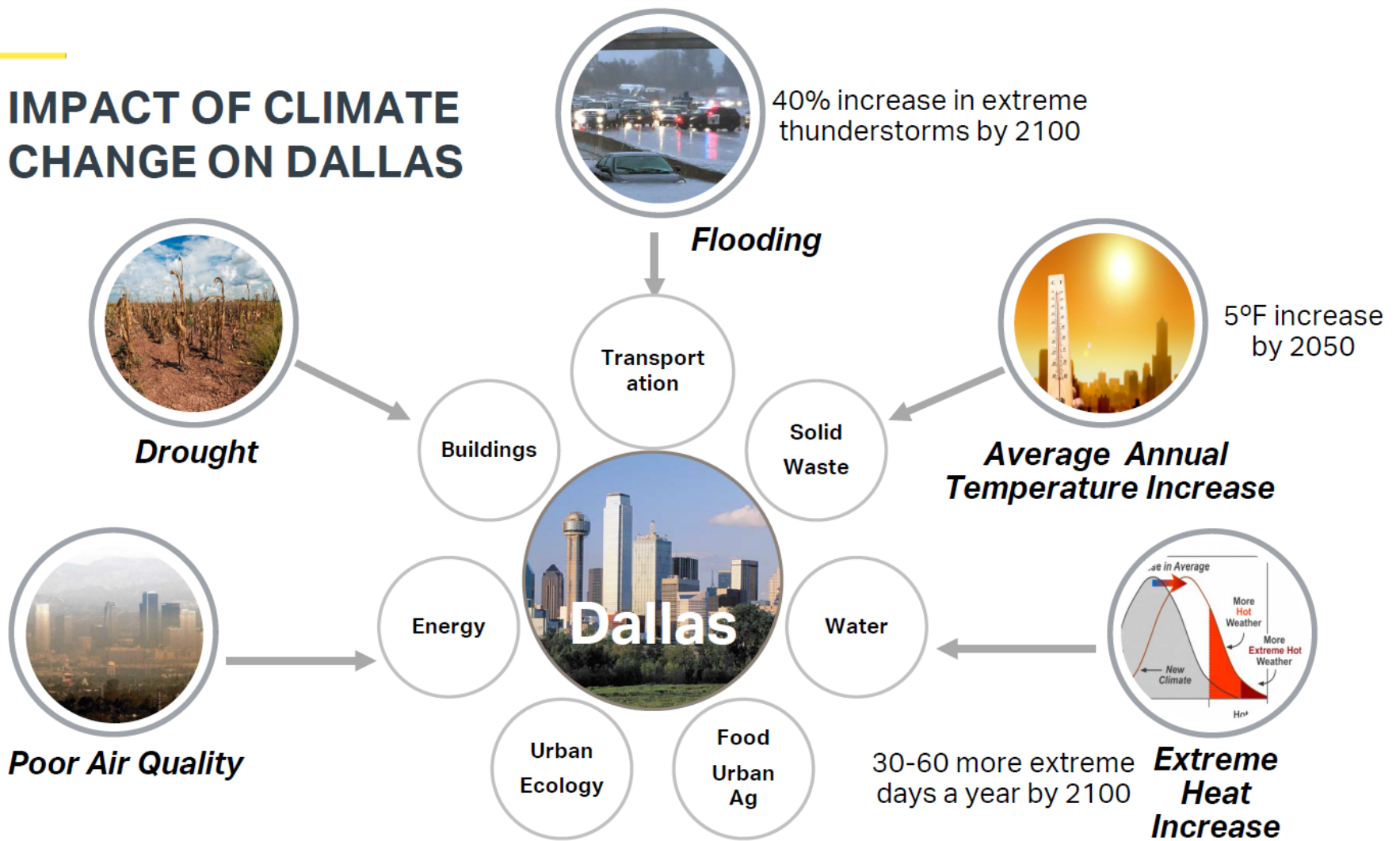
- Cities consume 2/3 of energy worldwide
- Cities generate 70% of greenhouse gas emissions
- Urban population is nine times larger today than 100 years ago and increasing steadily
- Actions taken at the local level have a major impact
- City leaders are more directly accountable to the public than state or federal officials



CECAP Addresses Risk

- Dallas faces economic, environmental, social, and governance risks
- Potential long-term consequences of inaction are becoming clearer
- Number of extreme weather events resulting in billion-dollar losses is increasing
- Bond rating agencies and investors want to know how risk is being addressed

IMPACT OF CLIMATE CHANGE ON DALLAS



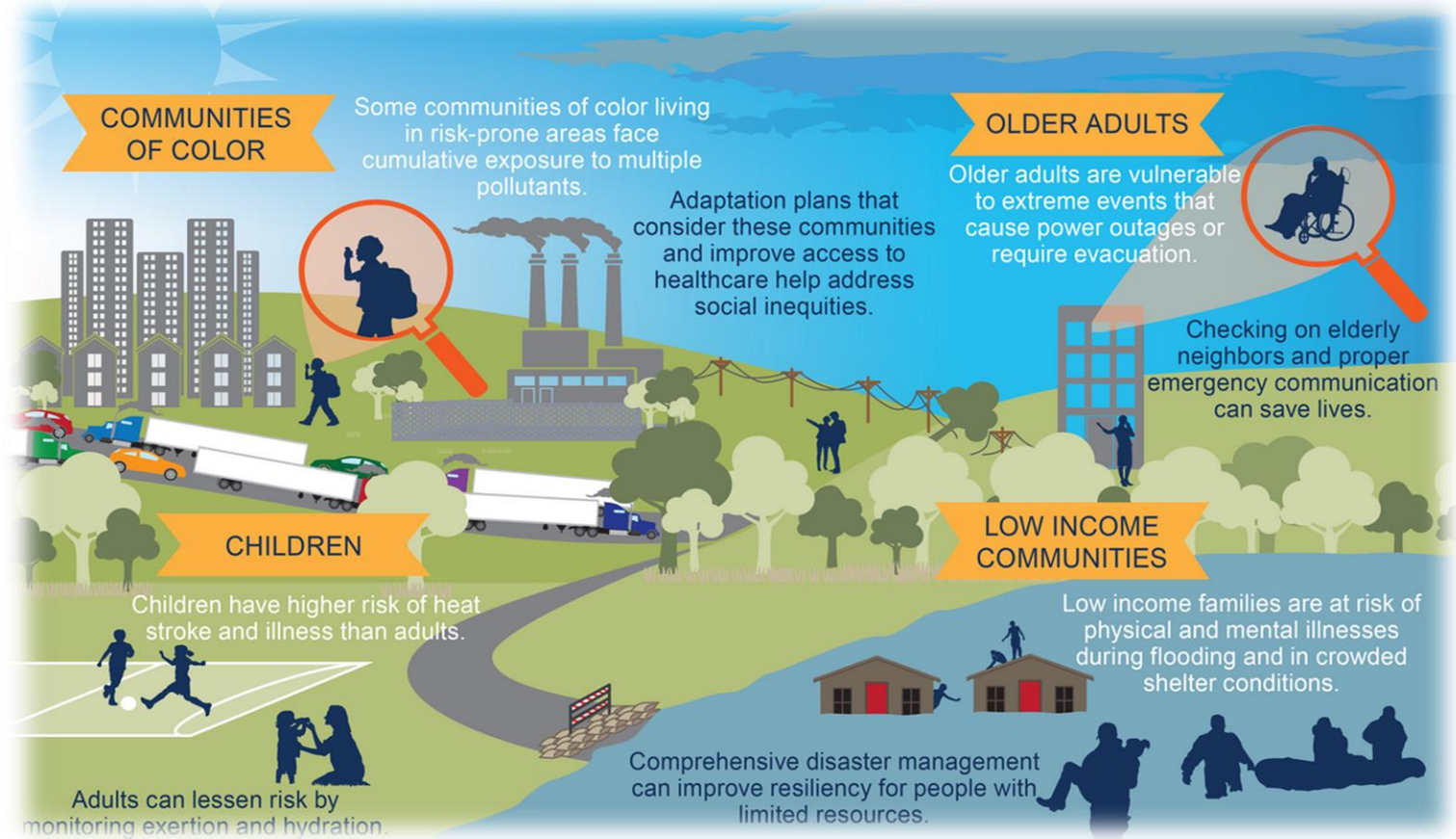


Fourth National Climate Assessment, Vol II — Impacts, Risks, and Adaptation in the United States

Chapter 23 | Southern Great Plains

- Food, Energy, and Water Resources - Quality of life in the region will be compromised as increasing population, the migration of individuals from rural to urban locations, and a changing climate redistribute demand at the intersection of food consumption, energy production, and water resources.
- Infrastructure - The built environment is vulnerable to increasing temperature, extreme precipitation, and continued sea level rise, particularly as infrastructure ages and populations shift to urban centers.
- Ecosystems and Ecosystem Services - Terrestrial and aquatic ecosystems are being directly and indirectly altered by climate change.
- Human Health - Health threats, including heat illness and diseases transmitted through food, water, and insects, will increase as temperature rises.

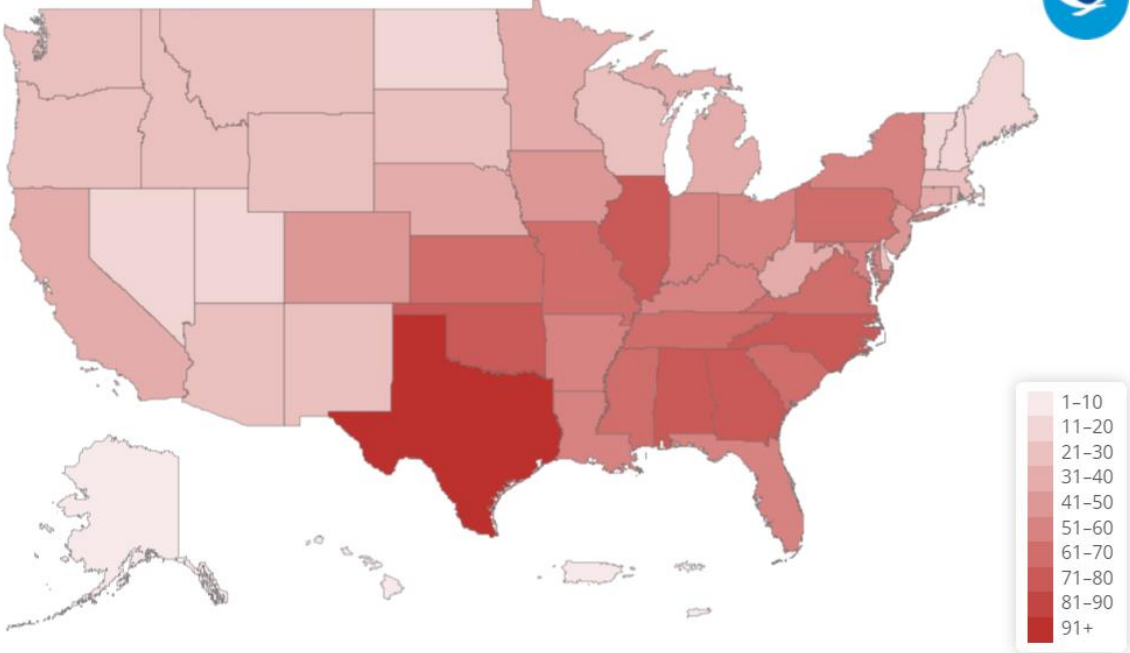
CECAP Addresses Equity



United States Global Climate Change Research Program. 2018. Strategic Finding #SF-2 of National Climate Assessment No. 4, November, 2018

CECAP Addresses Risk

1980-2018 Billion-Dollar Weather and Climate Disasters (CPI-Adjusted)



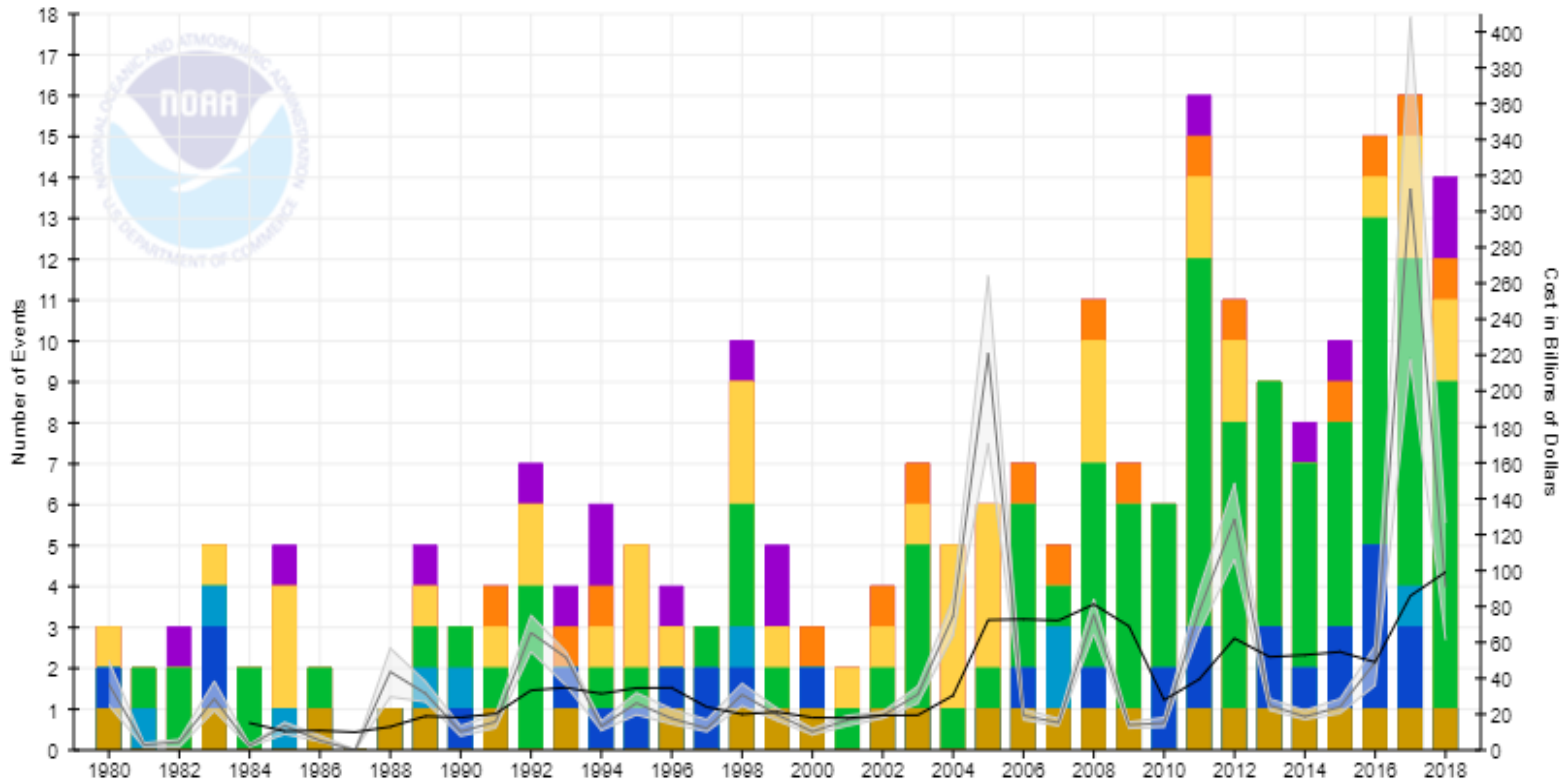
United States					
■ Drought:	26	■ Flooding:	29	■ Freeze:	9
■ Tropical Cyclone:	42	■ Wildfire:	16	■ Winter Storm:	103
				■ Severe Storm:	241
				■ All Disasters:	

Please note that the map reflects a summation of billion-dollar events for each state affected (i.e., it does not mean that each state shown suffered at least \$1 billion in losses for each event).

CECAP Addresses Risk

Billion-Dollar Disaster Event Types by Year (CPI-Adjusted)

- Winter Storm
- Wildfire
- Trop Cycl
- Severe Storm
- Freeze
- Flooding
- Drought
- Cost w/ 95% CI
- 5-Year Mean

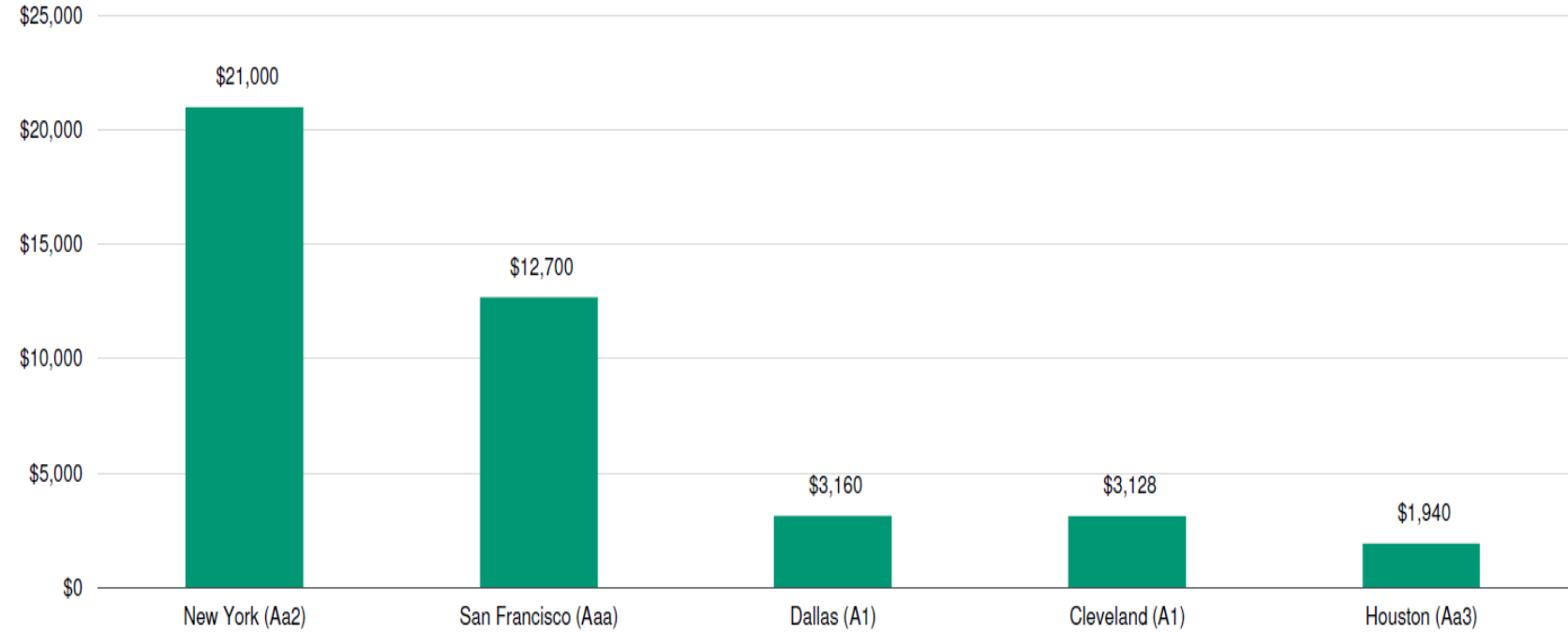


Moody's Investors Series Inquiry

Exhibit 4

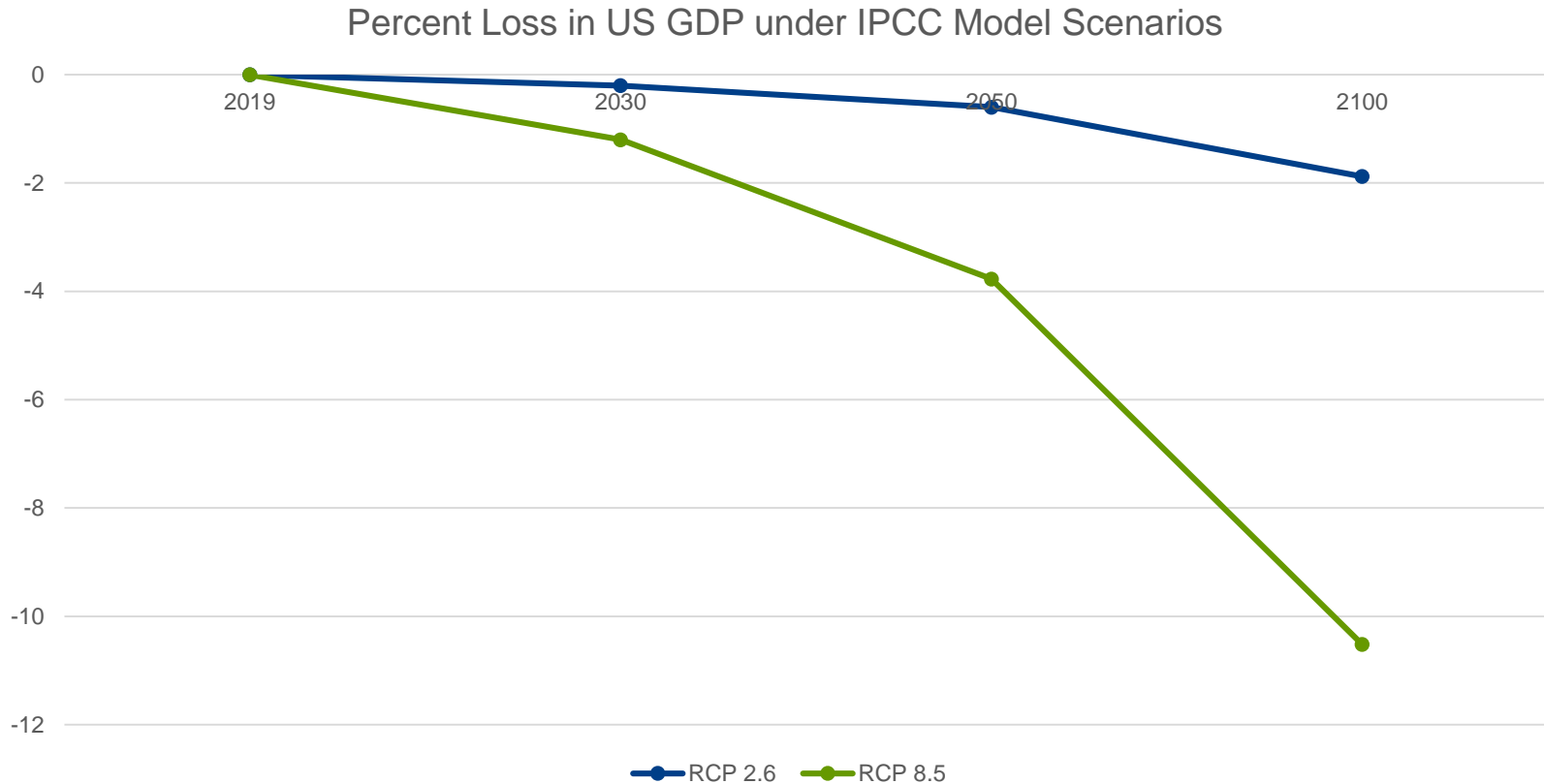
Cities with largest investment in climate mitigation projects planned or underway

Among survey respondents, \$ millions



Source: Moody's Investors Service

CECAP Addresses Risk



Data Source: ME Kuhn et al, Long-Term Macroeconomic Effects of Climate Change: A Cross Country Analyses; 20
Prepared for Federal Reserve Bank of Dallas. (<https://doi.org/10.24149/gwp365>)

Scope: Comprehensive Environmental & Climate Action Plan

Project Scope includes:

- Compile & review City Plans & Data
- Benchmark best practices & identify potential Dallas options
- Develop internal/external City working groups
- Robust public outreach & engagement
- Perform modelling to assess effectiveness
- Develop Dallas Plan



City Environmental Planning Task Force

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

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Stakeholder Advisory Committee



APPROACH TO PLANNING

MITIGATION:
Reduce emissions
that cause climate
change



Clean Energy
Sustainable
Transportation
Energy Efficiency



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



Disaster
Management
Flood Protection
Infrastructure
Upgrades

ADAPTATION:
Manage risks of
climate change
impacts

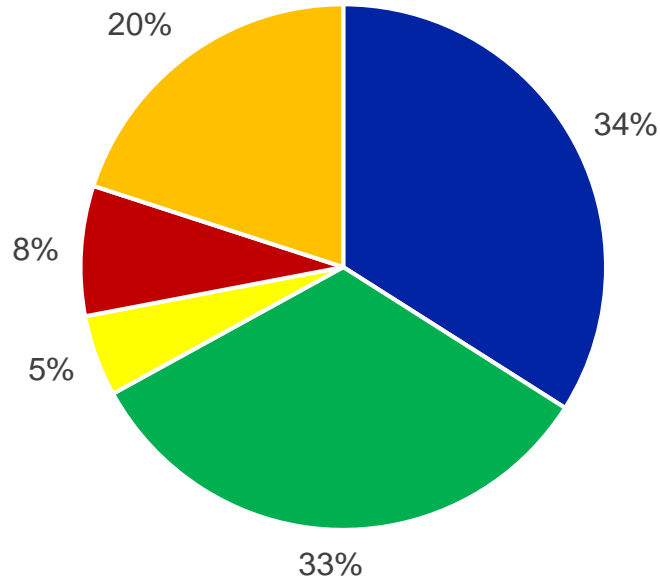


ENVIRONMENT: Improve Quality of Life + Public Health

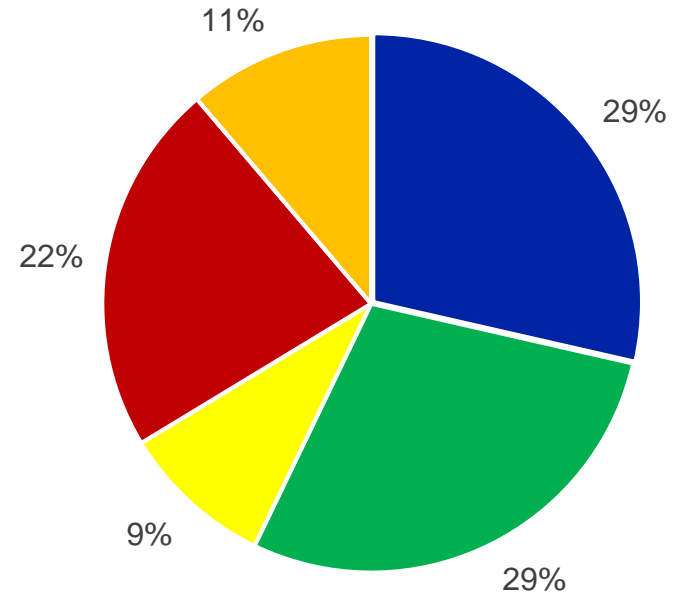
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Dallas Community Emissions

Dallas Community



U.S. Average



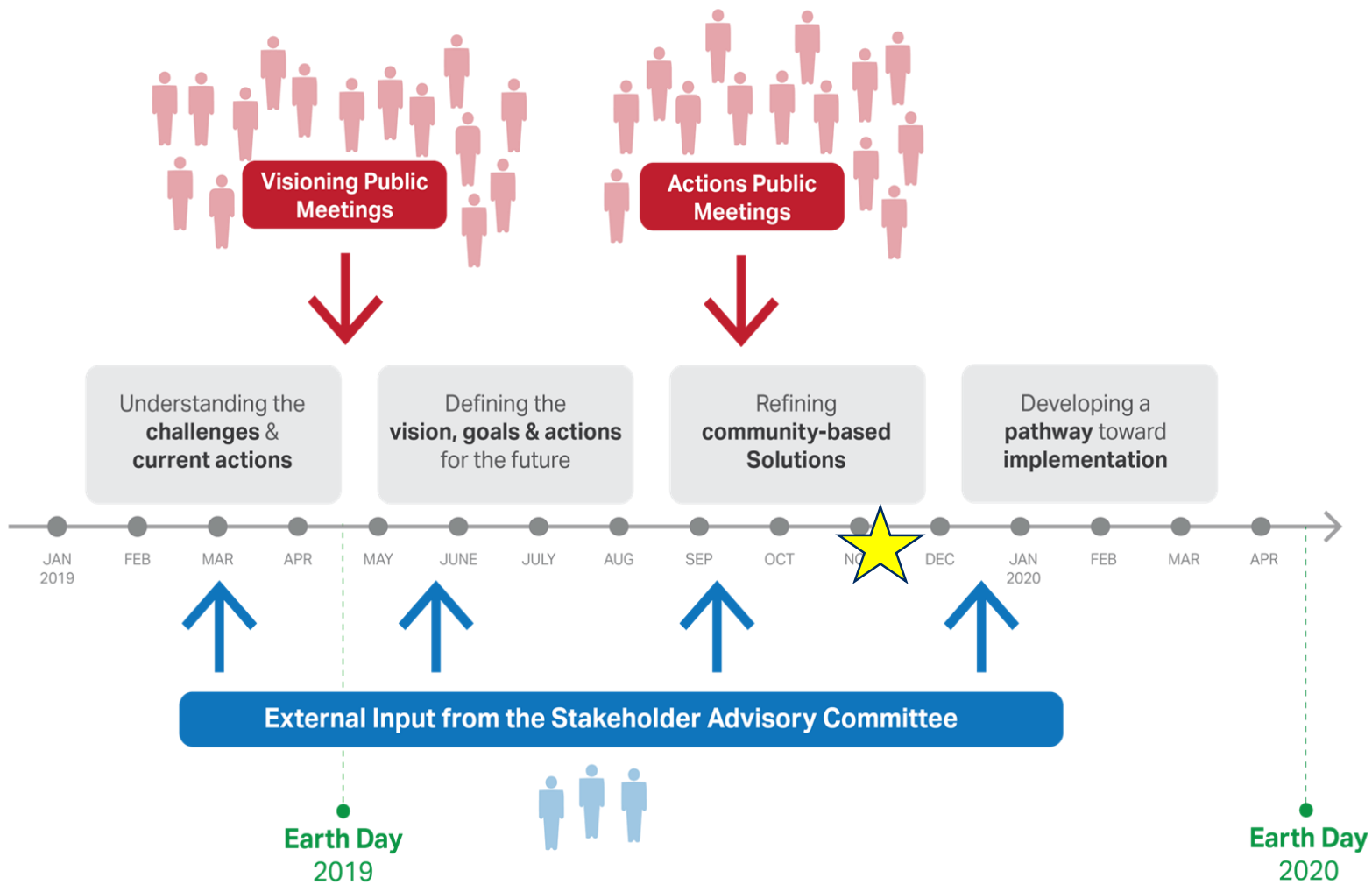
- Transportation/Mobile Sources
- Industrial Energy

- Commercial Energy
- Residential Energy

- Other Emissions

Draft CECAP Focus & Goals

- Dallas uses renewable, reliable, and affordable **energy**
- Dallas' **buildings** are energy efficient and resilient
- Dallas communities have access to clean, affordable **transportation** options
- Dallas protects its **water** resources and its communities from flooding & drought
- Dallas is a **Zero-waste** community
- All Dallas communities have access to healthy, local **food**
- All Dallas communities breathe clean **air**
- Dallas protects its **ecosystems** that in turn, protect public health



CECAP Expectations

- Must be actionable and measurable
- Must be equitable
- Must address risk and be data-driven
- Municipal utilities (or lack thereof)
- Transparency (www.dallasclimateaction.com)
- Partnerships
- Meet community and City Council expectations

Next Steps

- Close community engagement and present findings to committee (December 2, 2019 meeting)
- Deeper dive into focus and goals over next committee meetings (December 2, 2019 and January 6, 2020 meetings)
- Receive Environment & Sustainability Committee guidance

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APPENDIX

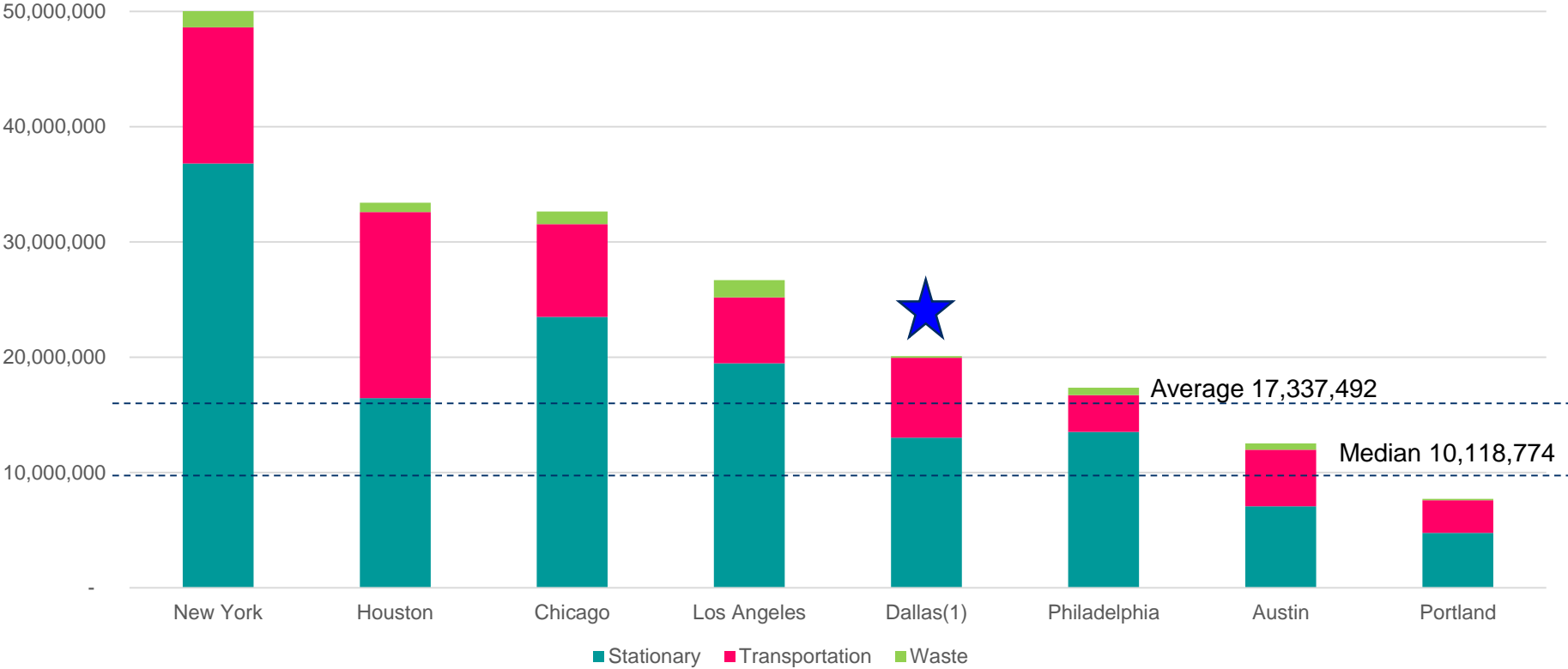


C40 Cities Organization

- Initiated in 2005, and represents over 96+ cities across globe
- 10 US Cities belong; Austin & Houston are members
- Base premise: Cities form the primary incubator of cultural, social and political innovations that shape our planet
- Focus: tackling climate change, and driving urban action that reduces greenhouse gases and climate risks, while increasing health, well-being and economic opportunities for urban residents
- Funded by Bloomberg Philanthropies, Children's Investment Fund Foundation, and Realdania.

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C40 City Comparison



Note: Dallas data is draft pending QA/QC

C40 Cities - Benefits

- Maintain Dallas position as leader/innovator re: environmental quality
- Data-driven approach to measuring program effectiveness
- Peer-to-peer assistance towards climate adaptation and resilience
- Potential financial assistance towards implementation for innovative approaches towards resilience with emphasis on equity

C40 Cities - Participation Standards

- **Mayorial Commitment** (✓ - Mayor Johnson supports)
- **GHG Inventory** (✓ - completed in December 2018)
- **Target for reducing GHG emissions** (✓ - consistent with C40 targets)
- **Develop climate action plan** with concrete initiatives to meet the target (in process)
- **Actively sharing best practice** examples with other cities throughout the C40 networks (in process)

407 US #ClimateMayors, representing 70 million Americans, have committed to adopt, honor and uphold the climate goals of the Paris Agreement



CLIMATEMAYORS.ORG

