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CITY OF EL PASO, TEXAS
AGENDA ITEM
DEPARTMENT HEAD'S SUMMARY FORM



DEPARTMENT: Strategic and Legislative Affairs

AGENDA DATE: 11/18/25

PUBLIC HEARING DATE:

CONTACT PERSON NAME: Fernando Liano Berjano, Senior Climate  **PHONE NUMBER:** 915 337-2517

DISTRICT(S) AFFECTED: All Districts

STRATEGIC GOAL:

No. 8: Nurture & Promote a Healthy, Sustainable Community

SUBGOAL:

SUBJECT:

Climate Action Plan update

BACKGROUND / DISCUSSION:

The update will provide comprehensive information on the progress of developing the Climate Action Plan, with the next deliverable due on December 1. This detailed document will outline various strategic initiatives and objectives aimed at mitigating climate-related risks and bolstering resilience within our community.

COMMUNITY AND STAKEHOLDER OUTREACH:

N/A

PRIOR COUNCIL ACTION:

N/A

AMOUNT AND SOURCE OF FUNDING:

N/A

REPORTING OF CONTRIBUTION OR DONATION TO CITY COUNCIL:

N/A

NAME	AMOUNT (\$)

*****REQUIRED AUTHORIZATION*****

DEPARTMENT HEAD:

Stephen Ian Voglewede
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Date: 2025.11.03 12:27:17 -07'00'

(If Department Head Summary Form is initiated by Purchasing, client department should sign also)



**Chihuahuan
Desert
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POWERED BY THE CITY OF EL PASO

El Paso Regional Climate Action Plan

Draft

August 8th , 2025

El Paso Regional Climate Action Plan

The City of El Paso and regional partners would like to thank the many members of the public who participated in the planning process by offering their time, concerns, suggestions, and support.

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Abbreviations

ACS	American Community Survey
AR5	Assessment Report 5
AWS	American Welding Society
BACT	Best Available Control Technology
BLS	Bureau of Labor Statistics (BLS)
BRT	Bus Rapid Transit
C&D	Construction and Demolition
CAFE	Corporate Average Fuel Economy
CAP	Climate Action Plan
CAPs	Criteria Air Pollutants
CBO	Community-Based Organization
CBP	Customs and Border Protection
CCAP	Comprehensive Climate Action Plan
CDC	Centers for Disease Control
CDCC	Chihuahuan Desert Climate Collaborative
CEJST	Climate and Economic Justice Screening Tool
CH ₄	Methane
CID	Capital Improvement Department
CMRA	Climate Mapping for Resilience and Adaptation Assessment
CNG	Compressed Natural Gas
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
CPRG	Climate Pollution Reduction Grants
CTE	Career and Technical Education
DOE	Department of Energy
EIA	U.S. Energy Information Administration
EIE	Environmental Insights Explorer
EPA	Environmental Protection Agency
EPCC	El Paso Community College
EPE	El Paso Electric
EPWater	El Paso Water
EUI	Energy Use Intensity
EV	Electric Vehicle

FEMA	Federal Emergency Management Agency
FLIGHT	Facility Level Information Greenhouse Gases Tool
GHG	Greenhouse Gas
GIS	Geographic Information System
GWP	Global Warming Potential
HAP	Hazardous Air Pollutant
HVAC	Heating, Ventilation and Air Conditioning
IBEW	International Brotherhood of Electrical Workers
ICLEI	ICLEI – Local Governments for Sustainability
IECC	International Energy Conservation Code
IIC	Intergovernmental and Interagency Coordination
IPCC	Intergovernmental Panel on Climate Change
ISDs	Independent School Districts
kWh	Kilowatt-Hours
LEARN	Land Emissions and Removals Navigator
LEED	Leadership in Energy and Environmental Design
LIDACs	Low-Income and Disadvantaged Communities
LPG	Liquefied Petroleum Gas
LSC	Leadership Steering Committee
LULUCF	Land Use, Land-Use Change, and Forestry
LQ	Location Quotient
MEP	Mechanical, Electrical, and Plumbing
MIT	Massachusetts Institute of Technology
MMBtu	Million British Thermal Units
MPO	El Paso Metropolitan Planning Organization
MRFs	Materials Recovery Facilities
MSA	Metropolitan Statistical Area
MTCO ₂ e	Metric Tons of Carbon Dioxide Equivalent
MWh	Megawatt Hours
N ₂ O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NAICS	North American Industry Classification System
NEI	National Emissions Inventory
NFIP	National Flood Insurance Program
NH ₃	Ammonia

NOAA	National Oceanic and Atmospheric Administration
NO _x	Nitrogen Oxide
NPL	National Priorities List
PACE	Property Assessed Clean Energy
PCAP	Priority Climate Action Plan
PM	Particulate Matter
PPA	Power Purchase Agreement
PUCT	Public Utility Commission of Texas
RCP	Representative Concentration Pathway
RNG	Renewable Natural Gas
SCADA	supervisory control and data acquisition
SIT	State Inventory Tool
SO ₂	Sulfur Dioxide
SOC	Standard Occupational Classification
SRI	Solar Reflectance Index
SVI	Social Vulnerability Index
TCEQ	Texas Commission on Environmental Quality
TOD	Transit-Oriented Development
TWD	Texas Workforce Commission
TWDB	Texas Water Development Board
TxDOT	Texas Department of Transportation
DOE	U.S. Department of Energy
DOL	U.S. Department of Labor
DoD	U.S. Department of Defense
HUD	U.S. Department of Housing and Urban Development
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
UTEP	University of Texas El Paso
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compound
WECC	Western Electricity Coordinating Council
YDSP	Ysleta del Sur Pueblo
ZEV	Zero emission vehicle



Executive Summary

Artists: Terry Wright & Kathryn Gelinas

Executive Summary

The El Paso Metropolitan Statistical Area (El Paso region) faces climate hazards including drought, flash flooding, and extreme heat. Nearly 65% of El Paso County and 100% of Hudspeth County are considered low-income and disadvantaged communities (LIDACs) facing burdens like linguistic isolation and poor health that make it harder for residents to respond to climate hazards.¹ To address these complex challenges, the City of El Paso worked with partners across El Paso and Hudspeth Counties to create this Climate Action Plan (CAP). This CAP, developed under the U.S. Environmental Protection Agency (EPA) Climate Pollution Reduction Grants (CPRG) program, prioritizes measures to reduce greenhouse gas (GHG) emissions in the El Paso region, while providing other benefits to residents, such as creating jobs, improving local air quality, and enhancing overall quality of life.

This plan addresses the region's unique environmental, economic, and public health challenges, including extreme heat, drought, flooding, and air pollution, which disproportionately impact LIDACs. With over 65% of El Paso County and all of Hudspeth County census tracts classified as LIDACs, this CAP prioritizes equitable climate action and community engagement.

Engagement

To develop this CAP, the City of El Paso collaborated extensively with regional governments, tribal entities, and community organizations. Strong regional coordination through the Chihuahuan Desert Climate Collaborative (CDCC) and Leadership Steering Committee helped align local goals, while targeted outreach by Climate Fellows and promotoras were instrumental to gather input from hard-to-reach neighborhoods. Climate Fellows are early-career professionals trained to support climate planning and engagement efforts, while promotoras are trusted community health workers who use their deep local ties to share information and gather input from historically underserved neighborhoods. Local community organizations and businesses helped shape and support the CAP through climate summits. This extensive community engagement process reached over 3,000 people through bilingual meetings, surveys, and events. Engagement and collaboration will continue after CAP adoption, and updates and opportunities will be shared on the project website.

Greenhouse Gas Emissions and Targets

The CAP region-wide GHG inventory includes major emissions sources within El Paso County and Hudspeth County for calendar year 2019. Most of the region's emissions are from energy use in transportation (48%) and buildings and facilities (44%). GHG emissions projections under a business-as-usual scenario estimate a potential 45% reduction in net emissions from 2019 to 2050, largely due to cleaner electricity generation sources and increased electric vehicle (EV) adoption (see Figure 1).

¹ Council on Environmental Quality. (2022). *Climate and Economic Justice Screening Tool 1.0*.

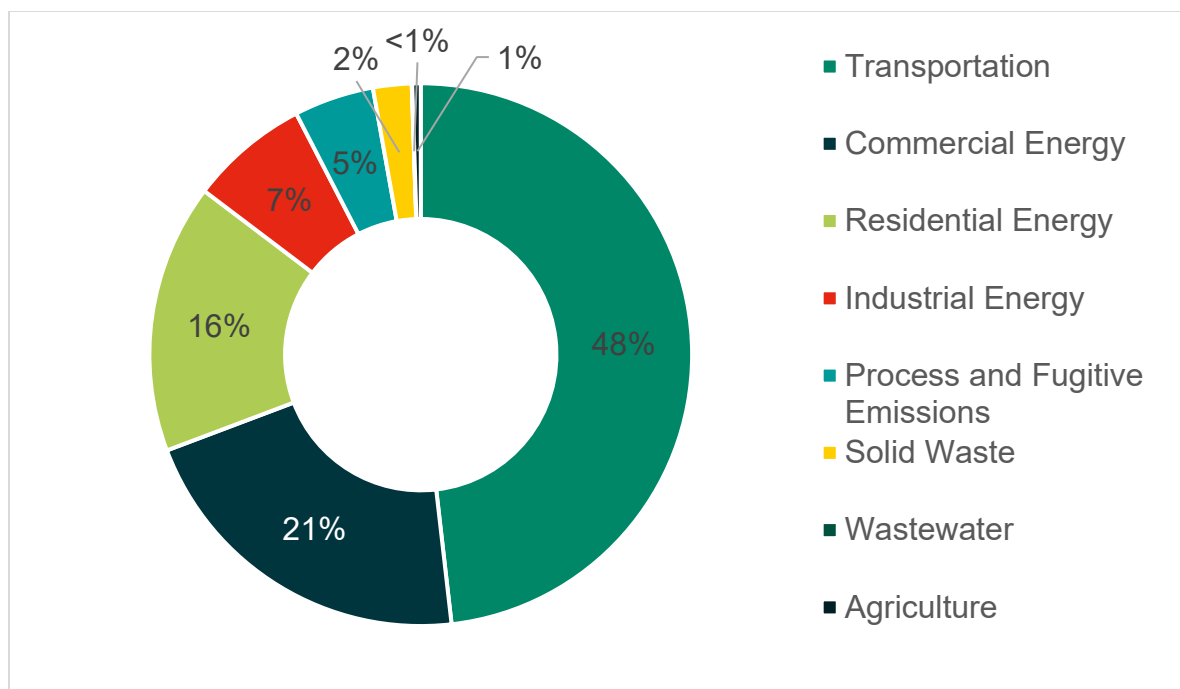


Figure 1. El Paso Region 2019 GHG Inventory

The CAP establishes two types of reduction targets for the region: an ambitious target, which is based on scientific best practices, and a localized target, which represents the reductions that can be achieved if El Paso fully implements the climate actions outlined in this CAP (see Table 1).

Table 1. GHG Reduction Targets

Projected Emissions	2030	2050
Ambitious Target	50% below 2019 levels	Net Zero
Localized Target	21% below 2019 levels	67% below 2019 levels

The localized target shows that two-thirds of the region's 2019 GHG emissions could be reduced by 2050. However, additional external assistance from regional, state, and/or federal partners is needed to reach the ambitious target defined as net zero by 2050.

Climate Vulnerability and Adaptation Strategies

The CAP also includes a climate vulnerability assessment, which identifies the transportation infrastructure, utilities, natural resources, and socially vulnerable communities most at risk from future climate change impacts by mid-century. Extreme heat, flooding, and drought are all projected to increase in severity for the El Paso region, potentially endangering communities and critical infrastructure. More than 70% of roadways and 65% of railways are highly vulnerable to extreme heat, which can damage pavements and buckle railways. Some 90% of critical facilities—such as schools, community centers, senior centers, libraries, and medical centers—are highly vulnerable to heat, which can lead to power outages and grid instability, increase energy costs, and threaten the health and safety of occupants. Drought is another important climate threat in the region that can reduce water availability for agriculture, cooling (e.g., residential, industrial and commercial buildings), ecosystems, and sanitation, while also increasing dust.

While the City of El Paso has already undertaken actions to increase its resilience, this plan outlines future adaptation actions and emphasizes the importance of maintaining and expanding natural resources to enhance regional resilience.

Climate Actions

The CAP includes 10 broad climate measures and 53 actions that support each measure. A measure is a broad strategy that addresses an emissions source or climate hazard in the El Paso region, aligns with regional goals, and is important to the community. Actions are specific policies, programs, or projects that support one of the 10 measures. Each action was evaluated for its GHG and co-pollutant emissions reduction potential, local authorities' ability to implement, implementation cost, potential progress tracking metrics, and additional benefits including climate adaptation, public health and wellbeing, environmental stewardship, resource conservation, economic prosperity, savings to residents and businesses, and community building (see Table 2).

Table 2. CAP Climate Actions

Measure 1: Increase Energy Efficiency and Decarbonize Buildings	
-	Action M1: Enhance or create a community-wide building energy efficiency and electrification rebate program
-	Action M2: Develop a Building Energy Performance Standard for commercial buildings
-	Action M3: Partner with industries to reduce emissions related to industrial activities
-	Action M4: Enhance or develop a weatherization program
-	Action M5: Increase energy efficiency in public buildings
-	Action M6: Develop a data center policy that incorporates environmental, community, and economic development considerations
Measure 2: Support the Zero Emission Vehicle Transition	
-	Action M7: Implement electric vehicle (EV) charging policies for new buildings
-	Action M8: Organize zero emission and hybrid vehicle ride-and-drive events for community members
-	Action M9: Transition municipal fleets to zero emission vehicles (ZEVs)
-	Action M10: Install public EV charging stations
-	Action M11: Develop alternate fuel hubs for buses and heavy-duty fleet vehicles
-	Action M12: Develop alternative fuel freight corridors
Measure 3: Install Renewable Energy Systems	
-	Action M13: Partner with utilities and startups to increase geothermal energy use
-	Action M14: Procure renewable energy through utility contracts or subscriptions to meet electricity demand
-	Action M15: Implement solar-ready policies for new buildings
-	Action M16: Incentivize battery storage installations

- Action M17: Install solar panels on public buildings and public land as alternate energy sources and as shade structures

Measure 4: Promote Sustainable Food Systems and Waste Management Practices

- Action M18: Improve recycling practices
- Action M19: Implement community-wide composting for food and yard waste
- Action M20: Develop a construction and demolition waste diversion ordinance and explore establishing reuse or recycling facilities
- Action M21: Capture and upgrade biogas to use as an energy source
- Action M22: Use water-based growing systems, such as hydroponics and aquaponics agriculture, to grow food without soil
- Action M23: Develop local food hubs

Measure 5: Promote Walking, Biking, and Riding Transit

- Action M24: Implement Complete Streets conversion projects to improve walking, biking, and public transit use
- Action M25: Expand existing micromobility systems for bikes and scooters
- Action M26: Explore options to provide free public transit
- Action M27: Build transit-oriented developments to increase access to public transit
- Action M28: Expand micro-transit projects like small shuttles to help people get from home to transit stops
- Action M29: Implement car-free hours to increase pedestrian street access
- Action M30: Update the zoning code to remove parking minimums
- Action M31: Improve the frequency and quality of transit services

Measure 6: Monitor and Improve Air Quality

- Action M32: Coordinate infrastructure, policy, and operations to reduce truck idling at ports and freight corridors
- Action M33: Create, expand, or improve designated truck parking areas at El Paso Ysleta Port of Entry to reduce idling
- Action M34: Reduce wait times at international bridges
- Action M35: Install air quality monitoring systems at the international bridges
- Action M36: Install air quality monitoring systems in communities disproportionately impacted by poor air quality

Measure 7: Implement and Oversee Climate Actions

- Action M37: Establish green revolving loan funds to support sustainability projects in public buildings
- Action M38: Integrate a climate and sustainability lens into government operations and decision-making
- Action M39: Create a mini-grant program to support neighborhood-level climate action

Measure 8: Cool Communities, Protect Health, and Increase Native Ecosystems

- Action A1: Develop a community stewardship program to mitigate heat by increasing tree canopy and shading, focused on cooling homes, community centers, and neighborhoods
- Action A2: Adopt a heat-resilient building code
- Action A3: Develop climate-resilient building codes and development standards
- Action A4: Adjust the structural design of pavements, bridges, and railways and use more cool and reflective surfaces (walls, roofs, pavements)
- Action A5: Develop multi-hazard resilience hubs in vulnerable communities
- Action A6: Develop a robust multi-lingual emergency communications response framework and resources
- Action A7: Implement carbon sequestration projects on public land

Measure 9: Build Drought Resilience and Conserve Water

- Action A8: Expand wetlands and parks to support groundwater recharge
- Action A9: Expand use of recycled water and greywater for irrigation, and establish projects to capture runoff
- Action A10: Educate, incentivize, and provide technical assistance to growers in the region to transition to climate-friendly farming practices
- Action A11: Develop water capture systems that run on solar energy to generate potable water in unincorporated areas and colonias

Measure 10: Reduce Flood Risk

- Action A12: Deploy green infrastructure and reduce impermeable surfaces along roads and at critical facilities
- Action A13: Strategically acquire land in the 100-year floodplain
- Action A14: Stabilize arroyos in steep locations and in areas that show signs of erosion

LIDAC Analysis

The CAP includes a robust LIDAC analysis for the El Paso region, identifying 112 census tracts and 65% of the total population as disadvantaged according to the Climate and Economic Justice Screening Tool (CEJST). These communities face compounded burdens such as high energy costs, poor air quality, limited access to green space, and inadequate infrastructure. The El Paso region may choose to prioritize LIDACs for action implementation to ensure benefit distribution is focused in areas of need. Given this, the CAP evaluates the GHG and co-pollutant reductions that may be achieved in LIDACs due to the CAP actions. The CAP also outlines potential LIDAC benefits and disbenefits resulting from the actions and proposes mitigation strategies to avoid unintended harm. For example, while building electrification may reduce emissions and improve indoor air quality, the plan recommends financial support to prevent cost burdens on low-income renters. This equity-centered approach ensures that climate solutions are inclusive, just, and responsive to the needs of the most vulnerable populations.

Workforce Planning Analysis

This chapter evaluates how the mitigation actions outlined in CAP will impact the regional labor market. It identifies high-demand occupations critical to implementation, assesses current workforce training capacity, and recommends strategies to build a skilled and inclusive talent pipeline. With projected job growth in areas like clean energy, construction, and EV infrastructure, the chapter emphasizes the need for coordinated investments in training, employer engagement, and support services.

Intersection with Other Funding Sources

CAP implementation is complex and resource-intensive, requiring long-term planning and coordination across jurisdictions and sectors. Multiple funding and financing sources will be needed for most actions due to the diverse range of projects and stakeholders involved. Available funding includes competitive federal and state grants, local and national philanthropy, traditional and innovative financing tools, and revenue-generating mechanisms like local taxes. State and local sources will play an outsized role in the may play a larger role in the near term.

Next Steps

The next phase begins with formal adoption of the CAP by the City and participating with regional entities. Following adoption, the City will continue to coordinate with the CDCC to oversee implementation, align departmental and regional efforts, pursue funding opportunities, and monitor progress against performance indicators. The City will utilize an equity investment framework to direct resources toward projects that advance equity, support community priorities, and build long-term capacity in historically under-resourced areas. The City will also launch a climate-focused mini-grant program to provide small grants to community-based organizations, schools, neighborhood groups, and small businesses to implement local climate action projects. To promote transparency and accountability, the City will maintain a publicly accessible climate action dashboard and, in alignment with CPRG requirements, publish a formal CAP status report in 2027. These next steps work towards the main goal of the CAP; to reduce the region's emissions in order to improve air quality, health outcomes, and economic opportunities while minimizing economic stress in the community due to plan implementation.





01

Introduction

Artist: Chris Winterstein

1. Introduction

Key Takeaways

- This Climate Action Plan (CAP) serves as the El Paso region's Comprehensive Climate Action Plan under the U.S. Environmental Protection Agency's (EPA's) Climate Pollution Reduction Grant (CPRG) program.
- The City of El Paso led CAP development in partnership with 10 municipalities, two counties, Ysleta del Sur Pueblo, the El Paso Metropolitan Planning Organization (MPO), and the Rio Grande Council of Governments.
- The region faces rising risks from extreme heat, drought, flooding, and pollution—disproportionately affecting Low-Income and Disadvantaged Communities (LIDACs).
- The CAP establishes greenhouse gas (GHG) targets and identifies cross-sector climate actions that create additional benefits including job growth, energy savings, and public health improvements.

CPRG Overview

The EPA's CPRG program provides grants to states, local governments, tribes, and territories to develop and implement ambitious plans for reducing GHG emissions and other harmful air pollution. All CPRG Phase I Planning Grant participants must submit a Priority Climate Action Plan (PCAP), Comprehensive Climate Action Plan (CCAP), and status reports. As a grantee, the El Paso region developed a PCAP that outlined the region's emission sources, priority measures, and LIDAC impacts. This CAP acts as the CCAP to meet the CPRG Planning Grant requirements.

El Paso Region Profile and Climate Context

The El Paso Metropolitan Statistical Area (the El Paso region) comprises El Paso County and Hudspeth County. The El Paso region is a complex network of communities, with 10 municipalities and 15 census-designated places and unincorporated communities spanning two counties and more than 5,500 square miles (see Figure 2). Home to five international ports of entry, the El Paso region is a crucial channel for freight traffic and international trade and commerce with Mexico. In 2021, the El Paso-Juárez-Las Cruces Borderplex was the fifth-largest manufacturing employment center in North America.

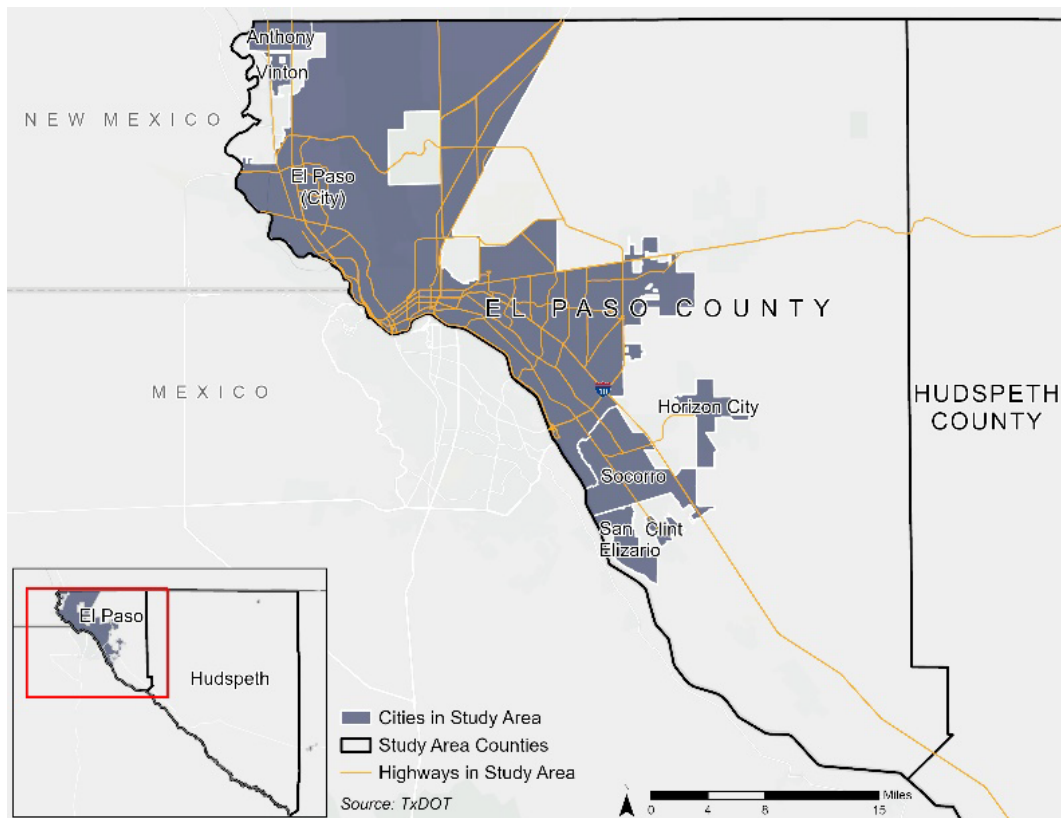


Figure 2. CAP Study Area

The El Paso region faces economic, environmental, and public health challenges due to the changing climate. Record heat, flash floods, drought, and fire pose risks for residents of the region. Triple-digit temperatures have become more frequent in the last 10 years, leading to summer blackouts as the regional electric utilities struggle to meet energy demands. In 2024, El Paso ranked among the most-polluted major U.S. cities.² The region is suffering a 20-year megadrought, and water supply from the Rio Grande is declining. Meanwhile, intense rainfall caused flash flood events in 2006, 2021, and most recently in July 2025. Recovering from events like these is more difficult for people facing other stressors. Nearly 65% of El Paso County and all of Hudspeth County census tracts are identified as LIDACs and face the burdens of poverty, low education, and poor health.³ The counties score 0.98 and 0.99, respectively, on the Centers for Disease Control (CDC) Social Vulnerability Index, where 1 is the highest vulnerability.⁴ El Paso residents facing these interconnected challenges are less able to adapt to environmental change. Working together to reduce climate pollution is necessary to protect residents from these risks now and in the future.

CAP Purpose and Scope

This CAP is an actionable roadmap for climate action that reflects the local context of the El Paso region. The CAP will support investment in policies, practices, and technologies that

² El Paso Matters. 2025, March 12. *El Paso's air quality ranks among worst in U.S. for dust pollution, driven by wind and weather.* <https://elpasomatters.org/2025/03/12/el-paso-air-quality-rank-dust-pollution-wind-weather/>

³ Council on Environmental Quality. (2022). *Climate and Economic Justice Screening Tool 1.0.*

⁴ Agency for Toxic Substances and Disease Registry (ATSDR). (2024). *CDC/ATSDR Social Vulnerability Index (SVI).* February 7, 2024. <https://www.atsdr.cdc.gov/placeandhealth/svi/index.html>

reduce GHG emissions, increase climate resilience, spur economic growth, and enhance residents' quality of life.

The CAP is a culmination of a rigorous, sustained process that involves working across multiple levels of government, gathering meaningful community input, and conducting additional stakeholder outreach. With the PCAP as a springboard, the CAP:

- Updates and expands the inventory of local GHG emission sources and sinks
- Establishes ambitious and localized 2030 and 2050 GHG emission reduction targets
- Identifies a broad range of GHG mitigation and climate adaptation actions across primary economic sectors
- Assesses emissions benefits and other community benefits for each action
- Explores implementation authority, funding strategies, and workforce needs

In addition to reducing GHG emissions, the CAP actions offer other benefits to residents of the El Paso region. Implementing these actions can reduce energy costs, improve air quality, create high-quality jobs, improve public health, and enhance community cohesion. This CAP represents an opportunity for the El Paso region to meet current and future challenges and maximize benefits to all residents.

Approach to Developing the CAP

The City of El Paso (the City) is leading CAP development with a high-level approach that integrates regional coordination, data-driven planning, and equitable community engagement. The CAP builds on the foundation established through the PCAP, which was completed in spring 2024. The CAP is expected to be finalized in December 2025 in alignment with EPA's CPRG program timeline.

This CAP is the result of a collaborative planning process led by the City of El Paso through the Chihuahuan Desert Climate Collaborative (CDCC), with active participation from regional partners. These include the Towns of Anthony and Clint, Horizon City, the Cities of San Elizario and Socorro, the Village of Vinton, El Paso and Hudspeth Counties, the MPO, the Rio Grande Council of Governments, and Ysleta del Sur Pueblo. Partners have provided technical input, implementation expertise, and cross-jurisdictional coordination. Intra-governmental collaboration was supported through regular working group meetings, while localized needs were addressed through one-on-one discussions.

Meaningful public engagement remains a core element to the City's approach to climate planning. The City prioritized inclusive outreach to LIDACs through culturally responsive engagement strategies and trusted community-based partners. Led by Climate Fellows, engagement included bilingual workshops, virtual focus groups, youth events, and community pop-ups. Many engagement approaches and lessons learned from the PCAP process were refined and carried forward to make sure the CAP reflects technical analysis and lived experience.

This regional and equity-centered approach allows the CAP to identify the most impactful GHG reduction strategies and advance long-term community priorities, resilience goals, and funding-readiness for implementation.



02

Stakeholder Engagement

Artist: Jari WERC Alvarez

2. Stakeholder Engagement

Key Takeaways

- Strong regional coordination through the CDCC and Leadership Steering Committee (LSC) helped align local goals.
- Extensive community engagement reached over 3,000 people through bilingual meetings, surveys, and events.
- Targeted outreach by Climate Fellows and promotoras gathered input from hard-to-reach neighborhoods.
- Local community organizations and businesses helped shape and support the plan through climate summits.
- Engagement will continue after adoption, with updates and opportunities shared on the project website.

Intergovernmental and Interagency Coordination

Creating the CAP required significant coordination and input from all regional stakeholders to integrate CAP development with other planning efforts and to build an effective coalition for implementation. In April 2024, the CDCC—a regional partnership focused on advancing climate action and resilience in the region—was established. The CDCC brings together local governments, tribal nations, regional agencies, educational institutions, and community-based organizations to advance cross-sector coordination.

The City continued to coordinate with the LSC, which was established to align outcomes of the PCAP and CAP with regional goals. The LSC is a senior-level advisory group with representatives from multiple public entities including:

- | | |
|--|-------------------------------------|
| - City of El Paso | - Hudspeth County |
| - City of San Elizario | - Rio Grande Council of Governments |
| - City of Socorro | - Town of Anthony |
| - El Paso County | - Town of Clint |
| - El Paso Metropolitan Planning Organization | - Village of Vinton |
| - Horizon City | - Ysleta del Sur Pueblo |

The LSC met throughout CAP development to review proposed measures and actions, prioritize actions, provide input on the project schedule, and exchange updates on ongoing programs and initiatives.

The project team also conducted one-on-one meetings with the City of El Paso City Councilors to brief them on CAP measures. Similarly, the City briefed other regional partners, including utility companies, regional transportation planning organizations, and county seats, on the CAP measures. Through the core engagement strategy of meeting people where they are, the City also met with key community institutions such as Eco El Paso, Community First Coalition,

Amanecer, the El Paso Chamber of Commerce, the El Paso Community Foundation, and the Paso del Norte Health Foundation.

Community Engagement

Engagement Objectives and Structure

Community engagement for the CAP was structured around five touchpoints or engagement series; four of the five series have been held so far. Each series includes two community meetings with an informational video and a survey to broaden access and participation. The engagement process was designed to educate, gather input, and collaboratively shape the CAP with residents. "Meeting-in-a-Box" sessions, facilitated by Climate Fellows, were conducted as part of each engagement series to engage residents in familiar settings. This approach supported inclusive participation by bringing the planning process directly to where people live.

- **Engagement Series #1 (Summer 2024):** Introduced the CAP, shared the project's goals and milestones, and provided an opportunity to meet the planning team. This series focused on building awareness and excitement at the project's launch.
- **Engagement Series #2 (Fall 2024):** Shared results from the region's GHG inventory and discussed how climate hazards impact communities. Community members were invited to share their lived experiences and local knowledge.
- **Engagement Series #3 (Early 2025):** Presented a set of draft climate measures and actions and gathered input from participants to help prioritize those most relevant to the region's needs.
- **Engagement Series #4 (Spring 2025):** Focused on understanding benefits most important to residents.
- **Engagement Series #5 (Summer 2025):** Will provide an opportunity to review the draft CAP and provide feedback on the actions, including identifying responsible parties, developing implementation timelines, and highlighting community benefits.

A range of outreach strategies was employed to promote each engagement opportunity. These included e-blasts to the project listserv, updates on the project website, social media posts, and door-to-door canvassing to reach residents. Paid, targeted social media advertisements were used to boost participation and reach a wider audience. Table 3 shows a summary of the number of people reached through the outreach process.

Table 3. Outreach Summary

Category	Series 1	Series 2	Series 3	Series 4
Meeting-in-a-Box and Tabling	400+ reached	500+ reached	600+ reached	100+ reached
Canvassing and Flyer Engagements	400+ engagements	800+ engagements	100+ engagements	100+ engagements
Email Newsletter Recipients	3,700 recipients	4,200 recipients	4,600 recipients	5,300 recipients

Social Media Engagements	325+	270+	170+	50+
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All meeting and outreach materials were provided in English and Spanish for inclusivity and accessibility to the region's diverse communities. All information, including videos, meeting materials, summary documents, and surveys, are hosted on the project website to promote transparency and public access. In-person meetings were hosted at multiple locations across the region to capture diverse perspectives. This approach ensured that input reflected the priorities and experiences of residents from different communities. See Figure 3 for meeting locations.

Climate Lotería – Culturally relevant engagement methods were central to the engagement strategy. One such tool was Climate Lotería, an interactive, bilingual game inspired by the traditional Mexican game of Lotería (similar to Bingo). Designed to resonate with local traditions, it was used at pop-up events and community meetings to engage residents (especially families and youth) in a fun and accessible way. Each card highlighted a climate-related co-benefit, such as increased resilience, community cohesion, and public health. Participants used the game to identify co-benefits they valued most. By incorporating familiar imagery and language, Climate Lotería helped build trust and sparked meaningful conversations about climate action.



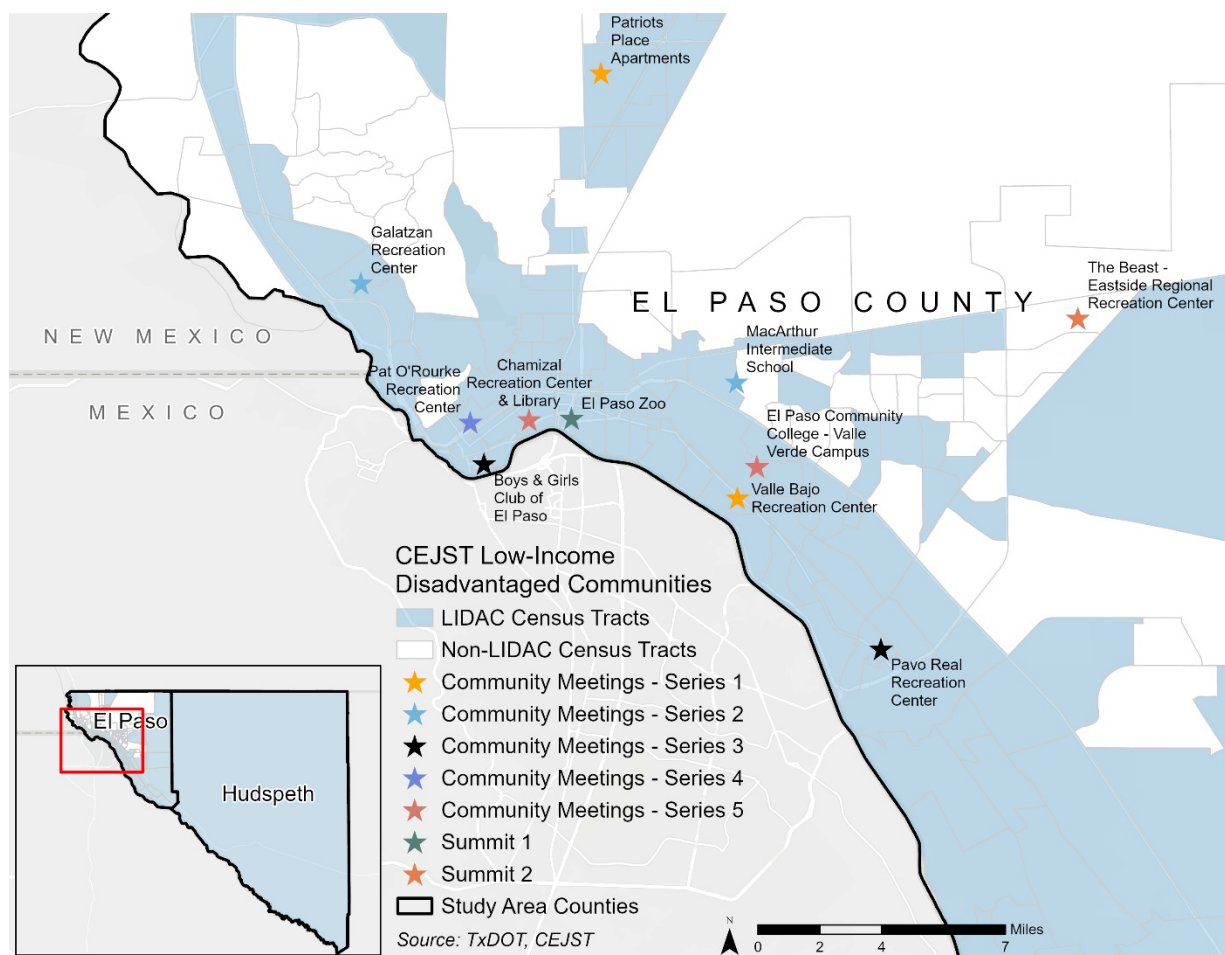


Figure 3. Community Meeting Locations

Figure 3 illustrates that community meetings were held throughout El Paso County, with a notably higher density in the City of El Paso. This includes Community Meetings Series 1 through 5, in addition to two summits held at El Paso Zoo and Eastside Regional Recreation Center. Community meetings and summits were held in ADA-accessible structures and engaged a variety of residents throughout the broader region.

Outcomes

As of June 18, 2025, nearly 2,400 unique community inputs were gathered. See Table 4 for a breakdown of participants by series.

Table 4. Number of People Engaged in the Planning Process

Series	Community Meeting Attendees	Survey Responses
Series 1	97	550
Series 2	124	193
Series 3	139	322
Series 4	102	285
Tailored Survey for Fellow and Promotora-Led Engagement	NA	1,226

Total	462	2,576
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Figure 4 displays the ZIP codes of community meeting attendees, highlighting strong participation from areas that include multiple LIDAC-designated census tracts. Community meetings took place in a variety of centers throughout El Paso County, with attendees originating from ZIP codes throughout El Paso County and Hudspeth County, in addition to neighboring counties in New Mexico. Overall, 32 of 58 ZIP codes in El Paso and Hudspeth Counties were represented in the attendees at community meetings. Many of those ZIP codes overlap with CEJST LIDACs, as indicated in Figure 4.

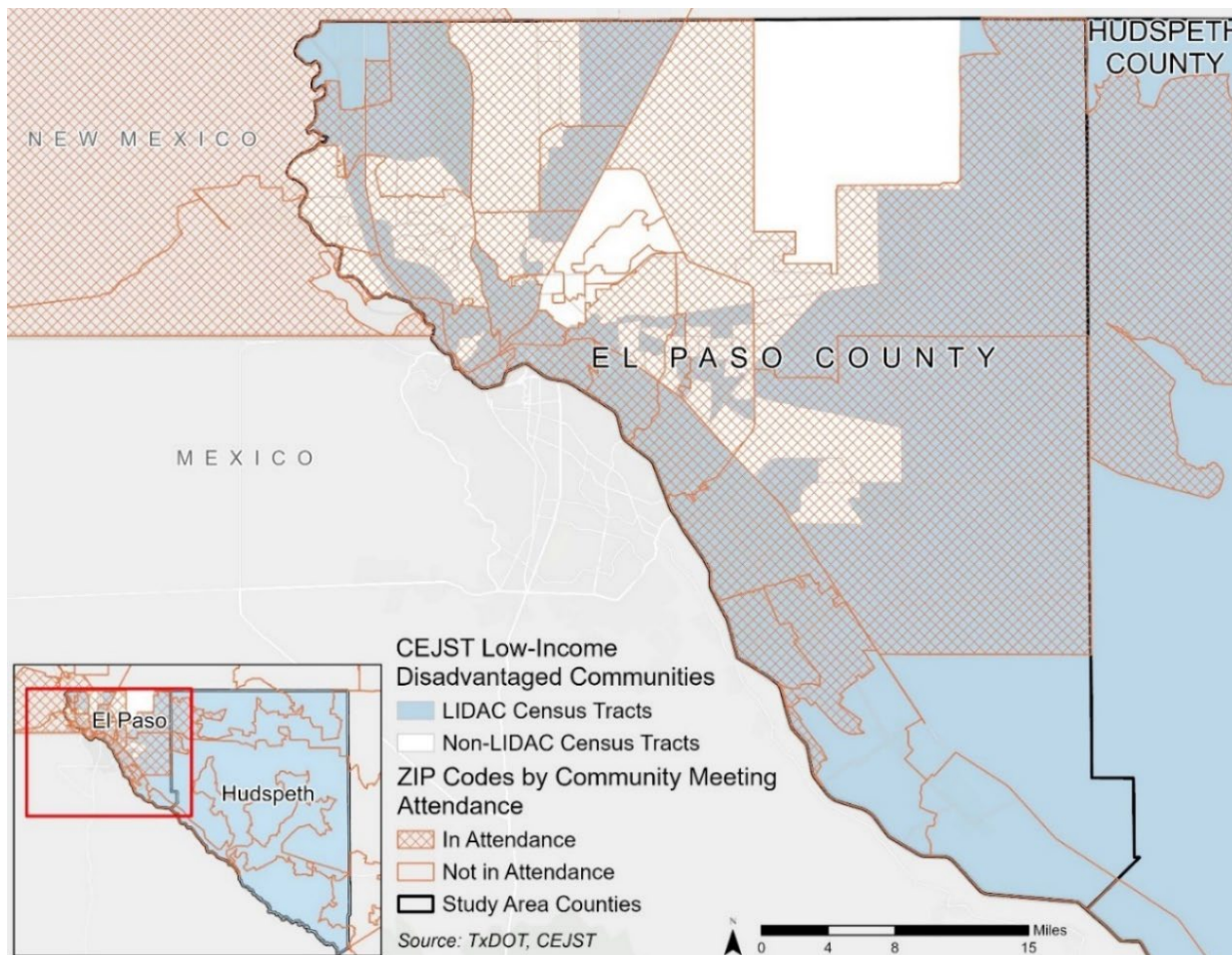


Figure 4. Community Meeting Attendee ZIP Codes

Figure 5 displays the number of survey respondents by ZIP code, highlighting strong participation from areas that include multiple LIDAC-designated census tracts. Several ZIP codes registered over 100 survey respondents, all of which overlap with CEJST LIDACs. These include the following ZIP Codes: 79902, 79912, 79924, 79927, 79928, 79936, and 79938. Overall, 52 ZIP codes throughout El Paso County and Hudspeth County were represented in survey results, of which 38 registered more than one response.

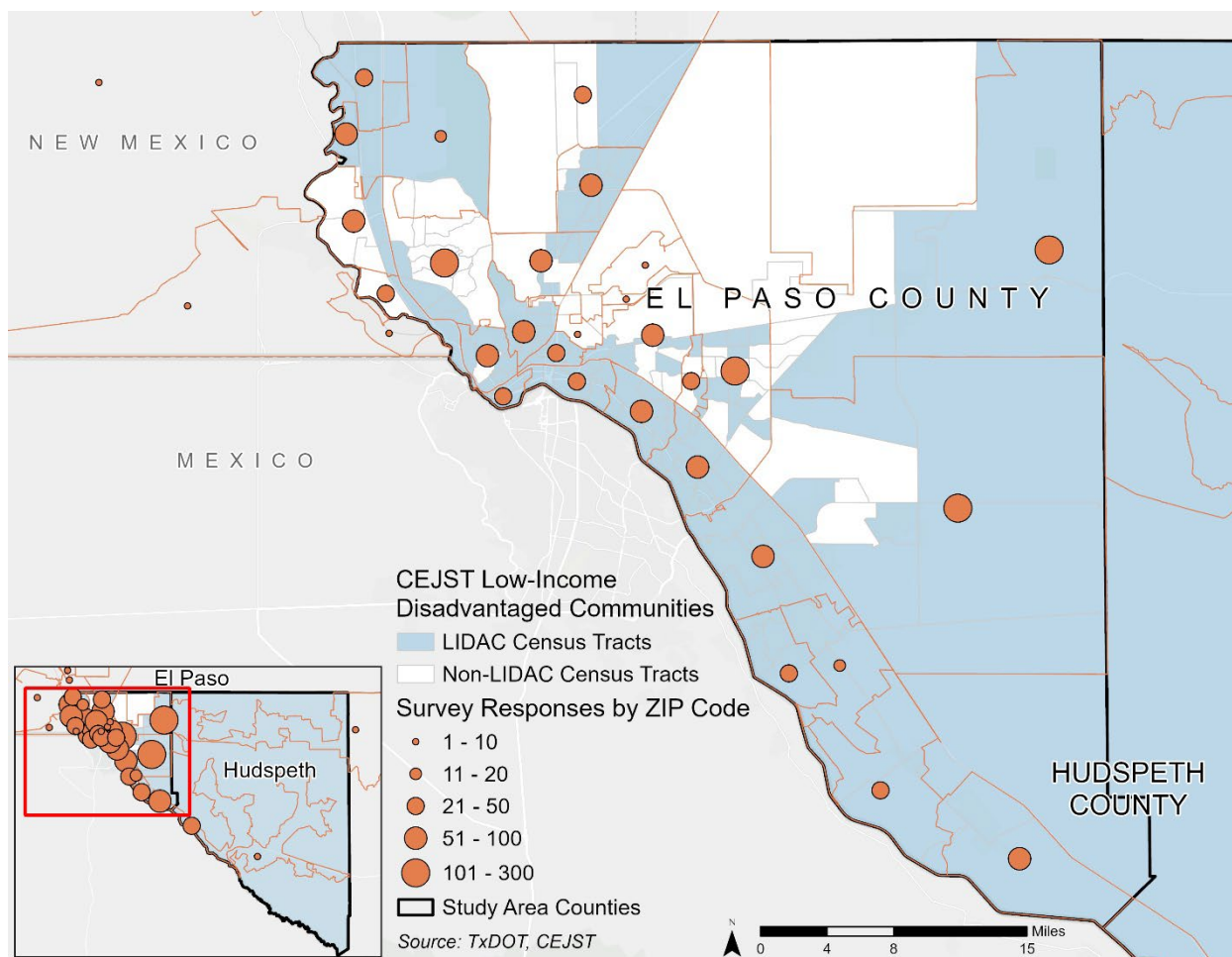


Figure 5. Number of Survey Responses by ZIP Code

Climate Action Summits

The City convened two Climate Action Summits to engage local businesses, nonprofit organizations, academic institutions, and other key partners, and a third is scheduled for August 2025. These summits serve as a platform to strengthen regional collaboration, align stakeholder priorities, and co-develop practical pathways for CAP implementation. The events were also designed to identify resource needs and opportunities to support CAP implementation through cross-sector partnerships.

Summit #1 – February 26, 2025: The first Climate Action Summit brought together more than 85 participants, including community leaders, academic institutions, business representatives, nonprofits, and civic organizations. The event provided a space for attendees to share current sustainability efforts, highlight successful environmental programs, and identify challenges to implementing green practices. The project team delivered an overview of the CAP development process and hosted a Q&A session to encourage dialogue. Participants offered feedback on the proposed measures and discussed how their organizations could support and align with CAP strategies.

Summit #2 – May 7, 2025: The second summit convened over 65 partners to review draft climate goals, public engagement findings, and case studies from regional climate initiatives. Following a brief presentation, participants engaged in an extended, facilitated work session

structured as a series of focus-group-style discussions. Conversations centered on opportunities to implement proposed climate actions, workforce development needs, and strategies to maximize the benefits of climate action for LIDACs.

The third and final Climate Action Summit is currently being planned for August 2025.

CDCC Climate Fellowship

The CDCC Climate Fellowship was established by the City as part of the CAP development process. The fellowship was designed to build local capacity for climate leadership by engaging emerging professionals from across the region. To date, 27 fellows have joined the program and are organized into nine teams, each consisting of three members.

The fellowship offers participants meaningful career-building opportunities in the field of climate action. Fellows contribute directly to the development and implementation of the CAP while gaining hands-on experience in community engagement, sustainability education, and climate-related outreach.

As part of their work, fellows collaborate with local partner organizations including the Frontera Land Alliance, El Paso Community Foundation, Eco El Paso, and various promotora groups. These partnerships help advance community engagement activities, promote climate literacy, and support outreach efforts that are grounded in local priorities and trusted networks.

Promotora Engagement

Promotoras are trained community health workers who serve as trusted messengers within their neighborhoods, particularly in Spanish-speaking and underserved communities. They play a critical role in advancing health equity and community wellbeing by connecting residents with resources and facilitating culturally responsive engagement. As part of the CAP development, the City partnered with the Texas Colonia Program to support targeted engagement in hard-to-reach areas across the region.

Through this partnership, promotoras and CDCC climate fellows carried out localized engagement activities to gather feedback in informal community settings. This approach allowed outreach teams to meet residents where they are (e.g., at community centers, neighborhood gatherings, and places of worship). Input was collected through a tailored survey to better understand local priorities, concerns, and barriers to climate action.

1,225 responses (423 English and 803 Spanish responses) across 62 ZIP codes in El Paso and surrounding areas were collected. The findings highlight that affordability is a central concern for residents, with high energy and water bills identified as the top household cost. Many respondents reported difficulty staying cool indoors due to unsafe temperatures, limited access to air conditioning, and inefficient housing. Financial assistance for utility bills, access to A/C units, weatherization upgrades, and expanded green space were among the most requested solutions.

While most participants had not experienced flooding, those who had reported property damage, transportation disruptions, and mold concerns. Top requests related to flooding included improved drainage, post-flood repair support, and better early warning systems. Homeowners prioritized A/C upgrades, insulation, and solar panel incentives, while renters emphasized the need for landlord participation and tenant protections.

Transportation barriers were also significant, with 89% relying on personal vehicles and many citing limited access to reliable public transit or safe walking and biking infrastructure. Residents expressed strong interest in expanded transportation options, carpooling, and safer sidewalks. Additional themes included demand for lighting, parks, and community gardens. Spanish-

speaking households expressed particularly urgent needs, and promotora outreach was validated as an effective engagement strategy.

These findings point to several clear opportunities for action through the CAP. Specific CAP actions—such as increasing access to energy efficiency upgrades and weatherization programs, expanding shade tree planting and green infrastructure, and improving drainage systems in flood-prone neighborhoods, directly align with community-identified needs. Actions that promote sustainable transportation and improve public transit coverage, sidewalks, and bike lanes can address key mobility barriers, particularly in underserved areas. If piloted and implemented with equity in mind, these actions can improve quality of life, reduce utility burdens, and strengthen household resilience, especially for the most vulnerable communities across the region.

Continued LIDAC Engagement

Following adoption of the CAP, the City and its partners remain committed to ongoing community engagement to guide implementation. Community members, businesses, and organizations will continue to play a vital role in advancing climate solutions through participation in grant-funded projects, program design, and policy feedback. Updates on implementation progress, funding opportunities, and ways to stay involved will be shared regularly on the project website. The website will serve as a central hub for resources, events, and feedback opportunities. This will help to maintain transparency and foster collaboration.

Visit the [EPClimate website](#) to learn more about the engagement activities completed during CAP development.





03

Greenhouse Gas Emission Inventory

Artist: Laura Turon

3. Greenhouse Gas Emissions Inventory

Key Findings

- The El Paso region used 2019 as a GHG inventory base year to reflect pre-COVID “business-as-usual” conditions; the inventory was developed using ICLEI – Local Governments for Sustainability’s (ICLEI’s) ClearPath tool and guidance from the U.S. Community Protocol.
- In 2019, the El Paso region’s gross emissions were 7,572,602 metric tons of carbon dioxide equivalent (MTCO₂e), and net emissions were 7,419,432 MTCO₂e.
- Transportation is the largest emissions source, accounting for 48% of total emissions—mainly from on-road gasoline and diesel use.
- Building energy use (Commercial, Residential, and Industrial Energy sectors) generates 44% of total emissions, with most of these emissions coming from electricity (45%) and natural gas (36%) use.
- Forests and urban trees sequester approximately 2% of gross emissions, lowering net emissions.
- This section summarizes the development methodology and results for the El Paso region-wide comprehensive GHG inventory.

Inventory Methodology

The CAP region-wide GHG inventory includes major emissions sources within El Paso and Hudspeth Counties for calendar year 2019. The CAP GHG inventory is an update of the PCAP simplified GHG inventory and was developed following guidance from ICLEI’s U.S. Community Protocol.⁵ GHG emissions were calculated using a combination of empirical and modeled data in ICLEI’s ClearPath GHG inventory tool; 2019 was selected as the base year because it best represents the most recent year with available data that also reflects “business-as-usual” community activities before the COVID-19 pandemic. The inventory includes the emissions sources presented in Table 5.

Table 5. GHG Emissions Sectors and Activities

Emissions Sector	Activities Included
Transportation	Gasoline and diesel use for on-road car and truck travel; gasoline, diesel, compressed natural gas (CNG), and liquefied petroleum gas (LPG) use in Sun Metro public transit buses; aviation gasoline use at El Paso International Airport and Fabens Airport; diesel use for passenger and freight rail travel; gasoline and diesel use for waterborne pleasure craft; and diesel, gasoline, CNG, and LPG use for other off-road equipment
Residential Energy	Stationary energy use in residential buildings, including electricity, natural gas, propane, and wood fuels

⁵ICLEI. (2024). *U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions*. <https://iclei.org/us-community-protocol/>

Emissions Sector	Activities Included
Commercial Energy	Stationary energy use in commercial buildings, including electricity, natural gas, fuel oil, propane, and wood fuels
Industrial Energy	Stationary energy use in industrial buildings, including electricity*, natural gas*, fuel oil, LPG, and gasoline fuels
Solid Waste	Fugitive emissions from solid waste landfills including the Greater El Paso Landfill, City of El Paso Landfill, Hudspeth County Dell City Landfill, and Hudspeth County Sierra Blanca Landfill
Wastewater	Process emissions from wastewater treatment and effluent discharge**
Process and Fugitive Emissions	Fugitive emissions from natural gas distribution and process emissions from industries, such as hydrogen production, petroleum refining, and iron and steel production
Agriculture	Emissions from livestock enteric fermentation, manure management, agricultural soils, and crop residue burning
Forests and Trees	Emissions and removals from forests and urban trees

**Industrial electricity and natural gas emissions are included in the Commercial sector due to limitations in data disaggregation*

***Electricity and natural gas emissions for water and wastewater treatment are included in the Commercial sector (the Wastewater sector only includes process emissions)*

Some emission sources are excluded from the inventory because they are minor and difficult to estimate, such as emissions from septic systems and composting processes. Additionally, some of the U.S. Army Fort Bliss facility emissions, such as non-utility fuel combustion, were excluded from the inventory because municipalities in the region have little authority to influence these operations. However, Fort Bliss natural gas and electricity use and emissions are reported in the Industrial Energy sector.

The activities included in the inventory produce the following GHGs:

- Carbon dioxide (CO₂)
- Methane (CH₄)
- Nitrous oxide (N₂O)

Activity data and emissions factors were collected for the activities listed in Table 5. The activity data (such as kilowatt-hours [kWh] used per year or miles traveled per year) was then multiplied by activity-specific GHG emissions factors (such as pounds of carbon dioxide produced per kilowatt-hour used) to calculate total GHG emissions produced by that activity. In developing the inventory, the Intergovernmental Panel on Climate Change (IPCC) Assessment Report 5 (AR5) 100-year global warming potential (GWP) values were used to convert the amount of different GHGs to MTCO_{2e}. Calculating GHG emissions typically follows this simplified formula:

Activity Data x Emissions Factor x 100-year GWP = Total Emissions in MTCO_{2e}

Activity data and emissions factors were gathered from various sources as shown in Table 6. Emissions sources were either directly reported, estimated, or downscaled per the “Data Locality Key” below.

Data Locality Key:

- Direct Reporting = Empirical activity data, such as total kWh used in the region, was reported directly from the electric utility
- Estimated = Emissions data was estimated using a bottom-up method and local, state, or national proxy data
- Downscaled = Emissions data was downscaled from state or national data

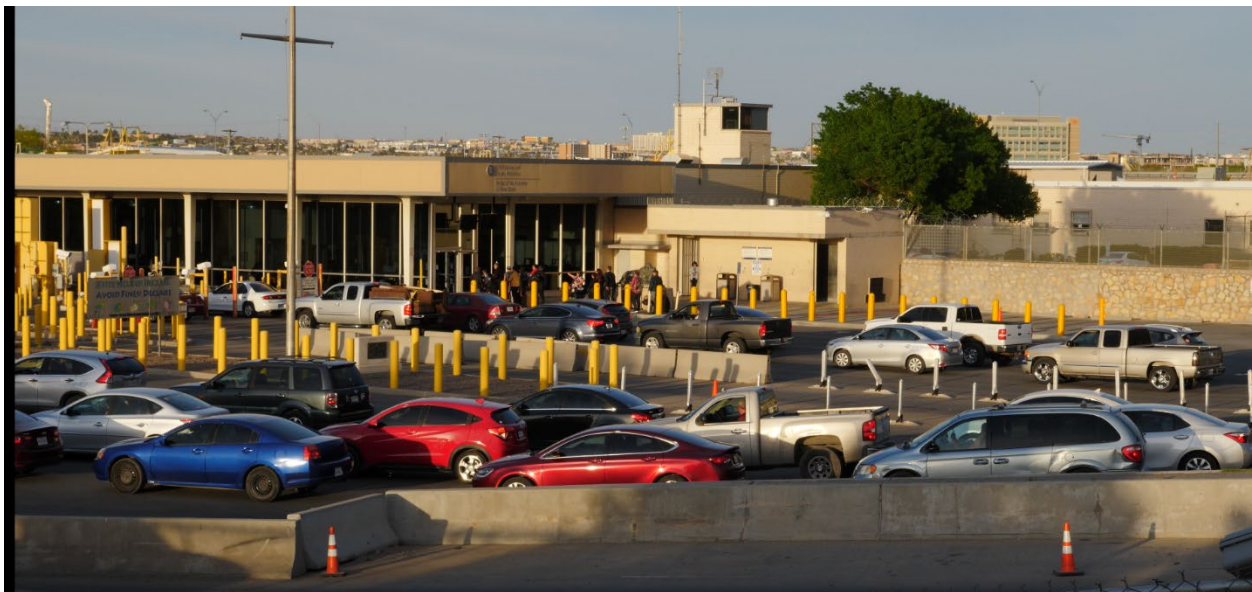


Table 6. GHG Emissions Inventory Data Sources

Emissions Source	Data Locality	Emissions Data Obtained	Emissions Data Source	Emissions Factor Source
On-road Transportation	Estimated	Vehicle miles traveled (VMT) for El Paso County gasoline and diesel vehicles using the origin-destination method (50% inbound, 50% outbound, and 100% in-boundary trips)	Google Environmental Insights Explorer (EIE) 2019 for VMT	ICLEI ClearPath 2019 U.S. National Defaults/U.S. EPA Emission Factor Hub
		VMT for Hudspeth County was estimated using El Paso County VMT per capita multiplied by Hudspeth County population	U.S. Census for population	
		Fuel economy and vehicle and/or fuel types	Fuel economy from Federal Highway Administration, vehicle types from U.S. Environmental Protection Agency (EPA) State Inventory Tool (SIT)	
Public Transit	Direct Reporting	Sun Metro compressed natural gas (CNG), liquefied petroleum gas (LPG) use, and VMT (Sun Metro gasoline and diesel use already included in On-road Transportation)	Sun Metro	ICLEI ClearPath 2019 U.S. National Defaults/U.S. EPA
Pleasure craft, passenger and freight rail, other off-road	Estimated	Greenhouse gas (GHG) emissions per emissions source at the county level	EPA National Emissions Inventory (NEI) 2020	EPA National Emissions Inventory

Emissions Source	Data Locality	Emissions Data Obtained	Emissions Data Source	Emissions Factor Source
Aviation – El Paso International Airport	Estimated	Aviation gasoline gallons per passenger average for U.S. Carriers	Bureau of Transportation Statistics gallons per passenger data	EPA Emission Factors Hub
		El Paso International Airport passengers (only accounted for 50% of total passengers to account for 50% of fuel use from arriving or departing flights)	El Paso International Airport for passenger data Assumed aviation gasoline for all fuel	
Aviation – Fabens Airport	Direct Reporting	Aviation gasoline for domestic passenger flights (gallons)	Fabens Airport	EPA Emission Factors Hub
Electricity*	Direct Reporting	Electricity use in megawatt hours (MWh) per sector	El Paso Electric (EPE) Utility Data 2019	EPE 2019 Corporate Sustainability Report
	Estimated	Average electricity use per household in Texas (kWh per household) Rio Grande Electric Co-op accounts	Energy Information Administration (EIA) data on electricity per household use in 2019 Number of accounts from Rio Grande (assigned all to residential)	EPA eGRID 2019 for Western Electric Coordinating Council (WECC) Southwest subregion
Natural Gas*	Direct Reporting	Natural gas use in therms	Texas Gas	CO ₂ from EPA Emission Factors Hub, CH ₄ /N ₂ O from EPA Climate Leaders, Stationary Combustion Guidance (2008)

Emissions Source	Data Locality	Emissions Data Obtained	Emissions Data Source	Emissions Factor Source
Natural Gas Fugitive Emissions	Estimated	Natural gas use in therms	Texas Gas and default leakage rate from ClearPath	ICLEI ClearPath
Residential and Commercial Propane, Wood, Fuel Oil, Gasoline	Downscaled	Energy use in million British thermal units (MMBtu)	EIA 2019 Data	EPA
Industrial LPG, Distillate Fuel Oil, Propane, Gasoline	Direct Reporting	GHG emissions	EPA Facility Level Information on Greenhouse Gases Tool (FLIGHT) 2019**	EPA FLIGHT 2019
Landfilled Waste	Direct Reporting	Short tons of waste received by each landfill	Texas Commission on Environmental Quality 2019 Report: "Municipal Solid Waste in Texas: A Year in Review"	ICLEI ClearPath/EPA WARM model
	Estimated	Waste characterization	Texas Commission on Environmental Quality "Study on the Economic Impacts of Recycling, Final Report 2017"	
Potable Water Supply Electricity and Natural Gas Use***	Direct Reporting	Energy use in kilowatt-hours (kWh) and therms	Jonathan Rogers Wate Treatment Plant, Kay Bailey Hutchison Water Treatment Plant, Upper Valley Water Plant, Roberston/Umbenhauer Water Treatment Plant	EPE 2019 Corporate Sustainability Report for Electricity CO ₂ from EPA Emission Factors Hub, CH ₄ /N ₂ O from EPA Climate Leaders, Stationary Combustion

Emissions Source	Data Locality	Emissions Data Obtained	Emissions Data Source	Emissions Factor Source
				Guidance (2008) for natural gas
Wastewater Energy Use, Treatment, and Effluent***	Estimated	El Paso wastewater treatment facilities process information (e.g., population served, daily nitrogen load, etc.)	Fred Hervey Water Reclamation Plant, John T. Hickerson Water Reclamation Facility, Haskell R. Street Wastewater Treatment Plant, Roberto Bustamante Wastewater Treatment Plant	ICLEI U.S. Community Protocol
		Hudspeth County population (assumed treatment processes were the same as El Paso)	U.S. Census	ICLEI U.S. Community Protocol
Process Emissions from Industries	Direct Reporting	GHG emissions for industrial facilities emitting over 25,000 MTCO ₂ e/year (includes Marathon El Paso Refinery and Vinton Steel)****	EPA FLIGHT 2019	EPA FLIGHT 2019
Agriculture	Estimated	GHG emissions at county level	United States Department of Agriculture (USDA) SIT Agriculture Module, USDA Census of Agriculture (2017)	USDA SIT Agriculture Module

Emissions Source	Data Locality	Emissions Data Obtained	Emissions Data Source	Emissions Factor Source
Forests and Trees	Estimated	GHG emissions and removals	ICLEI Land Emissions and Removals Navigator (LEARN) Tool	ICLEI LEARN Tool

** Industrial electricity and natural gas emissions are included in the Commercial sector*

***EPA FLIGHT emissions are calculated using AR4 GWPs, not AR5 like the rest of the inventory emissions*

****Though potable water and wastewater electricity and natural gas use information was collected, all energy-related emissions information is included in the Commercial sector*

*****Industrial facilities generating less than 25,000 MTCO₂e/year are not included due to lack of data*

Inventory Results

Emissions inventory totals can be represented as gross emissions or as net emissions. For the EPA's U.S. GHG Inventory, the gross emissions total includes all relevant emissions sources except emissions and removals from Land Use, Land-Use Change, and Forestry (LULUCF), and the net emissions total includes emissions and removals from LULUCF. For the El Paso region GHG inventory totals, gross emissions exclude emissions and removals from Forests and Trees, while net emissions include emissions and removals from Forests and Trees.⁶

In calendar year 2019, the El Paso region's gross emissions were 7,572,602 MTCO₂e and net emissions were 7,419,432 MTCO₂e as shown in Figure 6 and Table 7.

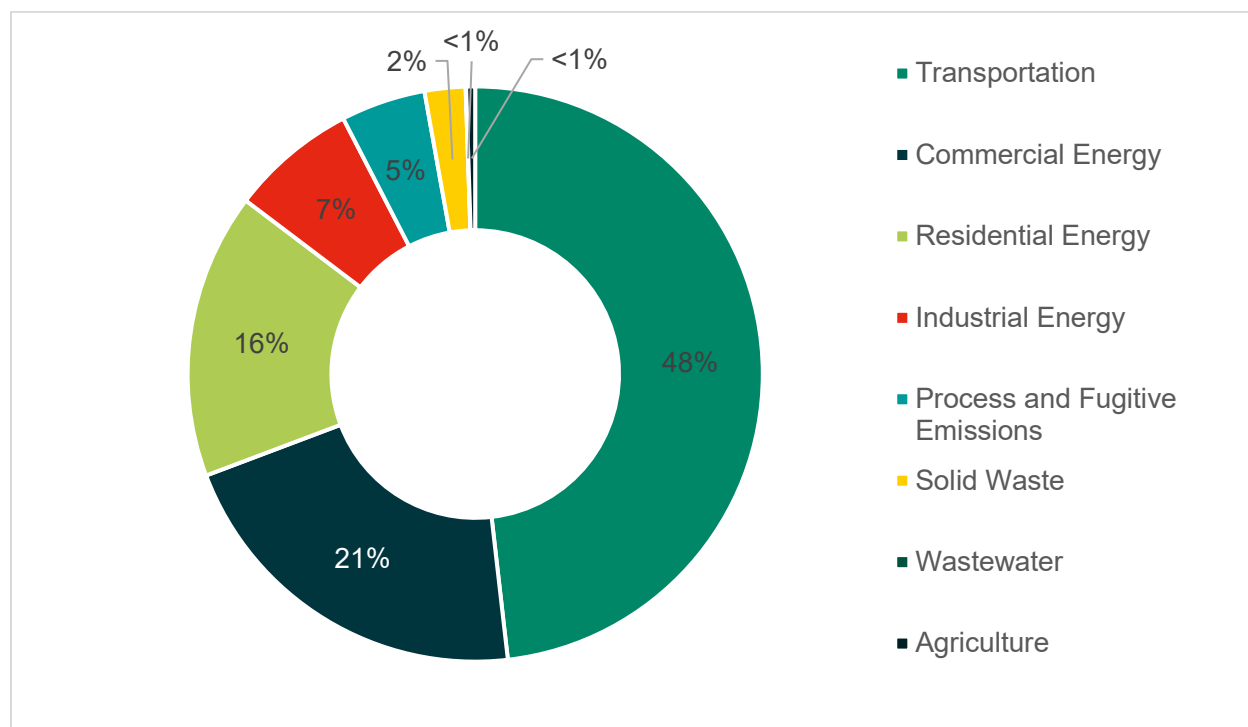


Figure 6. 2019 GHG Emissions by Sector

Table 7. 2019 GHG Emissions Inventory by Sector⁷

Sector	2019 GHG Emissions (MTCO ₂ e)	% of Total Gross Emissions
Transportation	3,648,902	48%
Commercial Energy*	1,595,866	21%
Residential Energy	1,215,221	16%
Industrial Energy*	538,007	7%

⁶ GHG inventories are calculated this way as GHG targets are set on both net and gross basis. Additionally, calculating gross and net emissions helps identify how much emissions an entity is generating versus removing.

⁷ A table of GHG emissions by EPA-specific emissions sectors can be found in Appendix A

Sector	2019 GHG Emissions (MTCO ₂ e)	% of Total Gross Emissions
Process and Fugitive Emissions	360,451	5%
Solid Waste	173,915	2%
Wastewater	2,210	<1%
Agriculture	38,030	<1%
Gross Emissions (Excluding Forest and Trees)	7,572,602	100%
Forests and Tree Emissions	561	NA
Forest and Tree Removals	-153,731	NA
Net Emissions (Including Forest and Trees)	7,419,432	NA
*Commercial and Industrial electricity and natural gas use could not be disaggregated – the associated emissions are included in the Commercial Energy sector		

Table 8 shows GHG emissions by specific activity type (a full inventory by GHG and by EPA emissions sectors is in Appendix A).

Table 8. 2019 GHG Emissions Inventory by Sector and Subsector

Sector and Activity Type	MTCO ₂ e*	% of Gross Emissions
Transportation	3,648,902	48%
On-Road Gasoline, Diesel, compressed natural gas (CNG), and liquefied petroleum gas (LPG)	3,328,855	44%
Aviation Gasoline	267,496	4%
Freight Rail Diesel	39,579	1%
Other Off-road Gas, Diesel, CNG, LPG	11,401	<1%
Passenger Rail Diesel	1,409	<1%
Pleasure Craft Diesel and Gasoline	162	<1%
Commercial Energy	1,595,866	21%
Electricity**	968,833	13%
Natural Gas**	584,090	8%
Distillate Fuel Oil No. 2	26,996	<1%

Sector and Activity Type	MTCO ₂ e*	% of Gross Emissions
Propane/LPG	15,816	<1%
Wood	131	<1%
Residential Energy	1,215,221	16%
Natural Gas	621,835	8%
Electricity	556,660	7%
Propane/LPG	36,004	<1%
Wood	722	<1%
Industrial Energy	538,007	7%
Propane/LPG	536,285	7%
Distillate Fuel Oil No. 2	1,686	<1%
Gasoline	36	<1%
Process and Fugitive Emissions	360,451	5%
Petroleum Refining Processes	249,713	3%
Hydrogen Production Processes	39,669	1%
Fugitive Natural Gas Distribution	39,337	1%
Iron and Steel Production Processes	31,731	<1%
Solid Waste	173,915	2%
Landfilled Waste	173,915	2%
Agriculture	38,030	1%
Livestock Enteric Fermentation, Agricultural Soils, and Manure Management	38,030	1%
Crop Residue Burning	<1	<1%
Water and Wastewater	2,210	<1%
Wastewater Treatment and Discharge	2,210	<1%
Forest and Trees	(153,170)	NA
Forests and Tree Emissions	561	NA
Forest and Tree Removals	(153,731)	NA

Sector and Activity Type	MTCO ₂ e*	% of Gross Emissions
Gross Emissions (Excluding Forest and Trees)	7,572,602	100%
Net Emissions (Including Forests and Trees)	7,419,432	NA

*Totals may not sum due to rounding

**Commercial and Industrial natural gas and electricity use could not be disaggregated – the associated emissions are reflected in the Commercial Energy sector. Additionally, all data center energy use is included in the Commercial Energy sector.

Key findings from GHG inventory development include:

- Most of the region's emissions are from the Transportation sector (48%) and the Commercial, Residential, and Industrial Energy sectors (44%).
- Waste-related emissions from solid waste and wastewater treatment and disposal generate <3% of total emissions.
- Carbon sequestration from forest and trees reduces gross emissions by 2%.
- On-road fuel use from cars and trucks contributes the most to Transportation sector emissions and generates 44% of total emissions.
- Electricity use generates 20% of total emissions, primarily due to the use of fossil fuels to generate electricity for the regional electric grid.
- Natural gas generates 16% of total emissions, and is primarily used for space and water heating, cooking, and industrial processes.
- As the electric and natural gas utilities could not disaggregate industrial electricity and natural gas from the Commercial Energy sector, the industrial electricity and natural gas use and associated emissions are aggregated under the Commercial Energy sector. Therefore, the Commercial Energy emissions appear to be larger and Industrial Energy emissions appear to be smaller than actual.

The inventory reveals which sectors and activities generate most of the region's emissions. Regional emissions are then forecast under a business-as-usual scenario to determine how these emissions sources may change over time and to identify effective climate actions.



04

Greenhouse Gas Emission Projections

Artist: Jesus 'Cimi' Alvarado

4. Greenhouse Gas Emissions Projections

Key Findings

- The business-as-usual emissions projection scenario assumes no new local climate action but integrates existing state and federal policies and market trends.
- In the business-as-usual scenario, gross emissions decrease 44% from 2019 to 2050 and net emissions decrease 45%.
- The decrease in total emissions is mainly due to emissions reductions in the Transportation, Commercial Energy, and Residential Energy sectors.

Emissions Projections Methodology

While the 2019 inventory provides a snapshot of the region's GHG emissions, it is important to understand how GHG emissions may change in the future. The El Paso region's 2019 GHG emissions were projected to 2050 under a "business-as-usual" scenario for which existing state and national legislation and market trends were considered, but assuming the El Paso region will not take further action to reduce emissions. For each emission source, the activity data and/or emissions factors were assigned growth indicators (see Table 9).

Table 9. El Paso Region GHG Forecast Growth Indicators

Emission Source/Emission Factor	Growth Indicator	Source of Growth Indicator
Electricity Emissions Factor	El Paso Electric (EPE) Electricity Emission Factor Projection	EPE Corporate Sustainability Reports
On-Road Transportation Emissions Factors	Transportation Corporate Average Fuel Economy (CAFE) standards	ICLEI/Center for Climate and Energy Solutions
Transportation Electric Vehicle (EV) Adoption	EV adoption rates for Texas	Rocky Mountain Institute's Energy Policy Simulator
On-Road, Aviation, Rail, Waterborne, and Off-Road Fuel Use	El Paso County Population Growth Rate*	City of El Paso/U.S. Census
Residential and Commercial Energy Use	El Paso County Population Growth Rate*	City of El Paso/U.S. Census
Industrial Energy Use	No Change	NA
Natural Gas Fugitive Emissions	El Paso County Population Growth Rate*	City of El Paso/U.S. Census
Industrial Process Emissions	No Change	NA
Solid Waste Tonnage	El Paso County Population Growth Rate*	City of El Paso/U.S. Census

Emission Source/Emission Factor	Growth Indicator	Source of Growth Indicator
Wastewater Population Served	El Paso County Population Growth Rate*	City of El Paso/U.S. Census
Agriculture Emissions	No Change	NA
Forest and Trees Emissions	No Change	NA
<i>* Hudspeth County population growth had minimal or negligible impact compared to El Paso County</i>		

Emissions were held constant for the Industrial Energy, Industrial Processes, Agriculture, and Forest and Tree sectors because those activities were not expected to change significantly and/or appropriate growth indicators were not available. The Transportation sector forecast integrates the impacts of population growth on travel, federal Corporate Average Fuel Economy (CAFE) standards on vehicle fuel efficiency, and additional electric vehicle (EV) adoption impacts from federal programs and funding. Additionally, the electricity emissions factor was forecast using El Paso Electric's (EPE's) goals of 80% clean energy by 2035 and 100% clean energy by 2045. This forecast assumes that all electricity provided to the El Paso region from EPE will produce zero GHG emissions in 2045. After the growth indicators were collected, the emissions forecasts were developed using ICLEI USA's ClearPath tool.

Emissions Projections Results

Table 10 shows GHG emissions projections from 2019 to 2030 and 2050, and the percent change in emissions from 2019 to 2050.

Table 10. El Paso Region GHG Projections

Sector	2019 GHG Emissions (MTCO ₂ e)	2030 GHG Emissions (MTCO ₂ e)	2050 GHG Emissions (MTCO ₂ e)	% Change 2019-2050
Transportation	3,648,902	2,813,829	1,646,782	-55%
Commercial Energy*	1,595,866	1,295,764	694,607	-56%
Residential Energy	1,215,221	1,060,002	729,532	-40%
Industrial Energy*	538,007	538,007	538,007	No Change
Process and Fugitive Emissions	360,451	362,720	364,690	1%
Solid Waste	173,915	183,949	192,657	11%
Wastewater	2,210	2,338	2,448	11%

Sector	2019 GHG Emissions (MTCO ₂ e)	2030 GHG Emissions (MTCO ₂ e)	2050 GHG Emissions (MTCO ₂ e)	% Change 2019-2050
Agriculture	38,030	38,030	38,030	No Change
Gross Emissions (Excluding Forests and Trees)	7,572,602	6,294,639	4,206,754	-44%
Forests and Tree Emissions	561	561	561	No Change
Forest and Tree Removals	(153,731)	(153,731)	(153,731)	No Change
Net Emissions (Including Forests and Trees)	7,419,432	6,141,469	4,053,584	-45%
* Commercial and Industrial electricity and natural gas use could not be disaggregated; the associated emissions are included in the Commercial Energy sector				

Gross emissions (excluding Forests and Trees) decreased 44% from 2019 to 2050 and net emissions (including Forests and Trees) decreased 45%. This is mainly due to emissions reductions in the Transportation, Commercial Energy, and Residential Energy sectors. Transportation emissions decreased 55% due to the assumed increase in market-driven EV adoption in Texas and an increase in new vehicle fuel efficiency. Commercial and Residential Energy emissions decreased 40% to 56% due to EPE producing 100% clean energy by 2045, meaning that any electricity used in these sectors will produce zero GHG emissions by 2050.

These results show that if the El Paso region does not take any further climate action, regional emissions could be reduced by approximately half by 2050. This information was then used to inform regional GHG reduction targets and climate action development.

The background of the entire page is a photograph of two large, weathered concrete pyramids. The pyramid on the left is a reddish-brown color, while the one on the right is a darker, greyish-brown. Both structures show signs of aging and cracking. They are set against a clear blue sky with some wispy clouds. Power lines are visible in the background, stretching across the sky. The overall composition is a low-angle shot, making the pyramids appear imposing and monumental.

05

Greenhouse Gas Reduction Targets

Artist: Janet Lofquist

5. Greenhouse Gas Reduction Targets

Key Takeaways

- The CAP establishes an ambitious target and a localized reduction target for the region. The ambitious target is based on scientific best practices, and the localized target represents the reductions that can be achieved if El Paso fully implements the climate actions outlined in this CAP.
- The ambitious target is 50% emissions reduction below 2019 levels by 2030 and net zero by 2050.
- The localized GHG reduction target is 21% emissions reduction below 2019 levels by 2030 and 67% by 2050.
- The CAP actions alone will not meet the ambitious target without significant external support, such as from state and federal governments, as major emission sources fall partly or entirely outside the control of local or regional governing bodies.

The United Nations IPCC—the leading international body for assessing climate science—noted that more severe climate impacts could be avoided if global warming were limited to 1.5 degrees Celsius (°C) (or 2.7 degrees Fahrenheit [°F]) above pre-industrial levels. To achieve this, global anthropogenic CO₂ levels need to decrease by at least 45% from 2010 levels by 2030 and reach net zero (i.e., balance the emissions produced and removed from the atmosphere) by 2050.

In line with scientific best practice, the El Paso region developed an ambitious, regional GHG reduction target to address the warming effect that will have significant consequences on the health and wellbeing of its people and future generations. As the El Paso region does not have a 2010 baseline of emissions to align with the IPCC base year, the 2019 GHG inventory was used because it represents the most recent year with available data that also reflects “business-as-usual” community activities before the COVID-19 pandemic. The regional ambitious target is as follows:

Ambitious GHG Reduction Target

1. Reduce economy-wide gross emissions 50% below 2019 levels by 2030
2. Reach net-zero economy-wide emissions by 2050

The top-down nature of the ambitious global target established under IPCC guidance means it may not be achievable given its aggressive nature nor fully applicable to the local governments’ sphere of influence. For example, many emissions sources may be outside of the region’s direct control, such as from industrial activities. El Paso recognizes the importance of setting actionable, achievable targets alongside the ambitious target to demonstrate progress in mitigating climate change and ensure these targets are representative of the local context. To do so, the region has used a bottom-up approach to model the GHG reductions of CAP actions and set targets based on those potential reductions. The localized target therefore represents the cumulative emissions reduction the El Paso CAP actions can achieve in 2030 and 2050. The localized target is as follows:

Localized GHG Reduction Target

1. Reduce economy-wide gross emissions 21% below 2019 levels by 2030
2. Reduce economy-wide gross emissions 67% below 2019 levels by 2050

Table 11 and Figure 7 display the region's business-as-usual emissions, ambitious target emissions trajectory, and localized target emissions trajectory.

Table 11. GHG Reduction Targets Projected Emissions (MTCO₂e)

Projected Gross Emissions	2019	2030	2050
Business-as-usual	7,572,602	6,294,639 (17% below 2019)	4,206,754 (44% below 2019)
Ambitious Target	7,572,602	3,786,301 (50% below 2019)	Net Zero
Localized Target	7,572,602	5,966,787 (21% below 2019)	2,534,440 (67% below 2019)

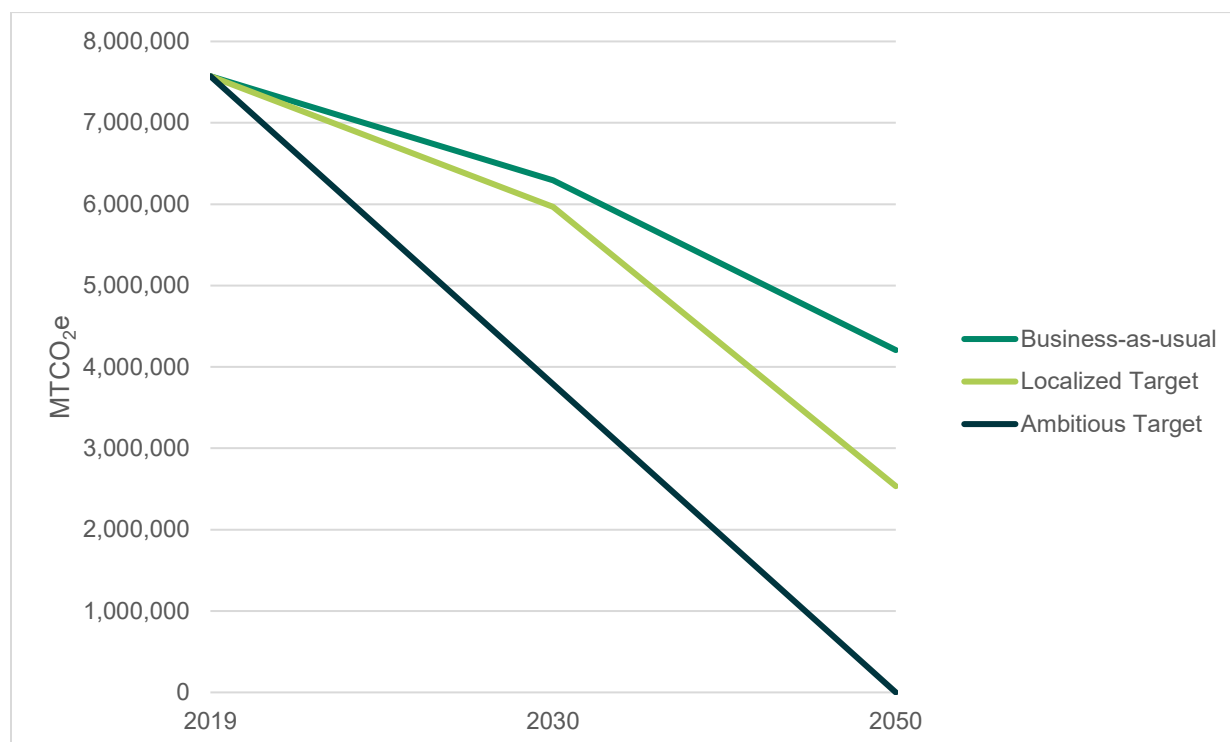


Figure 7. GHG Reduction Targets

Because the localized target was established by summing all the CAP action GHG reductions, it also represents the region's action implementation scenario, or the GHG levels that could be reached if all CAP actions were implemented. Under this scenario, the region will reach a 21% reduction compared to 2019 levels by 2030 and a 67% reduction by 2050. As the ambitious reduction target is 50% by 2030 and net zero by 2050, the CAP actions alone will not meet the ambitious targets. This outcome is common in local and regional climate action planning for which most major emission sources fall partly or entirely outside the control of local or regional governing bodies. Therefore, the GHG reduction gap between the localized target/CAP action

implementation scenario and ambitious target requires additional action from regional, state, and/or federal partners.

If all CAP actions are implemented, most 2050 remaining emissions would be from the Transportation (26%), Commercial Energy (21%), and Industrial Energy (18%) sectors. These sectors are more challenging for local governments to decarbonize because they lack regulatory authority over private vehicle purchasing decisions and commercial/industrial processes. For example, not all ports of entry can be influenced by El Paso regional governments; the federal government and City of Juárez also exert regulatory and authoritative control over some ports in the region. Therefore, the El Paso region will need to acquire additional external partnerships and assistance to address these remaining sectors and meet the net zero target.

See Appendix A for a detailed methodology on developing the action/localized target GHG reductions.





06

Co-Pollutant Inventory and Projections

Artist: Mitsu Overstreet

6. Co-pollutant Inventory and Projections

Key Findings

- Co-pollutants include criteria air pollutants (CAPs) and hazardous air pollutants (HAPs) regulated under the Clean Air Act.
- The El Paso region's 2019 co-pollutant inventory is based on EPA's 2017 National Emissions Inventory (NEI).
- The largest co-pollutant sources are highway vehicles, off-highway equipment, and natural sources like vegetation and soils.
- Co-pollutant emissions are projected to decline through 2050.

Co-pollutants include CAPs and HAPs.⁸ The Clean Air Act requires the EPA to set National Ambient Air Quality Standards (NAAQS) for CAPs which include carbon monoxide, lead, ground-level ozone, nitrogen dioxide, particulate matter, and sulfur dioxide. These pollutants are found all over the United States and can harm public health, the environment and cause property damage. HAPs are other pollutants beyond the six CAPs that are known or suspected to cause cancer and other health effects, as well as adverse environmental effects. There are almost 200 HAPs, including benzene, formaldehyde, and methylene chloride.

Data on co-pollutant emissions generated in El Paso and Hudspeth Counties was gathered from the EPA's 2017 NEI. The NEI is based primarily on data provided by state, local, and tribal air agencies for sources in their jurisdictions and supplemented by data developed by the EPA. These 2017 activities serve as a proxy for 2019 base year activities because it is the latest year prior to 2019 for which data is available. The co-pollutants quantified in the NEI also include CAP precursors such as volatile organic compounds—a precursor to ozone—and ammonia—a precursor to particulate matter (levels of ozone and lead are not included in the NEI).

Emissions of CAPs were quantified for various activities including building fuel combustion, electricity generation, vehicle travel, and industrial processes, among others. HAP emissions were quantified for electricity generation and airport activities. A summary of the El Paso region's 2019 co-pollutant emissions is included in Table 12 and Figure 8 shows 2019 co-pollutant emissions by activity. Most co-pollutant emissions are generated by activities associated with highway vehicles, natural resources such as vegetation and soils, and off-highway vehicles and equipment.

Table 12. El Paso Region 2019 Co-pollutant Emissions

Co-Pollutants	Short Tons
Ammonia (NH ₃)	2,383
Carbon Monoxide (CO)	72,083
Nitrogen Oxides (NO _x)	19,105
Particulate Matter (PM ₁₀)	14,299
Particulate Matter (PM _{2.5})	2,718

⁸ U.S. Environmental Protection Agency. (n.d.). *Criteria air pollutants*. <https://www.epa.gov/criteria-air-pollutants>

Co-Pollutants	Short Tons
Sulfur Dioxide (SO ₂)	2,205
Volatile Organic Compounds (VOCs)	49,699
Hazardous Air Pollutants (HAPs)	46

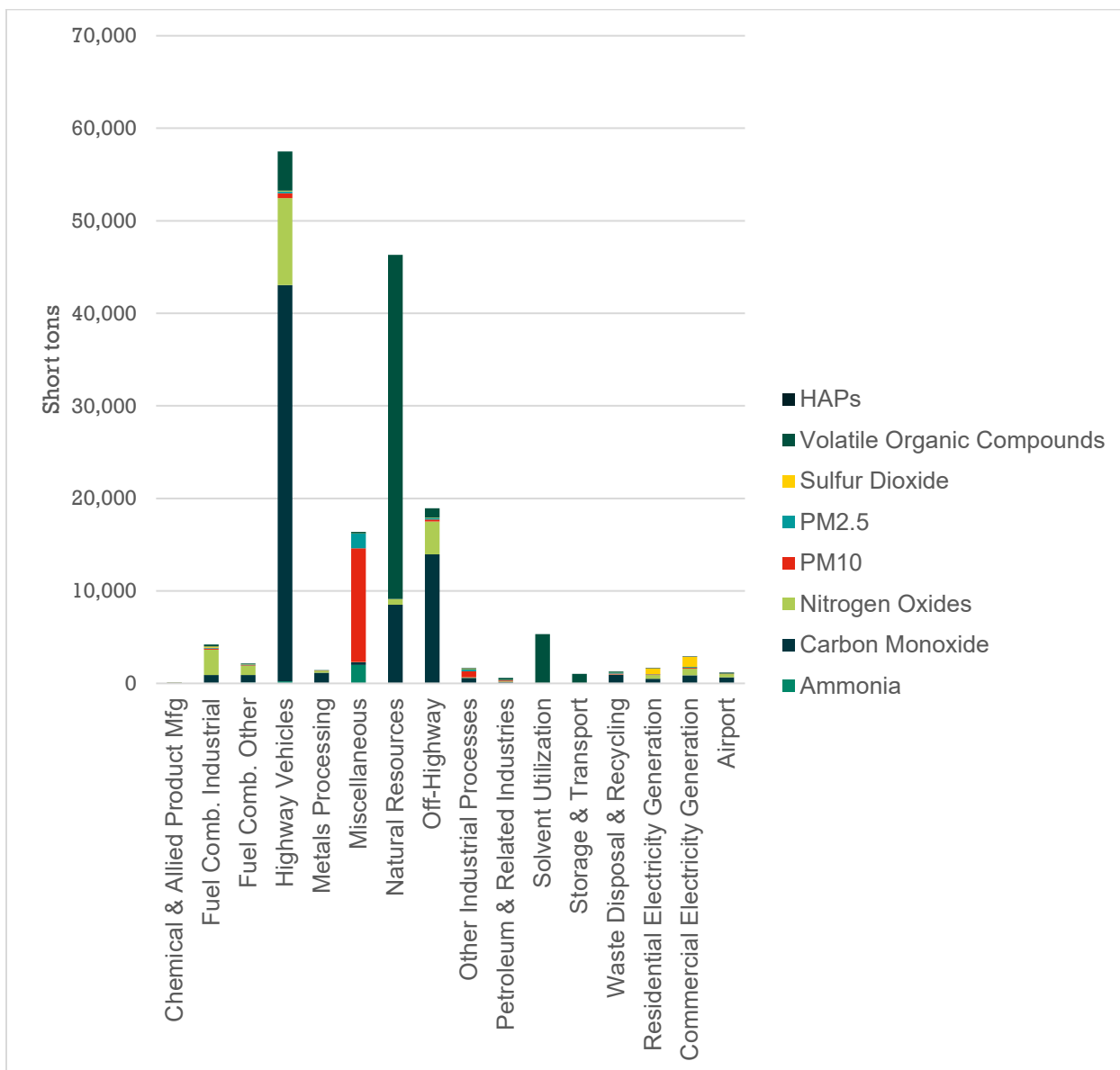


Figure 8. 2019 Co-pollutant Emissions by Activity⁹

Business-as-usual co-pollutant projections are based on the forecasted change in activity associated with the source of the co-pollutant or a proxy for that activity (e.g., change in vehicle

⁹ Miscellaneous emissions include “Non-Industrial Not Included Elsewhere” emissions such as agricultural silage, cremation, and residential charcoal grilling.

miles traveled or population). The co-pollutant activities and growth indicators are listed in Table 13. The co-pollutant activities that have “No Change” as their growth indicator, such as industrial activities, are not expected to change significantly or applicable growth indicators were not available.

Table 13. Co-pollutant Activities and Growth Rates

Activity	Growth Indicators
Chemical and Allied Product Manufacturing	No Change
Fuel Combustion Industrial	No Change
Fuel Combustion Other*	El Paso County Population Growth
Highway Vehicles	El Paso Region Vehicle Miles Traveled Growth Rates, Transportation Corporate Average Fuel Economy (CAFE) Standards, Texas EV Adoption Rates
Metals Processing	No Change
Miscellaneous	No Change
Natural Resources	No Change
Off-Highway*	El Paso County Population Growth
Other Industrial Processes	No Change
Petroleum & Related Industries	No Change
Solvent Utilization	No Change
Storage and Transport	El Paso Region Vehicle Miles Traveled Growth Rates
Waste Disposal and Recycling*	El Paso County Population Growth
Electricity Generation – Residential**	EPE Electricity Emissions Factor Projection, El Paso County Population Growth
Electricity Generation – Commercial**	EPE Emissions Factor Projection, El Paso County Population Growth
Electricity Generation – Industrial**	No Change
Airport*	El Paso County Population Growth

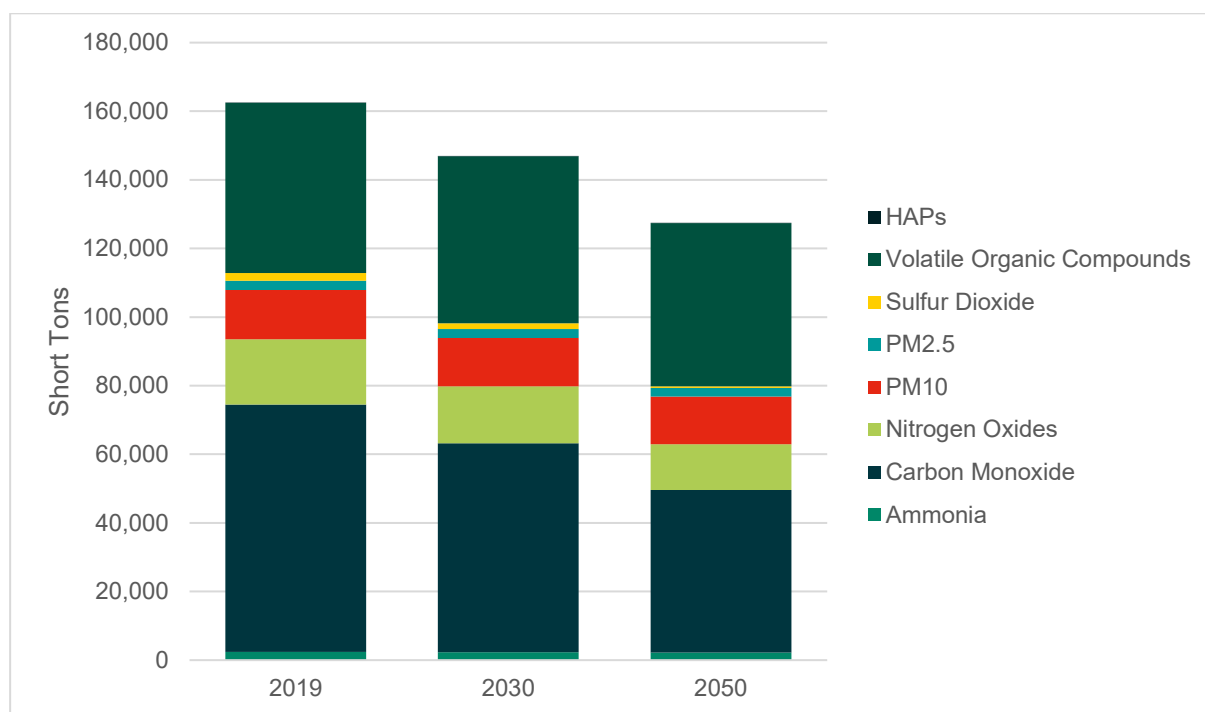
* Hudspeth County population growth had minimal/negligible impact compared to El Paso County

** This accounts for all co-pollutants generated due to in-region electricity use, even if co-pollutants are produced outside of the region

Using the growth indicators in Table 13, co-pollutant emissions were forecast from 2019 to 2050 as shown in Table 14 and Figure 9.

Table 14. El Paso Region Co-pollutant Forecasts

Co-Pollutant	2019	2030	2050
Ammonia	2,383	2,316	2,226
Carbon Monoxide	72,083	60,941	47,405
Nitrogen Oxides	19,105	16,521	13,258
Particulate Matter (PM)10	14,299	14,133	13,905
PM2.5	2,718	2,639	2,530
Sulfur Dioxide	2,205	1,642	475
Volatile Organic Compounds	49,699	48,734	47,625
Hazardous Air Pollutants (HAPs)	46	29	34

**Figure 9. El Paso Region Co-pollutant Forecasts**

Quantified estimates of co-pollutant reductions associated with each CAP action are included in the Climate Actions chapter. Appendix B presents the Climate Action co-pollutant reduction methodology.



07

Climate Vulnerability Assessment

Artist: Creative Kids, Inc.

7. Climate Vulnerability Assessment

Key Takeaways

- Extreme heat and drought are the most widespread and severe climate hazards, impacting nearly all asset types and communities in the region.
- 90% of critical facilities (e.g., schools, medical centers, and community centers) are highly vulnerable to extreme heat, posing risks to health and service delivery.
- Transportation infrastructure is most vulnerable to heat and flooding, with over 70% of roadways and 65% of railways vulnerable to extreme heat and 23% of bridges vulnerable to flooding.
- Socially vulnerable communities, including LIDACs and Ysleta del Sur Pueblo, are nearly universally vulnerable to heat (96%) and drought (100%).
- Flooding risk is rising, with the 100-year floodplain projected to nearly double in size by 2050, threatening infrastructure like bridges and ports of entry.
- Recreational areas and natural spaces are highly vulnerable to heat (88%) and drought (73%), impacting public health, habitats, biodiversity, and quality of life.
- Despite projected climate vulnerabilities, both existing and recommended resilience strategies (e.g., flood planning, drought contingency, and urban heat island studies) offer a solid foundation for adaptation. See the Climate Actions chapter to find all strategies to increase resilience.

The El Paso region is facing increasing threats from climate change hazards, with recent severe flooding in 2021, an extended drought between 2020 and 2022, and record-breaking heat waves in 2023. These hazards disproportionately impact low-income and socially vulnerable communities, who may have lower capacity to respond to and recover from unexpected shocks. This chapter summarizes the climate vulnerability assessment conducted for the CAP, with the full assessment provided in Appendix C: Vulnerability Assessment .

Climate vulnerability describes the degree to which physical and socioeconomic systems are susceptible to the impacts of climate change. This assessment identifies specific infrastructure assets and communities most likely to be impacted by climate hazards, including flooding, extreme heat, drought, wildfire, and wind. It also serves as the basis for developing climate adaptation actions.

Climate Hazards

As a result of rising GHG emissions, average global temperatures are warming, leading to both increased heat as well as secondary impacts such as more extreme precipitation, drought, inland flooding, and heightened wildfire risk in El Paso. Based on past climate hazards in the El Paso region and stakeholder feedback, the CAP selected the following hazards for evaluation in the vulnerability assessment.

Flooding. Flash flooding poses a significant threat to the El Paso region. Historically (1976 to 2005), El Paso has received approximately 8 inches of rainfall annually.¹⁰ This rain is often delivered in intense bursts, with 2 to 4 inches falling in a 2-hour period. These storms can lead

¹⁰ NOAA. (2023). Climate Mapping for Resilience and Adaptation (CMRA). Accessed July 2023. <https://resilience.climate.gov/>

to flooding in areas with outdated stormwater infrastructure or steep slopes, which accelerate runoff and erosion. Past events, such as the 2006 flood that caused over \$200 million in property damage and \$115 million in damages to the stormwater system, highlight the region's vulnerability.¹¹ Future projections indicate that the frequency of intense precipitation events will increase, which could lead to more extreme flooding.¹² The 100-year floodplain in El Paso County is expected to nearly double in size by 2050.¹³

Extreme heat. Extreme heat is already a major concern and is projected to worsen over the next several decades. While the region regularly experiences triple-digit temperatures, recent summers have broken records for consecutive hot days and peak electricity demand, leading to increases in heat-related emergencies and death.^{14,15} Vulnerable populations, including the elderly and low-income residents, are particularly at risk. Extreme heat can damage pavements, increase energy costs, lead to power outages, increase water demand, and heighten wildfire risk. By mid-century (2036–2065), the number of days exceeding 100°F is expected to more than triple, from 17 days to 55 days annually. Temperatures in El Paso have already begun to exceed model projections, however, with 70 days over 100 in 2023, further emphasizing the need to prepare communities and infrastructure for extreme heat.¹⁶

Drought. Drought conditions are expected to become more frequent and severe, straining water supplies in a region experiencing rapid population growth. El Paso relies on both surface water from the Rio Grande and groundwater from the Hueco-Mesilla and Bolson aquifers.¹⁷ Recent prolonged droughts have reduced surface water availability, leading to greater dependence on groundwater extraction.¹⁸ Legal disputes over Rio Grande water rights and declining snowpack in upstream regions further complicate supply reliability.^{19,20} By mid-century (2036–2065), the region is projected to experience longer dry spells, with an average of 57 consecutive dry days annually, up from 50 historically.

Wildfire. El Paso and Hudspeth Counties experience occasional wildfires, most recently in 2023 with 3,500 acres burned along the El Paso-Hudspeth County line. Wildfire risk in the region is moderate but increasing. While more common in open grasslands, wildfires in the Wildland-Urban Interface pose a greater threat to people and property, especially as drought and extreme heat create favorable conditions for fire spread. By mid-century (2040–2069), the region is expected to experience 95 days annually with high wildfire danger, a 30% increase from historical averages.²¹ Smoke from nearby fires can also degrade air quality and visibility.

¹¹ Climate Crisis Advisory Committee. (2023). Climate Crisis Advisory Committee Framework.

https://escobar.house.gov/uploadedfiles/ccac_framework.pdf

¹² NOAA. (2023). Climate Mapping for Resilience and Adaptation (CMRA). Accessed July 2023. <https://resilience.climate.gov/>

¹³ Texas Water Development Board. (2023). 2023 Upper Rio Grande Regional Flood Plan.

https://www.twdb.texas.gov/flood/planning/plans/2023f/doc/R14_MainReport.pdf

¹⁴ The Rockefeller Foundation, 100 Resilient Cities. (2017). Resilient El Paso.

<https://www.elpasotexas.gov/assets/Documents/CoEP/Community-Development/Community-Development-Block-Grant/City-of-El-Paso-Resilience-Strategy.pdf>

¹⁵ Climate Crisis Advisory Committee. (2023). Climate Crisis Advisory Committee Framework.

https://escobar.house.gov/uploadedfiles/ccac_framework.pdf

¹⁶ National Weather Service. (nd). El Paso's 100 degree days FAQ. https://www.weather.gov/epz/elpaso_100_degree_page

¹⁷ EPWater. (2024b). *Drought Contingency Plan*. https://cdnsm5-hosted.civiclive.com/UserFiles/Servers/Server_6843404/File/Conservation/Drought%20Contingency%20Plan%201.pdf

¹⁸ EPWater. (2024a). 2024 Water Conservation Plan. https://cdnsm5-hosted.civiclive.com/UserFiles/Servers/Server_6843404/File/Conservation/2024%20Water%20Conservation%20Plan.pdf

¹⁹ Climate Crisis Advisory Committee. (2023). Climate Crisis Advisory Committee Framework.

https://escobar.house.gov/uploadedfiles/ccac_framework.pdf

²⁰ Raymond, N. (2024, June 21). U.S. Supreme Court rejects states' settlement over Rio Grande waters. Reuters.

<https://www.reuters.com/legal/government/us-supreme-court-rejects-states-settlement-over-rio-grande-waters-2024-06-21/>

²¹ Hegewisch, K.C. and Abatzoglou, J.T. (n.d.). 'Climate Mapper' web tool. Climate Toolbox <https://climatetoolbox.org>

Wind. El Paso and Hudspeth Counties frequently experience high or extreme wind events, such as dust storms and straight-line windstorms. However, future projections for extreme wind events are limited, as they are determined by local topography and short-term weather. Because climate models do not provide projections for wind gusts, the climate vulnerability assessment evaluated average maximum wind speeds based on available data. According to this data, El Paso and Hudspeth Counties will experience an average of 10.8-mile-per-hour maximum daily winds by mid-century (2046–2065). High winds can threaten public safety, damage property and infrastructure, exacerbate wildfire risk, decrease visibility, and cause power outages.

Local Dust Storms – Dust storms in the El Paso region have historically caused air quality challenges in addition to limiting visibility. The region saw intense drought and record-breaking extreme heat in 2023 and 2024, and dust storms have increased significantly over the last few years. In just the first several months of 2025, El Paso suffered nearly 24 hours of “brownout” dust storm conditions, compared to 23.5 hours total from 2000 to 2021. Dust storms have wide-reaching economic effects, including disrupting road transport, reducing electricity generation at solar farms, and interfering with manufacturing facilities.

Vulnerability Assessment Methodology

The El Paso CAP evaluated the vulnerability of transportation infrastructure, critical facilities, water and wastewater infrastructure, recreational areas, natural spaces, and socially vulnerable communities, which are all considered assets. The vulnerability assessment included asset data provided by the City of El Paso, El Paso Water (EPWater), other towns in El Paso County, and other sources such as the Texas Department of Transportation (TxDOT).

To assess future climate exposure, the CAP uses mid-century projections (approximately 2035–2064) for climate hazards under the representative concentration pathway (RCP) 8.5 scenario. These projections model the future extent and severity of extreme heat, drought, precipitation, wildfire, and wind under the RCP 8.5 scenario, which closely simulates the current global trajectory of increased GHG emissions and population growth. RCP 8.5 illustrates a worst-case plausible future, which is often used in climate adaptation planning as industry best practice to help understand extreme conditions, identify vulnerabilities, and minimize potential risks. For flooding, the assessment used historical data from Federal Emergency Management Agency’s (FEMA’s) Flood Insurance Rate Maps, which deploy sophisticated flood mapping techniques to identify areas with a 1% and 0.2% annual chance of flooding, referred to as the 100- and 500-year floodplains, respectively. To determine climate vulnerability, the CAP first assessed projected hazard exposure, which uses geospatial analysis to evaluate how likely each individual asset will be exposed to each climate hazard. Next, the assessment also evaluated sensitivity, which is a rating of how likely each type of asset (e.g., roadways, hospitals, or community centers) is likely to be damaged or disrupted by each climate hazard type. The vulnerability assessment also considers adaptive capacity, or the ability of each asset type to respond to, adjust, or repair itself to reduce damage, which is used to adjust sensitivity. Finally, exposure and sensitivity (both converted into a score) are combined using the equation below to derive vulnerability scores for each asset and hazard combination. For the full methodology, please see Appendix C: Vulnerability Assessment.

$$\text{Vulnerability} = \text{Exposure} \times \text{Sensitivity}$$

Key Vulnerability Assessment Findings

This section summarizes the key vulnerabilities of assets to climate hazards. For selected asset types, maps depict the number of hazards to which an asset is highly vulnerable, which can identify vulnerability hot spots.

Transportation Assets

The vulnerability assessment evaluated the climate vulnerabilities of the El Paso region's multi-modal transportation network, including roadways, railways, bike lanes, bus stops, bus routes, bridges, ports of entry, and the El Paso International Airport. Across all asset types, extreme heat and flooding consistently emerged as the most significant threats. In contrast, vulnerabilities to drought, wildfire, and wind were generally low, suggesting that future adaptation efforts should focus primarily on enhancing resilience to heat and flood-related risks.

More than 70% of roadways, 65% of railways, and the El Paso International Airport are highly vulnerable to **extreme heat**. Most bike lanes and bus routes, which share similar characteristics as roadways, are also highly vulnerable to extreme heat. Prolonged exposure to extreme heat can lead to asphalt rutting and shoving, pavement blowups, railway buckling, and expansions of bridge expansion joints.

Figure 10 depicts the number of hazards to which roadway segments in El Paso County are highly vulnerable. Most roadway segments are highly vulnerable to only one hazard (typically extreme heat) or no hazards, but roads in some areas, including northwest El Paso, a small strip between the Franklin Mountains and Fort Bliss, and along the U.S.-Mexico border, have high vulnerability to two hazards, generally heat and flooding.

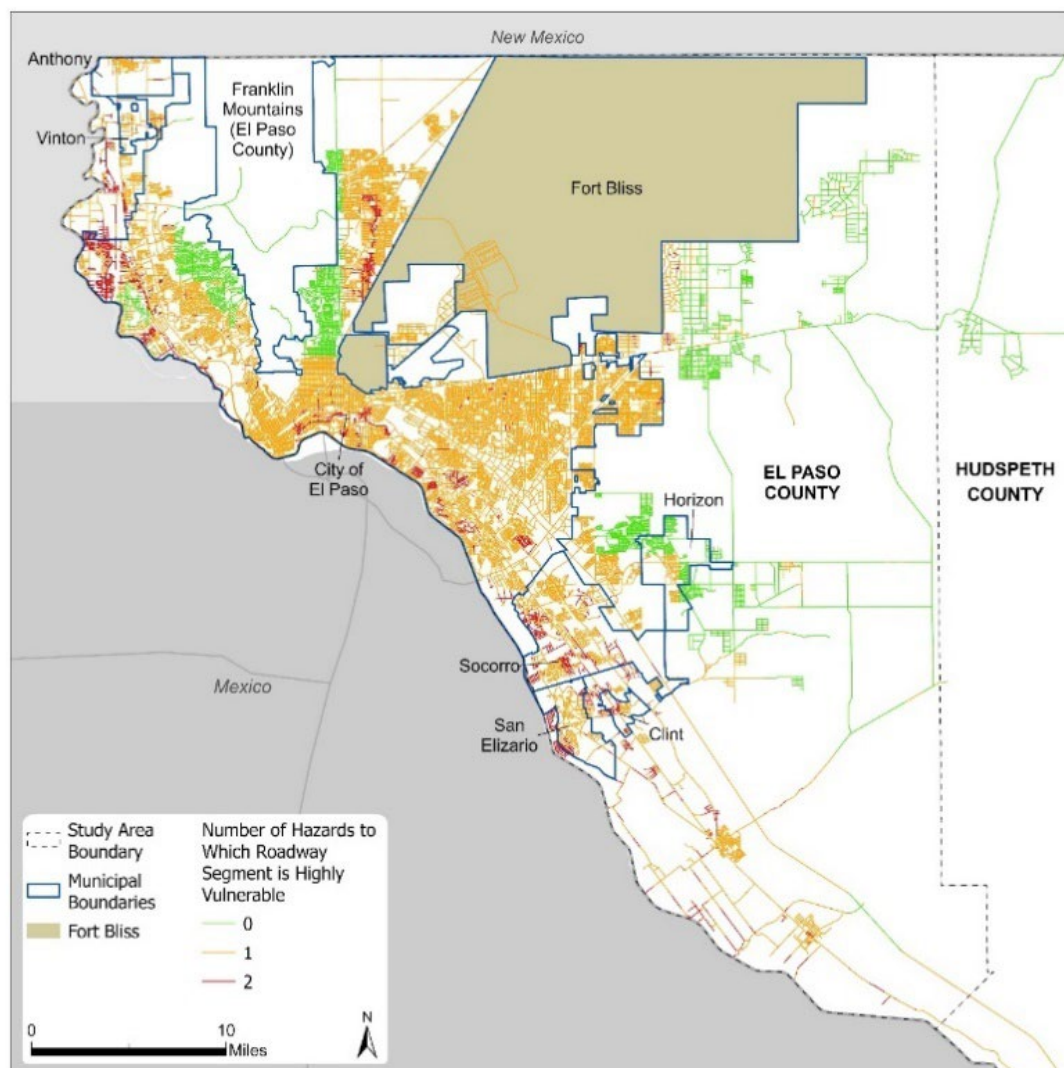
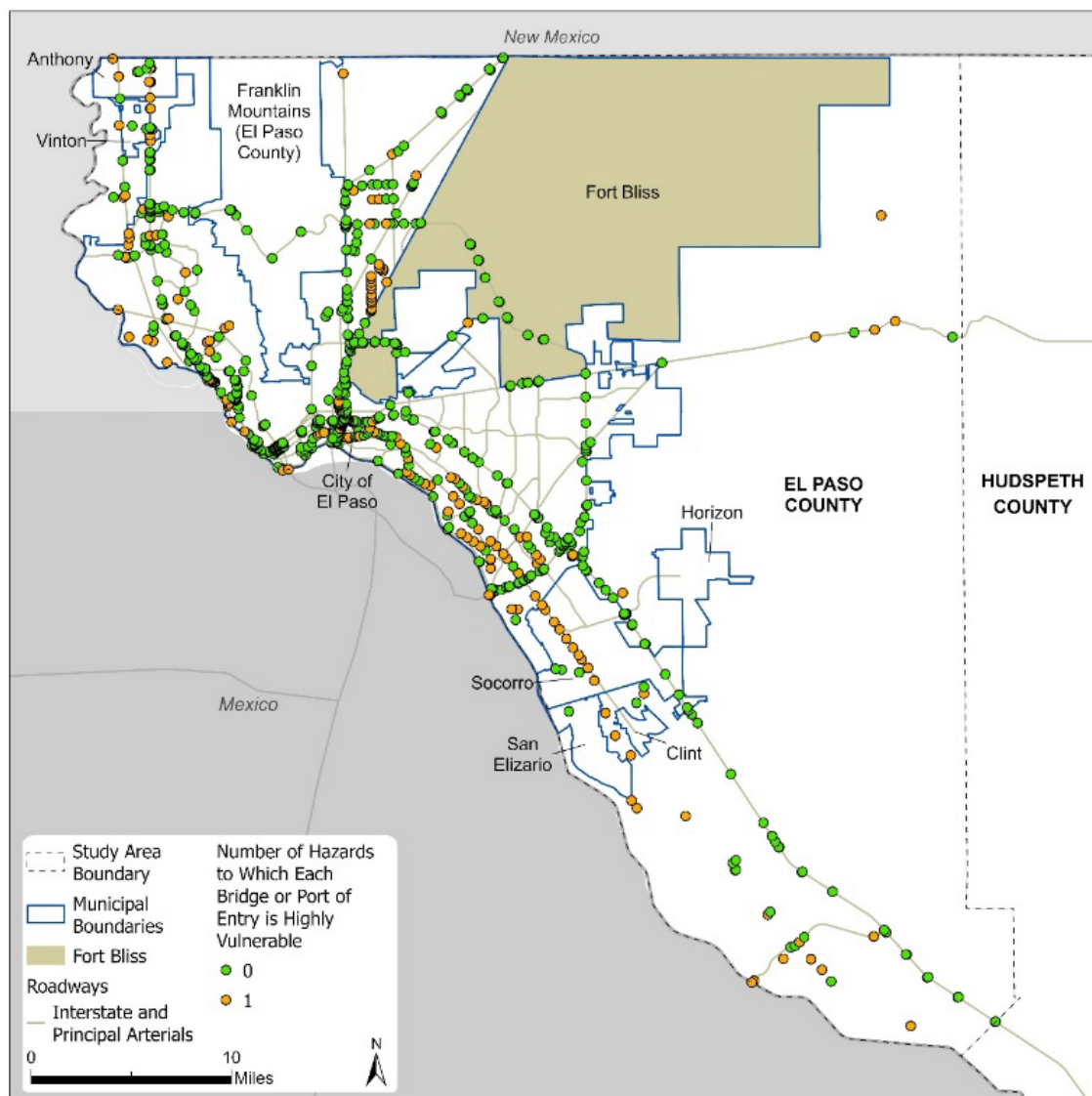


Figure 10. Highly Vulnerable Roadways

Bridges in the region are primarily threatened by **flooding**, with 23% rated as highly vulnerable. Four out of six ports of entry along the U.S.-Mexico border are also highly vulnerable to flooding, largely due to their location within the Rio Grande floodplain. However, the actual vulnerability for both may be overstated, as the assessment did not have elevation data for bridges or ports of entry. Bridge deck elevation data can improve the accuracy of flood exposure assessments by identifying bridges that are higher than the projected flood depth.

Figure 11 depicts the number of hazards to which bridges and ports of entry in El Paso County are highly vulnerable. Clusters of vulnerable bridges are found near the western borders with Mexico and New Mexico, and between the Franklin Mountains and Fort Bliss.

Figure 11. Highly Vulnerable Bridges or Ports of Entries



Critical Facilities

Critical facilities in the El Paso region encompass a wide range of essential services and infrastructure, including schools, community and senior centers, medical centers, clinics, hospitals, municipal buildings, police stations, and fire stations. Across all categories, critical facilities exhibit high vulnerability to climate hazards, particularly extreme heat and drought.

Approximately 90% of all critical facilities are highly vulnerable to **extreme heat**, which can lead to power outages, affect the performance of building mechanical and electrical equipment, increase electricity use, and affect occupant health and safety. Extreme heat can also affect student learning and academic performance, making it critical to address heat resilience for schools through improved building designs and cooling systems. As community centers, senior

centers, libraries, and recreation centers often serve as formal or informal cooling centers or evacuation sites, strategies to increase their resilience will also be important.

About 80% of critical facilities are highly vulnerable to **drought**, which can reduce water availability for cooling (e.g., by evaporative and swamp coolers), sanitation (especially important for medical facilities), irrigation, firefighting, and other activities.

Only a small number of schools, medical facilities, community centers, senior centers, libraries, and recreational centers are highly vulnerable to flooding and wildfire, which can significantly damage or destroy buildings. However, as shown in Figure 12, many critical facilities are highly vulnerable to multiple hazards. Several areas, most notably Central El Paso and the West Valley, Valley Creek South, and Valley Creek North neighborhoods, emerge as hot spots where facilities face high vulnerability to three climate hazards. These findings highlight the urgent need for strategies to build the resilience of critical facilities to extreme heat and drought.

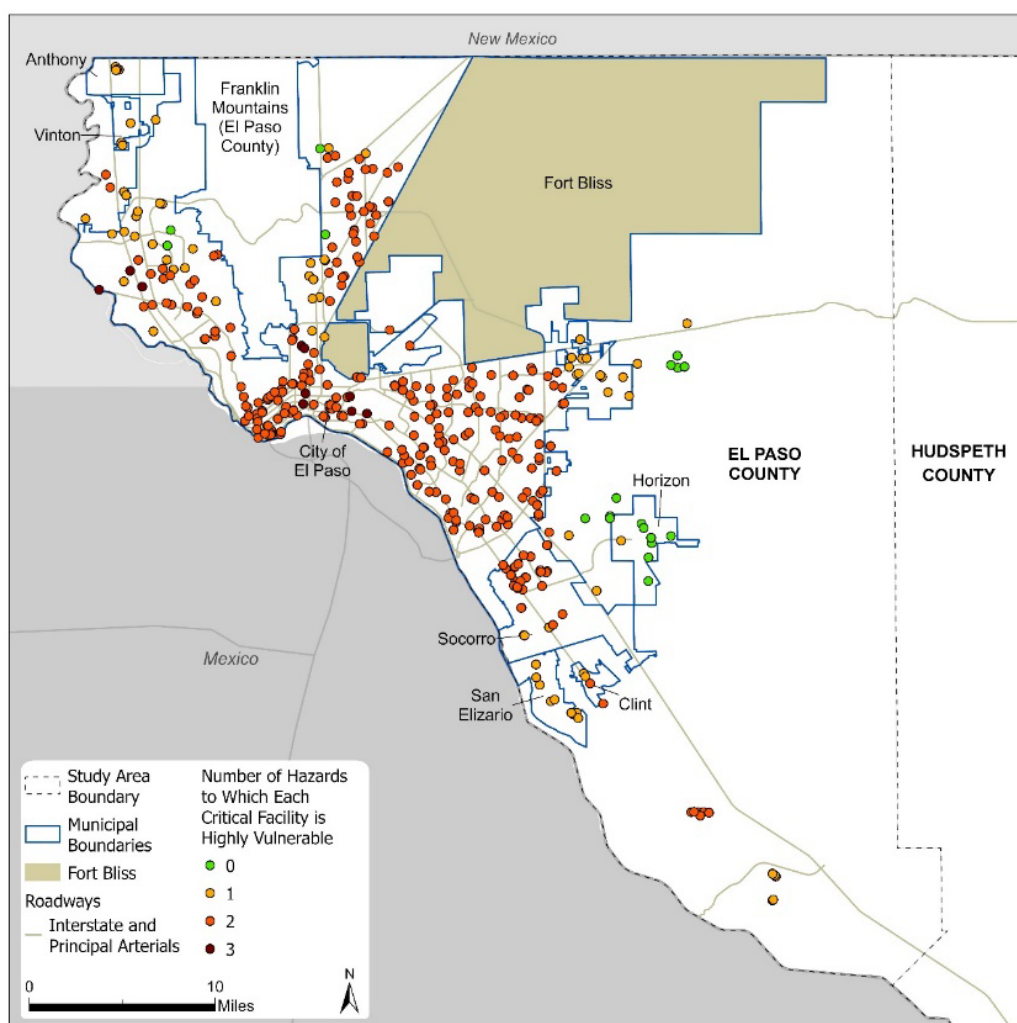


Figure 12. Highly Vulnerable Critical Facilities

Water Utilities

The CAP evaluated the climate vulnerabilities of utility assets critical to the production, distribution, and collection of water resources in the El Paso region. These include EPWater

facilities, sewer lift stations, water booster stations, wastewater treatment plants, water treatment and desalination plants, sewer mains, water mains, and storm conduits. Figure 13 depicts utility facilities and water mains that are highly vulnerable to climate hazards.

All EPWater facilities, all wastewater treatment plants (four total), all water treatment and desalination plants (four total), and 87% of sewer lift and water booster stations are highly vulnerable to extreme heat. Heat can increase wear and tear on pumps, motors, and other equipment, potentially increasing maintenance costs and accelerating replacement schedules. It can also result in loss of power, potentially disrupting operations, and increase water and wastewater treatment costs. Two out of seven (29%) of EPWater facilities, 16% of sewer lift stations and water booster stations, 10% of sewer mains, 10% of water mains, and 14% of storm conduits have high vulnerability to flooding. Flooding can damage equipment and buildings, contaminate water, and cause overflows at wastewater treatment plants. Generally, water utility infrastructure has low or no vulnerability to wildfire, due to low exposure to wildfire risk, and wind, which is unlikely to damage or disrupt their functions.

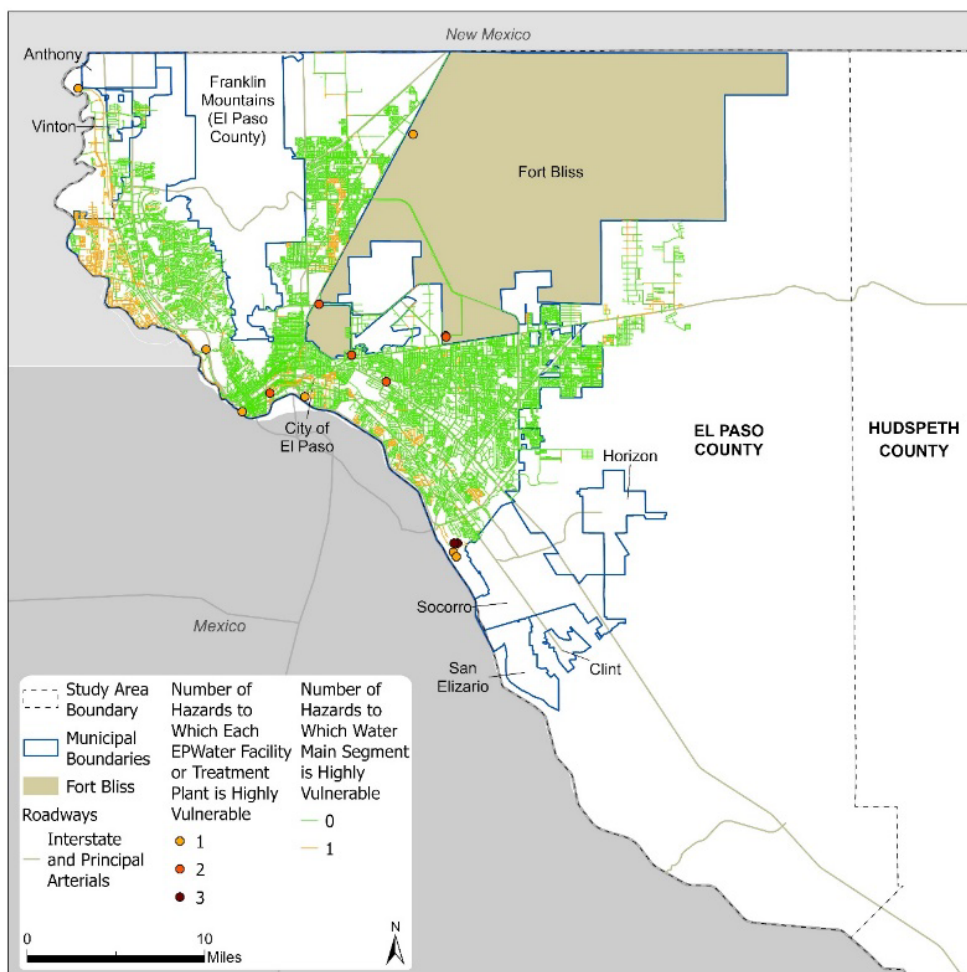


Figure 13. Highly Vulnerable Water Utility Facilities and Water Mains

Socially Vulnerable Communities

The CAP evaluated climate vulnerability of socially vulnerable communities, which includes both Ysleta del Sur Pueblo (YDSP) and LIDAC communities. Almost all (96%) socially vulnerable communities are highly vulnerable to extreme heat, and all are highly vulnerable to drought. Approximately 8% of socially vulnerable communities are highly vulnerable to flooding. Figure 14 depicts the number of hazards to which socially vulnerable communities are highly vulnerable. Most communities are highly vulnerable to two hazards: extreme heat and drought. Several communities between the Franklin Mountains and Fort Bliss and between Interstate 10 and the Mexico border are highly vulnerable to three hazards. Although not depicted on the map, Hudspeth County is considered a socially vulnerable community and is highly vulnerable to three hazards: extreme heat, drought, and wildfire.

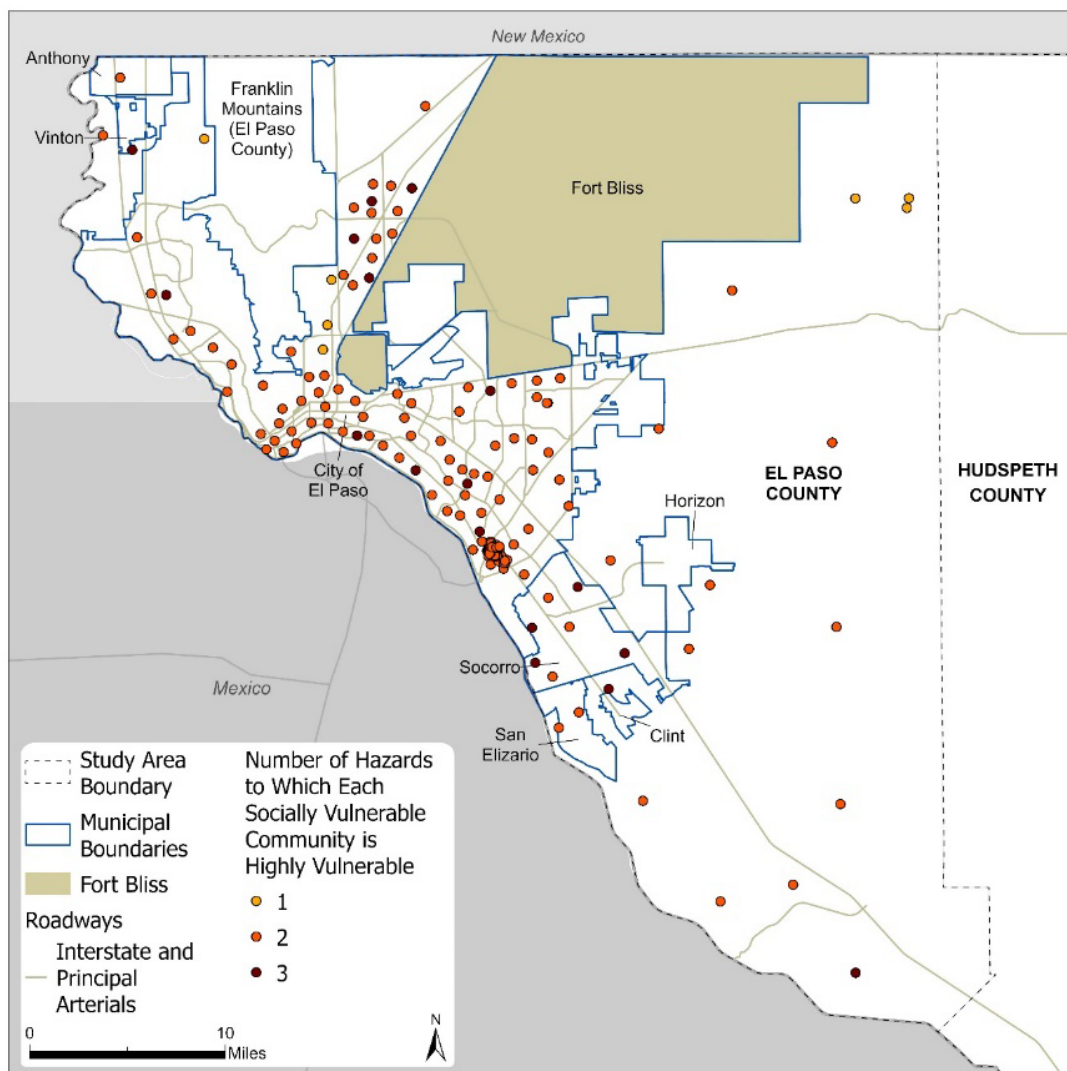


Figure 14. Socially Vulnerable Communities That Are Highly Vulnerable

Socially vulnerable communities are highly sensitive to the impacts of drought, such as increased air-borne dust causing respiratory issues, reduced water and food availability, and the risk of wells running dry for communities such as colonias without connections to municipal

water systems. Drought not only reduces water supply but in combination with heat, can increase dust storms, which disproportionately affect residents who work outdoors or rely on public transit or active transportation. Extended droughts can impact the agricultural economy and lead to loss of employment for farm workers.

Extreme heat is a significant risk for socially vulnerable communities, who are more likely to live in aging housing, lack air conditioning, and work outdoors. The elderly, children, pregnant people, people who are socially isolated, and people with preexisting health conditions are especially vulnerable to extreme heat, which can lead to heat illness, kidney disease, and heat stroke. Construction and agricultural workers are also heightened risk of exposure to extreme heat due to a lack of safety regulations at the state and federal level.

Furthermore, socially vulnerable communities often have lower capacity to adapt to climate hazards and may lack financial resources to improve housing energy efficiency, install or upgrade air conditioning systems, or carry out repairs. Energy affordability is a major issue, particularly for low-income residents during periods of extreme cold and extreme heat. As summers become hotter, low-income households may face challenging decisions between cooling their homes and other expenses, with critical implications for public health. The lack of nighttime cooling at home can be particularly dangerous, as it creates cumulative stress for the human body, especially for people who work for extended periods outdoors or in unconditioned spaces.²²

Poverty also makes it challenging for community members to respond to, evacuate from, and rebound after climate or extreme weather events, which often disproportionately impact communities experiencing poverty.²³ For instance, the 2006 major storm and flooding hit the Lincoln Park neighborhood in Central El Paso particularly hard. This neighborhood is considered a low-income disadvantaged community with a median household income of \$29,400, compared to El Paso County's median household income of \$59,000.²⁴ Because much of post-disaster recovery is targeted toward homeowners, renters and other socially vulnerable communities are more likely to experience disparities in receiving disaster assistance and compensation.²⁵

A limitation of this analysis is that socially vulnerable communities are represented as points rather than polygons, which can obscure spatial variation in climate hazard exposure across the communities. The CAP uses the exposure value at the center point of each LIDAC census tract or YDSP community, rather than the entire polygon. Although this approach simplifies vulnerability results, the overall trend of the findings—that almost all socially vulnerable communities are also highly vulnerable to extreme heat and drought—holds true across the El Paso region. To address these challenges, adaptation action implementation should prioritize the needs of socially vulnerable communities.

²² World Health Organization. Heat and health. (2024.) <https://www.who.int/news-room/fact-sheets/detail/climate-change-heat-and-health>

²³ The Rockefeller Foundation, 100 Resilient Cities. (2017). Resilient El Paso. <https://www.elpasotexas.gov/assets/Documents/CoEP/Community-Development/Community-Development-Block-Grant/City-of-El-Paso-Resilience-Strategy.pdf>

²⁴ American Community Survey. (2023). US Census Bureau. https://data.census.gov/profile/El_Paso_County,_Texas?q=050XX00US48141

²⁵ Center for American Progress. How FEMA Can Prioritize Equity in Disaster Recovery Assistance. (2022). <https://www.americanprogress.org/article/how-fema-can-prioritize-equity-in-disaster-recovery-assistance/>

Recreational Areas and Natural Spaces

This vulnerability assessment includes 348 recreational areas and natural spaces, primarily parks. More than 88% of recreational areas and natural spaces in the study area are highly vulnerable to extreme heat, and 73% are highly vulnerable to drought. Only 5% of areas adjacent to and within the Franklin Mountains are highly vulnerable to wildfire.

Figure 15 depicts the number of hazards to which recreational areas and natural spaces are highly vulnerable. Recreational areas and natural spaces closer to the center of the City of El Paso have high vulnerability to two or more hazards, while those farther away are generally highly vulnerable to only one hazard.

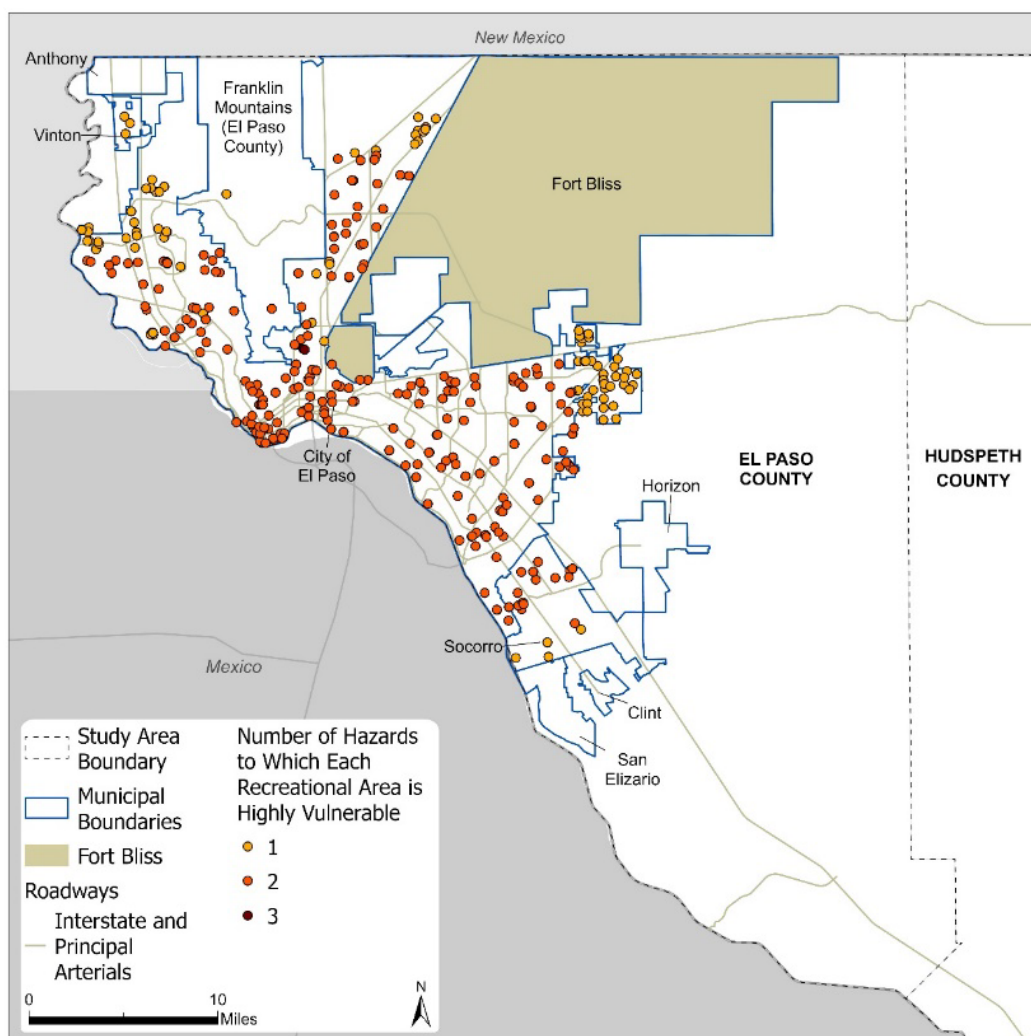


Figure 15. Highly Vulnerable Recreational Areas and Natural Spaces

Natural Resources

The El Paso region is part of Texas's Trans-Pecos ecoregion. Natural resources in the region include:

- Natural areas: Franklin Mountains State Park, Hueco Tanks State Park, Rio Bosque Wetlands Park, Featherlake Wildlife Sanctuary, Knappland Nature Preserve, Wakeem/Teschner Nature Preserve of Resler Canyon, and Guadalupe Mountains National Park^{26,27}
- Land types: Plains, valleys, mountains, and wetlands
- Vegetation: Chihuahuan Desert species including red berry juniper, tarbush, and various cacti²⁸
- Water resources: Rio Grande and Hueco-Mesilla and Bolson aquifers²⁹
- Animal species: More than 500 species of birds, mule deer, squirrels, coyotes, and mountain lions³⁰

Natural resources are important to the region because they provide essential ecosystem services and sustain the livelihoods and wellbeing of local communities. Functional and robust natural resources can contribute to regional resilience against climate hazards.

Extreme heat: Higher temperatures can accelerate evaporation of soil moisture, which can stress vegetation and lead to increased water demand for irrigation. Increased evaporation can also affect wetlands and riparian habitats such as those in the Rio Bosque Wetlands Park.³¹ Higher water temperatures can result in harmful algae blooms that are detrimental to plants, animals, and water quality.³² Temperature increases above species' preferred heat tolerance range can lead to species change and migration for plants and animals.^{33,34} These changes can be acute (e.g., wildlife die-offs) or gradual (e.g., long-term shifts in migration patterns or wildlife physiology, such as reducing lifetime ability to reproduce).³⁵

Drought: Natural resources, specifically water, are highly vulnerable to drought. Drought and subsequent reduction in water availability can lead to habitat and wetland loss, stress for local plant and animal species, and poor soil quality.³⁶ Drought is one of the primary concerns at the Rio Bosque Wetlands Park, with dry soil conditions limiting revegetation and ecosystem restoration efforts.³⁷

²⁶ Nature Preserves, State Parks, and National Parks are quantitatively assessed under the recreational areas and natural spaces asset type.

²⁷ El-Hage, A. and Moulton, D. (1998, April). Evaluation of Selected Natural Resources in El Paso County, Texas. Texas Parks and Wildlife Department. https://tpwd.texas.gov/publications/pwdpubs/media/pwd_rp_t3200_1050a.pdf

²⁸ Texas A&M Forest Service. (n.d.) Trans-Pecos Ecoregion. <http://texastreeid.tamu.edu/content/texasEcoRegions/Trans-Pecos/>

²⁹ EPWater. (2024b). Drought Contingency Plan. https://cdnsnm5-hosted.civiclive.com/UserFiles/Servers/Server_6843404/File/Conservation/Drought%20Contingency%20Plan%201.pdf

³⁰ Texas Parks and Wildlife Department. (n.d.a) Franklin Mountains State Park - Nature. <https://tpwd.texas.gov/state-parks/franklin-mountains/nature>

³¹ University of Texas at El Paso. (2002). Rio Bosque Wetlands Park Biological Management Plan. <https://www.utep.edu/cerm/rio-bosque/documents/rio-bosque-wetlands-park-biological-management-plan.pdf>

³² Texas Parks and Wildlife Department. (n.d.b) Harmful Algal Blooms (HABs). <https://tpwd.texas.gov/landwater/water/enviroconcerns/hab/>

³³ Herring, D. (2020) How will global warming harm natural and agricultural resources in the United States? Climate.gov. <https://www.climate.gov/news-features/climate-ga/how-will-global-warming-harm-natural-and-agricultural-resources-united>

³⁴ Wu, J.X., Wilsey, C.B., Taylor, L., and Schuurman, G.W. (2018). Projected avifaunal responses to climate change across the U.S. National Park System. PLOS ONE 13(3): e0190557. <https://doi.org/10.1371/journal.pone.0190557>

³⁵ Gaskill, M. (2021, July 28). Winter, summer weather extremes are taking a toll on Texas plants, wildlife. Texas Climate News. <https://texasclimatenews.org/2021/07/28/winter-summer-weather-extremes-are-taking-a-toll-on-texas-plants-wildlife/>

³⁶ National Drought Mitigation Center. (n.d.) How does drought affect our lives? <https://drought.unl.edu/Education/DroughtforKids/DroughtEffects.aspx>

³⁷ University of Texas at El Paso. (2002). Rio Bosque Wetlands Park Biological Management Plan. <https://www.utep.edu/cerm/rio-bosque/documents/rio-bosque-wetlands-park-biological-management-plan.pdf>

Wildfires: Often exacerbated by drought and extreme heat, wildfires can be highly destructive; however, natural fires are a part of the Chihuahuan Desert’s ecosystem cycle.³⁸ Ash and contaminants can settle on surface water sources like streams and reservoirs, potentially degrading water quality and increasing treatment costs. Loss of vegetation can also lead to increased erosion that can pollute surface water supplies.³⁹ The Texas Parks and Wildlife Department conducts prescribed burns to sustain biodiversity, facilitate the recycling of ecosystem nutrients, and reduce the potential severity of wildfires.⁴⁰

Flooding: Natural resources are generally resilient to flooding and can recover quickly. Trees and other vegetation, especially those in floodplains, can help mitigate the impacts of flooding by retaining water. However, intense or extended floods can lead to ecosystem damage.⁴¹ Beyond direct damage, excess soil moisture can result in vegetation loss.⁴² Flooding can also contain and carry debris and pollutants, including harmful pathogens and chemicals. Like wildfire, flooding can introduce contaminants and pollutants into the water supply.⁴³

Building on El Paso’s Existing Resilience Actions

Climate resilience initiatives are not new to the City or the region. Beginning with water conservation and flood mitigation, El Paso has been taking steps to enhance its resilience since the late-20th century. In 1991, the City adopted its first Water Conservation Ordinance, which established policies to restrict landscape watering and require efficient plumbing fixtures.⁴⁴ In response to severe floods in 2006, the City established a stormwater utility within EPWater and developed its first stormwater master plan.⁴⁵

To reduce the health impacts of extreme heat, El Paso’s Extreme Weather Task Force convened in 2004 to address heat-related deaths and is still operating in 2025. In 2020, the City partnered with the National Oceanic and Atmospheric Administration (NOAA) and CAPA Strategies to study El Paso’s urban heat island effect (i.e., the higher temperatures experienced in urbanized areas as a result of heat trapped by buildings, pavements, and other infrastructure). As part of this study, volunteers traversed the City collecting data to understand which neighborhoods have warmer temperatures and thus a higher heat island effect.

More broadly, in 2014, the City was one of the first cities to partner with the Rockefeller Foundation’s 100 Resilient Cities program, which created the role of Chief Resilience Officer.⁴⁶ This resulted in the development of the City’s resilience strategy, *Resilient El Paso*.

³⁸ Gebrow, B.S. and Halvorson, W.L. (2005, April). Managing Fire in the Northern Chihuahuan Desert: A Review and Analysis of the Literature. U.S. Geological Survey. Southwest Biological Science Center. <https://pubs.usgs.gov/of/2005/1157/of2005-1157.pdf>

³⁹ EPA. (2019). Wildfires: How do they affect our water supplies? <https://www.epa.gov/scienematters/wildfires-how-do-they-affect-our-water-supplies>

⁴⁰ Texas Parks and Wildlife Department. (n.d.c). Wildland fire management. https://tpwd.texas.gov/landwater/land/wildland_fire_management/

⁴¹ Beck, B. (2024, July 10). Trees, Forests, and Flooding: Impacts and Recovery. Iowa State University Natural Resource Stewardship. <https://naturalresources.extension.iastate.edu/blog/dr-billy-beck/trees-forests-and-flooding-impacts-and-recovery>

⁴² FEMA. (n.d.) Flood impact. <https://community.fema.gov/ProtectiveActions/s/article/Flood-Impact>

⁴³ EPA. (2019). Wildfires: How do they affect our water supplies? <https://www.epa.gov/scienematters/wildfires-how-do-they-affect-our-water-supplies>

⁴⁴ El Paso Water. (2024a). 2024 Water Conservation Plan. https://cdns5-hosted.civiclive.com/UserFiles/Servers/Server_6843404/File/Conservation/2024%20Water%20Conservation%20Plan.pdf

⁴⁵ The Rockefeller Foundation, 100 Resilient Cities. (2017). Resilient El Paso. <https://www.elpasotexas.gov/assets/Documents/CoEP/Community-Development/Community-Development-Block-Grant/City-of-El-Paso-Resilience-Strategy.pdf>

⁴⁶ The Rockefeller Foundation, 100 Resilient Cities. (2017). Resilient El Paso. <https://www.elpasotexas.gov/assets/Documents/CoEP/Community-Development/Community-Development-Block-Grant/City-of-El-Paso-Resilience-Strategy.pdf>

A Closer Look at Drought

The El Paso region and EPWater have been at the forefront of drought planning and mitigation efforts for several decades. EPWater recently completed several drought and water conservation planning efforts, including the 2024 Drought Contingency Plan, 2024 Water Conservation Plan, and a drought-specific vulnerability assessment.

EPWater's primary strategy against drought is water resource diversification to reduce reliance on surface water.⁴⁷ This includes conservation programs, water reuse, advanced water purification, reclaimed water, increased groundwater recharge, and surface water augmentation. The utility produces up to 27.5 million gallons every day from a desalination plant that purifies brackish groundwater.⁴⁸ EPWater is also on the cusp of treating wastewater for direct potable reuse through the Pure Water Center, an advanced water purification facility expected to begin operations later in 2025.⁴⁹ In 2023, EPWater began constructing the Enhanced Arroyo Infiltration project, which will route water from the Rio Grande, coupled with reclaimed water and stormwater, into the Hueco-Mesilla and Bolson aquifers.⁵⁰

These strategies serve as a strong foundation for the El Paso region to continue enhancing its resilience through the adoption and implementation of the climate adaptation actions described in the Climate Actions chapter.



⁴⁷ El Paso Water. (2024b). Drought Contingency Plan. https://cdnsm5-hosted.civiclive.com/UserFiles/Servers/Server_6843404/File/Conservation/Drought%20Contingency%20Plan%201.pdf

⁴⁸ The Rockefeller Foundation, 100 Resilient Cities. (2017). Resilient El Paso. <https://www.elpasotexas.gov/assets/Documents/CoEP/Community-Development/Community-Development-Block-Grant/City-of-El-Paso-Resilience-Strategy.pdf>

⁴⁹ El Paso Water. (2024b). Drought Contingency Plan. https://cdnsm5-hosted.civiclive.com/UserFiles/Servers/Server_6843404/File/Conservation/Drought%20Contingency%20Plan%201.pdf

⁵⁰ El Paso Water. (2024a). 2024 Water Conservation Plan. https://cdnsm5-hosted.civiclive.com/UserFiles/Servers/Server_6843404/File/Conservation/2024%20Water%20Conservation%20Plan.pdf

8.

08

Climate Actions

Artists: Terry Wright & Kathryn Gelinas

Climate Actions

Key Takeaways

- Ten climate measures and 53 actions were developed to address El Paso region's emissions sources and climate hazards.
- Each action was evaluated for GHG and co-pollutant reduction potential, cost, community benefits, funding sources, implementation authority, and tracking metrics.
- If all CAP actions are implemented, they could potentially reduce region-wide gross GHG emissions 21% below 2019 levels by 2030 and 67% by 2050.

Action Development and Selection

The CAP includes **10 broad climate measures** and **53 actions** that support each measure. A **measure** is a broad strategy that addresses an emissions source or climate hazard within the El Paso region, aligns with regional goals, and is important to the community. **Actions** are specific policies, programs, or projects that support one of the 10 measures.

Initially, draft priority measures and draft actions were developed for the El Paso region PCAP using input from residents, project implementers, and other stakeholders through four primary instruments:

1. Bilingual public surveys
2. Public meetings
3. Project intake forms
4. Subject matter expert analysis

Through regional conversations with stakeholders such as action implementers and community members, the draft measures and actions were further refined into a final list of 10 measures and 53 actions (see Table 15).

Table 15. Climate Measures and Actions

Measure 1: Increase Energy Efficiency and Decarbonize Buildings	
-	Action M1: Enhance or create a community-wide building energy efficiency and electrification rebate program
-	Action M2: Develop a Building Energy Performance Standard for commercial buildings
-	Action M3: Partner with industries to reduce emissions related to industrial activities
-	Action M4: Enhance or develop a weatherization program
-	Action M5: Increase energy efficiency in public buildings
-	Action M6: Develop a data center policy that incorporates environmental, community, and economic development considerations
Measure 2: Support the Zero Emission Vehicle Transition	

- Action M7: Implement electric vehicle (EV) charging policies for new buildings
- Action M8: Organize zero emission and hybrid vehicle ride-and-drive events for community members
- Action M9: Transition municipal fleets to zero emission vehicles (ZEVs)
- Action M10: Install public EV charging stations
- Action M11: Develop alternate fuel hubs for buses and heavy-duty fleet vehicles
- Action M12: Develop alternative fuel freight corridors

Measure 3: Install Renewable Energy Systems

- Action M13: Partner with utilities and startups to increase geothermal energy use
- Action M14: Procure renewable energy through utility contracts or subscriptions to meet electricity demand
- Action M15: Implement solar-ready policies for new buildings
- Action M16: Incentivize battery storage installations
- Action M17: Install solar panels on public buildings and public land as alternate energy sources and as shade structures

Measure 4: Promote Sustainable Food Systems and Waste Management Practices

- Action M18: Improve recycling practices
- Action M19: Implement community-wide composting for food and yard waste
- Action M20: Develop a construction and demolition waste diversion ordinance and explore establishing reuse or recycling facilities
- Action M21: Capture and upgrade biogas to use as an energy source
- Action M22: Use water-based growing systems, such as hydroponics and aquaponics agriculture, to grow food without soil
- Action M23: Develop local food hubs

Measure 5: Promote Walking, Biking, and Riding Transit

- Action M24: Implement Complete Streets conversion projects to improve walking, biking, and public transit use
- Action M25: Expand existing micromobility systems for bikes and scooters
- Action M26: Explore options to provide free public transit
- Action M27: Build transit-oriented developments to increase access to public transit
- Action M28: Expand micro-transit projects like small shuttles to help people get from home to transit stops
- Action M29: Implement car-free hours to increase pedestrian street access
- Action M30: Update the zoning code to remove parking minimums
- Action M31: Improve the frequency and quality of transit services

Measure 6: Monitor and Improve Air Quality

- Action M32: Coordinate infrastructure, policy, and operations to reduce truck idling at ports and freight corridors
- Action M33: Create, expand, or improve designated truck parking areas at El Paso Ysleta Port of Entry to reduce idling
- Action M34: Reduce wait times at international bridges
- Action M35: Install air quality monitoring systems at the international bridges
- Action M36: Install air quality monitoring systems in communities disproportionately impacted by poor air quality

Measure 7: Implement and Oversee Climate Actions

- Action M37: Establish green revolving loan funds to support sustainability projects in public buildings
- Action M38: Integrate a climate and sustainability lens into government operations and decision-making
- Action M39: Create a mini-grant program to support neighborhood-level climate action

Measure 8: Cool Communities, Protect Health, and Increase Native Ecosystems

- Action A1: Develop a community stewardship program to mitigate heat by increasing tree canopy and shading, focused on cooling homes, community centers and neighborhoods
- Action A2: Adopt a heat-resilient building code
- Action A3: Develop climate-resilient building codes and development standards
- Action A4: Adjust the structural design of pavements, bridges, and railways and use more cool and reflective surfaces (walls, roofs, pavements)
- Action A5: Develop multi-hazard resilience hubs in vulnerable communities
- Action A6: Develop a robust multi-lingual emergency communications response framework and resources
- Action A7: Implement carbon sequestration projects on public land

Measure 9: Build Drought Resilience and Conserve Water

- Action A8: Expand wetlands and parks to support groundwater recharge
- Action A9: Expand use of recycled water and greywater for irrigation, and establish projects to capture runoff
- Action A10: Educate, incentivize, and provide technical assistance to growers in the region to transition to climate-friendly farming practices
- Action A11: Develop water capture systems that run on solar energy to generate potable water in unincorporated areas and colonias

Measure 10: Reduce Flood Risk

- Action A12: Deploy green infrastructure and reduce impermeable surfaces along roads and at critical facilities
- Action A13: Strategically acquire land in the 100-year floodplain
- Action A14: Stabilize arroyos in steep locations and in areas that show signs of erosion

Each action has been assessed for its implementation costs, ability to provide community benefits and disbenefits, relevant tracking metrics, and GHG and co-pollutant emissions reduction potential. This methodology is described in the Action Analysis section, and the results are included in the CAP Action Summary section.

Action Analysis

The following section describes how the action-specific GHG reductions, co-pollutant reductions, and community benefits were developed. In some cases, full action implementation may depend on other enabling actions that are difficult to assess on their own. Additionally, there may be groups of related actions in a sector that produce similar outputs that are most reasonably aggregated and evaluated together. In these cases, actions were “bundled” to collectively assess their GHG and co-pollutant emission reductions. Additionally, emission reductions were assessed so that no emission reductions were double-counted between actions.

GHG Reduction Quantification Methodology

Overall emissions for the region are projected under two scenarios: a “business-as-usual” scenario in which no additional GHG emissions measures are implemented, and a “sustainable” scenario in which the identified CAP actions are implemented. ICLEI USA’s ClearPath software allows CAP actions to be modeled using various emission reduction calculators for each sector. CAP actions were matched with the relevant ClearPath reduction strategy calculators; these calculators require inputs related to implementation timeline and other characteristics to calculate the resulting impact on business-as-usual activity data and GHGs. All actions were assumed to have an implementation start year of 2026 and to conclude in 2050. Implementation characteristics include inputs such as VMT reductions if applied to the Transportation sector or number of homes weatherized if applied to the Residential Energy sector. These inputs were informed by best practices from other U.S. communities that have implemented similar measures, and revised to determine what the El Paso region can implement each year. Measures that reduce electricity use or increase clean electricity sources are not expected to produce any additional GHG reductions in 2050 because the electric grid is projected to be 100% carbon free in the business-as-usual scenario by 2045. The total GHG reductions of all CAP actions provided the basis for the localized GHG reduction target (see section 5: Greenhouse Gas Reduction Targets). A detailed description of the GHG reduction quantification methodology per action can be found in Appendix A.

Co-Pollutant Reduction Quantification Methodology

Mitigation actions selected to reduce GHG emissions were also assessed for their potential impact on co-pollutant emissions. Actions targeting reducing electricity consumption or developing a cleaner electric grid will reduce co-pollutants associated with electricity generation. Actions that reduce fossil fuel combustion in the industrial sector, whether reduced via changes to industrial processes and product use or conversion to lower-carbon fuels like electricity, will mitigate co-pollutants generated from industrial processes and fuel combustion. Actions focused on the Transportation sector, including VMT reductions, fuel use reductions, and transitioning to electric vehicles and equipment, will reduce co-pollutants associated with on-road, off-road, and aviation travel.

Co-pollutant emission factors for 2030 and 2050 were used to measure the actions’ annual co-pollutant emissions reductions in 2030 and 2050. For example, if an action reduces residential

electricity use by 1,000 MWh in 2030, then the co-pollutant emissions factor in 2030 (e.g., metric tons co-pollutant/MWh) was used to calculate the total co-pollutants reduced in that year.

A detailed description of the co-pollutant reduction quantification methodology per action can be found in Appendix B.

Community Benefits Methodology

Community benefits are positive outcomes generated by climate actions beyond the primary benefit of GHG reductions, while disbenefits represent unintentional negative outcomes. Seven region-wide community benefit criteria were selected that reflect local priorities and community concerns. Each action was then evaluated to see if it could provide any of the selected community benefits. This analysis also helped to identify potential disbenefits that actions may generate and potential solutions to mitigate disbenefits (see Table 16).

Table 16. Benefit Criteria

Community Benefit Category	Criteria	Definition
Resilience	Climate Adaptation	Impact on the community's ability to prepare for, adapt to, withstand, and recover from climate change impacts, hazards, and stressors
Health	Public Health and Wellbeing	Impact on public health and wellbeing due to improved air quality (indoor and outdoor) and water quality, increased physical activity, decreased time spent commuting or traveling, decreased noise pollution, etc.
Environment	Environmental Stewardship	Impact on the conservation, creation, or regeneration of natural environments and/or greenspace
	Resource Conversation	Impact on natural resources, such as raw materials, water, energy feedstocks, etc.
Economics	Economic Prosperity	Impact on the employment rate, total number of jobs, physical access to jobs, opportunities for workforce development, revenue for businesses, and/or income and social mobility
	Savings to Residents and Businesses	Impact on savings to people and businesses (energy costs, travel costs, equipment costs, rent or housing costs, food costs, medical expenses, maintenance costs, etc.)
Society	Community Building	Impact on community interactions and social cohesion and connections (e.g., promoting interactions)

Intersection with Other Funding Sources

Applicable federal, state, and local funding sources for each action were identified during CAP development. In addition, potential grant opportunities—including federal, state, utility, and other sources—were profiled with details on the funding program name, amount requested, and the status of the request (e.g., pending, requested, or secured). Local and national philanthropy

also play an important role in funding CAP implementation. This information is intended to demonstrate the financial feasibility of the proposed actions and facilitate alignment with anticipated or available resources.

Cost of Actions

The cost of the actions includes an estimate of the implementation and if applicable the running cost, which is based on the components of each action. The results are presented as order-of-magnitude estimates. Cost estimates are developed as point-in-time estimates and do not consider phased implementation or the time-value of money.

The cost estimate first identifies the primary actor or payer responsible for the implementation of each measure. This analysis considers two categories of payers – public agency payers and private payers. Public agency payers are defined as public institutions such as local, state, federal, or quasi-governmental institutions. Measures primarily supported by taxpayer dollars are defined as public agency payers. Private payers are defined as households or businesses.

Primary Implementing Authorities

Existing statutory and regulatory authorities relevant to action implementation were identified. Where additional authority is needed, the anticipated process for obtaining that authority, such as through legislative action, regulatory changes, or interagency agreements, is outlined. Additionally, critical implementation roles have been assigned to specific partner organizations based on their current or anticipated authority to lead or support action implementation. This assessment supports a clearer understanding of implementation feasibility and the roles needed to advance each action.

CAP Action Summary

Table 17 and Table 18 list the CAP actions by measure and geographic location/scope with actions GHG reduction potential for 2030 and 2050. Actions with GHG emissions reductions labeled as “Not modeled” means potential reductions were not estimated as there was not enough data or relevant ClearPath calculators, “N/A” means there are no associated GHG reductions, “and Included in Action #” means that the action’s GHG reductions were bundled together with other actions.

Table 17. Mitigation Actions

Action # and Title	Geograph ic Location/ Scope	2030 GHG Emission Reductions (MTCO ₂ e/year)	2050 GHG Emission Reductions (MTCO ₂ e/year)
Measure 1: Increase Energy Efficiency and Decarbonize Buildings			
Action M1: Enhance or create a community-wide building energy efficiency and electrification rebate program	Region-wide	18,701	16,885
Action M2:	Region-wide	11,159	5,747

Action # and Title	Geographic Location/ Scope	2030 GHG Emission Reductions (MTCO ₂ e/year)	2050 GHG Emission Reductions (MTCO ₂ e/year)
Develop a Building Energy Performance Standard for commercial buildings			
Action M3: Partner with industries to reduce emissions related to industrial activities	Region-wide	3,352	3,352
Action M4: Enhance or develop a weatherization program	Region-wide	1,026	1,028
Action M5: Increase energy efficiency in public buildings	Public Buildings	196	53
Action M6: Develop a data center policy that incorporates environmental, community, and economic development considerations	Region-wide	Not Modeled	Not Modeled
Measure 2: Support the Zero Emission Vehicle Transition			
Action M7: Implement electric vehicle (EV) charging policies for new buildings	Region-wide	66,998	46,591
Action M8: Organize zero emission and hybrid vehicle ride-and-drive events for community members	Region-wide	Included in Action M7	Included in Action M7
Action M9: Transition municipal fleets to zero emission vehicles (ZEVs)	Public Fleets	Included in Action M7	Included in Action M7
Action M10: Install public EV charging stations	Region-wide	Included in Action M7	Included in Action M7
Action M11: Develop alternate fuel hubs for buses and heavy-duty fleet vehicles	Region-wide	322	265
Action M12:	Region-wide	Included in Action M11	Included in Action M11

Action # and Title	Geographic Location/ Scope	2030 GHG Emission Reductions (MTCO ₂ e/year)	2050 GHG Emission Reductions (MTCO ₂ e/year)
Develop alternative fuel freight corridors			
Measure 3: Install Renewable Energy Systems			
Action M13: Partner with utilities and startups to increase geothermal energy use	Region-wide	21,487	0
Action M14: Procure renewable energy through utility contracts or subscriptions to meet electricity demand	Region-wide	843	0
Action M15: Implement solar-ready policies for new buildings	Region-wide	330	0
Action M16: Incentivize battery storage installations	Region-wide	Included in Action M15	Included in Action M15
Action M17: Install solar panels on public buildings and public land as alternate energy sources and as shade structures	Public Buildings and Land	275	0
Measure 4: Promote Sustainable Food Systems and Waste Management Practices			
Action M18: Improve recycling practices	Region-wide	4,974	4,974
Action M19: Implement community-wide composting for food and yard waste	Region-wide	3,774	3,774
Action M20: Develop a construction and demolition waste diversion ordinance and explore establishing reuse or recycling facilities	Region-wide	1,113	1,113
Action M21: Capture and upgrade biogas to use as an energy source	Region-wide	Not Modeled	Not Modeled
Action M22:	Region-wide	Not Modeled	Not Modeled

Action # and Title	Geographic Location/ Scope	2030 GHG Emission Reductions (MTCO ₂ e/year)	2050 GHG Emission Reductions (MTCO ₂ e/year)
Use water-based growing systems, such as hydroponics and aquaponics agriculture, to grow food without soil			
Action M23: Develop local food hubs	Region-wide	Not Modeled	Not Modeled
Measure 5: Promote Walking, Biking, and Riding Transit			
Action M24: Implement Complete Streets conversion projects to improve walking, biking, and public transit use	Region-wide	611	425
Action M25: Expand existing micromobility systems for bikes and scooters	Region-wide	Included in Action M24	Included in Action M24
Action M26: Explore options to provide free public transit	Region-wide	Included in Action M24	Included in Action M24
Action M27: Build transit-oriented developments to increase access to public transit	Region-wide	445	309
Action M28: Expand micro-transit projects like small shuttles to help people get from home to transit stops	Region-wide	Included in Action M27	Included in Action M27
Action M29: Implement car-free hours to increase pedestrian street access	Region-wide	432	300
Action M30: Update the zoning code to remove parking minimums	Region-wide	Included in Action M29	Included in Action M29
Action M31: Improve the frequency and quality of transit services	Region-wide	382	266
Measure 6: Monitor and Improve Air Quality			
Action M32:	Region-wide	299	299

Action # and Title	Geographic Location/ Scope	2030 GHG Emission Reductions (MTCO ₂ e/year)	2050 GHG Emission Reductions (MTCO ₂ e/year)
Coordinate infrastructure, policy, and operations to reduce truck idling at ports and freight corridors			
Action M33: Create, expand, or improve designated truck parking areas at El Paso Ysleta Port of Entry to reduce idling	El Paso Ysleta Port of Entry	Included in Action M32	Included in Action M32
Action M34: Reduce wait times at international bridges	International Bridges	Included in Action M32	Included in Action M32
Action M35: Install air quality monitoring systems at the international bridges	International Bridges	N/A	N/A
Action M36: Install air quality monitoring systems in communities disproportionately impacted by poor air quality	Region-wide	N/A	N/A
Measure 7: Implement and Oversee Climate Actions			
Action M37: Establish green revolving loan funds to support sustainability projects in public buildings	Public Buildings	N/A	N/A
Action M38: Integrate a climate and sustainability lens into government operations and decision-making	Public Operations	N/A	N/A
Action M39: Create a mini-grant program to support neighborhood-level climate action	Region-wide	N/A	N/A

Table 18. Adaptation Actions

Action Title	Geographic Location/Scope
Measure 8: Cool Communities, Protect Health, and Increase Native Ecosystems	
Action A1: Develop a community stewardship program to mitigate heat by increasing tree canopy and shading, focused on cooling homes, community centers, and neighborhoods	Region-wide
Action A2: Adopt a heat-resilient building code	Region-wide
Action A3: Develop climate-resilient building codes and development standards	City of El Paso
Action A4: Adjust the structural design of pavements, bridges, and railways and use more cool and reflective surfaces (walls, roofs, pavements)	City of El Paso
Action A5: Develop multi-hazard resilience hubs in vulnerable communities	City of El Paso
Action A6: Develop a robust multi-lingual emergency communications response framework and resources	City of El Paso
Action A7: Implement carbon sequestration projects on public land	Public Land
Measure 9: Build Drought Resilience and Conserve Water	
Action A8: Expand wetlands and parks to support groundwater recharge	Region-wide
Action A9: Expand use of recycled water and greywater for irrigation, and establish projects to capture runoff	City of El Paso
Action A10: Educate, incentivize, and provide technical assistance to growers in the region to transition to climate-friendly farming practices	Region-wide
Action A11: Develop water capture systems that run on solar energy to generate potable water in unincorporated areas and colonias	Region-wide
Measure 10: Reduce Flood Risk	

Action Title	Geographic Location/Scope
Action A12: Deploy green infrastructure and reduce impermeable surfaces along roads and at critical facilities	City of El Paso
Action A13: Strategically acquire land in the 100-year floodplain	City of El Paso
Action A14: Stabilize arroyos in steep locations and in areas that show signs of erosion	City of El Paso

CAP Action GHG and Co-pollutant Reductions

Figure 16 and Figure 17 show the future GHG and co-pollutant emissions levels that would result if all CAP actions were implemented.

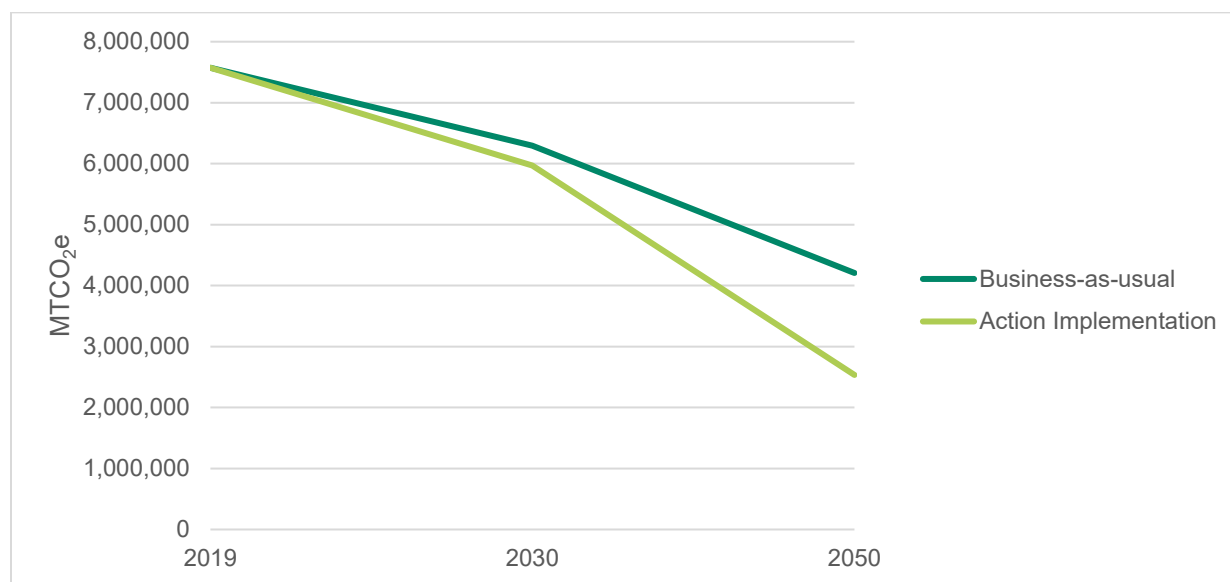


Figure 16. Action Implementation GHG Emissions

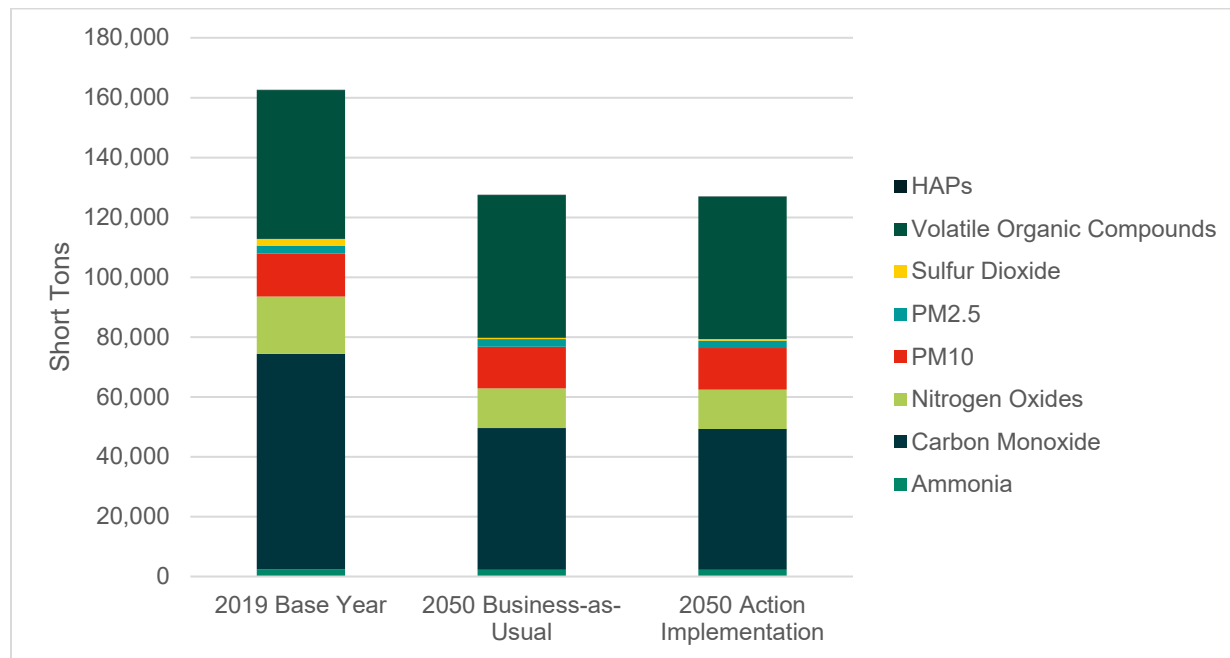


Figure 17. Action Implementation Co-pollutant Emissions

Table 19 and Table 20 show total GHG and co-pollutant reductions for each measure (some measures do not have associated GHG or co-pollutant reductions). Action-specific GHG and co-pollutant reductions are included in Table 17 and in the following sections. The action GHG reductions were used to inform the localized target as discussed in the GHG Reduction Targets section.

Table 19. GHG Reductions by Measure

Measure	2030 GHG Reduction Potential (MTCO ₂ e/year)	2050 GHG Reduction Potential (MTCO ₂ e/year)
Measure 1: Increase Energy Efficiency and Decarbonize Buildings	34,434	27,065
Measure 2: Support the Zero Emission Vehicle Transition	67,320	46,856
Measure 3: Install Renewable Energy Systems	22,935	0
Measure 4: Promote Sustainable Food Systems and Waste Management Practices	9,861	9,861
Measure 5: Promote Walking, Biking, and Riding Transit	1,870	1,300
Measure 6: Monitor and Improve Air Quality	299	299
Measure 8: Cool Communities, Protect Health, and Increase Native Ecosystems	2,103	2,103

Table 20. Co-pollutant Reductions by Measure

Measure	2030 Co-pollutant Reduction Potential (short ton/year)*	2050 Co-pollutant Reduction Potential (short ton/year)*
Measure 1: Increase Energy Efficiency and Decarbonize Buildings	NH ₃ : 6 CO: 101 NOx: 112 PM10: 12 PM2.5: 10 SO ₂ : 87 VOCs: 8 HAPs: 1	NH ₃ : 5 CO: 47 NOx: 68 PM10: 5 PM2.5: 5 SO ₂ : 2 VOCs: 6 HAPs: <1
Measure 2: Support the Zero Emission Vehicle Transition	NH ₃ : +3 CO: 334 NOx: +22 PM10: +13 PM2.5: +13 SO ₂ : +204 VOCs: 44 HAPs: +2	NH ₃ : 1 CO: 200 NOx: 44 PM10: 2 PM2.5: 1 SO ₂ : <1 VOCs: 20 HAPs: <1

Measure	2030 Co-pollutant Reduction Potential (short ton/year)*	2050 Co-pollutant Reduction Potential (short ton/year)*
Measure 3: Install Renewable Energy Systems	NH ₃ : 1 CO: 29 NOx: 25 PM10: 3 PM2.5: 2 SO ₂ : 39 VOCs: 1 HAPs: <1	NH ₃ : <1 CO: <1 NOx: <1 PM10: <1 PM2.5: <1 SO ₂ : <1 VOCs: <1 HAPs: <1
Measure 4: Promote Sustainable Food Systems and Waste Management Practices	NH ₃ : <1 CO: 53 NOx: 1 PM10: 7 PM2.5: 6 SO ₂ : <1 VOCs: 5 HAPs: N/A	NH ₃ : <1 CO: 53 NOx: 1 PM10: 7 PM2.5: 6 SO ₂ : <1 VOCs: 5 HAPs: N/A
Measure 5: Promote Walking, Biking, and Riding Transit	NH ₃ : <1 CO: 18 NOx: 4 PM10: <1 PM2.5: <1 SO ₂ : <1 VOCs: 1 HAPs: N/A	NH ₃ : <1 CO: 7 NOx: <1 PM10: <1 PM2.5: <1 SO ₂ : <1 VOCs: <1 HAPs: N/A
Measure 6: Monitor and Improve Air Quality	NH ₃ : <1 CO: 11 NOx: 2 PM10: <1 PM2.5: <1 SO ₂ : <1 VOCs: 1 HAPs: N/A	NH ₃ : <1 CO: 11 NOx: 2 PM10: <1 PM2.5: <1 SO ₂ : <1 VOCs: 1 HAPs: N/A
Measure 8: Cool Communities, Protect Health, and Increase Native Ecosystems	NH ₃ : N/A CO: <1 NOx: 2 PM10: 5 PM2.5: <1 SO ₂ : <1 VOCs: N/A HAPs: N/A	NH ₃ : N/A CO: <1 NOx: 2 PM10: 5 PM2.5: <1 SO ₂ : <1 VOCs: N/A HAPs: N/A

*Any values with a "+" symbol mean emissions increased instead of decreased

How to Read a CAP Action Table

The following section organizes CAP actions by measure. Each CAP action overview and table provides further details on the action, such as GHG reduction potential, implementing

authorities, cost information, and community benefits. 21 is an example of how to read a CAP action overview and table.

Figure 21. How to Read a CAP Action Overview & Table

Action Description: *A description of the action.*

Primary Implementing Authorities: *Primary action implementers. Because most actions can be implemented region-wide, “local governments” refer to any municipal or county government in the region.*

Authority to Implement: *Describes the existing statutory or regulatory authority to implement the action. Identifies critical implementation partners and their roles based on actual or anticipated authority to implement.*

Geographic Location/Scope	<i>Where the action will be implemented (e.g., region-wide, municipal buildings, international bridges, etc.)</i>	Implementation Timeline	<i>How long it will take to implement the action:</i> • Near-term (0-3 years) • Medium-term (4-7 years) • Long-term (7+ years)
Cost Information	<i>Estimated implementation costs, such as capital expenditures, programmatic costs, and life cycle costs.</i>	Primary Benefits	<i>If the action provides Mitigation (greenhouse gas [GHG] reduction), Adaptation (climate risk reduction), or Mitigation and Adaptation benefits.</i>
Community Benefits			
<i>List of community benefits that the action provides. Can include:</i> • Adaptation (only assessed for Mitigation measures) • Mitigation (only assessed for Adaptation measures) • Public Health and Wellbeing • Environmental Stewardship • Resource Conservation • Economic Prosperity • Savings to Residents and Businesses • Community Building			
Disbenefits and Solutions			
<i>Potential disbenefits the action could cause and potential strategies to mitigate the disbenefits.</i>			
Implementation Schedule and Milestones			

High-level implementation steps and key milestones for action completion.

Metrics for Tracking Progress

Output metrics for tracking action implementation progress. Output metrics are the direct measurable result of an action, such as kilowatts of solar installed or miles of bike lanes built.

GHG Emission Reductions*

The quantity of GHGs reduced in MTCO2e/year in 2030

The quantity of GHGs reduced in MTCO2e/year in 2050

CAPs Emission Reductions*

The quantity of CAPs reduced in short tons/year in 2030:

- Nitrogen Oxides (NO_x)
- Ammonia (NH₃)
- Particulate Matter (PM 2.5 and PM 10)
- Volatile Organic Compounds (VOCs)
- Sulfur Dioxide (SO₂)
- Carbon Monoxide (CO)

The quantity of CAPs reduced in short tons/year in 2050:

- Nitrogen Oxides (NO_x)
- Ammonia (NH₃)
- Particulate Matter (PM 2.5 and PM 10)
- Volatile Organic Compounds (VOCs)
- Sulfur Dioxide (SO₂)
- Carbon Monoxide (CO)

HAP Emission Reductions*

The quantity of HAPs reduced in short tons/year in 2030 (all HAPs will be summed)

The quantity of HAPs reduced in short tons/year in 2050 (all HAPs will be summed)

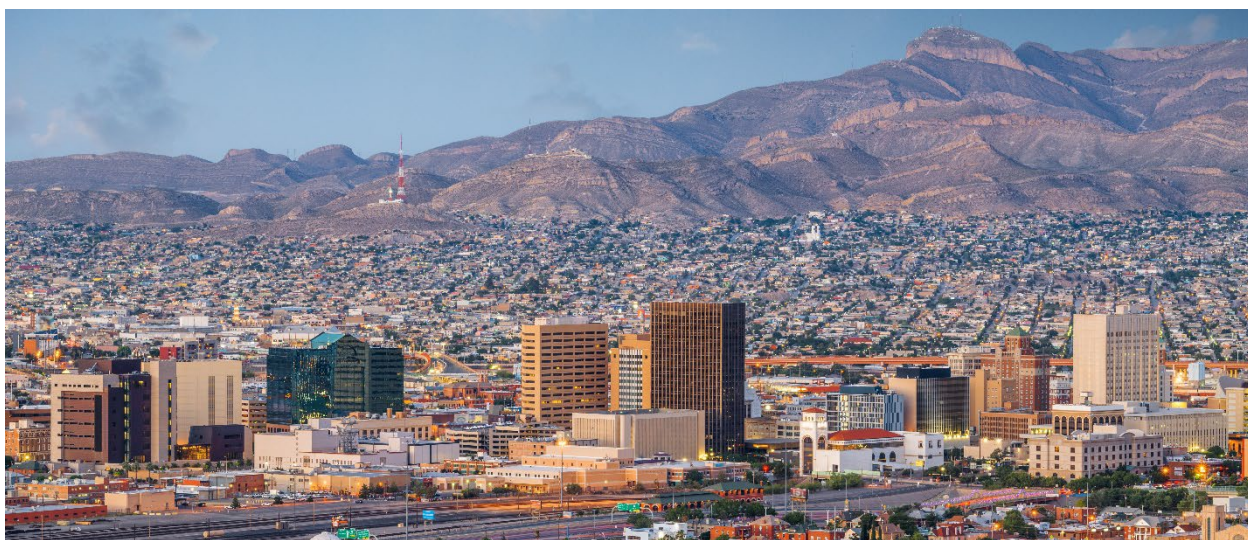
***“Not modeled” means potential reductions were not estimated, “N/A” means there are no associated reductions, “Included in Action #” means that reductions were bundled together with other actions*

Measure 1: Increase Energy Efficiency and Decarbonize Buildings

Increasing energy efficiency in buildings, facilities, and infrastructure while also transitioning fossil fuel equipment to electric options can help reduce GHG emissions from buildings and facilities. As this measure supports electrifying fossil fuel-powered equipment, its GHG reduction potential is related to how much clean energy is used in providing the region's electricity, which is addressed in part through the *Install Renewable Energy Systems* measure. This measure can also help reduce utility costs, grow the local workforce, increase resilience to extreme temperatures and weather, and improve public health and wellbeing by reducing indoor air pollution and creating more comfortable indoor environments to live and work.

Building on Regional Achievements

El Paso has a historical commitment to building efficiency. El Pasos Better Buildings initiative⁵¹ began with adopting a “smart growth” comprehensive growth plan in 2011, which was recognized for its excellence by the EPA with the 2011 National Smart Growth Award. Since then, El Paso's municipal energy efficiency program has included retrofits of municipal buildings, an ordinance that all new city buildings meet Leadership in Energy and Environmental Design (LEED) Silver standards, and a city green building grant program. In 2012, the City launched the El Paso Green Business Challenge, encouraging local businesses to conserve energy, reduce waste, save water, and consider alternative means of transportation.^{52, 53, 54,55,56}



⁵¹ U.S. Department of Energy. (n.d.). *El Paso, TX* [Partner page]. Better Buildings Solution Center. Retrieved July 7, 2025, from Better Buildings Solution Center website. <https://betterbuildingssolutioncenter.energy.gov/partners/el-paso-tx>

⁵² City of El Paso. (2011). *Plan El Paso: The comprehensive plan for El Paso, Texas*. <https://www.elpasotexas.gov/assets/Documents/CoEP/Planning/PlanElPaso/Plan-ElPaso-Adopted-2012.pdf>

⁵³ U.S. Environmental Protection Agency. (2011, December 1). *El Paso, Texas: 2011 National Award for Smart Growth Achievement*. <https://www.epa.gov/smartgrowth/el-paso-texas-2011-national-award-smart-growth-achievement>

⁵⁴ City of El Paso. (2008). *Green building ordinance for city-owned facilities* [Ordinance No. 017048]. <https://www.elpasotexas.gov>

⁵⁵ El Paso Green Business Challenge. (2012). *Official launch announcement and participant guide* [Archived]. <https://web.archive.org/web/20120609133942/http://www.elpasogbc.org/>

⁵⁶ City of El Paso. (n.d.). *Green building grant program guidelines*. Office of Sustainability. <https://web.archive.org/web/20140102074034/http://home.elpasotexas.gov/green-building/>

ACTION M1: Enhance or create a community-wide building energy efficiency and electrification rebate program

Action Description: Partner with utilities to create or enhance community-wide incentive programs for energy-efficient and/or electric building equipment and appliances. This will help residents replace old appliances (furnaces, water heaters, clothes dryers, etc.) with high-efficiency electric options instead of natural gas (or other fossil fuel) options.

Primary Implementing Authorities: El Paso Electric (EPE), Rio Grande Electric Cooperative, Texas Gas Service, City of El Paso Office of Climate and Sustainability, and local governments

Authority to Implement: Utilities typically lead rebate and incentive programs for building appliances and equipment, as they have existing authority under Public Utility Commission of Texas (PUCT) regulations and demand-side management plans. Local governments can partner with utilities to design and promote incentive programs. Project Bravo and Project Ayuda can act as local implementation partners. No new legislative authority is required, though local approval may be needed for matching funds or incentive

Geographic Location/Scope	Region-wide	Implementation Timeline	Near-term
Cost Information	Under development	Primary Benefits	Mitigation and Adaptation
Community Benefits			
- Adaptation - Public Health and Wellbeing - Economic Prosperity - Savings to Residents and Businesses			
Disbenefits and Solutions			
None identified			
Implementation Schedule and Milestones			
- Year 1: Identify and assess existing programs to identify gaps - Year 2 to 3: Develop and implement program			
Metrics for Tracking Progress			
- Percent participation rate in program - Building permit data describing equipment replacement and fuel switching - Number of buildings or households retrofitted - Number, square footage, or percent of buildings with non-electric fuel type electrified			
GHG Emission Reductions			
2030: 18,701 MTCO ₂ e/year	2050: 16,885 MTCO ₂ e/year		
CAPs Emission Reductions			

2030:	2050:
• NO_x: 31 tons/year • NH₃: 3 tons/year • PM 2.5: 2 tons/year • PM 10: 2 tons/year • VOCs: 4 tons/year • SO₂: +8 tons/year • CO: 23 tons/year	• NO_x: 37 tons/year • NH₃: 4 tons/year • PM 2.5: 3 tons/year • PM 10: 3 tons/year • VOCs: 4 tons/year • SO₂: 1 ton/year • CO: 30 tons/year
HAP Emission Reductions	
2030: <1 tons/year	2050: <1 tons/year

ACTION M2: Develop a building energy performance standard for commercial buildings

Action Description: Implement a commercial building energy reporting and performance standard that establishes a minimum energy performance threshold for commercial buildings, which is based on and measured against a building's demonstrated energy performance. Define a phased implementation strategy that decreases the floor area of buildings over time that are required to participate.

Primary Implementing Authorities: City of El Paso Office of Climate and Sustainability, Planning and Inspections Department, and other local governments

Authority to Implement: Local governments have authority under zoning and building codes to establish performance standards. Ordinances may require updates to municipal codes, utility data-sharing agreements, and City Council or commission approval if benchmarking laws are not yet in place. Coordination with commercial property owners is key to implementation.

Geographic Location/Scope	Region-wide	Implementation Timeline	Medium-term
Cost Information	Under development	Primary Benefits	Mitigation
Community Benefits			
• Economic Prosperity • Savings to Residents and Businesses			
Disbenefits and Solutions			
None identified			
Implementation Schedule and Milestones			
• Year 1: Convene stakeholder meetings, inventory of buildings • Year 2 to 4: Implement voluntary reporting program • Year 5 to 7: Adopt code			
Metrics for Tracking Progress			

• Percent participation rate in program • Square footage or number of buildings participating • Energy use intensity (EUI) of commercial buildings	
GHG Emission Reductions	
2030: 11,159 MTCO ₂ e/year	2050: 5,747 MTCO ₂ e/year
CAPs Emission Reductions	
2030: • NO_x: 58 tons/year • NH₃: 3 tons/year • PM 2.5: 7 tons/year • PM 10: 8 tons/year • VOCs: 3 tons/year • SO₂: 72 tons/year • CO: 66 tons/year	2050: • NO_x: 12 tons/year • NH₃: 1 ton/year • PM 2.5: 1 ton/year • PM 10: 1 ton/year • VOCs: 1 ton/year • SO₂: <1 ton/year • CO: 10 tons/year
HAP Emission Reductions	
2030: 1 ton/year	2050: <1 ton/year

ACTION M3: Partner with industries to reduce emissions related to industrial activities

Action Description: Develop pilot projects with industry partners to reduce industrial process emissions. Encourage best available control technology (BACT) and help establish emissions reduction targets and milestones that also provide economic benefits for industries.

Primary Implementing Authorities: Local governments, industrial operators, regional economic development agencies, and Texas Commission on Environmental Quality (TCEQ)

Authority to Implement: Industrial facilities can adopt emissions reduction measures voluntarily or to meet regulatory requirements. Local governments lack direct regulatory authority but can support projects through partnerships, zoning incentives, and economic tools. TCEQ and U.S. Environmental Protection Agency (EPA) maintain regulatory oversight. No new authority is needed for voluntary efforts, though local ordinances or agreements may be required for formal targets or reporting.

Geographic Location/Scope	Region-wide	Implementation Timeline	Medium-term
Cost Information	Under development	Primary Benefits	Mitigation
Community Benefits			
• Public Health and Wellbeing			
Disbenefits and Solutions			
None identified			

Implementation Schedule and Milestones	
- Year 1: Partner with industries to identify needs and establish goals - Year 2 to 3: Identify pilot projects - Year 3 to 5: Implement pilot projects	
Metrics for Tracking Progress	
- Number of pilot projects implemented - Percent or number of industrial businesses participating - Percent change in emissions per square foot - Operational savings due to projects	
GHG Emission Reductions	
2030: 3,352 MTCO ₂ e/year	2050: 3,352 MTCO ₂ e/year
CAPs Emission Reductions	
2030: - NO_x: 17 tons/year - NH₃: <1 ton/year - PM 2.5: 1 ton/year - PM 10: 1 ton/year - VOCs: 1 ton/year - SO₂: 1 ton/year - CO: 5 tons/year	2050: - NO_x: 17 tons/year - NH₃: <1 ton/year - PM 2.5: 1 ton/year - PM 10: 1 ton/year - VOCs: 1 ton/year - SO₂: 1 ton/year - CO: 5 tons/year
HAP Emission Reductions	
2030: N/A	2050: N/A

ACTION M4: Enhance or develop a weatherization program

Action Description: Develop a weatherization and energy audit program for low-income residents and businesses. The program can fund home upgrades, such as adding insulation, sealing air leaks, and performing efficiency inspections and tune-ups of furnaces, boilers, and water heaters for low-income residents. It can also provide energy audits for residents and businesses.

Primary Implementing Authorities: City of El Paso Office of Climate and Sustainability, local governments, nonprofit housing agencies, and utilities (e.g., El Paso Electric (EPE), Texas Gas Service)

Authority to Implement: Local governments can lead or contract program delivery to nonprofits. Local governments are authorized to run residential assistance programs through housing or sustainability departments and can partner with utilities and nonprofits or use federal or state funds to support weatherization. Utilities may contribute to energy audits or funding through existing programs. Community partners are essential for outreach. No new authority is needed, but coordination and funding agreements may be required.

Geographic Location/Scope	Region-wide	Implementation Timeline	Near-term
Cost Information	Under development	Primary Benefits	Mitigation and Adaptation
Community Benefits			
• Adaptation • Public Health and Wellbeing • Economic Prosperity • Savings to Residents and Businesses			
Disbenefits and Solutions			
None identified			
Implementation Schedule and Milestones			
• Year 1: Identify and assess existing programs to identify gaps • Year 2 to 3: Develop and implement program			
Metrics for Tracking Progress			
• Percent participation rate in program • Number of audits • Funding provided through program • Number of homes weatherized			
GHG Emission Reductions			
2030: 1,026 MTCO2e/year		2050: 1,028 MTCO2e/year	
CAPs Emission Reductions			
2030: • NOx: 5 tons/year • NH3: <1 ton/year • PM 2.5: <1 ton/year • PM 10: 1 ton/year • VOCs: <1 ton/year • SO2: 4 tons/year • CO: 5 tons/year		2050: • NOx: 2 tons/year • NH3: <1 ton/year • PM 2.5: <1 ton/year • PM 10: <1 ton/year • VOCs: <1 ton/year • SO2: <1 ton/year • CO: 2 tons/year	
HAP Emission Reductions			
2030: <1 ton/year		2050: <1 ton/year	

ACTION M5: Increase energy efficiency in public buildings

Action Description: Upgrade public building envelopes (windows, external walls, doors, floors, skylights) and equipment/appliances (control systems, lighting, Heating, Ventilation and Air

Conditioning [HVAC] units) to improve operational efficiency. High-efficient envelope components prevent air leaks and keep indoor temperatures at design set up points, preventing energy leakage and resource waste.

Primary Implementing Authorities: City of El Paso Capital Improvement Department (CID) and Streets and Maintenance Department, local Public Works Departments, and El Paso Electric (EPE)

Authority to Implement: Local governments oversee public building planning, design, and maintenance and have authority to upgrade public buildings through local ordinances, capital programs, and maintenance budgets. Municipal departments can contract for improvements under existing codes and procurement rules. EPE can support through technical assistance, rebates, and incentives. No new authority is needed.

Geographic Location/Scope	Public Buildings	Implementation Timeline	Near-term
Cost Information	Under development	Primary Benefits	Mitigation
Community Benefits			
Public Health and Wellbeing			
Disbenefits and Solutions			
None identified			
Implementation Schedule and Milestones			
- Year 1: Identify funding mechanism - Year 2: Identify and prioritize buildings to upgrade; plan projects and begin upgrades - Year 3: Continue upgrades until completion			
Metrics for Tracking Progress			
- Number, square footage, or percent of public buildings upgraded - Energy savings from efficiency upgrades \$ savings from efficiency upgrades			
GHG Emission Reductions			
2030: 196 MTCO2e/year		2050: 53 MTCO2e/year	
CAPs Emission Reductions			
2030: - NOx: 1 ton/year - NH3: <1 ton/year - PM 2.5: <1 ton/year - PM 10: <1 ton/year - VOCs: <1 ton/year - SO2: 2 tons/year - CO: 2 tons/year		2050: - NOx: <1 ton/year - NH3: <1 ton/year - PM 2.5: <1 ton/year - PM 10: <1 ton/year - VOCs: <1 ton/year - SO2: <1 ton/year - CO: <1 ton/year	

HAP Emission Reductions	
2030: <1 ton/year	2050: <1 ton/year

ACTION M6: Develop a data center policy that incorporates environmental, community, and economic development considerations

Action Description: Develop data center policy that incorporates environmental (e.g., energy and water usage), community, and economic development considerations. The policy will explore tentative incentives, requirements, and energy generation requirements.

Primary Implementing Authorities: City of El Paso Economic and International Development Department, Planning and Inspections Department, local governments, and EPE

Authority to Implement: Local governments have authority to set development standards and incentives through zoning and permitting. They can include environmental criteria—such as energy efficiency, water use, and renewable sourcing—in site reviews and incentive agreements. Economic development teams can coordinate with companies and site selectors. Utilities assist with energy and water impact planning. Utility coordination ensures infrastructure capacity. No new authority is needed, but updates to zoning codes or development guidelines may be required.

Geographic Location/Scope	Region-wide	Implementation Timeline	Near-term
Cost Information	Under development	Primary Benefits	Mitigation
Community Benefits			
• Resource Conservation • Public Health and Wellbeing			
Disbenefits and Solutions			
None identified			
Implementation Schedule and Milestones			
• Year 1: Review existing data on data centers • Year 2: Approve policy			
Metrics for Tracking Progress			
• Number or percent of data centers participating in program • Number or percent of data centers disclosing energy or emissions information • Financing leveraged for community projects • Additional capital gained by region through data center industry			
GHG Emission Reductions			
2030: Not Modeled		2050: Not Modeled	
CAPs Emission Reductions			
2030: Not Modeled		2050: Not Modeled	

HAP Emission Reductions	
2030: Not Modeled	2050: Not Modeled



Measure 2: Support the Zero Emission Vehicle Transition

Most vehicles traveling in the El Paso region are powered by gasoline or diesel fuel. Though a CAP priority is to help residents and visitors shift these trips to active or public transportation modes under the *Promote Walking, Biking, and Riding Transit* measure, many of these trips cannot feasibly shift, as they may be too far, require a large vehicle for transporting goods, or the proper infrastructure is not in place. Helping to switch these vehicles to zero- or low-emission options when they are retired will reduce vehicle-related GHG emissions, air and noise pollution, and vehicle fuel and maintenance costs, and increase local jobs. In the near-term, implementation of this measure will focus on larger public and private fleets. As this measure supports vehicle electrification, its GHG reduction potential is related both to the reduction in gasoline or diesel fuel use AND the amount of renewable energy used in providing the region's electricity, which is addressed in part through the *Install Renewable Energy Systems* measure. Additionally, as the *Promote Walking, Biking, and Riding Transit* measure promotes the use of riding transit, it is important for these transit vehicles to be low- or zero-emissions to maximize GHG reductions from this measure.

Building on Regional Achievements

EPE's "Electric Vehicles for Everyone" includes Texas's residential and commercial EV incentive programs, in addition to offering EV rate plans, which offer special electricity rates to EV owners to encourage off-peak charging.^{57, 58,59} Additionally, South Central Regional Transit District, which services part of the El Paso region, released a Zero Emission Bus Rollout Plan in 2022, which includes transitioning to a 100% emission-free bus fleet by 2035.⁶⁰

ACTION M7: Implement EV charging policies for new buildings

Action Description: Develop an electric vehicle (EV) charging policy for new residential and commercial buildings that defines requirements for at-home EV charging readiness and new commercial parking lot EV charging.

Primary Implementing Authorities: City of El Paso Planning and Inspections Department, local governments, and building permitting agencies

Authority to Implement: Local governments have full authority to adopt EV charging requirements for new buildings through local amendments to building codes, zoning ordinances, or development regulations. They oversee the permitting process for new construction and can establish EV readiness or charging requirements for residential and commercial developments by ordinance. Such policies can apply to multifamily residential, commercial, and mixed-use projects. Implementation requires code revisions, stakeholder engagement (e.g., with developers and builders), and staff training on new inspection requirements. No new state or federal authority is needed; however, municipalities may choose to align with model codes (e.g., International Energy Conservation Code [IECC] appendices) or develop incentive programs for early adoption. Technical assistance from utilities and regional planning bodies can support rollout and compliance.

⁵⁷ El Paso Electric. (n.d.). *Electric Vehicles for Everyone*. <https://www.epelectric.com/ev>

⁵⁸ El Paso Electric. (n.d.). *EV rate options*. <https://www.epelectric.com/residential/electric-vehicles/ev-rate-options>

⁵⁹ El Paso Electric. (n.d.). *EV Smart Rewards program*. <https://www.epelectric.com/residential/electric-vehicles/ev-smart-rewards>

⁶⁰ South Central Regional Transit District. (2022, June 3). *Zero-emission bus fleet rollout plan*. <https://scrtcd.org/zero-emission-bus-fleet>

Geographic Location/Scope	Region-wide	Implementation Timeline	Near-term
Cost Information	Under development	Primary Benefits	Mitigation
Community Benefits			
None identified			
Disbenefits and Solutions			
EV charging requirements could increase development costs but decrease future EV charging installation costs for building owners. To reduce additional costs, municipalities could offer technical assistance, workshops, and guidelines on EV-charging infrastructure requirements and best practices to streamline design and construction work and/or develop an EV-ready assistance incentive.			
Implementation Schedule and Milestones			
- Year 1: Convene stakeholder groups; forecast new building construction - Year 2 to 3: Adopt policy			
Metrics for Tracking Progress			
- Number of EV chargers installed due to policy - Number of homes and commercial buildings that are EV-ready due to policy			
GHG Emission Reductions			
2030: 66,998 MTCO2e/year		2050: 46,591 MTCO2e/year	
CAPs Emission Reductions			
2030: - NO_x: +22 tons/year - NH₃: +3 tons/year - PM 2.5: +13 tons/year - PM 10: +13 tons/year - VOCs: 44 tons/year - SO₂: +204 tons/year - CO: 332 tons/year		2050: - NO_x: 44 tons/year - NH₃: 1 ton/year - PM 2.5: 1 ton/year - PM 10: 2 tons/year - VOCs: 20 tons/year - SO₂: <1 ton/year - CO: 199 tons/year	
HAP Emission Reductions			
2030: +2 tons/year increase in HAPs due to increased electricity use		2050: +<1 ton/year increase in HAPs due to increased electricity use	

ACTION M8: Organize zero emission and hybrid vehicle ride-and-drive events for community members

Action Description: Conduct regular ride-and-drive events to promote awareness of and familiarity with EVs and other clean air vehicles and help local dealerships conduct their own events.

Primary Implementing Authorities: City of El Paso Office of Climate and Sustainability, El Paso Electric (EPE), local governments, nonprofit organizations, and auto dealerships

Authority to Implement: Local governments have the authority to plan and host public outreach and education events under general public engagement and sustainability mandates. Ride-and-drive events do not require new legal authority and can be implemented directly by municipal departments or in partnership with third-party organizers and local auto dealers. Local governments may use existing community event protocols, procurement tools, or sponsorship agreements to coordinate logistics. Collaboration with local dealerships ensures access to a range of vehicles, staff, and technical expertise. Nonprofits may assist with outreach and education, especially in underserved communities. Utilities may also participate by promoting incentives and providing charging infrastructure demonstrations. No new legislative action is necessary, though partnerships and waivers (e.g., for insurance or liability) may need to be structured in advance.

Geographic Location/Scope	Region-wide	Implementation Timeline	Near-term
Cost Information	Under development	Primary Benefits	Mitigation
Community Benefits			
- Economic Prosperity - Community Building			
Disbenefits and Solutions			
None identified			
Implementation Schedule and Milestones			
- Year 1: Coordinate with EPE and local dealerships - Year 2: Implement events			
Metrics for Tracking Progress			
- Number of events - Number of community members participating			
GHG Emission Reductions			
2030: Included in Action M7		2050: Included in Action M7	
CAPs Emission Reductions			
2030: Included in Action M7		2050: Included in Action M7	
HAP Emission Reductions			
2030: Included in Action M7		2050: Included in Action M7	

ACTION M9: Transition municipal fleets to ZEVs

Action Description: Transition municipal fleets to zero emission vehicles (ZEVs) and create a Fleet Electrification Playbook that includes recommendations for planning, stakeholder engagement, and execution for electrification of light-, medium-, and heavy-duty vehicles.

Primary Implementing Authorities: City of El Paso Fleet Services Division, City of El Paso Office of Climate and Sustainability, and other local government fleet management departments

Authority to Implement: Local governments have full authority to manage and replace their own vehicle fleets, including transitioning to ZEVs. Local governments may implement ZEV transition plans through internal capital planning, procurement policy updates, and fleet electrification strategies. Municipal fleet managers oversee vehicle procurement, operations, and replacement cycles. Sustainability offices help align fleet transitions with climate goals and may coordinate planning, funding, and performance tracking. No new legislative authority is required. However, changes may involve adopting formal fleet transition targets, updating procurement procedures to prioritize ZEVs, and investing in supporting infrastructure (e.g., chargers at municipal yards). Partnerships with utilities can help assess grid capacity and plan phased deployment.

Geographic Location/Scope	Public Fleets	Implementation Timeline	Medium-term
Cost Information	Under development	Primary Benefits	Mitigation
Community Benefits			
Public Health and Wellbeing			
Disbenefits and Solutions			
None identified			
Implementation Schedule and Milestones			
- Year 1: Identify pilot vehicles and funding - Year 2: Implement pilot - Year 3: Evaluate pilot - Year 4: Scale up to entire fleet			
Metrics for Tracking Progress			
- Percent total municipal fleet that is ZEV - Number or percent of miles traveled by municipal fleet that is electric - Municipal fleet fuel use (e.g., gasoline, diesel) and electricity use - Financial savings (fuel, vehicles, maintenance)			
GHG Emission Reductions			
2030: Included in Action M7		2050: Included in Action M7	
CAPs Emission Reductions			
2030: Included in Action M7		2050: Included in Action M7	
HAP Emission Reductions			
2030: Included in Action M7		2050: Included in Action M7	

ACTION M10: Install public EV charging stations

Action Description: Install Level 2 and fast charging stations for EVs at public parking lots and set affordable charging rates.

Primary Implementing Authorities: City of El Paso Capital Improvement and Transportation Departments, local governments, EPE, and regional utilities

Authority to Implement: Local governments have the authority to install EV charging infrastructure on public property through existing powers related to capital improvements, transportation planning, and land use. Cities can procure, install, and operate Level 2 and DC fast chargers on public parking lots and rights-of-way, or contract private operators through franchise or concession agreements. Coordination with utilities is required for site selection, interconnection approval, technical review, and load management, and utilities may provide incentives or rebates for hardware installation. No new statutory authority is required; however, local permitting and procurement procedures may need to be updated to support streamlined deployment.

Geographic Location/Scope	Region-wide	Implementation Timeline	Medium-term
Cost Information	Under development	Primary Benefits	Mitigation
Community Benefits			
Savings to Residents and Businesses			
Disbenefits and Solutions			
None identified			
Implementation Schedule and Milestones			
- Year 1: Identify pilot EV charging locations and funding sources - Year 2: Implement pilot EV stations - Year 3: Evaluate pilot - Year 4: Scale up charger installations			
Metrics for Tracking Progress			
- Number of public EV chargers installed - Percent utilization rate - Charger uptime (percent of days charger is operational)			
GHG Emission Reductions			
2030: Included in Action M7		2050: Included in Action M7	
CAPs Emission Reductions			
2030: Included in Action M7		2050: Included in Action M7	
HAP Emission Reductions			
2030: Included in Action M7		2050: Included in Action M7	

ACTION M11: Develop alternate fuel hubs for buses and heavy-duty fleet vehicles

Action Description: Develop alternate fuel production facilities (e.g., green hydrogen, biofuels, renewable natural gas, etc.) that can serve transit fleet operators, local government vehicle fleets, and potentially other large regional fleet operators. Fuel would primarily be used to decarbonize medium- and heavy-duty vehicles.

Primary Implementing Authorities: Sun Metro (City of El Paso Mass Transit Department), City of El Paso Fleet Services, regional transit agencies, local governments, and fuel providers (e.g., hydrogen, renewable natural gas [RNG], biodiesel suppliers)

Authority to Implement: Local governments and transit agencies have authority to develop and operate alternative fuel hubs for public fleets and may enter into agreements with private operators or utilities. Transit and fleet departments lead site planning and vehicle integration, while private fuel providers or utilities may design, build, and operate fueling infrastructure. Local governments may support with permitting, land use planning, and interagency coordination. Deployment may occur on public land or in coordination with regional freight operators through interlocal agreements. Infrastructure may include hydrogen fueling stations, RNG compressors, or high-capacity EV charging depots. Cities can use existing siting and permitting authority, capital improvement planning, and procurement processes to launch projects. No new legislative authority is required, but successful implementation may involve coordination with state agencies (e.g., Texas Commission on Environmental Quality [TCEQ], Texas Department of Transportation [TxDOT]), participation in federal programs (e.g., Environmental Protection Agency [EPA] Clean Heavy-Duty Vehicles Program), and updates to local codes for fueling technologies. Utility collaboration is essential for energy supply planning.

Geographic Location/Scope	Region-wide	Implementation Timeline	Long-term
Cost Information	Under development	Primary Benefits	Mitigation
Community Benefits			
- Economic Prosperity - Savings to Residents and Businesses			
Disbenefits and Solutions			
None identified			
Implementation Schedule and Milestones			
- Year 1 to 2: Convene stakeholders; identify alternate fuel hub locations; identify funding sources - Year 2 to 3: Implement pilot fuel hubs - Year 4: Evaluate pilot - Year 5 to 7: Scale up fuel hubs			
Metrics for Tracking Progress			
- Number of alternate fuel production facilities and fueling hubs - Quantity of alternate fuel purchased from hubs annually			

GHG Emission Reductions	
2030: 322 MTCO ₂ e/year	2050: 265 MTCO ₂ e/year
CAPs Emission Reductions	
2030: • NO_x: <1 ton/year • NH₃: <1 ton/year • PM 2.5: <1 ton/year • PM 10: <1 ton/year • VOCs: <1 ton/year • SO₂: <1 ton/year • CO: 2 tons/year	2050: • NO_x: <1 ton/year • NH₃: <1 ton/year • PM 2.5: <1 ton/year • PM 10: <1 ton/year • VOCs: <1 ton/year • SO₂: <1 ton/year • CO: 1 ton/year
HAP Emission Reductions	
2030: N/A	2050: N/A

ACTION M12: Develop alternative fuel freight corridors

Action Description: Identify and plan for freight vehicle refueling infrastructure needs to support industry transition toward low- or zero emission freight vehicles.

Primary Implementing Authorities: City of El Paso Office of Climate and Sustainability, TxDOT, MPO, local governments, and freight and logistics industry partners

Authority to Implement: TxDOT and the MPO have the authority to plan and designate freight corridors, while local governments control land use, permitting, and infrastructure deployment along the corridor. No new statutory authority is required to plan and support alternative fuel corridors. However, implementation involves coordinated action between multiple jurisdictions, public agencies, and private sector partners. Local governments can facilitate the development of refueling stations (e.g., for hydrogen, CNG, RNG, or electric trucks) through zoning updates, right-of-way use, and incentive programs and play a key role in permitting and siting. Industry stakeholders help define refueling needs and usage patterns. TxDOT may incorporate corridor plans into the statewide freight strategy, while the MPO can allocate federal and state funding.

Geographic Location/Scope	Region-wide	Implementation Timeline	Long-term
Cost Information	Under development	Primary Benefits	Mitigation
Community Benefits			
• Economic Prosperity • Savings to Residents and Businesses			
Disbenefits and Solutions			
None identified			
Implementation Schedule and Milestones			

- Year 1 to 2: Convene stakeholders; identify fuel corridor locations; identify funding sources - Year 2 to 3: Implement pilot projects - Year 4: Evaluate pilot - Year 5 to 7: Scale up projects	
Metrics for Tracking Progress	
- Number of alternative fuel refueling stations - Quantity of alternate fuel purchased from stations annually	
GHG Emission Reductions	
2030: Included in Action M11	2050: Included in Action M11
CAPs Emission Reductions	
2030: Included in Action M11	2050: Included in Action M11
HAP Emission Reductions	
2030: Included in Action M11	2050: Included in Action M11



Measure 3: Install Renewable Energy Systems

Renewable energy is generated from sources that are naturally replenished, such as the sun, wind, water, and heat energy from the earth. When used to generate electricity instead of fossil fuels, renewable energy can greatly decrease the emissions associated with electricity use. Large-scale renewable energy sources can be integrated into the electric grid by electric utilities, or residents, businesses, and local governments can install solar, wind, or other renewable energy systems locally. Expanding renewable energy systems can also increase energy resilience, lower electricity costs, create jobs, and improve public health by reducing co-pollutants associated with fossil fuel-based electricity production. Additionally, other measures, such as *Support the Zero Emission Vehicle Transition* and *Increase Energy Efficiency and Decarbonize Buildings*, promote electrification as a primary method for reducing GHG emissions. Switching to renewable energy is important to help maximize emissions reductions in these other measures.

Building on Regional Achievements

EPE's Community Solar Program, first launched in 2017, was Texas's first community solar program. It allows residents and businesses to subscribe to solar energy without installing rooftop panels. It is powered by local utility-scale solar farms and is offered to renters, homeowners, and businesses. The program supports EPE's goal of achieving 100% carbon-free electricity by 2045.⁶¹

ACTION M13: Partner with utilities and startups to increase geothermal energy use

Action Description: Electric utilities, including EPE, can collaborate with geothermal startups to increase the renewable contributions to their electricity generation portfolios. Local governments can partner with geothermal companies to install geothermal pilot projects to help provide heating and cooling to government operations, residential households, or industrial facilities.

Primary Implementing Authorities: Rio Grande Electric Cooperative, El Paso Electric (EPE), geothermal energy companies and startups, City of El Paso Office of Climate and Sustainability, local governments

Authority to Implement: Electric utilities have full authority over their generation portfolios and can invest in or procure geothermal energy consistent with Public Utility Commission of Texas (PUCT) regulations. Local governments can support or initiate geothermal energy pilot projects by contracting with developers, leasing public land, integrating systems into public buildings, and aligning permitting and incentives with clean energy goals. Developers and Housing Authorities can also act as partners. Utilities must adhere to regulatory guidelines for interconnection, reliability, and cost recovery when adding geothermal to their generation mix. No new statutory authority is required, but successful project development may depend on clarifying zoning classifications, interagency permitting coordination, and establishing joint development or purchase agreements. Local governments can also support market entry for geothermal startups through pilot-friendly procurement or demonstration site designations.

Geographic Location/Scope	Region-wide	Implementation Timeline	Medium-term
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⁶¹ El Paso Electric. (n.d.). *Community Solar Program*. <https://www.epelectric.com/communitysolar/>

Cost Information	Under development	Primary Benefits	Mitigation
Community Benefits			
- Economic Prosperity - Savings to Residents and Businesses			
Disbenefits and Solutions			
None identified			
Implementation Schedule and Milestones			
- Year 1: Convene stakeholder meetings - Year 2 to 4: Implement pilot projects; evaluate data; engage PUCT			
Metrics for Tracking Progress			
- Number of geothermal projects - Electricity generated from geothermal systems - Energy savings from use of geothermal energy			
GHG Emission Reductions			
2030: 21,487 MTCO2e/year		2050: 0 MTCO2e/year (Note: calculation does not estimate potential for geothermal energy systems to replace on-site stationary fuel combustion, such as natural gas)	
CAPs Emission Reductions			
2030: - NO_x: 18 tons/year - NH₃: 1 ton/year - PM 2.5: 2 tons/year - PM 10: 3 tons/year - VOCs: 1 ton/year - SO₂: 28 tons/year - CO: 21 tons/year		2050: - NO_x: <1 ton/year - NH₃: <1 ton/year - PM 2.5: <1 ton/year - PM 10: <1 ton/year - VOCs: <1 ton/year - SO₂: <1 ton/year - CO: <1 ton/year	
HAP Emission Reductions			
2030: <1 ton/year		2050: <1 ton/year	

ACTION M14: Procure renewable energy through utility contracts or subscriptions to meet electricity demand

Action Description: Electric utilities, such as El Paso Electric (EPE), can create clean energy procurement or subscription programs that allow government entities or businesses to voluntarily subscribe to energy generated from clean energy facilities. Subscribing to these programs allows subscribers access to solar energy at a predictable rate without installing panels on their property.

Primary Implementing Authorities: City of El Paso Office of Climate and Sustainability, local governments, EPE, Rio Grande Electric Cooperative

Authority to Implement: Local governments have procurement authority to select energy supply options for their facilities and operations, including participation in voluntary renewable energy programs. Utilities like EPE can offer green power products, long-term clean energy subscriptions, or utility-scale power purchase agreements (PPAs), subject to Public Utility Commission of Texas (PUCT) rules. No new legal authority is needed for participation in existing offerings. If new programs must be developed, utility regulatory filings and PUCT approval may be required. Participation decisions may require internal approval through local procurement policies or sustainability resolutions.

Geographic Location/Scope	Region-wide	Implementation Timeline	Near-term
Cost Information	Under development	Primary Benefits	Mitigation
Community Benefits			
None identified			
Disbenefits and Solutions			
None identified			
Implementation Schedule and Milestones			
- Year 1: Promote program and increase enrollment - Year 2: Track progress and evaluate program - Year 3: Recommend improvements			
Metrics for Tracking Progress			
- Total electricity purchased from clean energy sources annually - Percent of total electricity purchased from clean energy sources annually - Number or percent of government entities enrolled in clean energy procurement or subscription programs			
GHG Emission Reductions			
2030: 843 MTCO2e/year		2050: 0 MTCO2e/year	
CAPs Emission Reductions			
2030: - NOx: 2 tons/year - NH3: <1 ton/year - PM 2.5: <1 ton/year - PM 10: <1 ton/year - VOCs: <1 ton/year - SO2: 3 tons/year - CO: 2 tons/year		2050: - NO_x: <1 ton/year - NH₃: <1 ton/year - PM 2.5: <1 ton/year - PM 10: <1 ton/year - VOCs: <1 ton/year - SO₂: <1 ton/year - CO: <1 ton/year	

HAP Emission Reductions	
2030: <1 ton/year	2050: <1 ton/year

ACTION M15: Implement solar-ready policies for new buildings

Action Description: Develop a policy to require all new residential and commercial construction to be solar-ready. Develop solar-ready guidelines to help applicants and reviewers determine compliance with the ordinance.

Primary Implementing Authorities: City of El Paso Planning and Inspections Department, local governments, and building permitting agencies

Authority to Implement: Local governments have existing authority to adopt solar-ready requirements through local amendments to building codes, zoning ordinances, or permitting regulations. Municipalities can mandate that new buildings include design features—such as roof orientation, load-bearing capacity, and conduit installation—that facilitate future solar system deployment. Solar-ready ordinances can be adopted under the same statutory authority used for energy code updates, often through city council approval. While no new state authority is required, local governments may choose to align their requirements with state-adopted model codes (e.g., International Energy Conservation Code) or coordinate with utilities for educational support. Implementation may require staff training, permitting checklist updates, and stakeholder outreach to reduce compliance barriers. Coordination with developers, architects, and contractors will be essential for implementation.

Geographic Location/Scope	Region-wide	Implementation Timeline	Near-term
Cost Information	Under development	Primary Benefits	Mitigation and Adaptation
Community Benefits			
Adaptation			
Disbenefits and Solutions			
Solar-ready requirements could increase development costs but decrease future solar installation costs for building owners. To help address additional costs, municipalities could offer technical assistance, workshops, and guidelines on solar-ready requirements and best practices to streamline design and construction work and/or develop a solar-ready assistance incentive for developers.			
Implementation Schedule and Milestones			
• Year 1: Convene stakeholder groups; forecast new building construction • Year 2 to 3: Adopt policy			
Metrics for Tracking Progress			
• Percent of new buildings constructed annually that are solar-ready • Number of solar-ready buildings that install solar systems			
GHG Emission Reductions			
2030: 330 MTCO ₂ e/year		2050: 0 MTCO ₂ e/year	
CAPs Emission Reductions			

2030: • NO_x: 3 tons/year • NH₃: <1 ton/year • PM 2.5: <1 ton/year • PM 10: <1 ton/year • VOCs: <1 ton/year • SO₂: 4 tons/year • CO: 3 tons/year	2050: • NO_x: <1 ton/year • NH₃: <1 ton/year • PM 2.5: <1 ton/year • PM 10: <1 ton/year • VOCs: <1 ton/year • SO₂: <1 ton/year • CO: <1 ton/year
HAP Emission Reductions	
2030: <1 ton/year	2050: <1 ton/year

ACTION M16: Incentivize battery storage installations

Action Description: Create an incentive program to help new and existing solar customers install battery storage systems.

Primary Implementing Authorities: Rio Grande Electric Cooperative, El Paso Electric (EPE), City of El Paso Office of Climate and Sustainability, local governments

Authority to Implement: Electric utilities have existing authority to develop and administer battery storage incentive programs under their demand-side management and grid reliability responsibilities, subject to PUCT oversight. Local governments can support implementation by facilitating outreach, offering complementary incentives, or co-developing program goals and evaluation metrics. Municipalities may also use zoning, permitting, and building codes to encourage battery storage readiness or deployment in public and private developments. No new statutory authority is required but coordinated program design may involve memorandums of understanding (MOUs) or interagency agreements between utilities and municipal entities.

Geographic Location/Scope	Region-wide	Implementation Timeline	Medium-term
Cost Information	Under development	Primary Benefits	Mitigation and Adaptation
Community Benefits			
• Adaptation • Savings to Residents and Businesses			
Disbenefits and Solutions			
None identified			
Implementation Schedule and Milestones			
• Year 1: Develop pilot project • Year 2 to 3: Gain approval from PUCT • Year 4: Implement pilot			

Year 5 to 7: Implement full program	
Metrics for Tracking Progress	
- Number of incentives provided - Number of battery storage systems installed due to incentives - Reduction in regional peak demand	
GHG Emission Reductions	
2030: Included in Action M15	2050: Included in Action M15
CAPs Emission Reductions	
2030: Included in Action M15	2050: Included in Action M15
HAP Emission Reductions	
2030: Included in Action M15	2050: Included in Action M15

ACTION M17: Install solar panels on public buildings and public land as alternate energy sources and as shade structures

Action Description: Install solar panels over open government-owned spaces like parking lots, rooftops, canals, or vacant public land. Parking lot solar canopies double as shade and protection from urban heat.

Primary Implementing Authorities: City of El Paso Capital Improvement Department, Public Works Departments of local governments, El Paso Electric (EPE), and other regional municipalities

Authority to Implement: Local governments have full authority to install solar panels on municipally owned property under existing procurement, planning, and land use powers. City departments responsible for public facilities can initiate solar projects directly or through third-party power purchase agreements (PPAs), energy service contracts, or bond-financed capital projects. Interconnection with the grid is governed by the Public Utility Commission of Texas (PUCT), with EPE facilitating compliance. EPE may also assist with net metering or system performance data and may offer technical guidance or incentives. No new statutory authority is required, but cities may need to update procurement language to enable solar-specific contracts, including long-term energy service agreements or public-private partnerships. Local coordination with the utility is critical to ensure smooth grid integration and maximize system value.

Geographic Location/Scope	Public Buildings and Land	Implementation Timeline	Near-term
Cost Information	Under development	Primary Benefits	Mitigation and Adaptation
Community Benefits			
- Adaptation - Public Health and Wellbeing - Circular jobs related to solar sector (i.e., dismantling and recycling of solar installations after 20 years)			

Disbenefits and Solutions	
None identified	
Implementation Schedule and Milestones	
- Year 1: Define pipeline of solar projects in the region; develop education and workshops on public solar - Year 2: Install solar systems	
Metrics for Tracking Progress	
- kW of solar installed on public buildings/land - kWh of solar produced annually - Financial savings annually and over project lifetime	
GHG Emission Reductions	
2030: 275 MTCO ₂ e/year	2050: 0 MTCO ₂ e/year
CAPs Emission Reductions	
2030: - NO_x: 2 tons/year - NH₃: <1 ton/year - PM 2.5: <1 ton/year - PM 10: <1 ton/year - VOCs: <1 ton/year - SO₂: 4 tons/year - CO: 3 tons/year	2050: - NO_x: <1 ton/year - NH₃: <1 ton/year - PM 2.5: <1 ton/year - PM 10: <1 ton/year - VOCs: <1 ton/year - SO₂: <1 ton/year - CO: <1 ton/year
HAP Emission Reductions	
2030: <1 ton/year	2050: <1 ton/year



Measure 4: Promote Sustainable Food Systems and Waste Management Practices

Local, sustainable, and self-sufficient food production and distribution systems can reduce GHG emissions from agricultural practices, landfilling food waste, and food transportation. Sustainable food production, also known as sustainable agriculture, uses techniques that aim to protect the environment, expand natural resources, make the best use of nonrenewable resources, and in some cases, increase overall carbon sequestration. Sustainable food systems can create local, high-quality jobs, reduce grocery costs, increase access to healthy food, improve food and water use resiliency, enhance community connectivity, and reduce food waste sent to landfills.

Landfills and wastewater treatment plants produce GHG emissions through the decomposition of organic matter. Waste emissions can be decreased by reducing the total amount of waste thrown away, diverting waste from landfills to compost or recycling facilities, or capturing and using the biogas generated as an energy source. This measure not only reduces GHGs from landfills, wastewater treatment plants, and waste transportation systems, but also increases local jobs and reduces waste disposal costs, landfill odors, and the need for raw materials by providing recycled materials and composting ingredients.

Building on Regional Achievements

An El Paso business, New Green Organics, currently offers a “green bin” composting service, where they collect food scraps from residents and turn them into ready-to-use compost. It began in 2021 and offers full-service compost at a monthly subscription rate.⁶²

ACTION M18: Improve recycling practices

Action Description: Reduce amount of recyclable materials ending up in landfill through education and outreach on recycling practices and expanding recycling services. Focus on materials that can be recycled locally such as aluminum and on improving recycling at apartment complexes.

Primary Implementing Authorities: City of El Paso Environmental Services Department, local governments, regional solid waste authorities, and contracted recycling haulers

Authority to Implement: Environmental services agencies manage municipal recycling programs, including curbside collection, public education, and materials recovery. Local governments have existing authority to improve recycling programs through municipal code, service contracts, and public education campaigns. Cities can expand recycling access, update accepted materials lists, and implement outreach strategies through administrative action or ordinance. No new legislative authority is required. Improvements may involve contracting with haulers to increase multifamily service coverage, investing in materials recovery facilities (MRFs), or launching contamination-reduction initiatives. State permitting and reporting requirements (e.g., Texas Commission on Environmental Quality [TCEQ] solid waste rules) apply to facility upgrades. Regional collaboration can help harmonize recycling standards, reduce market confusion, and increase diversion rates.

⁶² New Green Organics. (n.d.). *Green Bin Program*. Retrieved June 2025, from https://www.newgreenorganics.com/green-bin-program?utm_source=chatgpt.com

Geographic Location/Scope	Region-wide	Implementation Timeline	Near-term
Cost Information	Under development	Primary Benefits	Mitigation
Community Benefits			
Resource Conservation			
Disbenefits and Solutions			
None identified			
Implementation Schedule and Milestones			
- Year 1: Develop education and outreach program; convene with waste haulers and treatment facilities - Year 2: Implement program			
Metrics for Tracking Progress			
- Number of incentives provided - Number of battery storage systems installed due to incentives - Reduction in regional peak demand			
GHG Emission Reductions			
2030: 4,974 MTCO2e/year		2050: 4,974 MTCO2e/year	
CAPs Emission Reductions			
2030: - NO_x: 1 ton/year - NH₃: <1 ton/year - PM 2.5: 3 tons/year - PM 10: 3 tons/year - VOCs: 2 tons/year - SO₂: <1 ton/year - CO: 27 tons/year		2050: - NO_x: 1 ton/year - NH₃: <1 ton/year - PM 2.5: 3 tons/year - PM 10: 3 tons/year - VOCs: 2 tons/year - SO₂: <1 ton/year - CO: 27 tons/year	
HAP Emission Reductions			
2030: N/A		2050: N/A	

ACTION M19: Implement community-wide composting for food and yard waste

Action Description: Implement composting program to remove food and yard waste from solid waste stream before it goes to landfills.

Primary Implementing Authorities: City of El Paso Environmental Services Department, regional solid waste agencies, local governments, and contracted waste haulers.

Authority to Implement: Local governments have full authority to implement residential and commercial composting programs through municipal waste ordinances and solid waste service contracts. Environmental Services Departments operate or contract facilities, manage outreach, and set participation guidelines. Cities can adopt source separation requirements, establish collection programs, and permit or build composting facilities. Composting mandates or incentives can be introduced by ordinance. Private haulers may assist with collection and processing logistics. No new state authority is needed, though facilities must comply with Texas Commission on Environmental Quality (TCEQ) permitting requirements for organic waste processing.

Geographic Location/Scope	Region-wide	Implementation Timeline	Medium-term
Cost Information	Under development	Primary Benefits	Mitigation
Community Benefits			
- Resource Conservation - Economic Prosperity			
Disbenefits and Solutions			
None identified			
Implementation Schedule and Milestones			
- Year 1: Implement composting pilot - Year 2: Evaluate pilot - Year 3 to 7: Scale up program			
Metrics for Tracking Progress			
- Percent participation rate in program - Number of customers served by program - Amount of waste composted (pounds, tons/year) - Diversion rate and waste composition			
GHG Emission Reductions			
2030: 3,774 MTCO2e/year		2050: 3,774 MTCO2e/year	
CAPs Emission Reductions			
2030: - NOx: <1 ton/year - NH3: <1 ton/year - PM 2.5: 2 tons/year - PM 10: 3 tons/year - VOCs: 2 tons/year - SO2: <1 ton/year		2050: - NO_x: <1 ton/year - NH₃: <1 ton/year - PM 2.5: 2 tons/year - PM 10: 3 tons/year - VOCs: 2 tons/year - SO₂: <1 ton/year	

• CO: 20 tons/year	• CO: 20 tons/year
HAP Emission Reductions	
2030: N/A	2050: N/A

ACTION M20: Develop a construction and demolition waste diversion ordinance and explore establishing reuse/recycling facilities

Action Description: Develop a construction and demolition (C&D) waste ordinance that requires large construction projects to divert a certain percentage of C&D waste. Explore methods for establishing a C&D waste reuse/recycling facility.

Primary Implementing Authorities: City of El Paso Environmental Services Department, Planning and Inspections Department, local governments, regional solid waste authorities, and private C&D haulers and processors

Authority to Implement: Local governments manage permitting and inspection for construction projects. Local governments have full authority to adopt C&D waste diversion requirements through local ordinance and development code amendments. Cities can mandate that permitted projects divert a specified percentage of C&D waste, require waste management plans, and set enforcement protocols. Permitting and inspections staff can verify compliance through project documentation. Environmental Services Departments may support by facilitating facility siting, processing infrastructure, or public-private partnerships. No new state authority is required, though Texas Commission on Environmental Quality (TCEQ) permits are necessary for establishing or expanding C&D recycling facilities. Local governments may incentivize compliance by streamlining permit review or offering fee reductions for projects that meet diversion goals. Establishing public or private reuse/recycling centers may involve zoning adjustments and infrastructure investment, supported by grants or enterprise funding.

Geographic Location/Scope	Region-wide	Implementation Timeline	Medium-term
Cost Information	Under development	Primary Benefits	Mitigation
Community Benefits			
• Resource Conservation			
Disbenefits and Solutions			
Additional equipment or labor needed to sort or shred materials to meet diversion requirements can increase costs for contractors. Local governments can work with contractors and waste haulers to understand current diversion practices and develop ordinance requirements that would reduce costs, such as establishing a minimum threshold of materials diverted as a percent of total project waste tonnage rather than requiring diversion of specific material streams. Diversion as a percentage of project by weight provides flexibility for the contractor to divert materials that may be easier to adapt into current practices (e.g., concrete, asphalt, rock and dirt) and forgo the diversion of materials that may require the purchase or rental of special equipment such as a shredder.			
Implementation Schedule and Milestones			
• Year 1: Convene with contractors; develop policy language; research C&D facility feasibility			

- Year 2: Adopt policy, establish C&D facility feasibility - Year 3 to 4: Progress on C&D facility development	
Metrics for Tracking Progress	
Quantity and percent of total C&D waste diverted (pounds, tons/year) and composition of waste	
GHG Emission Reductions	
2030: 1,113 MTCO ₂ e/year	2050: 1,113 MTCO ₂ e/year
CAPs Emission Reductions	
2030: - NO_x: <1 ton/year - NH₃: <1 ton/year - PM 2.5: 1 ton/year - PM 10: 1 ton/year - VOCs: 1 ton/year - SO₂: <1 ton/year - CO: 6 tons/year	2050: - NO_x: <1 ton/year - NH₃: <1 ton/year - PM 2.5: 1 ton/year - PM 10: 1 ton/year - VOCs: 1 ton/year - SO₂: <1 ton/year - CO: 6 tons/year
HAP Emission Reductions	
2030: N/A	2050: N/A

ACTION M21: Capture and upgrade biogas to use as an energy source

Action Description: Establish renewable natural gas (RNG) facilities at solid waste or wastewater treatment plants. This initiative involves upgrading biogas generated during waste treatment to produce RNG, contributing to sustainable energy production. RNG produced can be used for on-site energy generation or as a transportation fuel.

Primary Implementing Authorities: City of El Paso Environmental Services Department, El Paso Water, local governments, wastewater utilities, and landfill operators

Authority to Implement: Public utilities and environmental services agencies are responsible for operating wastewater treatment plants and landfills which are key sources of biogas. Local governments and public utilities have existing authority to develop biogas capture and RNG systems at these facilities. Municipal utilities may implement biogas upgrading projects under their operational mandates, using enterprise funds, capital budgets, or third-party energy service agreements. No new statutory authority is required. However, interconnection with gas or electricity infrastructure may require coordination with utilities and compliance with state and federal emissions, safety, and reporting regulations (e.g., Environmental Protection Agency [EPA] Renewable Fuel Standard, Texas Commission on Environmental Quality [TCEQ] permits). Local governments can also adopt policies or incentives to encourage biogas use as a transportation or facility energy source. Public-private partnerships may enhance project viability and access to federal or state funding.

Geographic Location/Scope	Region-wide	Implementation Timeline	Medium-term
Cost Information	Under development	Primary Benefits	Mitigation
Community Benefits			
- Economic Prosperity - Savings to Residents and Businesses			
Disbenefits and Solutions			
None identified			
Implementation Schedule and Milestones			
- Year 1: Identify facilities - Year 2: Develop projects and identify funding - Year 3: Construct projects - Year 3 to 4: Construction completed			
Metrics for Tracking Progress			
- Number of RNG facilities developed - Quantity of biogas upgraded to RNG annually/quantity of RNG produced - Quantity of RNG used on-site or as fuel			
GHG Emission Reductions			
2030: Not Modeled		2050: Not Modeled	
CAPs Emission Reductions			
2030: Not Modeled		2050: Not Modeled	
HAP Emission Reductions			
2030: Not Modeled		2050: Not Modeled	

ACTION M22: Use water-based growing systems, such as hydroponics and aquaponics agriculture

Action Description: Work with local farmers, agriculture businesses, and/or community gardens to implement an indoor hydroponic and aquaponic system pilot project to provide local produce. This will reduce water use for food production and transportation emissions.

Primary Implementing Authorities: City of El Paso Economic and International Development Department, Planning and Inspections Department, local governments, local agriculture businesses, and community-based organizations

Authority to Implement: Local governments have authority to support hydroponic and aquaponic systems through zoning allowances, pilot project approvals, and public-private partnerships. Agricultural businesses and nonprofits lead system installation, operations, and community engagement. No new statutory authority is required. Local governments can revise local zoning codes to allow indoor and vertical farming in urban zones, offer expedited permits,

or make public facilities available for demonstration projects. Local governments may also provide technical assistance, financial incentives, or land access to support adoption. Implementation partnerships with agriculture businesses and universities may be formalized through memoranda of understanding or lease agreements. Projects must comply with building, health, and food safety regulations, but do not require new state-level permissions if sited and operated locally.

Geographic Location/Scope	Region-wide	Implementation Timeline	Medium-term
Cost Information	Under development	Primary Benefits	Mitigation and Adaptation
Community Benefits			
- Adaptation - Resource Conservation			
Disbenefits and Solutions			
None identified			
Implementation Schedule and Milestones			
- Year 1: Convene with stakeholders; develop pilot projects - Year 2: Implement pilot projects - Year 3: Evaluate pilot projects and develop training - Year 4: Scale up program			
Metrics for Tracking Progress			
- Number of local farmers participating in program - Number of hydroponic/aquaponic system projects implemented			
GHG Emission Reductions			
2030: Not Modeled		2050: Not Modeled	
CAPs Emission Reductions			
2030: Not Modeled		2050: Not Modeled	
HAP Emission Reductions			
2030: Not Modeled		2050: Not Modeled	

ACTION M23: Develop local food hubs

Action Description: Construct local food hubs so that communities can get produce and grocery staples from local sources. This will help eliminate food deserts, reduce freight transportation, and promote local food production. Food hubs will also provide other services such as cooling and emergency food distribution.

Primary Implementing Authorities: City of El Paso Economic and International Development Department, Planning and Inspections Department, local governments, and nonprofit or cooperative food organizations

Authority to Implement: Local governments have existing authority to support and facilitate the development of food hubs through zoning, land use policy, and public-private partnerships. Local governments can designate sites for food hubs, amend codes to allow for mixed-use and light industrial food uses, and provide funding or facility access through economic development tools. Nonprofits and cooperatives typically operate the hubs, handle aggregation and distribution, and manage community engagement and vendor coordination. Public markets, cold storage, and food aggregation facilities can be implemented under current municipal authority. No new statutory authority is required.

Geographic Location/Scope	Region-wide	Implementation Timeline	Medium-term
Cost Information	Under development	Primary Benefits	Mitigation and Adaptation
Community Benefits			
• Adaptation • Public Health and Wellbeing • Economic Prosperity • Savings to Residents and Businesses • Community Building			
Disbenefits and Solutions			
None identified			
Implementation Schedule and Milestones			
• Year 1: Convene stakeholders; plan food hub development • Year 2: Identify funding • Year 3: Begin construction • Year 4 to 5: Complete construction			
Metrics for Tracking Progress			
• Number of food hubs developed • Population or communities served by food hubs • Pounds or tons/year of local food produced/sold			
GHG Emission Reductions			
2030: Not Modeled		2050: Not Modeled	
CAPs Emission Reductions			
2030: Not Modeled		2050: Not Modeled	
HAP Emission Reductions			
2030: Not Modeled		2050: Not Modeled	

Measure 5: Promote Walking, Biking, and Riding Transit

Active transportation and public transit options reduce transportation-related GHG emissions by helping residents, workers, and visitors reduce their reliance on passenger vehicles. Active transportation includes any human-powered mobility, such as walking, biking, or rolling, while public transit includes options like buses, shuttles, trolleys, and rail. Improvements to active transportation systems, like sidewalks and bike lanes, and public transit systems, like bus routes or transit stops, can encourage residents to switch from personal vehicles to active transportation or public transit modes. Sustainable land use planning can also promote urban development that concentrates jobs, housing, services, and amenities around efficient transportation systems. These compact, mixed-use, pedestrian- and bicycle-friendly developments are also typically located close to transit options. Promoting alternative transportation options can also reduce air and noise pollution from passenger vehicles, improve public health and wellbeing by promoting active lifestyles, decrease passenger vehicle fuel and maintenance costs, enhance economic prosperity and mobility, and improve community connectivity.

Building on Regional Achievements

El Paso's Safe Routes to School program is a strategy to promote walking and biking to school and engage the community to create a healthier environment for El Paso students. The program combines infrastructure improvements, education, community engagement, and policy changes. The program began in December 2023 and included community engagement.⁶³ The City of El Paso also developed a Complete Streets policy in 2022 which serves to create a connected, resilient, and equitable transportation network through a shift in street and road design that ensures equitable access to community resources for all people. The policy provides a framework for integrating a Complete Streets approach into plans, policies, decision-making processes, funding priorities, and everyday practices across relevant city departments.⁶⁴

ACTION M24: Implement Complete Streets conversion projects to improve walking, biking, and public transit use

Action Description: Complete Streets is an approach to planning, designing, building, operating, and maintaining streets that enables safe and comfortable access for all people who need to use them, including pedestrians, bicyclists, motorists and transit riders of all ages and abilities. Use Complete Streets to reserve lanes in busy downtown areas or along highways for transit vehicles only, so that transit is not slowed by other traffic.

Primary Implementing Authorities: City of El Paso Capital Improvement Department, regional municipalities, TxDOT, and MPO

Authority to Implement: Local governments and Texas Department of Transportation (TxDOT) have existing statutory authority to design, construct, and retrofit roadways under Complete Streets principles. Local governments can adopt Complete Streets policies by ordinance or resolution and apply design standards to capital improvement projects. Local transit agencies may also participate in design for bus rapid transit (BRT) and other transit-supportive features. TxDOT maintains jurisdiction over most major arterials and highways; therefore, local

⁶³ City of El Paso. (n.d.). *Safe Routes to School initiative*. Retrieved June 2025, from <https://www.elpasotexas.gov/capital-improvement/safe-routes-to-school/>

⁶⁴ City of El Paso. July 2022. *Complete Streets Policy*. Retrieved July 2025, from <https://www.elpasotexas.gov/assets/Documents/CoEP/Capital-Improvement/Transportation-Planning/El-Paso-Complete-Streets-Policy.pdf>

governments must coordinate with TxDOT to implement lane reconfigurations, bike/transit infrastructure, and pedestrian upgrades on those corridors. The Metropolitan Planning Organization (MPO) coordinates funding, planning, and project prioritization across jurisdictions. No new legal authority is required, but local adoption of Complete Streets design guidelines and interagency coordination agreements (e.g., through memorandums of understanding) may be necessary for consistent execution and cross-jurisdictional continuity.

Geographic Location/Scope	Region-wide	Implementation Timeline	Medium-term
Cost Information	Under development	Primary Benefits	Mitigation
Community Benefits			
- Public Health and Wellbeing - Economic Prosperity - Community Building			
Disbenefits and Solutions			
None identified			
Implementation Schedule and Milestones			
- Year 1: Engage stakeholders; gather community feedback; design project - Year 2: Complete plan development - Year 3: Begin construction - Year 3 to 4: Complete construction			
Metrics for Tracking Progress			
- Miles of new bike lanes and dedicated bike lanes - Miles of dedicated transit lanes - Number of projects implemented - Number of automobile-pedestrian crashes - Number of local road diet projects - Walk Score rating - Bus travel time versus bus idling time - Percent change of population in each density class (low, low-medium, medium, etc.)			
GHG Emission Reductions			
2030: 611 MTCO2e/year		2050: 425 MTCO2e/year	
CAPs Emission Reductions			
2030: - NO_x: 1 ton/year - NH₃: <1 ton/year		2050: - NO_x: <1 ton/year - NH₃: <1 ton/year	

• PM 2.5: <1 ton/year • PM 10: <1 ton/year • VOCs: 1 ton/year • SO₂: <1 ton/year • CO: 6 tons/year	• PM 2.5: <1 ton/year • PM 10: <1 ton/year • VOCs: <1 ton/year • SO₂: <1 ton/year • CO: 2 tons/year
HAP Emission Reductions	
2030: N/A	2050: N/A

ACTION M25: Expand existing micromobility systems for bikes and scooters

Action Description: Expand existing micromobility systems to promote the use of active transportation options, such as walking, biking, and scooters. Construct protected and/or separated bike paths along major commuting routes.

Primary Implementing Authorities: City of El Paso Capital Improvement and Planning Departments, Camino Real Regional Mobility Authority, regional municipalities, micromobility service providers, and the MPO

Authority to Implement: Local governments are responsible for transportation planning, street infrastructure, and permits for micromobility operators. Private vendors supply and operate bikes or scooters, while the Metropolitan Planning Organization (MPO) may provide funding or coordinate regional mobility strategies. The Camino Real Regional Mobility Authority manages the existing El Paso Bike Share Program, SunCycle.

Local governments have existing authority to regulate and expand micromobility systems through franchise agreements, right-of-way permits, and public infrastructure investments. Cities can contract with private providers, establish operational zones, and invest in supporting infrastructure (e.g., bike lanes, charging hubs). No new legislative authority is needed. However, municipal code updates may be required to reflect evolving micromobility definitions, fee structures, or safety standards. State transportation departments or the MPO may also need to be involved if projects affect state roads or require federal funding. Coordination across jurisdictions ensures consistent regulations and system interoperability across the region.

Geographic Location/Scope	Region-wide	Implementation Timeline	Near-term
Cost Information	Under development	Primary Benefits	Mitigation
Community Benefits			
• Public Health and Wellbeing • Economic Prosperity • Community Building			
Disbenefits and Solutions			
None identified			
Implementation Schedule and Milestones			

- Year 1: Engage stakeholders; gather community feedback; design project
- Year 2: Complete plan development
- Year 3: Begin construction
- Year 3 to 4: Complete construction

Metrics for Tracking Progress

- Miles of new bike lanes and dedicated bike lanes
- Miles of trails
- Number or percent of nodes connected
- Number of automobile-pedestrian crashes
- Increased SunCycle bike share program ridership

GHG Emission Reductions

2030: Included in Action M24

2050: Included in Action M24

CAPs Emission Reductions

2030: Included in Action M24

2050: Included in Action M24

HAP Emission Reductions

2030: Included in Action M24

2050: Included in Action M24

ACTION M26: Explore options to provide free public transit

Action Description: Provide free public transit to increase transit access across the region.

Primary Implementing Authorities: Sun Metro (City of El Paso Mass Transit Department), City of El Paso Office of Management and Budget, regional transit agencies, and local governments

Authority to Implement: Local transit agencies, such as Sun Metro, oversee fare structures and transit operations and have the authority to set fare policies, including the implementation of fare-free transit programs.

Fare structures are governed at the agency level and may be modified administratively or through governing board action. Local governments can provide financial support to offset lost fare revenue or reallocate existing funding sources to support fare-free operations. Local governments may support fare-free initiatives through policy directives or interlocal agreements. No new legislative authority is required; however, successful implementation depends on the identification of sustainable funding, stakeholder engagement (e.g., with unions and riders), and coordination with regional transportation planning bodies. Federal grants or pilot programs may also support transitional funding while evaluating long-term impacts on ridership, equity, and service delivery.

Geographic Location/Scope	Region-wide	Implementation Timeline	Medium-term
Cost Information	Under development	Primary Benefits	Mitigation
Community Benefits			

• Economic Prosperity • Savings to Residents and Businesses • Community Building	
Disbenefits and Solutions	
None identified	
Implementation Schedule and Milestones	
• Year 1: Seek board approval • Year 2: Begin pilot project • Year 3: Evaluate pilot project • Year 4: Implement free fares system-wide	
Metrics for Tracking Progress	
• Percent of transit systems in the region that offer free service • Percent of riders receiving free access • Transit ridership • Number of new transit riders	
GHG Emission Reductions	
2030: Included in Action M24	2050: Included in Action M24
CAPs Emission Reductions	
2030: Included in Action M24	2050: Included in Action M24
HAP Emission Reductions	
2030: Included in Action M24	2050: Included in Action M24

ACTION M27: Build transit-oriented developments to increase access to public transit

Action Description: Transit-oriented developments are dense hubs surrounding a new or existing major transit hub. Unlike park-and-rides, transit-oriented developments put retail, restaurants, grocery, other businesses, and/or dense, mixed-use residential housing closest to the transit stop so that all people can easily access shops without a personal vehicle.

Primary Implementing Authorities: City of El Paso Planning and Inspections Department, Housing and Community Development Department, local governments, Metropolitan Planning Organization (MPO), private developers, and Sun Metro

Authority to Implement: Local governments lead zoning and land use planning to support dense, mixed-use development near transit. Transit agencies and MPO coordinate station area planning and infrastructure investments, while private developers construct housing and commercial components. Local governments have full statutory authority to enable and promote Transit-Oriented Development (TOD) through zoning code amendments, overlay districts, infrastructure planning, and development incentives. Local governments may revise land use codes to allow increased density, reduce parking requirements, and streamline permitting near major transit hubs. They may also use tax increment financing, public-private partnerships, and

land assemblage tools to support TOD projects. Coordination with Sun Metro is necessary to align development with station locations and service capacity. No new authority is required, but interdepartmental collaboration and public engagement are key to overcoming barriers such as neighborhood resistance, land acquisition challenges, or infrastructure constraints. TOD strategies may also require affordable housing mandates or incentives to ensure equitable outcomes.

Geographic Location/Scope	Region-wide	Implementation Timeline	Medium-term
Cost Information	Under development	Primary Benefits	Mitigation
Community Benefits			
- Public Health and Wellbeing - Economic Prosperity - Community Building			
Disbenefits and Solutions			
None identified			
Implementation Schedule and Milestones			
- Year 1: Engage stakeholders; gather community feedback; design project - Year 2: Complete plan development - Year 3: Begin construction - Year 3 to 4: Complete construction			
Metrics for Tracking Progress			
- Percent of qualified developments built in TODs (using either square footage or number of developments) - Number of communities served by transit - Transit ridership - Number of new transit riders - Increase in population covered by transit services			
GHG Emission Reductions			
2030: 445 MTCO2e/year		2050: 309 MTCO2e/year	
CAPs Emission Reductions			
2030: - NO_x: 1 ton/year - NH₃: <1 ton/year - PM 2.5: <1 ton/year - PM 10: <1 ton/year - VOCs: <1 ton/year		2050: - NO_x: <1 ton/year - NH₃: <1 ton/year - PM 2.5: <1 ton/year - PM 10: <1 ton/year - VOCs: <1 ton/year	

• SO₂: <1 ton/year • CO: 4 tons/year	• SO₂: <1 ton/year • CO: 2 tons/year
HAP Emission Reductions	
2030: N/A	2050: N/A

ACTION M28: Expand micro-transit projects like small shuttles to help people get from home to transit stops

Action Description: Operate a shuttle program to help close the gap between home and work and transit stops to increase ease of ridership and remove barriers for riders with mobility challenges (e.g., addressing first- and last-mile problems).

Primary Implementing Authorities: Sun Metro, City of El Paso Mass Transit and Planning Departments, regional municipalities, and local governments

Authority to Implement: Transit agencies such as Sun Metro have existing authority to develop and operate micro-transit programs under their general transportation service mandates. Micro-transit can be introduced administratively or as part of a broader service expansion strategy, and may be operated directly or via third-party vendors. Local governments can fund, promote, or supplement these services through interlocal agreements or transportation sales tax allocations. Local governments may also help identify service gaps or coordinate first-mile/last-mile connectivity through land use and transportation planning. No new legislative authority is required. However, successful implementation typically requires operational planning, fleet acquisition or contracting, community outreach, and potentially Federal Transit Administration (FTA) approvals if federal funding is involved. Regional coordination ensures micro-transit service areas connect effectively to major transit lines and hubs.

Geographic Location/Scope	Region-wide	Implementation Timeline	Near-term
Cost Information	Under development	Primary Benefits	Mitigation
Community Benefits			
• Public Health and Wellbeing • Economic Prosperity • Community Building			
Disbenefits and Solutions			
None identified			
Implementation Schedule and Milestones			
• Year 1: Convene stakeholders to identify priority micro-transit routes and stops • Year 2: Identify funding for program • Year 3: Implement program			
Metrics for Tracking Progress			

• Number of shuttles put into service • Shuttle ridership • Number of communities served by shuttles • Miles traveled by shuttles	
GHG Emission Reductions	
2030: Included in Action M27	2050: Included in Action M27
CAPs Emission Reductions	
2030: Included in Action M27	2050: Included in Action M27
HAP Emission Reductions	
2030: Included in Action M27	2050: Included in Action M27

ACTION M29: Implement car-free hours to increase pedestrian street access

Action Description: Identify streets that are either retail or restaurant hubs or overburdened communities with unsafe driving, noise, and air pollution and close sections of the street on specific hours or days of the week. This can enhance pedestrian safety, increase foot traffic, and boost local business revenue.

Primary Implementing Authorities: City of El Paso Planning and Inspections Department, Police and Transportation Departments, Downtown Management District, and other local governments

Authority to Implement: Local governments have the authority to temporarily close public streets under existing police powers and traffic control regulations. Local governments may use event permitting, municipal code provisions, or temporary use ordinances to authorize car-free hours. Police departments are responsible for enforcement and safety during closures. The Downtown Management District has the authority to develop car-free hour initiatives in downtown El Paso. In some cases, city councils may adopt formal resolutions to establish recurring car-free events or designate specific corridors as open-street zones. No new statutory authority is needed; however, outreach to affected businesses and residents, as well as coordination with emergency services, is critical to address concerns and ensure operational feasibility. Local ordinances may be updated to streamline recurring closures or pilot new models.

Geographic Location/Scope	Region-wide	Implementation Timeline	Near-term
Cost Information	Under development	Primary Benefits	Mitigation
Community Benefits			
• Public Health and Wellbeing • Economic Prosperity • Community Building			
Disbenefits and Solutions			

None identified	
Implementation Schedule and Milestones	
- Year 1: Convene stakeholder groups; identify priority streets - Year 2: Implement program	
Metrics for Tracking Progress	
- Miles of streets targeted - Number of hours streets are car-free	
GHG Emission Reductions	
2030: 432 MTCO ₂ e/year	2050: 300 MTCO ₂ e/year
CAPs Emission Reductions	
2030: - NO_x: 1 ton/year - NH₃: <1 ton/year - PM 2.5: <1 ton/year - PM 10: <1 ton/year - VOCs: <1 ton/year - SO₂: <1 ton/year - CO: 4 tons/year	2050: - NO_x: <1 ton/year - NH₃: <1 ton/year - PM 2.5: <1 ton/year - PM 10: <1 ton/year - VOCs: <1 ton/year - SO₂: <1 ton/year - CO: 2 tons/year
HAP Emission Reductions	
2030: N/A	2050: N/A

ACTION M30: Update the zoning code to remove parking minimums

Action Description: Remove any minimum parking requirements from the zoning code. Allow developers to build without parking spaces if they choose.

Primary Implementing Authorities: City of El Paso Planning and Inspections Department, Zoning Commissions, and other regional municipal planning departments

Authority to Implement: Local governments have full legal authority to amend zoning codes, including the removal of minimum off-street parking requirements. Local governments can revise parking standards through legislative action (e.g., ordinance amendment), subject to public hearing and council approval. Planning departments lead the technical analysis and drafting, while city councils and zoning commissions oversee public review and approval. No additional state or federal authority is required. Removal of parking minimums may be implemented citywide or targeted to specific districts (e.g., downtowns, transit corridors). Implementation typically requires a planning process that includes stakeholder engagement, impact studies (e.g., on traffic or development patterns), and legal review. Optional actions may include pairing code changes with parking maximums, shared parking provisions, or incentive overlays to support affordable housing or transit-oriented development.

Geographic Location/Scope	Region-wide	Implementation Timeline	Near-term
Cost Information	Under development	Primary Benefits	Mitigation
Community Benefits			
Savings to Residents and Businesses			
Disbenefits and Solutions			
None identified			
Implementation Schedule and Milestones			
- Year 1: Convene stakeholder groups; develop zoning code amendment language - Year 2 to 3: Update zoning code			
Metrics for Tracking Progress			
- Zoning code approval - Estimated number of parking spaces reduced due to policy			
GHG Emission Reductions			
2030: Included in M29		2050: Included in M29	
CAPs Emission Reductions			
2030: Included in M29		2050: Included in M29	
HAP Emission Reductions			
2030: Included in M29		2050: Included in M29	



ACTION M31: Improve the frequency and quality of transit services

Action Description: Improve transit services by increasing the number of routes, service hours, and/or drop-off locations.

Primary Implementing Authorities: Sun Metro (City of El Paso Mass Transit Department), Metropolitan Planning Organization (MPO), and local governments

Authority to Implement: Transit agencies like Sun Metro have full authority to adjust transit frequency, routes, and service quality under existing local and federal operating mandates. Service enhancements may be implemented administratively or through board-approved service plans. Local governments may influence service priorities through budgeting or capital investment in supportive infrastructure (e.g., bus shelters, transit signal priority) and can provide outreach assistance. No new statutory authority is required, but securing sustainable funding is essential—typically through a combination of local revenues, federal grants, and regional transportation allocations. As the MPO allocates regional transportation funding and coordinates long-range planning, MPO coordination is necessary to align transit upgrades with broader regional mobility goals. Public input and equity assessments should guide service design to meet community needs effectively.

Geographic Location/Scope	Region-wide	Implementation Timeline	Near-term
Cost Information	Under development	Primary Benefits	Mitigation
Community Benefits			
Public Health and Wellbeing			

• Economic Prosperity • Community Building	
Disbenefits and Solutions	
None identified	
Implementation Schedule and Milestones	
• Year 1: Convene stakeholders to identify transit needs • Year 2: Develop transit expansion plan • Year 3: Implement plan	
Metrics for Tracking Progress	
• Number of transit stops • Miles traveled by transit • Quantity of service hours • Number of communities served by transit • Transit ridership • Number of new transit riders • Percent of transit network affected • Percent change in time between transit vehicles	
GHG Emission Reductions	
2030: 382 MTCO ₂ e/year	2050: 266 MTCO ₂ e/year
CAPs Emission Reductions	
2030: • NO_x: 1 ton/year • NH₃: <1 ton/year • PM 2.5: <1 ton/year • PM 10: <1 ton/year • VOCs: <1 ton/year • SO₂: <1 ton/year • CO: 4 tons/year	2050: • NO_x: <1 ton/year • NH₃: <1 ton/year • PM 2.5: <1 ton/year • PM 10: <1 ton/year • VOCs: <1 ton/year • SO₂: <1 ton/year • CO: 1 ton/year
HAP Emission Reductions	
2030: N/A	2050: N/A

Measure 6: Monitor and Improve Air Quality

Local air quality is directly related to the concentration of co-pollutants in the region. Poor air quality can result in negative health impacts, such as increased cases of asthma and heart disease. To be able to take effective action, it is crucial to understand how co-pollutants are being released and where they are concentrated. Monitoring air quality in the region can help identify areas where levels of co-pollutants are high. As co-pollutants and GHGs are typically released together, reducing co-pollutants can improve public health and reduce GHGs.

Most of the region's co-pollutants are from highway vehicles. Freight trucks generate more co-pollutants than passenger vehicles because they have a lower fuel efficiency, primarily use diesel fuel, and do not have many zero emission alternatives currently in use or on the market. El Paso serves as a main port of entry, and the use of freight trucks is necessary to bring goods into the El Paso region and the rest of the country. Optimizing freight transportation routes, driver practices, and trucking regulations can improve local air quality, reduce noise pollution, reduce fuel and maintenance costs, improve overall traffic flow, and reduce freight GHG emissions.

Building on Regional Achievements

To better understand and address local air pollution, several monitoring efforts are underway. These include fixed-site regulatory monitors operated by the Texas Commission on Environmental Quality,⁶⁵ supplemental monitoring by the City of El Paso Department of Public Health,⁶⁶ and data collection through academic research initiatives, such as those by the University of Texas at El Paso's Department of Public Health Sciences.⁶⁷ These programs track pollutants including ozone, nitrogen dioxide, and fine particulate matter (PM 2.5). Public education campaigns and citizen science efforts such as school-based monitoring and community air sensor deployments are being used to raise awareness and reduce exposure in highly impacted neighborhoods. Data from these programs support health advisories, policy development, and climate action planning.

ACTION M32: Coordinate infrastructure, policy, and operations to reduce truck idling at ports and freight corridors

Action Description: Work with the federal government and transportation and logistics companies to implement strategies to reduce freight truck idling at region's ports of entry, including optimizing truck routes and road infrastructure and investing in short-haul shuttle trains.

Primary Implementing Authorities: City of El Paso Office of Climate and Sustainability, International Bridges Department, local governments, U.S. Customs and Border Protection (CBP), Texas Department of Transportation (TxDOT), and freight and logistics companies

Authority to Implement: Multiple agencies/organizations with different aspects of authority would be involved in action implementation. Local governments coordinate regional freight policy and infrastructure planning. CBP and federal agencies control international bridge

⁶⁵ Texas Commission on Environmental Quality (TCEQ). (2023). *Air Monitoring Sites in Texas*. https://www.tceq.texas.gov/cgi-bin/compliance/monops/site_info.pl

⁶⁶ City of El Paso Department of Public Health. (2022). *Air Quality Program Overview*. <https://www.elpasotexas.gov/public-health/environmental-health/air-quality/>

⁶⁷ University of Texas at El Paso (UTEP). (2021). *Community Air Monitoring Research Projects*. <https://www.utep.edu/public-health/research/index.html>

operations. TxDOT manages state roadways and freight corridors. Private sector partners operate trucking fleets and logistics terminals.

Local governments can implement anti-idling measures within their jurisdiction and collaborate with federal and state partners to reduce truck wait times and emissions at ports of entry. While local governments lack direct authority over bridge operations, they may use zoning, traffic signal coordination, signage, and incentive programs to reduce idling. CBP controls border operations and must authorize any changes to queuing or inspection processes. TxDOT governs infrastructure design and improvements on state-managed roads. No new legislative authority is required, but interagency coordination is essential.

Geographic Location/Scope	Region-wide	Implementation Timeline	Long-term
Cost Information	Under development	Primary Benefits	Mitigation
Community Benefits			
Public Health and Wellbeing			
Disbenefits and Solutions			
None identified			
Implementation Schedule and Milestones			
- Year 1 to 2: Implement planning phase including permitting, conceptual design, preliminary cost estimate, stakeholder outreach - Year 3 to 4: Design project - Year 5: Begin construction - Year 6 to 8: Construction completed			
Metrics for Tracking Progress			
- Average wait times - Air quality monitor results			
GHG Emission Reductions			
2030: 299 MTCO2e/year		2050: 299 MTCO2e/year	
CAPs Emission Reductions			
2030: - NOx: 2 tons/year - NH3: <1 ton/year - PM 2.5: <1 ton/year - PM 10: <1 ton/year - VOCs: 1 ton/year - SO2: <1 ton/year - CO: 11 ton/year		2050: - NOx: 1 ton/year - NH3: <1 ton/year - PM 2.5: <1 ton/year - PM 10: <1 ton/year - VOCs: 1 ton/year - SO2: <1 ton/year - CO: 5 ton/year	
HAP Emission Reductions			

2030: N/A

2050: N/A

ACTION M33: Create, expand, or improve designated truck parking areas at El Paso Ysleta Port of Entry to reduce idling

Action Description: Create a designated parking area at El Paso Ysleta Port of Entry, located at the Ysleta–Zaragoza International Bridge, where truck drivers can park and wait to cross the international bridge instead of idling. Implement timed entry for vehicles and provide rest areas with amenities for driver use.

Primary Implementing Authorities: International Bridges Department, City of El Paso Office of Climate and Sustainability, local governments, U.S. Customs and Border Protection (CBP), and Texas Department of Transportation (TxDOT)

Authority to Implement: Local governments have authority to develop truck parking and staging areas within their jurisdiction, but implementation at the Ysleta Port of Entry requires coordination with federal and state agencies.

CBP controls access to the port and must authorize changes to staging and traffic flow. TxDOT involvement is needed for highway connections and signage. No new legal authority is required, but multi-agency coordination and site access agreements are essential. The City may use capital improvement programs, land use planning, and public-private partnerships to fund and operate designated parking zones with amenities.

Geographic Location/Scope	El Paso Ysleta Port of Entry	Implementation Timeline	Long-term
Cost Information	Under development	Primary Benefits	Mitigation
Community Benefits			
Public Health and Wellbeing			
Disbenefits and Solutions			
None identified			
Implementation Schedule and Milestones			
- Year 1 to 2: Convene stakeholders and develop plan - Year 2 to 3: Gain necessary approvals and identify funding - Year 3 to 5: Construct parking areas/rest areas - Year 5 to 7: Project completion			
Metrics for Tracking Progress			
- Number of truck parking spaces - Average wait times - Air quality monitor results			
GHG Emission Reductions			
2030: Included in Action M32		2050: Included in Action M32	
CAPs Emission Reductions			

2030: Included in Action M32	2050: Included in Action M32
HAP Emission Reductions	
2030: Included in Action M32	2050: Included in Action M32

ACTION M34: Reduce wait times at international bridges

Action Description: Use Intelligent Transportation Systems to manage wait times at the international bridges and communicate wait times in real-time through official channels, like a website or app.

Primary Implementing Authorities: U.S. Customs and Border Protection (CBP), City of El Paso Department of International Bridges, Texas Department of Transportation (TxDOT), and local governments

Authority to Implement: Reducing wait times at international bridges requires coordinated action between federal, state, and local agencies, with authority divided across jurisdictions. CBP controls inspection lanes, processing procedures, and customs staffing levels. Local governments, including the City of El Paso, manage bridge infrastructure and may implement Intelligent Transportation Systems (ITS) to improve queuing and real-time traveler information. Local governments can also facilitate stakeholder coordination and international engagement. TxDOT supports signal prioritization, road design improvements, and data integration on state roads. No new statutory authority is needed, but success depends on multi-agency agreements, data sharing protocols, and infrastructure investments.

Geographic Location/Scope	International Bridges	Implementation Timeline	Long-term
Cost Information	Under development	Primary Benefits	Mitigation
Community Benefits			
- Public Health and Wellbeing - Savings to Residents and Businesses			
Disbenefits and Solutions			
None identified			
Implementation Schedule and Milestones			
- Year 1: Convene stakeholders to understand needs - Year 2: Identify priority system to manage wait times - Year 3 to 4: Develop and roll out system - Year 4 to 7: Evaluate and improve system			
Metrics for Tracking Progress			
- Average wait times - Air quality monitor results			
GHG Emission Reductions			
2030: Included in Action M32	2050: Included in Action M32		

CAPs Emission Reductions	
2030: Included in Action M32	2050: Included in Action M32
HAP Emission Reductions	
2030: Included in Action M32	2050: Included in Action M32

ACTION M35: Install air quality monitoring systems at the international bridges

Action Description: Install air quality monitoring systems at the international bridges to monitor air pollution from freight trucks.

Primary Implementing Authorities: City of El Paso Environmental Services Department, Texas Commission on Environmental Quality (TCEQ), U.S. Environmental Protection Agency (EPA), and local governments

Authority to Implement: Local governments have authority to install air quality monitors within their jurisdiction, including at or near international bridges, in partnership with state and federal agencies. Deployment of monitors near ports of entry may require site access agreements or coordination with federal agencies such as U.S. Customs and Border Protection (CBP). TCEQ sets monitoring standards and may support integration with the state network. No new statutory authority is required for installation, but adherence to EPA-approved protocols for data quality and instrument siting is needed to ensure results are valid for public reporting or regulatory use. Partnerships with regional health agencies and research institutions can enhance data interpretation and public communication.

Geographic Location/Scope	International Bridges	Implementation Timeline	Near-term
Cost Information	Under development	Primary Benefits	Mitigation
Community Benefits			
None identified			
Disbenefits and Solutions			
None identified			
Implementation Schedule and Milestones			
- Year 1 to 2: Implement pilot projects - Year 3: Implement expanded project			
Metrics for Tracking Progress			
Number of air quality monitors installed			
GHG Emission Reductions			
2030: N/A		2050: N/A	
CAPs Emission Reductions			
2030: N/A		2050: N/A	
HAP Emission Reductions			

2030: N/A	2050: N/A
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ACTION M36: Install air quality monitoring systems in communities disproportionately impacted by poor air quality

Action Description: Install air quality monitoring systems throughout the region to help identify where air quality issues are most pressing. Communities can experience negative health impacts from traffic pollution and dust storms.

Primary Implementing Authorities: City of El Paso Environmental Services Department, local governments, Texas Commission on Environmental Quality (TCEQ), U.S. Environmental Protection Agency (EPA), and community-based organizations

Authority to Implement: Local governments have existing authority to deploy air quality monitors on public property or with landowner consent in residential areas. No new statutory authority is required to install non-regulatory monitors for screening, public awareness, or community science efforts. TCEQ and EPA regulate compliance-grade monitors and can assist in ensuring alignment with national air monitoring standards if integration into official networks is desired. Coordination with community partners helps ensure site appropriateness, transparency, and local data use in planning or advocacy efforts.

Geographic Location/Scope	Region-wide	Implementation Timeline	Near-term
Cost Information	Under development	Primary Benefits	Mitigation
Community Benefits			
None identified			
Disbenefits and Solutions			
None identified			
Implementation Schedule and Milestones			
- Year 1 to 2: Implement pilot projects - Year 3: Implement expanded project			
Metrics for Tracking Progress			
- Number of air quality monitors installed - Percent of communities covered by air quality monitors			
GHG Emission Reductions			
2030: N/A		2050: N/A	
CAPs Emission Reductions			
2030: N/A		2050: N/A	
HAP Emission Reductions			
2030: N/A		2050: N/A	

Measure 7: Implement and Oversee Climate Actions

Local governments in the El Paso region have a responsibility to implement and oversee climate actions. Local governments can enable region-wide GHG reductions through unlocking funding, integrating sustainable practices into operations, and encouraging local action and leadership. This measure will help local government ts establish sustainable climate action implementation and management systems to promote long-lasting, systemic change.

Building on Regional Achievements

The City is participating in the LEED for Cities program, a national certification framework developed by the U.S. Green Building Council to help cities track and improve performance across key sustainability metrics. Through this effort, the City is monitoring indicators such as energy and water consumption, transportation patterns, waste diversion, and equity outcomes. The program supports data-driven policy and investment decisions and aligns local actions with national best practices. As part of the certification process, the City is also engaging communities to identify priorities and improve transparency. This initiative complements the CAP by providing a standardized framework to evaluate progress and guide continuous improvement.

ACTION M37: Establish green revolving loan funds to support sustainability projects in public buildings

Action Description: A green revolving loan fund is an internal capital pool that is dedicated to funding energy efficiency, renewable energy, and sustainability projects that generate cost savings. A portion of those savings are then used to replenish the fund (i.e., revolved) allowing for reinvestment in future projects of similar value. This establishes an ongoing funding vehicle that helps drive energy efficiency and sustainability over time, while generating cost savings and ensuring capital is available for important projects.

Primary Implementing Authorities: City of El Paso Office of Climate and Sustainability, Office of Management and Budget, Capital Improvement Department, and other local governments

Authority to Implement: Local governments have full authority to establish and manage internal revolving loan funds under existing financial and capital improvement powers. Sustainability offices support project selection and performance tracking. A green revolving loan fund can be established through a city ordinance, budget allocation, or administrative directive. The fund is typically capitalized with local revenues, grants, or energy savings from prior projects and is replenished by cost savings from completed energy efficiency or sustainability upgrades. No new legislative authority is required. Implementation may involve adopting internal loan policies, developing project eligibility criteria, and coordinating with facilities and finance departments for repayment tracking. Cities may also seek federal funding or philanthropic support to seed the fund and expand its impact.

Geographic Location/Scope	Public Buildings	Implementation Timeline	Medium-term
Cost Information	Under development	Primary Benefits	Mitigation and Adaptation
Community Benefits			
Adaptation			
Disbenefits and Solutions			

None identified	
Implementation Schedule and Milestones	
- Year 1: Convene internal departments to develop program - Year 2: Develop plan for fund structure - Year 3: Implement fund - Year 4: Projects can withdraw from fund	
Metrics for Tracking Progress	
- Number of projects accessing funds - Total funds allocated - Amount of savings replenishing the fund	
GHG Emission Reductions	
2030: N/A	2050: N/A
CAPs Emission Reductions	
2030: N/A	2050: N/A
HAP Emission Reductions	
2030: N/A	2050: N/A

ACTION M38: Integrate a climate and sustainability lens into government operations and decision-making

Action Description: Develop processes to integrate a climate lens into government operations and decision-making. Local governments should develop a Sustainability Management Plan and/or Sustainability processes to establish organization-wide standards for sustainable practices, sustainability-related goals and objectives, and provide guidance on developing strategies, plans, and programs through which sustainability goals will be pursued.

Primary Implementing Authorities: City of El Paso Office of Climate and Sustainability, Office of Management and Budget, departmental sustainability liaisons, and other local governments

Authority to Implement: Local governments have existing administrative authority to develop internal policies and procedures that embed sustainability and climate goals across departments.

Local governments can adopt a Sustainability Management Plan or similar framework through executive action or council resolution. This may include setting emissions targets, procurement guidelines, energy efficiency standards, and decision-making criteria. The Office of Sustainability coordinates interdepartmental standards and reporting, while individual departments embed climate considerations into their planning, procurement, and operations. No new statutory authority is required. Implementation typically involves developing guidance documents, staff training, and establishing monitoring and reporting processes. Integration may be supported through local budget priorities, departmental performance metrics, and interdepartmental working groups. External consultants or peer city models can inform best practices for successful institutionalization.

Geographic Location/Scope	Public Operations	Implementation Timeline	Near-term
Cost Information	Under development	Primary Benefits	Mitigation and Adaptation
Community Benefits			
Adaptation			
Disbenefits and Solutions			
None identified			
Implementation Schedule and Milestones			
• Year 1: Define key guidance documents/procedures • Year 2: Approve procedures/policies and track compliance/progress			
Metrics for Tracking Progress			
• Percent of spending on sustainable projects, services, materials, etc.			
GHG Emission Reductions			
2030: N/A		2050: N/A	
CAPs Emission Reductions			
2030: N/A		2050: N/A	
HAP Emission Reductions			
2030: N/A		2050: N/A	

ACTION M39: Create a mini-grant program to support neighborhood-level climate action

Action Description: Create a mini-grant program designed to support local community organizations and businesses in implementing projects that promote sustainability and resilience. The program would fund projects within city limits and encourage projects that further Climate Action Plan goals, build community partnerships, and leverage local and federal funding.

Primary Implementing Authorities: City of El Paso Office of Climate and Sustainability, Community and Human Development Department, local governments, and nonprofit partners

Authority to Implement: Local governments have full authority to establish and manage competitive grant programs using general funds, federal aid, or philanthropic contributions. A mini-grant program can be launched via administrative action or council-approved budget allocation. No new legal authority is required. Local governments may define eligibility criteria, selection processes, reporting requirements, and priority areas (e.g., tree planting, energy efficiency, heat mitigation projects, community gardens). Programs can be administered in-house or through fiscal intermediaries. Community-based organizations may help implement funded projects and ensure alignment with neighborhood needs.

Geographic Location/Scope	Region-wide	Implementation Timeline	Near-term
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Cost Information	Under development	Primary Benefits	Mitigation and Adaptation
Community Benefits			
- Adaptation - Economic Prosperity - Community Building			
Disbenefits and Solutions			
None identified			
Implementation Schedule and Milestones			
Year 1: Develop and launch program			
Metrics for Tracking Progress			
- Total funds allocated - Number of projects funded			
GHG Emission Reductions			
2030: N/A		2050: N/A	
CAPs Emission Reductions			
2030: N/A		2050: N/A	
HAP Emission Reductions			
2030: N/A		2050: N/A	



Measure 8: Cool Communities, Protect Health, and Increase Native Ecosystems

The El Paso region regularly experiences extreme heat, which is projected to worsen in the coming decades, both in terms of higher maximum and average temperatures and duration of extreme heat season. Prolonged exposure to high temperatures poses serious health risks, especially for children, seniors, and low-income residents, and places added stress on infrastructure and energy systems. This measure focuses on expanding tree canopy, restoring native vegetation, and implementing green infrastructure solutions such as shade structures and cool pavements to lower surface and air temperatures in priority areas. These strategies not only help cool neighborhoods and reduce heat-related illness, but also improve air quality, enhance stormwater management, and restore native ecosystems that support biodiversity and regional resilience.

Trees and other plants can capture, or sequester, CO₂ through the natural process of photosynthesis. Increasing the number of trees and natural spaces, such as community gardens and parks, can sequester CO₂ and reduce the urban heat island effect, lower energy costs, improve air quality, enhance ecosystems, increase resiliency to flooding and heat waves, add local jobs, and improve the health and wellbeing of residents.

Building on Regional Achievements

El Paso's Neighborhood Tree Adoption initiative through 915 Tree Keepers plants trees in underserved areas to boost urban greenery. It aims to cool neighborhoods and reduce urban heat islands by increasing shade. The program directly improves air quality through pollutant and carbon dioxide absorption.⁶⁸

ACTION A1: Develop a community stewardship program to mitigate heat by increasing tree canopy and shading, focused on cooling homes, community centers, and neighborhoods

Action Description: Engage volunteers and neighborhood groups in collaboration with public maintenance crews to create a tree stewardship program to plant and care for shade trees in areas with socially vulnerable communities, low existing shade canopy, high exposure to extreme heat, and/or along bike and pedestrian routes. Building on the 915 Tree Keepers program, adopt a train-the-trainer approach to equip community members with best practices on siting, selecting appropriate species, planting, and maintaining trees. Planting shade trees and other local flora can reduce the urban heat island, cool communities, and provide shade. If planted near homes and buildings such as community centers and schools, tree shading can also lower indoor temperatures and save energy. In public areas where trees are not feasible, explore shade structures.

Where possible, prioritize trees with larger shade canopies; developing a list of shade trees can facilitate implementation. A community-driven tree-planting process can build community capacity and create ownership over the program, which can lead to higher survival rates for trees. Consider establishing local tree nurseries or tree farms to help supply the region with local trees.

Primary Implementing Authorities: Local governments (City of El Paso Parks and Recreation, Capital Improvement Department (CID), Community & Human Development, and the Office of

⁶⁸ City of El Paso. (2023, October). *915 Tree Keepers: Neighborhood Tree Adoption Program*. <https://www.elpasotexas.gov/community-and-human-development/915-tree-keepers/>

Climate and Sustainability) in partnership with Community-Based Organizations (CBOs), nonprofits, and other stakeholders (Sembrando Esperanza, University of Texas El Paso [UTEP], and the El Paso Master Gardener program)

Authority to Implement: Local governments have existing authority to develop and administer tree planting and urban greening programs. Programs may be launched administratively or via city council resolutions. Local governments can allocate funding, dedicate staff, and use right-of-way and public land for planting. Stewardship models may involve public-private partnerships, training programs, or grants to local groups. Projects must comply with local tree ordinances and utility clearances.

Geographic Location/Scope	Region-wide	Implementation Timeline	Near-term
Cost Information	Under development	Primary Benefits	Mitigation and Adaptation
Community Benefits			
• Mitigation • Public Health and Wellbeing • Environmental Stewardship • Resource Conservation • Economic Prosperity • Savings to Residents and Businesses • Community Building			
Disbenefits and Solutions			
None identified			
Implementation Schedule and Milestones			
• Year 1: Create working group • Year 1 and Ongoing (Every planting season, Oct–April): Stewardship activities—plant trees, track milestones (e.g., X number of trees planted), and develop a volunteer leadership program • Year 2 and every 3 to 5 years thereafter: Conduct heat analysis updates			
Metrics for Tracking Progress			
• Number of volunteers engaged and hours accrued • Number of local tree nurseries/tree farms established • Percentage of tree canopy cover at the neighborhood level and city level			
GHG Emission Reductions			
2030: 2,103 MTCO2e/year		2050: 2,103 MTCO2e/year	
CAPs Emission Reductions			
2030: • NO_x: 2 tons/year		2050: • NO_x: 2 ton/year	

• NH₃: N/A • PM 2.5: <1 ton/year • PM 10: 5 tons/year • VOCs: N/A • SO₂: <1 ton/year • CO: <1 ton/year	• NH₃: N/A • PM 2.5: <1 ton/year • PM 10: 5 tons/year • VOCs: N/A • SO₂: <1 ton/year • CO: <1 ton/year
HAP Emission Reductions	
2030: N/A	2050: N/A

ACTION A2: Adopt a heat-resilient building code

Action Description: Update the City of El Paso's building code to incorporate standards to increase building resilience against extreme heat. This can help maintain cooler indoor temperatures, save energy by reducing cooling demand, and protect vulnerable communities.

A heat-resilient building code should require improved building insulation and cool roofs and walls, which reduce the amount of solar energy absorbed by buildings. Cool roofs can include a range of roofing materials, colors, and styles, such as tiles, shingles, coatings, and modified bitumen membranes. The solar reflectance index (SRI) measures how effectively the roof reflects solar heat; the building code should set a minimum SRI for new and renovated roofs. Cool roofs can be up to 50°F cooler than standard roofs, which significantly lowers indoor temperatures and improves building energy performance and roof lifespan.

Additionally, a heat-resilient building code should also include window performance standards, window treatments, passive cooling techniques (e.g., shading, cross-ventilation, building orientation), and cool pavements. Implementation can start with new construction and be phased into major retrofits. Public buildings can be used to pilot new requirements; prioritize implementation for schools, community centers, hospitals, and other facilities.

Primary Implementing Authorities: Local governments (Office of Climate and Sustainability, Capital Improvement Department [CID], Planning and Inspections, Code Enforcement, Community and Human Development) and code advisory boards

Authority to Implement: Local governments have full authority to adopt and amend local building codes, including provisions that improve resilience to extreme heat. No new authority is required. Heat-resilient codes can be adopted through municipal ordinance under a city's existing police power to protect public health and safety.

Geographic Location/Scope	Region-wide	Implementation Timeline	Medium-term
Cost Information	Under development	Primary Benefits	Mitigation and Adaptation
Community Benefits			
• Public Health and Wellbeing • Resource Conservation • Savings to Residents and Businesses			

- Equity and Quality of Life

Disbenefits and Solutions

Developers may have concerns about the potential for increased construction costs or added complexity. Similarly, residents may worry about the possibility of higher housing prices. To address these concerns, implementation can be phased, accompanied by incentives or rebates to ease the transition. Providing clear guidance and effectively communicating the long-term savings and benefits can help build support among both developers and the community.

Implementation Schedule and Milestones

- Year 1: Initiate ongoing efforts for regular evaluations and updates by convening stakeholder meetings and developing an inventory of buildings
- Year 2 to 4: Implement voluntary reporting program
- Year 5 to 7: Adopt code

Metrics for Tracking Progress

- Successful adoption of building code
- Number of new buildings permitted under updated code
- Percent of permitted buildings with cool roofs

ACTION A3: Develop climate-resilient building codes and development standards

Action Description: Update building codes and development standards in El Paso to ensure new construction and major renovations are equipped to withstand extreme weather conditions including heat waves, flooding, poor air quality, and high winds. Climate-resilient codes protect critical building systems, reduce the risk of structural failure, and help maintain habitability during climate-driven emergencies.

This action includes standards for elevating or floodproofing mechanical, electrical, and plumbing (MEP) systems, especially in flood-prone areas; anchoring roof structures to prevent wind uplift damage during dust storms or severe weather events; minimum energy efficiency and building envelope performance to improve thermal comfort and reduce energy use during extreme heat; improved ventilation systems and building envelope sealing to reduce air quality impacts; and reduction of impermeable surfaces around buildings to reduce stormwater runoff and improve site-level drainage.

Development standards should also incorporate land use strategies that avoid vulnerable areas (e.g., floodplains), preserve green space for stormwater management, and support passive cooling through orientation, shading and shade structures, and landscaping. Standards can also encourage or incentivize use of sustainable building materials, ideally locally produced. Adoption can follow a phased approach, beginning with new public buildings and areas with higher exposure to climate hazards, then expanding to citywide applicability.

Primary Implementing Authorities: Local governments (Office of Climate and Sustainability, Capital Improvement Department (CID), Planning and Inspections, Code Enforcement, Community & Human Development, City-County Office of Emergency Management)

Authority to Implement: Local governments have the authority to adopt building codes and land development standards under their general police and land use powers. These updates can be implemented through ordinance or resolution. Local governments may align updates with national model codes (e.g., International Code Council (ICC), American Society for Civil Engineers (ASCE) standards), Federal Emergency Management Agency (FEMA) guidance, or resilience-focused overlays in zoning codes. Coordination with El Paso Water, the fire marshal, and other reviewing agencies ensures technical feasibility and enforcement. Adoption may be phased or incentivized through expedited permitting or resilience certification programs.

Geographic Location/Scope	City of El Paso	Implementation Timeline	Medium-term
Cost Information	Under development	Primary Benefits	Adaptation
Community Benefits			
• Public Health and Wellbeing • Resource Conservation • Community Building • Savings to Residents and Businesses			
Disbenefits and Solutions			
Developers may have concerns about the potential for increased construction costs or added complexity. Similarly, residents may worry about the possibility of higher housing prices. To address these concerns, implementation can be phased, accompanied by incentives or rebates to ease the transition. Providing clear guidance and effectively communicating the long-term savings and benefits can help build support among both developers and the community.			
Implementation Schedule and Milestones			
• Year 1: Convene stakeholder meetings, inventory of buildings • Year 2 to 4: Implement voluntary reporting program • Year 5 to 7: Adopt code •			
Metrics for Tracking Progress			
• Successful adoption of building code • Number of new buildings permitted under updated resilience codes • Percentage of buildings with elevated/protected MEP systems • Number of structures with upgraded roof anchoring			

ACTION A4: Adjust the structural design of city pavements, bridges, and railways and use more cool and reflective surfaces

Action Description: Prolonged exposure to extreme heat can cause damage to pavements and bridge joints and buckle railways. To increase transportation infrastructure resilience against extreme heat, use pavement binders with a higher temperature grade or use binders that age more slowly. Upgrade components of bridges and railway tracks to account for more

thermal expansion and contraction in expansion joints and ensure bearings and superstructure elements of bridges can manage temperature fluctuations. In addition, pilot cool pavements (which use lighter-colored binders, aggregates, sealants, or coatings) to reduce heat-related damage for roadways highly vulnerable to extreme heat. Update city design standards, specifications, and manuals and maintenance procedures to consider higher maximum temperatures and more extended heat waves.

Prioritize implementation for city roadways and bridges with the highest vulnerability scores, as identified in the CAP. Pavement upgrades can also be incorporated into ongoing maintenance projects. For cool pavement installations, prioritize greenways, high-use active transportation and transit corridors, and areas with low existing tree canopy, high heat island effects (as identified through the CAPA Heat Watch Project), and lower traffic volumes, such as parking lots. To support local adoption, develop local industry capacity to produce heat-resilient paving materials and cool pavements.

Primary Implementing Authorities: Local governments (Capital Improvement Department [CID], Streets & Maintenance) and regional governments (Metropolitan Planning Organization [MPO])

Authority to Implement: No new statutory authority is required. Local governments have authority to modify pavement and roadway design on local infrastructure.

Geographic Location/Scope	City of El Paso	Implementation Timeline	Medium-term
Cost Information	Under development	Primary Benefits	Mitigation and Adaptation
Community Benefits			
None identified			
Disbenefits and Solutions			
None identified			
Implementation Schedule and Milestones			
- Year 1: Pilot - Year 2: Evaluate and refine; define new components - Years 3–7: Scale up implementation			
Metrics for Tracking Progress			
- Number of cool pavement pilots completed - Percentage of roadway miles using high-temperature-grade or slow-aging binders - Number of bridges and rail segments upgraded for thermal expansion - Design and maintenance manuals updated to account for extreme heat.			

ACTION A5: Develop multi-hazard resilience hubs in vulnerable communities

Action Description: Resilience hubs can provide communities with relief, shelter, supplies, power, and other resources during and after an emergency, extreme weather, and natural disasters. Hubs should be equipped with back-up power (enough for 72 hours), upgraded HVAC systems, and highly rated air filters. If possible, hubs should also include solar panels to provide backup energy and rainwater capture systems to increase resilience. Consider partnering with community organizations or mutual aid networks to build trust with community members and site hubs in a safe existing space; examples include libraries, community centers, churches, and schools. Hubs should also meet accessibility standards and ideally be served by transit.

Prioritize resilience hubs in communities with the highest vulnerabilities, as identified in the CAP. Outreach and engagement is critical as part of the planning and design process – seek community feedback to ensure that the resilience hub meets their needs and priorities. Community-Based Organizations (CBOs) partnerships and capacity building could also support providing ongoing programming or activities to establish the resilience hub as a community space. To fund infrastructure upgrades, identify energy grants (e.g., for microgrids or solar) that can be leveraged.

Primary Implementing Authorities: Local governments (City-County Office of Emergency Management, Office of Climate & Sustainability, Community and Human Development, Public Health, Libraries, Parks & Recreation)

Authority to Implement: No new statutory authority is required. Local governments have full authority to retrofit or repurpose public buildings as resilience hubs under their emergency management and capital improvement powers.

Geographic Location/Scope	City of El Paso	Implementation Timeline	Medium-term
Cost Information	Under development	Primary Benefits	Adaptation
Community Benefits			
- Public Health and Wellbeing - Economic Prosperity - Community Buildings			
Disbenefits and Solutions			
None identified			
Implementation Schedule and Milestones			
- Year 1: Convene stakeholders - Year 2: Pilot - Year 3: Evaluate and define new components - Years 4–7: Scale up			
Metrics for Tracking Progress			
Number of planned resilience hubs developed			

- Percent of resilience hubs that are fully equipped and operational (i.e., that meet the full criteria of infrastructure readiness)
- Percent of community members living within 1 mile of a resilience hub

ACTION A6: Develop a robust multi-lingual emergency communications response framework and resources

Action Description: Build on outreach relationships developed through the Chihuahuan Desert Climate Collaborative to develop a robust multi-lingual emergency communications response framework for community members, especially residents of low-income and disadvantaged communities. Having a network in place ahead of extreme events and disasters can increase community resilience and improve safety and health outcomes. Identify trusted community partners that can share messages to their audiences. Share information via multiple channels (e.g., radio, social media, flyers, trusted community service providers) and use technology to reach people who speak a language other than English.

In advance of the heat season, form a heat action working group to develop events, resources, and materials to educate the public on heat safety awareness. Messages should identify clear, simple actions that people can take to protect themselves and where to go for additional assistance. For example, heat wave communications should include cooling tips and dangerous activities to avoid and identify signs and symptoms of when to seek emergency help. While poor air quality is not a climate hazard, the emergency communications framework should also provide air quality alerts to foster engagement and build audiences, as air quality is a key community concern.

Primary Implementing Authorities: Local governments (City-County Office of Emergency Management, Community and Human Development, Public Health, Communications & Public Affairs, Environmental Services) and universities (e.g., University of Texas El Paso [UTEP])

Authority to Implement: No new statutory authority is required. Local governments have full authority to design and implement emergency communication systems, including multi-lingual outreach, under their public safety and emergency management mandates.

Geographic Location/Scope	City of El Paso	Implementation Timeline	Medium-term
Cost Information	Under development	Primary Benefits	Adaptation
Community Benefits			
• Public Health and Wellbeing			
Disbenefits and Solutions			
None identified			
Implementation Schedule and Milestones			
• Year 1: Pilot • Year 2: Evaluate and refine; define new components • Years 3–7: Scale up implementation			
Metrics for Tracking Progress			

- Percent of emergency communications available in multiple languages
- Number of distinct communication channels used for emergency communications response
- Number of community partners signed on to share messages

ACTION A7: Implement carbon sequestration projects on public land

Action Description: This initiative aims to retain and expand native plant-life, improve soil management, and avoid natural land conversions to effectively capture and store carbon on public lands. Local governments can foster environmental sustainability and biodiversity across their properties through carbon sequestration projects. Examples of potential projects include the following: Convert idle or degraded public parcels (e.g., vacant municipal lots, park edges, closed landfills) into native woodlands; Designate and manage selected public lands as permanent carbon sinks where natural systems are protected and enhanced; Re-establish native vegetative buffers on city- or county-owned stormwater corridors; Rehabilitate capped landfills, brownfields, or abandoned municipal lots by planting native perennials that build soil carbon and biodiversity.

Primary Implementing Authorities: Local governments (Parks and Recreation, Office of Climate and Sustainability), land trusts, and conservation organizations, with support from other stakeholders (e.g., universities)

Authority to Implement: No new statutory authority is required. Local governments have full authority to manage public land for environmental purposes, including native habitat restoration, reforestation, and soil improvement for carbon sequestration.

Geographic Location/Scope	Public Land	Implementation Timeline	Near Term
Cost Information	Under development	Primary Benefits	Mitigation and Adaptation
Community Benefits			
• Mitigation • Environmental Stewardship • Resource Conservation • Economic Prosperity • Community Building			
Disbenefits and Solutions			
None identified			
Implementation Schedule and Milestones			
• Year 1: Map existing programs • Year 2 and beyond: Implement strategies			
Metrics for Tracking Progress			
• Acres of sequestration projects			

Measure 9: Build Drought Resilience and Conserve Water

The El Paso region is experiencing more frequent and severe droughts. Water supplies from the Rio Grande are declining, and groundwater resources are under pressure. This measure focuses on reducing water demand and diversifying supplies. Strategies include expanding water reuse, improving irrigation efficiency, and promoting water-wise landscaping. Public education and updated building codes will also support conservation. These actions help protect long-term water access and reduce stress on utilities.

Building on Regional Achievements

El Paso Water's 2024 Drought Contingency Plan includes public education campaigns to reduce consumption, monitoring of water supply and demand, and tiered response strategies based on severity of drought conditions.⁶⁹

ACTION A8: Expand wetlands and parks to support groundwater recharge

Action Description: Work with the Parks and Recreation Department to identify areas to modify or expand parks and restore natural areas and wetlands to support groundwater recharge. Design park expansions to maximize groundwater recharge by incorporating space that can channel, infiltrate, and store stormwater, such as detention or retention basins, green infrastructure, and permeable pavements. If space for new park development is limited, look for opportunities to retrofit existing park designs to incorporate groundwater recharge features, green infrastructure, and pocket wetlands. Restored wetlands can also help to manage stormwater and increase groundwater recharge. By expanding groundwater recharge, water supply availability and build drought resilience can be increased.

Park expansion and wetland restoration projects should also support other CAP strategies and community priorities, including reducing flood risk. Update park standards to encourage shade tree planting to reduce the urban heat island effect and sequester carbon. Ideally, prioritize projects in areas with high flood risk, and if possible, in areas with high heat exposure or with low park access. Restoration projects can also be designed to support biodiversity, public access, and recreation.

Primary Implementing Authorities: Local governments (Parks and Recreation, El Paso Water, Planning and Inspections)

Authority to Implement: No new statutory authority is required. Local governments have authority to acquire, design, and enhance parks and natural areas under existing open space, flood control, and capital improvement mandates. However, construction in or near regulated floodplains or waterways may require environmental review and coordination with the U.S. Army Corps of Engineers (USACE) or Texas Commission on Environmental Quality (TCEQ). Land acquisition, hydrological design, and public engagement processes should be integrated into parks and stormwater master plans.

Geographic Location/Scope	Region-wide	Implementation Timeline	Long Term
Cost Information	Under development	Primary Benefits	Mitigation and Adaptation

⁶⁹ El Paso Water. (2024). *2024 Water Conservation Plan*. Retrieved June 2025, from <https://www.epwater.org/ep-water/uploads/2024-water-conservation-plan.pdf>

Community Benefits
• Mitigation • Environmental Stewardship • Resource Conservation
Disbenefits and Solutions
None identified
Implementation Schedule and Milestones
• Preserve/Acquire land as it becomes available; ongoing effort with no sunset date
Metrics for Tracking Progress
• Acres of floodplain restored or preserved as parks or wetland • Number or acres of parks developed or retrofitted with groundwater recharge features

ACTION A9: Expand use of recycled water and greywater for irrigation, and establish projects to capture runoff

Action Description: Increased use of reclaimed or recycled water or greywater can conserve potable water and reduce water costs. El Paso Water already supplies parks, schools, construction, and industrial sites with reclaimed water. Explore additional sites or activities that can use reclaimed water (e.g., for process cooling or agriculture).

Establish programs to increase stormwater capture for homes and businesses, such as by distributing rain barrels to residents and constructing cisterns or rainwater storage tanks as part of new developments.

Additionally, develop programs to support residents and businesses to install greywater systems for individual buildings. Greywater systems establish a set of piping to capture sink, shower, and laundry wastewater for onsite uses such as landscape irrigation. To encourage adoption, activities could include outreach and education campaigns, incentives or rebates, and workshops. Update building codes to support greywater installation and work with developers to incorporate “purple pipes” (for transporting greywater) in new projects.

Primary Implementing Authorities: Local governments (Planning and Inspections Department, El Paso Water, Parks Department, Environmental Services Department)

Authority to Implement: Local governments and public utilities have existing authority to expand non-potable water use systems under water utility service regulations and building code authority. Cities may update plumbing codes and permitting procedures to allow or incentivize residential and commercial greywater systems. No new statutory authority is required, but alignment with state health and environmental standards (e.g., Texas Commission on Environmental Quality [TCEQ] reclaimed water regulations) is essential.

Geographic Location/Scope	City of El Paso	Implementation Timeline	Medium Term
Cost Information	Under development	Primary Benefits	Mitigation and Adaptation
Community Benefits			

Resource Conservation
Disbenefits and Solutions
None identified
Implementation Schedule and Milestones
- Year 1: Pilot - Year 2: Evaluate and refine; define new components - Years 3–7: Scale up implementation
Metrics for Tracking Progress
- Number of residential and commercial greywater systems installed annually - Number of rain barrels distributed annually - Number of cisterns or storage tanks installed

ACTION A10: Educate, incentivize, and provide technical assistance to growers in the region to transition to climate-resilient farming practices

Action Description: Provide education, technical assistance, and rebates to adopt climate-friendly farming practices to reduce water use. Example practices include cover-cropping and reduced tillage, which can reduce soil erosion, increase soil water retention, improve soil carbon sequestration, and increase soil health, building resilience against drought. More efficient irrigation practices can include micro or drip irrigation, soil moisture sensor technology, and weather- or evapotranspiration-based irrigation scheduling. Incentives may be needed to support growers to reduce surface water use. To adapt to future climate conditions, growers may need to consider transitioning to crop types more suited for greater heat and longer droughts.

Partner with organizations such as the Texas A&M AgriLife extension program's heat office to develop training programs, education campaigns, and technical assistance and to conduct research on drought- and heat-tolerant crops suitable for future climate conditions in El Paso. Provide grant assistance to help growers access funding to cover potentially higher upfront costs of smart irrigation systems. Explore environmental credit systems that can support growers to carry out soil carbon sequestration activities.

Primary Implementing Authorities: Local governments (Office of Climate and Sustainability, Economic and International Development, El Paso County), Texas A&M AgriLife Extension, U.S. Department of Agriculture (USDA), and regional conservation districts

Authority to Implement: Local and regional governments have the authority to sponsor education and incentive programs for agricultural producers. Federal and state agricultural agencies can fund and support technical implementation. No new legal authority is required. Local governments may fund or facilitate initiatives through interlocal agreements, grants, or agricultural economic development programs.

Geographic Location/Scope	Region-wide	Implementation Timeline	Medium Term
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Cost Information	Under development	Primary Benefits	Adaptation
Community Benefits			
• Mitigation • Resource Conservation			
Disbenefits and Solutions			
Some climate-smart agricultural practices may involve higher upfront costs. Growers may also hesitate to adopt a new practice due to concerns over potential impacts on crop yields. To support adoption, help growers apply for grants, conduct pilot or test cases, and access alternative funding strategies like environmental credits.			
Implementation Schedule and Milestones			
• Year 1: Pilot • Year 2: Evaluate and refine; define new components • Years 3–7: Scale up implementation			
Metrics for Tracking Progress			
• Number of growers participating in soil health or irrigation efficiency programs • Acres of irrigated land using efficient irrigation systems • Number of irrigation systems converted to efficient systems • Acres under cover cropping or reduced tillage			

ACTION A11: Develop water capture systems that run on solar energy to generate potable water in unincorporated areas and colonias

Action Description: Deploy solar-powered water capture systems to generate potable water in unincorporated areas and colonias that lack access to drinking water systems. These systems use solar power to condense and collect humidity from the air, even in climates with low humidity, providing a local source of safe water, reducing costs, and increasing resilience against drought.

Partner with the county, community-based organizations, foundations, or the private sector to fund and install solar-powered water capture systems. Work with promotoras or community-based organizations to conduct outreach and provide education and training to residents on their use and maintenance.

Primary Implementing Authorities: Local governments (El Paso County, El Paso Water, Hudspeth County) and state agencies (Texas Water Development Board (TWDB), Texas Commission on Environmental Quality [TCEQ]), and nonprofit or community-based infrastructure providers

Authority to Implement: Local governments and utilities have the authority to install decentralized water infrastructure systems. Projects may be implemented under public health, emergency response, or infrastructure development authorities. No new statutory authority is required, but coordination with TCEQ is necessary to ensure potable water quality compliance. Implementation may also require interlocal agreements or memoranda of understanding with

local utility providers, and strong engagement with colonia residents to identify site-specific needs and ownership models.

Geographic Location/Scope	Region-wide	Implementation Timeline	Medium Term
Cost Information	Under development	Primary Benefits	Mitigation and Adaptation
Community Benefits			
• Public Health and Wellbeing • Resource Conservation • Economic Prosperity • Savings to Residents and Businesses			
Disbenefits and Solutions			
Solar-powered water capture systems may require maintenance, cleaning, and filter changes. Provide training on maintenance needs and, if needed, financial assistance with the cost of any filter or cartridge replacements.			
Implementation Schedule and Milestones			
• Year 1: Pilot • Year 2: Evaluate and refine; define new components • Years 3–7: Scale up implementation			
Metrics for Tracking Progress			
• Number of water capture system projects installed • Number of colonias served by at least one solar-powered water capture system			



Measure 10: Reduce Flood Risk

The El Paso region faces growing flood risks from intense rainfall, aging infrastructure, and expanding paved surfaces. Flash floods can damage homes, roads, and utilities, and pose serious risks to public safety. Low-income and vulnerable communities are often hardest hit. This measure aims to reduce flood risk using both green and gray infrastructure. Strategies include expanding wetlands, bioswales, and permeable pavement, and restoring floodplains. Early efforts will focus on flood-prone areas and underserved neighborhoods. These actions also improve water quality and create green spaces.

Building on Regional Achievements

After the 2006 flood, El Paso created a dedicated Stormwater Utility in 2009 to manage and upgrade the City's flood control infrastructure. Major improvements include new stormwater ponds and retention basins, upgraded drainage channels and culverts, improved arroyo and channel maintenance, and green infrastructure to slow and absorb runoff.⁷⁰

ACTION A12: Deploy green infrastructure and reduce impermeable surfaces along roads and at critical facilities

Action Description: Implement green infrastructure strategies and reduce impervious surfaces in key areas such as roadways, parking lots, city facilities, and around critical facilities (e.g., hospitals, fire stations, and emergency shelters) to reduce peak flows, slow down stormwater, thus mitigating flood risks. Additionally, green infrastructure can also infiltrate and recharge groundwater. Green infrastructure includes nature-based solutions such as bioswales, rain gardens, green roofs, permeable pavement, and rainwater harvesting systems that mimic natural hydrology. Trees can also help absorb and slow down stormwater and can be planted along high-use pedestrian and transit corridors and greenways.

These interventions can reduce localized flooding, improve water quality by filtering runoff, and reduce strain on the municipal stormwater system. Projects should be prioritized in areas with a history of flooding, infrastructure vulnerability, and environmental justice concerns. Educational signage and community co-design can raise awareness of environmental benefits and encourage replication.

Where feasible, integrate green infrastructure into routine capital improvement projects (e.g., street reconstruction) to reduce green infrastructure costs and streamline implementation. Coordinate with transportation and utility departments to identify project synergies. Update zoning codes, drainage criteria manuals, or standard construction specifications to institutionalize green infrastructure practices.

Primary Implementing Authorities: Local governments (Capital Improvement Department [CID], Planning and Inspections, Environmental Services, El Paso Water), Texas Department of Transportation (TxDOT)

Authority to Implement: Local governments have authority to implement green infrastructure improvements through existing capital improvement planning, stormwater management, and development code enforcement powers. Cities may redesign public facilities and roads under existing ordinances or as part of infrastructure upgrades. No new statutory authority is required.

⁷⁰ City of El Paso Water Utilities. (2009, February 4). *Stormwater Master Plan committee presentation* [PDF]. City of El Paso. https://cdnsm5-hosted.civiclive.com/UserFiles/Servers/Server_6843404/File/Our%20Water/Resources/Stormwater%20Master%20Plan/committee_020409.pdf

For projects on state-managed roads or in flood-prone areas, coordination with TxDOT and El Paso Water is essential.

Geographic Location/Scope	City of El Paso	Implementation Timeline	Medium Term
Cost Information	Under development	Primary Benefits	Adaptation
Community Benefits			
• Public Health and Wellbeing • Environmental Stewardship • Resource Conservation			
Disbenefits and Solutions			
Green infrastructure may have higher upfront investment costs than typical materials and design, and may require more frequent or specialized maintenance. In communicating the benefits of green infrastructure, emphasize their long-term cost savings and resilience benefits. Provide funding support, incentives, or streamlining benefits to developers. Provide training to City staff and incorporate maintenance into public works schedules and manuals. Develop community stewardship programs.			
Implementation Schedule and Milestones			
• Year 1: Pilot • Year 2: Scale up • Year 3: Develop design specifications			
Metrics for Tracking Progress			
• Total square footage of impermeable surface converted • Number of green infrastructure installations completed • Volume of stormwater managed (modeled or measured)			

ACTION A13: Strategically acquire land in the 100-year floodplain

Action Description: Acquire land within the 100-year and 500-year floodplains to reduce future flood risk, prevent development in vulnerable areas, and create space for natural flood mitigation strategies such as detention basins, wetland restoration, and riparian buffers. Strategic land acquisition can reduce exposure to flood hazards, lower long-term infrastructure and emergency response costs, and provide co-benefits such as ecosystem restoration and recreational open space.

This action includes voluntary property buyouts in repeatedly flooded areas, particularly for low-income and high-risk households; targeted land purchases to preserve open space or enable green stormwater infrastructure; and partnerships with land trusts, utilities, and regional conservation groups to manage acquired land.

Prioritization criteria should include flood recurrence, social vulnerability, cost-effectiveness, and co-benefits (e.g., habitat, connectivity, groundwater recharge). Community engagement is essential to ensure voluntary participation and transparent decision-making. Successful implementation requires identifying priority parcels through flood risk modeling, coordinating

with property owners, and ensuring long-term maintenance or restoration of acquired lands. Integration into land use plans and updates to floodplain zoning help reinforce long-term resilience goals.

Primary Implementing Authorities: Local governments (Capital Improvement Department [CID], Planning and Inspections, Real Estate Services Division, and El Paso Water)

Authority to Implement: Local governments have authority to acquire land for public purposes, including flood risk reduction, under existing statutory powers for eminent domain, open space preservation, and hazard mitigation. Land in the floodplain may be acquired through purchase, easement, or voluntary buyout. No new legal authority is needed.

Geographic Location/Scope	City of El Paso	Implementation Timeline	Long Term
Cost Information	Under development	Primary Benefits	Adaptation
Community Benefits			
• Public Health and Wellbeing • Environmental Stewardship • Resource Conservation • Economic Prosperity • Community Building			
Disbenefits and Solutions			
Buyouts may weaken community cohesion and existing relationships. Communities may have emotional or cultural ties to homes that may hinder voluntary buyouts. To address this, it is important to offer relocation assistance, conduct compassionate outreach, and provide adequate compensation.			
Implementation Schedule and Milestones			
• Acquire land as it becomes available; ongoing effort with no sunset date			
Metrics for Tracking Progress			
• Number of properties in floodplains acquired • Acres of floodplain preserved or restored • Reduction in repetitive loss claims (National Flood Insurance Program [NFIP]) • Estimated flood damage avoided (modeled)			

ACTION A14: Stabilize arroyos in steep locations and in areas that show signs of erosion

Action Description: During heavy rains, flooding and debris flow can exceed arroyo capacity, leading to flooding and damage. Use the results of the exposure assessment and past flood events to identify arroyos that are likely to experience flooding and consider widening the arroyo to increase capacity. In addition, stabilize arroyos with vegetation, gabions (stackable mesh baskets filled with rock or earth that can stabilize slopes), check dams, terracing, and other bank protective measures. If possible, prioritize nature-based solutions like vegetation – root systems

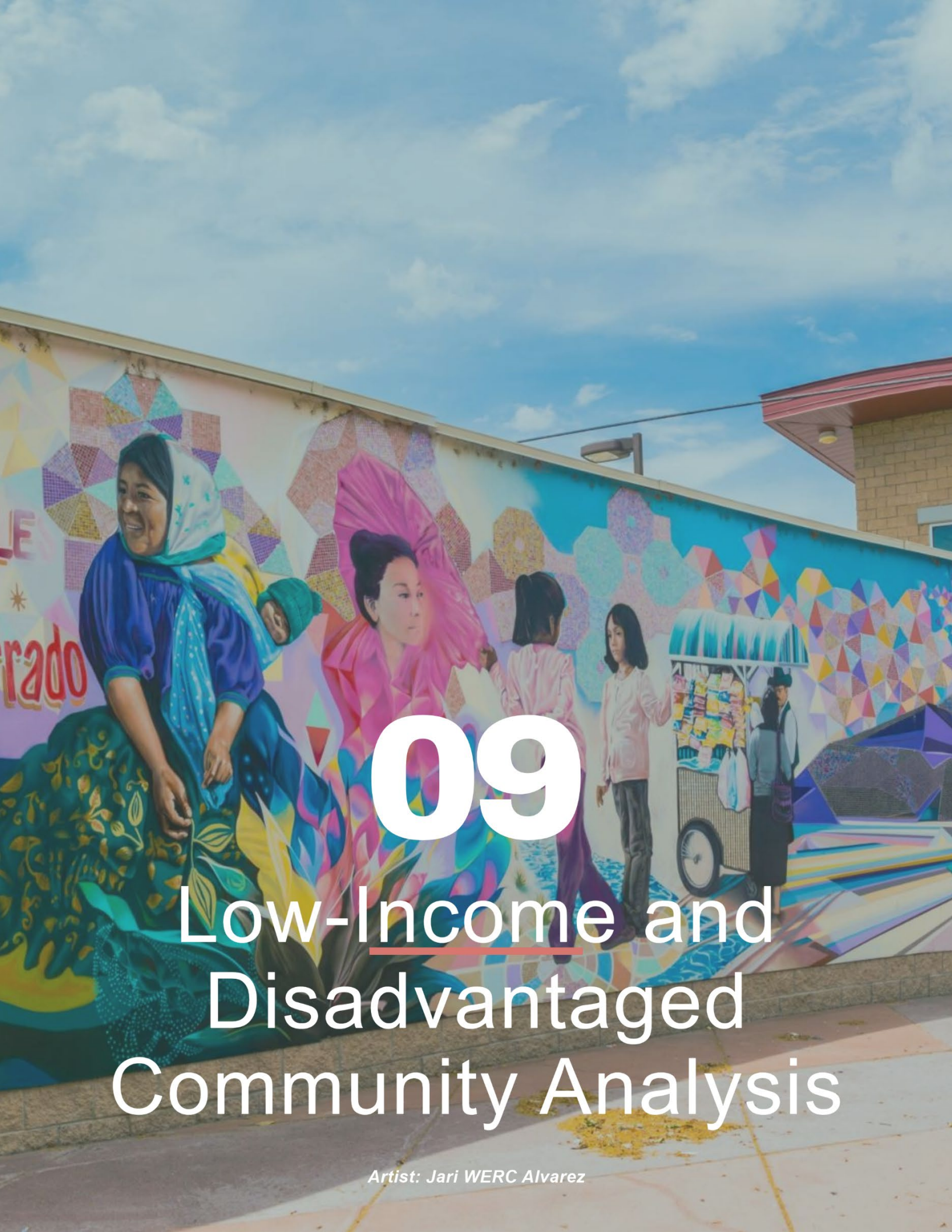
hold soil in place, which can help prevent debris flows and erosion. Where appropriate, use native vegetation. For paved arroyos, look for opportunities to add vegetation or other nature-based solutions as part of rewilding or capacity expansion projects.

Widened and stabilized arroyos can reduce flood risk, protecting nearby infrastructure and communities, and support groundwater recharge. If vegetation is used, arroyos can also support biodiversity. Prioritize arroyos that are near critical facilities, transportation corridors, and communities, particularly low-income or disadvantaged communities.

Primary Implementing Authorities: Local governments (Capital Improvement Department [CID], El Paso Water, Environmental Services Department)

Authority to Implement: Local governments have existing authority to conduct erosion control and flood mitigation projects on public lands and drainage corridors. Arroyo stabilization may be implemented under local stormwater management mandates and capital improvement authority. No new legal authority is required. Projects must comply with existing environmental permitting requirements (e.g., United States Army Corps of Engineers [USACE] Section 404 permits for work in jurisdictional waters, if applicable). Site access agreements may be needed for work on or adjacent to private property. Coordination with El Paso Water ensures alignment with watershed and infrastructure planning.

Geographic Location/Scope	City of El Paso	Implementation Timeline	Long Term
Cost Information	Under development	Primary Benefits	Adaptation
Community Benefits			
• Environmental Stewardship • Resource Conservation			
Disbenefits and Solutions			
None identified			
Implementation Schedule and Milestones			
• Acquire land as it becomes available; ongoing effort with no sunset date			
Metrics for Tracking Progress			
• Number of arroyo stabilization projects planned • Percent of arroyo stabilization projects completed • Reduction in number of arroyo flood or overtopping events (year-over-year) • Reduction in number of erosion or debris flow incidents in treated arroyos (year-over-year)			



09

Low-Income and Disadvantaged Community Analysis

Artist: Jari WERC Alvarez

Key Takeaways

- 65% of El Paso County residents and 100% of Hudspeth County residents live in LIDAC-designated census tracts.
- Key challenges include high energy costs, limited access to infrastructure, heat and flood risk, and air pollution, especially near roads and facilities.
- CAP actions are region-wide but can be prioritized in LIDACs to promote equitable distribution of benefits.

LIDAC Overview

LIDACs are, and will continue to be, disproportionately impacted by climate change. The El Paso region is a binational border region with a large proportion of low-income, socially vulnerable, and non-English-speaking residents. Vulnerable residents are more likely to face greater impacts from climate change and have fewer resources to help them respond and recover from these impacts. In addition, it will also be important to consider the impact of climate change on the Ysleta del Sur Pueblo Tribal Nation and their climate-related challenges and priorities.

LIDACs can be defined by a variety of metrics or indicators. For the CAP, LIDACs were identified by using the Climate and Economic Justice Screening Tool (CEJST).⁷¹ According to CEJST, nearly 65% of El Paso County and 100% of Hudspeth County are considered disadvantaged communities. Additionally, El Paso County and Hudspeth County have social vulnerability scores of 0.98 and 0.99, respectively, on the Centers for Disease Control (CDC) Social Vulnerability Index (SVI), where 1 is the highest vulnerability.⁷² These high social vulnerability scores indicate that residents in the El Paso region are likely to face greater challenges in accessing resources, preparing for climate impacts, and recovering from disasters than the rest of the U.S. Many residents in the region spend a large portion of their income on housing, transportation, and electricity alone, leaving little leftover for food, emergencies, or leisure. The percentage of income spent on these three necessities is even higher for those living below the federal poverty line, which is nearly 19% of the El Paso region population.

Implementing the measures included in this CAP is anticipated to provide significant benefits to LIDACs. This section discusses how LIDACs were identified, then quantifies the benefits of emissions reduction and qualitatively assesses other community benefits and potential disbenefits specific to LIDACs.

LIDAC Identification

CEJST was used to identify LIDAC areas in El Paso and Hudspeth Counties. CEJST identifies disadvantaged communities that are marginalized by underinvestment and overburdened by pollution.

⁷¹ Council on Environmental Quality. (2022). *Climate and Economic Justice Screening Tool 1.0*.

<https://screeningtool.geoplatform.gov/en/#3/33.47/-97.5>.

⁷² Agency for Toxic Substances and Disease Registry (ATSDR). (2024). *CDC/ATSDR Social Vulnerability Index (SVI)*. February 7, 2024. <https://www.atsdr.cdc.gov/placeandhealth/svi/index.html>

CEJST identifies census tracts that are disadvantaged using **burden** indicators in eight categories: climate change, energy, health, housing, legacy pollution, transportation, water and wastewater, and workforce development. Additionally, the CEJST identification approach uses two indicators of **socioeconomic burden**: income and education.

A community is considered LIDAC if it is at or above the threshold for one or more burdens **and** at or above the threshold for an associated socioeconomic burden. Communities within the boundaries of Federally Recognized Tribes are also considered disadvantaged.⁷³

Table 22 describes the eight CEJST indicators of burden, along with the affected population and the number of census tracts in the project area that are disadvantaged according to that indicator. LIDAC census tracts are mapped in Figure 19. Of the 162 census tracts within the El Paso region, 112 individual tracts (69%) are identified as LIDACs. These tracts meet or exceed the qualifications for one or more of the CEJST burden thresholds and meet the associated socioeconomic thresholds. Overall, more than 542,000 residents of the El Paso region reside in LIDACs, or 65% of the total population.

Colonias – Beginning in the 1950s, landowners began subdividing and selling low-value land, often lacking basic infrastructure like water, sewer, and electricity, to individuals pursuing the American Dream. These lots were typically sold through contract for deed agreements, a rent-to-own model that placed buyers at high risk of losing their land if they missed a payment. With limited financial resources, many residents lived in manufactured homes while gradually constructing permanent homes in phases. The absence of building and fire code enforcement led to the development of unsafe, substandard housing, conditions that still affect many communities today. These communities, known as colonias, are found throughout Texas. El Paso County is home to 300 colonias, representing nearly one in five of all colonias along the Texas-Mexico border. Communities living in colonias are especially vulnerable to climate change, facing increased risks from extreme heat, flooding, and limited infrastructure to cope with these growing hazards.

Table 22. CEJST Categories and Affected Census Tracts in El Paso and Hudspeth Counties

CEJST Category	Indicator Description	Disadvantaged Community Population	Number of Census Tracts
Climate Change	Census tracts are disadvantaged if they are: At or above the 90th percentile for expected agriculture loss rate OR expected building loss rate OR expected population loss rate OR	156,420	36

⁷³ Council on Environmental Quality. (2022). *Climate and Economic Justice Screening Tool 1.0*. <https://screeningtool.geoplatform.gov/en/#3/33.47/-97.5>.

CEJST Category		Indicator Description	Disadvantaged Community Population	Number of Census Tracts
		projected flood risk OR projected wildfire risk; AND are at or above the 65th percentile for low income.		
Energy	Census tracts are disadvantaged if they are: At or above the 90th percentile for energy cost OR particulate matter (PM) 2.5 in the air; AND are at or above the 65th percentile for low income.	11,477	5	
Health		Census tracts are disadvantaged if they are: At or above the 90th percentile for asthma OR diabetes OR heart disease OR low life expectancy; AND are at or above the 65th percentile for low income.	286,842	72
Housing	Census tracts are disadvantaged if they: Experienced historic underinvestment OR are at or above the 90th percentile for housing cost OR	68,211	21	

CEJST Category		Indicator Description	Disadvantaged Community Population	Number of Census Tracts
	lack of green space OR lack of indoor plumbing OR use of lead paint; AND are at or above the 65th percentile for low income.			
Legacy Pollution		Census tracts are disadvantaged if they: Have at least one abandoned mine land OR Formerly Used Defense Sites OR are at or above the 90th percentile for proximity to hazardous waste facilities OR proximity to Superfund sites (National Priorities List [NPL]) OR proximity to Risk Management Plan facilities; AND are at or above the 65th percentile for low income.	88,469	22
Transportation	Census tracts are disadvantaged if they are: At or above the 90th percentile for diesel particulate matter exposure OR transportation barriers OR traffic proximity and volume;	83,020	24	

CEJST Category		Indicator Description	Disadvantaged Community Population	Number of Census Tracts
	AND are at or above the 65th percentile for low income.			
Water and Wastewater		Census tracts are disadvantaged if they are: At or above the 90th percentile for underground storage tanks and releases OR wastewater discharge; AND are at or above the 65th percentile for low income.	154,351	40
Workforce Development	Census tracts are disadvantaged if they are: At or above the 90th percentile for linguistic isolation OR low median income OR poverty OR unemployment; AND more than 10% of people ages 25 years or older whose high school education is less than a high school diploma.	509,390	107	

Source: EPA CEJST

The following maps highlight CEJST indicators and identify impacted census tracts across El Paso and Hudspeth Counties

Figure 18 indicates that 118 census tracts were identified as disadvantaged per CEJST within El Paso and Hudspeth Counties.

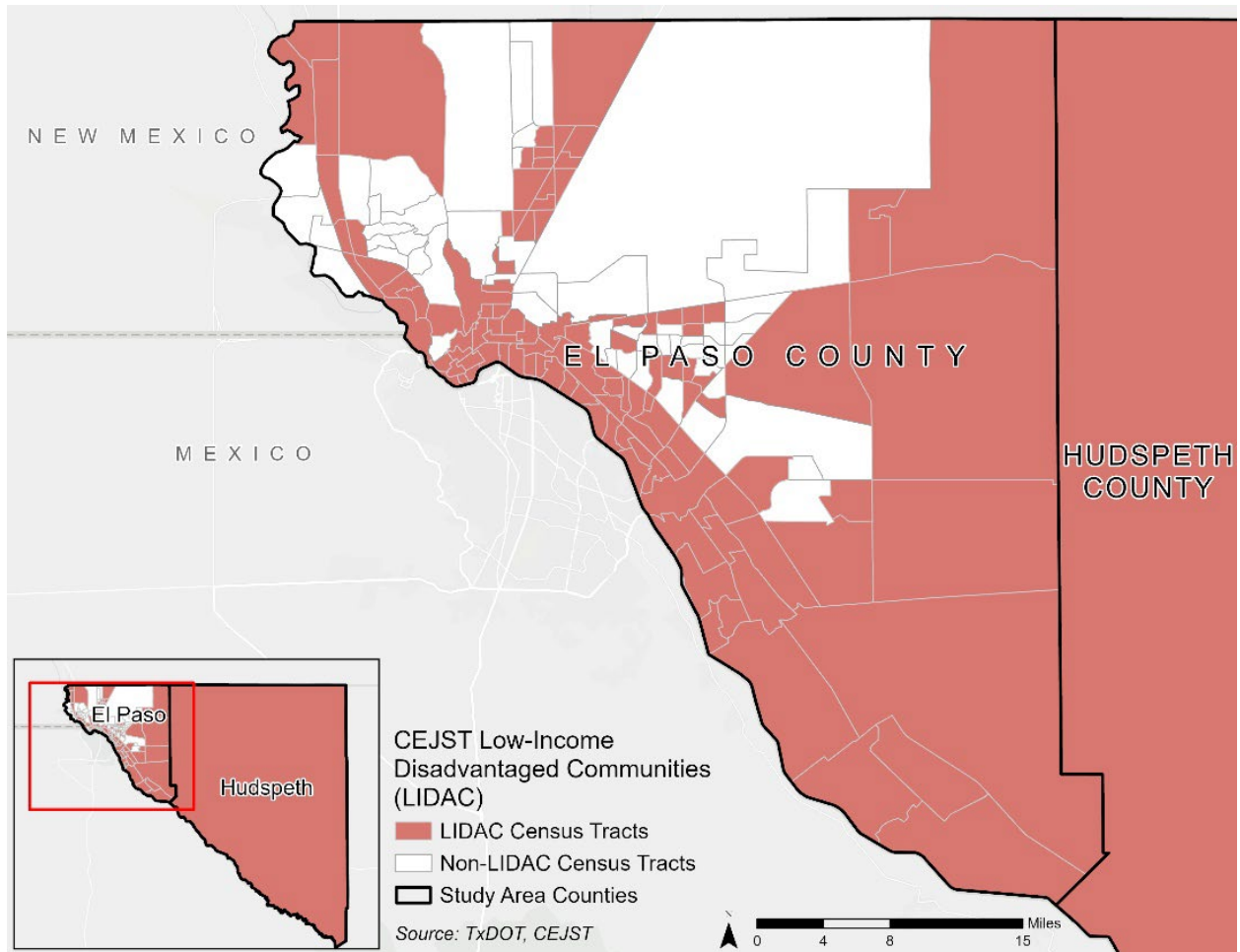


Figure 18. CEJST Census Tracts in El Paso Region

Source: EPA CEJST

Figure 19 indicates that 156,420 residents within 36 census tracts were identified as disadvantaged per the CEJST Climate Change Indicator.

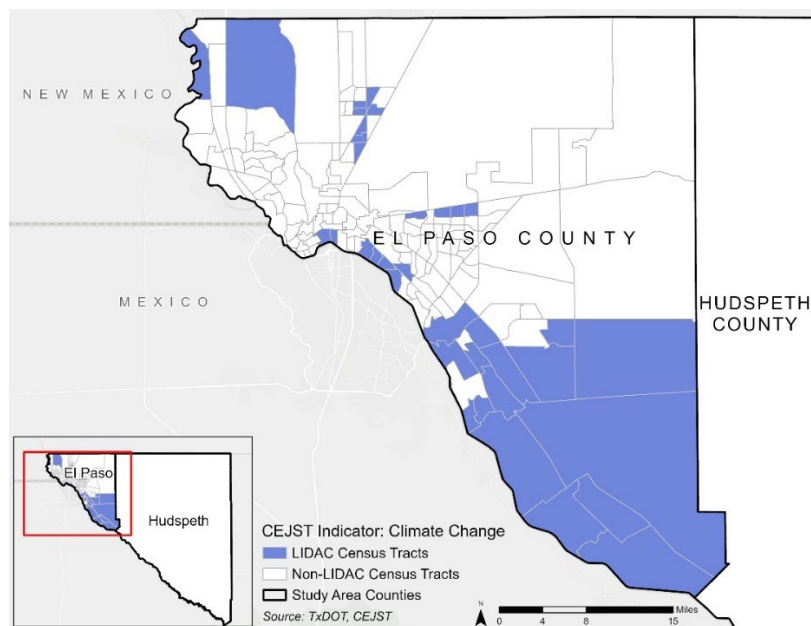


Figure 19. CEJST Census Tracts by Climate Change Indicator in El Paso Region

Source: EPA CEJST

Figure 20 indicates that 11,477 residents within 5 census tracts were identified as disadvantaged per the CEJST Energy Indicator. The Energy Indicator considers the following two factors: 1) energy costs reflect average household annual energy costs divided by average household income as compared to the US average, and 2) PM2.5 in the air. Lower energy costs in El Paso and Hudspeth Counties compared to the national average result in fewer census tracts being classified as LIDACs. While direct studies focusing solely on El Paso's energy poverty burden were not identified, the Texas Energy Poverty Research Institute (TEPRI) notes that El Paso's energy poverty rates are at or below the Texas state average, especially compared to more rural regions like the Rio Grande Valley.⁷⁴ However, even within the El Paso region, average energy burden statistics may obscure the full extent of energy insecurity. Many low-income households facing high utility rates or limited housing efficiency may reduce their energy consumption not by choice, but out of necessity, cutting back on heating, cooling, or appliance use to avoid unaffordable bills. This hidden hardship means that lower-than-expected energy usage in some areas may actually reflect under-consumption driven by financial strain, rather than true efficiency or adequate service. As a result, traditional metrics alone may fail to capture the lived reality of energy poverty in the region.

⁷⁴ Texas Energy Poverty Research Institute. (2019, April 15). *Low-income community profile series, part 1: Texas overview* [Policy research project (PRP) report]. Ray Marshall Center for the Study of Human Resources. https://sites.utexas.edu/raymarshallcenter/files/2019/06/final_TEPRI_PRP_April_15_2019.pdf

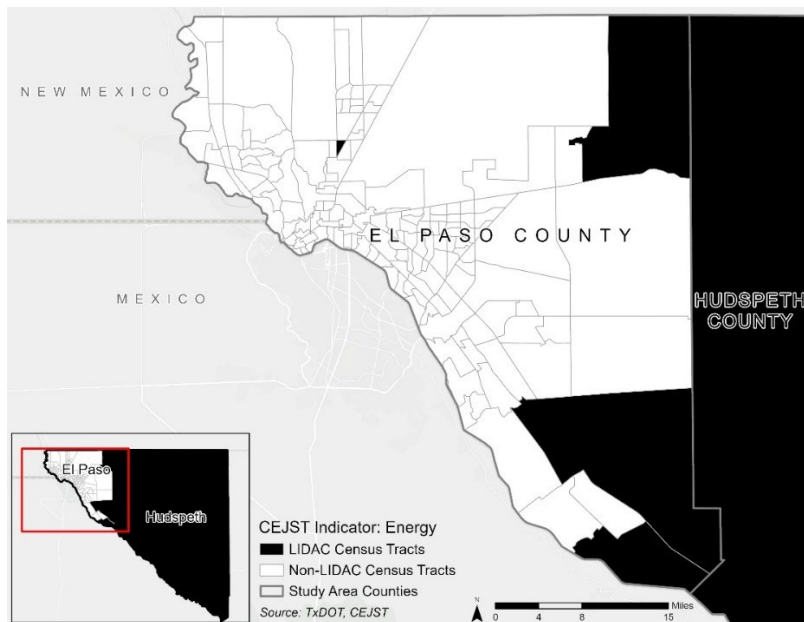


Figure 20. CEJST Census Tracts by Energy Indicator in El Paso Region

Source: EPA CEJST

Figure 21 indicates that 286,842 residents within 72 census tracts were identified as disadvantaged per the CEJST Health Indicator.

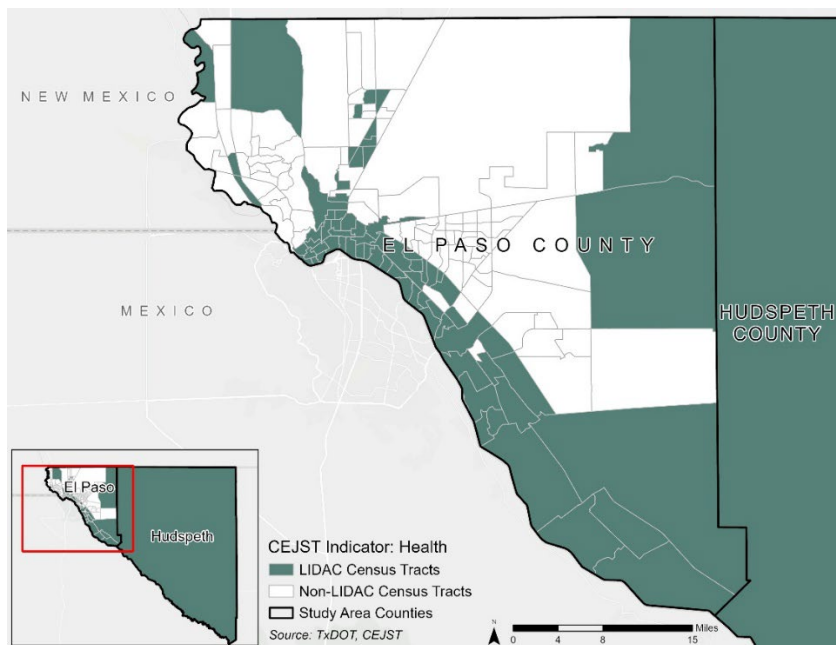


Figure 21. CEJST Census Tracts by Health Indicator in El Paso Region

Source: EPA CEJST

Figure 22 indicates that 68,211 residents within 21 census tracts were identified as disadvantaged per the CEJST Housing Indicator.

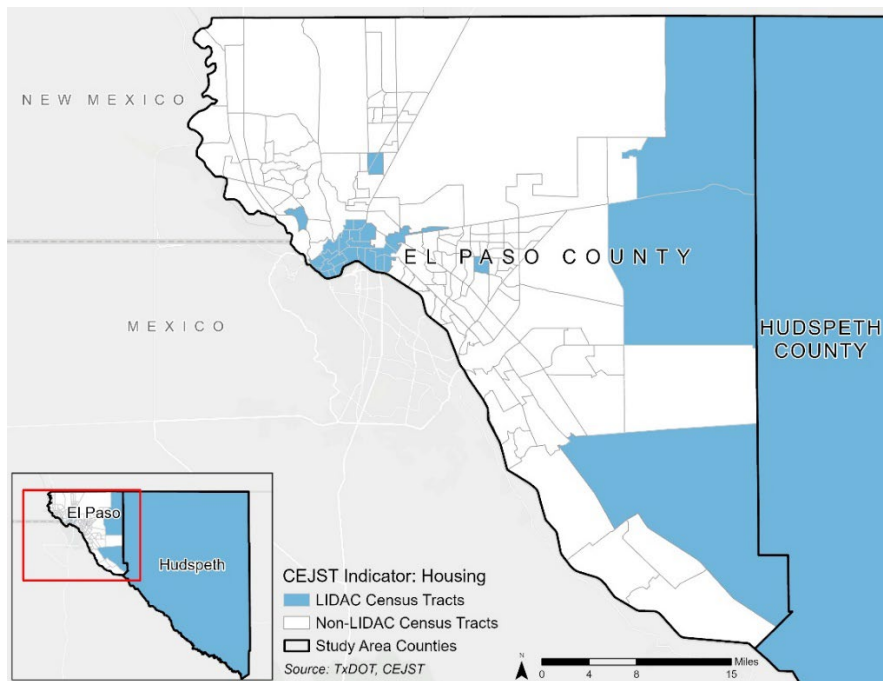


Figure 22. CEJST Census Tracts by Housing Indicator in El Paso Region

Source: EPA CEJST

Figure 23 indicates that 88,469 residents within 22 census tracts were identified as disadvantaged per the CEJST Legacy Pollution Indicator.

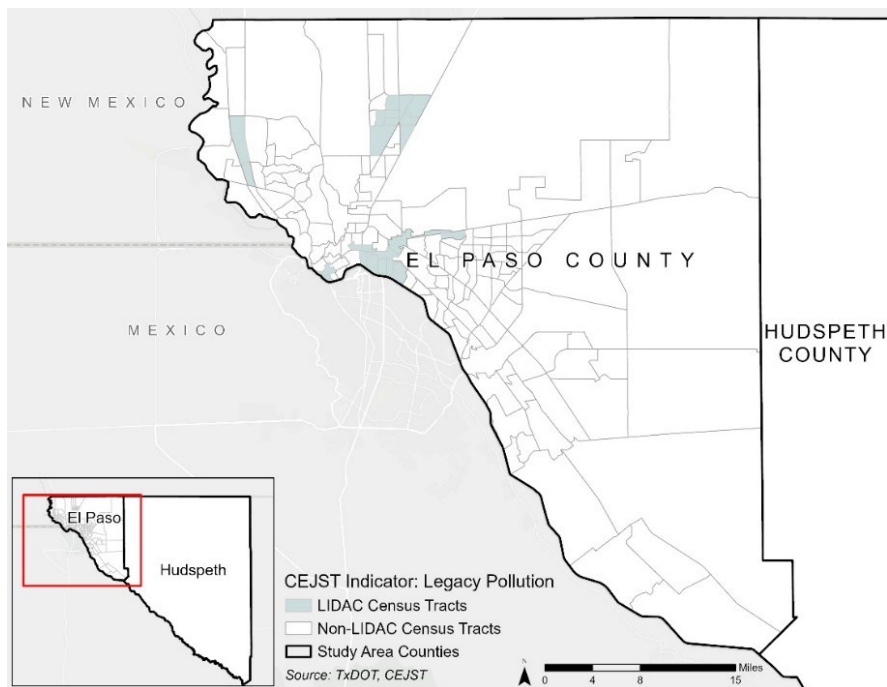


Figure 23. CEJST Census Tracts by Legacy Pollution Indicator in El Paso Region

Source: EPA CEJST

Figure 24 indicates that 83,020 residents within 24 census tracts were identified as disadvantaged per the CEJST Transportation Indicator.

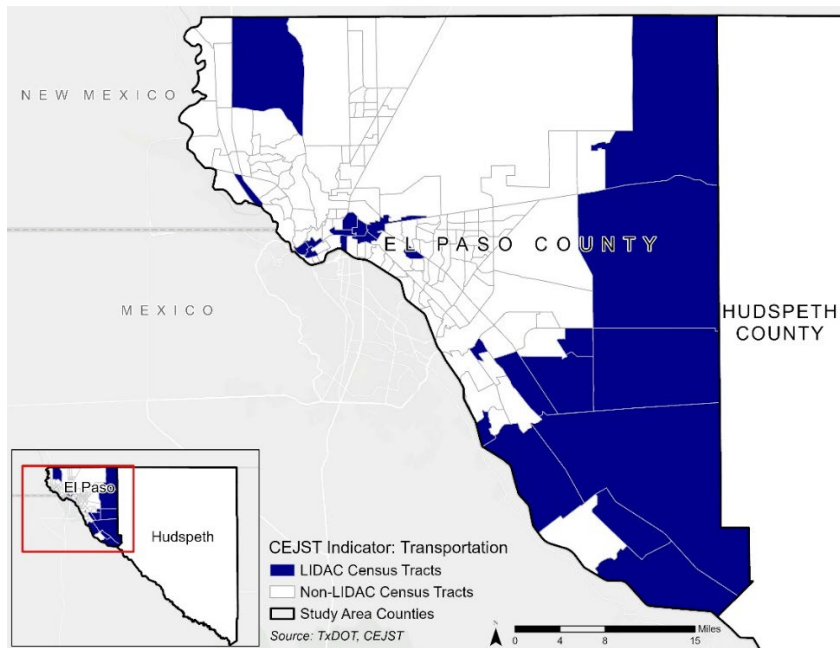


Figure 24. CEJST Census Tracts by Transportation Indicator in El Paso Region

Source: EPA CEJST

Figure 25 indicates that 154,351 residents within 40 census tracts were identified as disadvantaged per the CEJST Water and Wastewater Indicator.

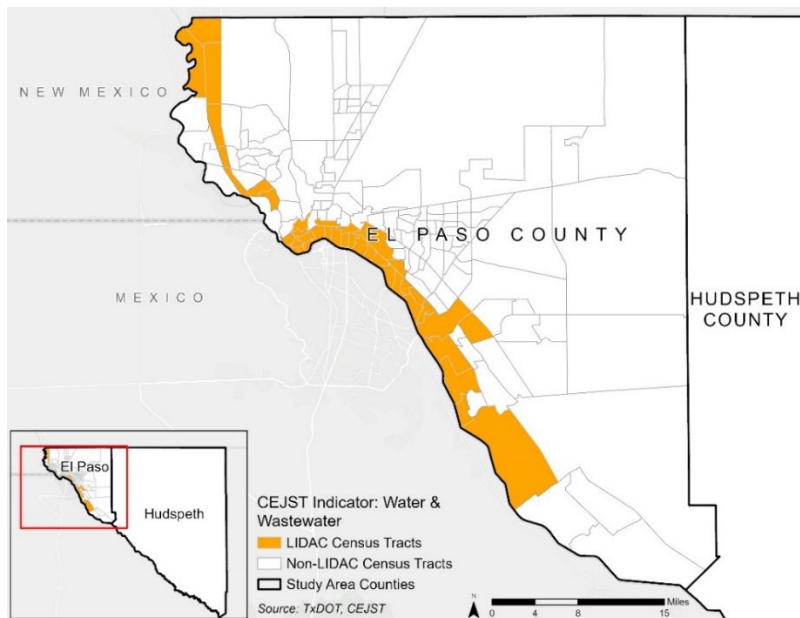


Figure 25. CEJST Census Tracts by Water/Wastewater Indicator in El Paso Region

Source: EPA CEJST

Figure 26 indicates that 509,390 residents within 107 census tracts were identified as disadvantaged per the CEJST Workforce Development Indicator.

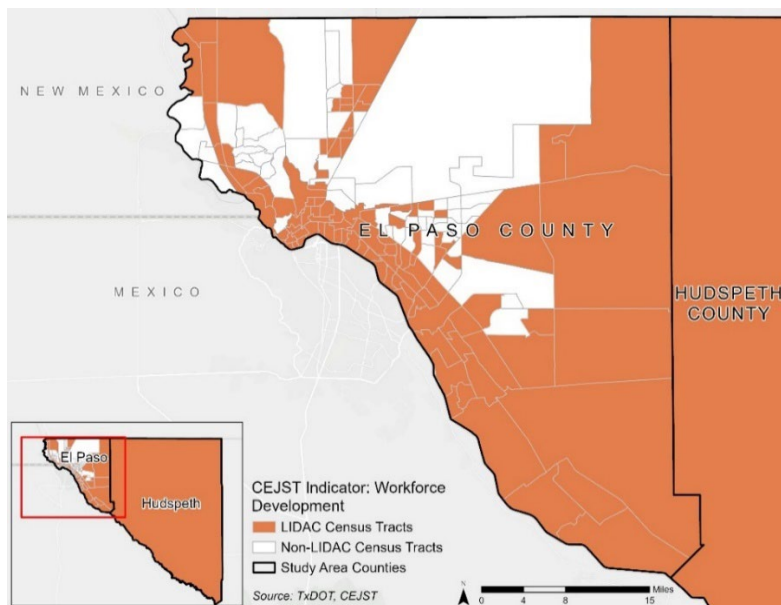


Figure 26. CEJST Census Tracts by Workforce Development Indicator in El Paso Region

Source: EPA CEJST

Of the 112 census tracts identified as LIDACs within the El Paso Region, 111 are in El Paso County and one represents Hudspeth County. Appendix D lists these LIDAC census tracts per EPA CPRG program requirements.

All of Hudspeth County is designated as a singular census tract and is identified as a LIDAC. According to the 2020 Census, 77% of the population is Hispanic or Latino, 17% of the population is White, and 2% is Black or African American.⁷⁵ Hudspeth County faces a high rate of linguistic isolation and a large population without a high school diploma, as well as high rates of diabetes, heart disease, and lack of adequate indoor plumbing. Many low-income households in the county face a high energy cost burden.⁷⁶

In El Paso County, 111 out of 161 total census tracts are identified as LIDAC. According to the 2020 Census, 83% of the population is Hispanic or Latino, 36% is White, and 3% is Black or African American.⁷⁷ In addition to drought, flooding, and extreme weather, El Paso County communities also face air pollution due to traffic and to facilities that use extremely hazardous substances. The county also faces toxic concentrations of wastewater discharge in streams and high rates of diabetes and heart disease. Communities in El Paso County face barriers to transit access, historic underinvestment, and a lack of access to natural spaces. Like Hudspeth County, communities in El Paso County face linguistic isolation and low high school diploma attainment.⁷⁸

Benefits and Disbenefits of Actions to LIDACs

Most of the CAP actions are not limited to a specific geographic location, as they are meant to be implemented across the region. Therefore, all LIDAC census tracts in the El Paso region can benefit from CAP action implementation, with census tracts in geographic proximity to actions receiving more direct benefits. The El Paso region may choose to prioritize LIDACs for action implementation to ensure benefit distribution is focused in areas of need. Beyond GHG reductions, the actions may provide additional community benefits or result in unintended disbenefits to LIDACs. Identifying these potential disbenefits will help the region better understand how to minimize them during action planning and implementation. This section includes a quantitative analysis of GHG and co-pollutant reductions in LIDACs and a qualitative analysis of community benefits and disbenefits to LIDACs to inform the design of implementation programs and policies.

Emissions Benefits to LIDACs

For GHG and co-pollutant quantification purposes, CAP action benefits are assumed to be evenly distributed across the region. Therefore, as 65% of the El Paso region population lives in a LIDAC, it is assumed that 65% of each action's GHG and co-pollutant reductions will occur in a LIDAC. To approximate the quantified benefits per measure, the GHG and co-pollutant reductions of corresponding actions under each measure were summed, as shown in Table 23 and Table 24 (GHG and co-pollutant reductions were not quantified for adaptation-specific measures). For co-pollutants, any values with a "+" means emissions increased that year.

⁷⁵ U.S. Census Bureau, "Hudspeth County, Texas Census Bureau Profile," 2024, https://data.census.gov/profile/Hudspeth_County_Texas?q=050XX00US48229.

⁷⁶ Council on Environmental Quality, "Climate and Economic Justice Screening Tool 1.0."

⁷⁷ U.S. Census Bureau, "El Paso County, Texas - Census Bureau Profile," 2024, https://data.census.gov/profile/El_Paso_County_Texas?q=050XX00US48141.

⁷⁸ Council on Environmental Quality, "Climate and Economic Justice Screening Tool 1.0."

Table 23. Measure GHG Reduction Benefits to LIDACs

Measure	2030 GHG Reduction Potential (MTCO₂e/year)	2050 GHG Reduction Potential (MTCO₂e/year)
Measure 5: Promote Walking, Biking, and Riding Transit	1,216	845
Measure 1: Increase Energy Efficiency and Decarbonize Buildings	22,382	17,592
Measure 3: Install Renewable Energy Systems	14,908	-
Measure 4: Promote Sustainable Food Systems and Waste Management Practices	6,410	6,410
Measure 2: Support the Zero Emission Vehicle Transition	43,758	30,456
Measure 8: Cool Communities, Protect Health, and Increase Native Ecosystems	1,367	1,367
Monitor 6: Monitor and Improve Air Quality	194	194

Table 24. Measure Co-pollutant Reduction Benefits to LIDACs

Measure	2030 Co-Pollutant Reductions (short tons)	2050 Co-Pollutant Reductions (short tons)
Measure 5: Promote Walking, Biking, and Riding Transit	NH ₃ : <1 CO: 12 NO _x : 3 PM ₁₀ : <1 PM _{2.5} : <1 SO ₂ : <1 VOCs: <1 HAPs: N/A	NH ₃ : <1 CO: 5 NO _x : <1 PM ₁₀ : <1 PM _{2.5} : <1 SO ₂ : <1 VOCs: <1 HAPs: N/A
Measure 1: Increase Energy Efficiency and Decarbonize Buildings	NH ₃ : 4 CO: 66	NH ₃ : 3 CO: 31

Measure	2030 Co-Pollutant Reductions (short tons)	2050 Co-Pollutant Reductions (short tons)
	NOx: 73 PM10: 8 PM2.5: 7 SO ₂ : 57 VOCs: 5 HAPs: <1	NOx: 44 PM10: 3 PM2.5: 3 SO ₂ : 1 VOCs: 4 HAPs: <1
Measure 3: Install Renewable Energy Systems	NH ₃ : <1 CO: 19 NOx: 16 PM10: 2 PM2.5: 1 SO ₂ : 25 VOCs: <1 HAPs: <1	NH ₃ : <1 CO: <1 NOx: <1 PM10: <1 PM2.5: <1 SO ₂ : <1 VOCs: <1 HAPs: <1
Measure 4: Promote Sustainable Food Systems and Waste Management Practices	NH ₃ : <1 CO: 34 NOx: <1 PM10: 5 PM2.5: 4 SO ₂ : <1 VOCs: 3 HAPs: N/A	NH ₃ : <1 CO: 34 NOx: <1 PM10: 5 PM2.5: 4 SO ₂ : <1 VOCs: 3 HAPs: N/A
Measure 2: Support the Zero Emission Vehicle Transition	NH ₃ : +2 CO: 217 NOx: +14 PM10: +8 PM2.5: +8 SO ₂ : +133 VOCs: 29 HAPs: +1	NH ₃ : <1 CO: 130 NOx: 29 PM10: 2 PM2.5: <1 SO ₂ : <1 VOCs: 20 HAPs: <1

Measure	2030 Co-Pollutant Reductions (short tons)	2050 Co-Pollutant Reductions (short tons)
Measure 8: Cool Communities, Protect Health, and Increase Native Ecosystems	NH ₃ : N/A CO: <1 NOx: 1 PM10: 3 PM2.5: <1 SO ₂ : <1 VOCs: N/A HAPs: N/A	NH ₃ : N/A CO: <1 NOx: 1 PM10: 3 PM2.5: <1 SO ₂ : <1 VOCs: N/A HAPs: N/A
Measure 6: Monitor and Improve Air Quality	NH ₃ : <1 CO: 7 NOx: 1 PM10: <1 PM2.5: <1 SO ₂ : <1 VOCs: <1 HAPs: N/A	NH ₃ : <1 CO: 7 NOx: 1 PM10: <1 PM2.5: <1 SO ₂ : <1 VOCs: <1 HAPs: N/A

Community Benefits and Disbenefits to LIDACs

The following sections describe the qualitative benefits, disbenefits, and disbenefit solutions (in italics) by CJEST indicator categories for each measure. Call-out boxes highlight case studies of programs that have made a positive impact to LIDACs.

Measure 1: Increase Energy Efficiency and Decarbonize Buildings

Climate Change

Benefits: More energy-efficient buildings mean spaces can be cooled or heated to healthy temperatures more easily, which increases resilience to extreme heat and extreme cold.

Disbenefits (and Solutions): None identified

Energy

Benefits: Increasing energy efficiency in buildings can lower energy costs and reduce the financial burden for low-income tenants.

Disbenefits (and Solutions): Transitioning to an electric system could result in higher upfront costs than maintaining a gas system. Rental unit and/or property electrification costs may be

passed on to renters. Additionally, converting from gas to electric heat for multifamily housing can shift costs from the landlord (central heating bill) to residents (per unit electricity bills).

Provide financial support (such as partial or full subsidies) for low-income households and small or minority-owned businesses to lead the way in the electrification process with pilot projects focusing on these areas first. Consider incentivizing grid meter upgrades. As wealthier customers transition toward all-electric buildings, there remains a risk of overburdening remaining gas customers with increased costs.

Coordinated action should include steps to prepare low-income households for electrification, such as by expediting the decommissioning of natural gas infrastructure in lower-income neighborhoods to avoid potential utility cost increases associated with a decreasing customer base left to fund the infrastructure.

Health

Benefits: Transitioning from fossil fuel equipment to electric alternatives can improve indoor air quality for homes and businesses. For example, one study found switching from gas to electric stove cuts indoor air pollution by more than 50 percent.⁷⁹

Disbenefits (and Solutions): Low-income customers may not be aware of the health risks of having gas appliances.

Work with El Paso Electric to provide more education on the health risks of having gas appliances and the benefits of converting to electric appliances.

Housing

Benefits: None identified

Disbenefits (and Solutions): Housing costs could increase after building equipment or appliance upgrades are made.

Ensure affordable units are prioritized in building decarbonization strategies.

Water and Wastewater

Benefits: Upgrading water and wastewater infrastructure can create more efficient systems and lower utility costs for residents in the long term.

Disbenefits (and Solutions): Expanding water and wastewater infrastructure can impact utility cost affordability in the short term.

The region can evaluate providing subsidies on water bills for Low-Income and Disadvantaged Communities (LIDACs).

Workforce Development

Benefits: Decarbonizing buildings will create opportunities for new ongoing jobs to install electric alternatives, such as the installation and maintenance of heat pumps. These jobs will mostly be electricians and HVAC (Heating, Ventilation, and Air Conditioning) system technicians, which tend to be good, stable, well-paying jobs.

⁷⁹ Misbath Daouda, Annie Carforo, Heather Miller, Jennifer Ventrella, Yu Ann Tan, Michelle Feliciano, Jessica Tryner, Andrew Hallward-Driemeier, Steve Chillrud, Roisin Commene, Diana Hernández, Michael Johnson, Darby Jack. (2024). *Out of Gas, In with Justice: Findings from a gas-to-induction pilot in low-income housing in NYC*. Energy Research & Social Science. Volume 116. 103662.ISSN 2214-6296. <https://doi.org/10.1016/j.erss.2024.103662>.

Disbenefits (and Solutions): As electric alternatives become more available, the transition away from fossil fuel-powered appliances may lead to a decline in jobs for technicians skilled in the installation and maintenance of these appliances.

The region can investigate training programs and partnerships with local organizations, training centers, high schools, and colleges.

Electrification could create additional challenges for restaurants, including small and minority-owned restaurants, regarding preferences and practices associated with gas cooking techniques or culinary styles.

The region can implement training programs and knowledge sharing opportunities (e.g., demonstration kitchen classes) to facilitate transition to electric cooking equipment.

Measure 2: Support the Zero Emission Vehicle Transition

Energy

Benefits: Installing more electric vehicle (EV) charging infrastructure will aid in the transition of the region's municipal fleets and can encourage residents to purchase an EV

Disbenefits (and Solutions): Zero emission vehicles (ZEVs) and at-home charging stations have high up-front costs and dedicated at-home charging options are typically available to homeowners (as opposed to renters). The availability of charging infrastructure may also be disproportionate across the region.

The region should balance the provision of public charging infrastructure within Low-Income and Disadvantaged Communities (LIDACs) with the near-term challenges associated with EV ownership costs in general. The region should also investigate incentives and grant programs for at-home charging stations and multi-unit residential charging opportunities.

Health

Benefits: Reducing or removing the combustion of gasoline and diesel in vehicles improves air pollution, particularly for communities near busy roadways.

Disbenefits (and Solutions): None identified

Transportation

Benefits: Switching from diesel transit vehicles to electric transit vehicles can improve air quality in communities, particularly those located directly along bus transit routes.

Disbenefits (and Solutions): ZEVs have high upfront cost and there is a lack of ZEVs for customers in the used vehicle market or a lack of medium-duty ZEV options for small business owners relying on medium-duty delivery vehicles.

Accessible vehicle rebates, used ZEV incentives, and partnerships with community organizations on the ground will help reduce ZEV barriers.

Workforce Development

Benefits: Ongoing job opportunities can be generated for the maintenance of electric vehicles and the installation and maintenance of charging stations.

Disbenefits (and Solutions): As electric vehicles and charging infrastructure become more available, the transition away from gasoline and diesel vehicles may lead to a decline in jobs for technicians skilled in these vehicles.

The region can investigate job training programs and partnerships with local organizations, training centers, high schools, and colleges.

Measure 3: Install Renewable Energy Systems

Energy

Benefits: Installing renewable energy systems at homes and businesses can reduce energy costs. This can help alleviate financial burdens on low-income residents.

Addition of building-scale renewables will add resilient power for critical loads and resilience hubs.

Disbenefits (and Solutions): Renewable energy sources, such as solar, often have a high up-front cost that may not be feasible for residents in low-income areas.

The region can investigate grants and funding opportunities that could make solar more feasible in Low-Income and Disadvantaged Communities (LIDACs) and evaluate providing subsidies on electric bills for LIDACs.

Work with El Paso Electric to build more Community Solar arrays and focus outreach efforts for low-income families to participate. Community Solar kWh pricing is more stable and can be a significantly lower cost.

Health

Benefits: Lower energy costs mean homes, workplaces, and community spaces can be cooled/heated to healthy temperatures. This reduces health risks, particularly for vulnerable populations.

Replacing existing sources of energy that generate particulate matter emissions will improve the region's air quality and public health.

Disbenefits (and Solutions): None identified

Housing

Benefits: Once solar panels are properly installed and fully paid off, they can increase the value of the home.

Disbenefits (and Solutions): Homeowners who have solar panels installed are vulnerable to solar contractors that damage roofs, create problems with home insurance, and put homeowners into debt they cannot afford.

Create regulations that disincentivizes harmful solar contractors and allows homeowners to easily report poor practice and get justice.

Transportation

Benefits: An increase in renewable energy generation will allow more residents and transportation fleet operators to charge electric vehicles with emissions-free electricity.

Disbenefits (and Solutions): None identified

Workforce Development

Benefits: New ongoing jobs can be created for renewable energy system installation and maintenance. Additionally, circular jobs can be created related to the solar sector, such as dismantling and recycling solar installations after their useful life. In the longer-term, manufacturing of renewable energy system components may also be an economic and workforce opportunity for the region.

Disbenefits (and Solutions): As renewable energy becomes more available, the transition away from fossil fuels may lead to a decline in fossil fuel-related jobs. Additionally, technology is rapidly changing, making it difficult to create training programs for the workers needed to install and maintain renewable energy systems.

The region can investigate job training programs and partnerships with local organizations, training centers, high schools, and colleges.

Measure 4: Promote Sustainable Food Systems and Waste Management Practices

Climate Change

Benefits: Sustainable agriculture practices can build greater resilience against agriculture loss and improve soil health.

Sustainable production and distribution can reduce food waste.

Disbenefits (and Solutions): Shifting agriculture practices may have a high upfront cost for farmers and distributors.

The region should investigate incentives and subsidies to make the transition viable for local agriculture partners. Farmers should be informed on best practices to switch from crops that use large amounts of water to crops that are more resilient to the region's climate.

Health

Benefits: Diverting odor-causing decomposing organic matter from landfills and reducing the amount of necessary waste hauling can improve air quality.

Reducing food waste can reduce household food costs and increase local food security.

Local food production and distribution can improve access to fresher, more nutritious food.

Disbenefits (and Solutions): Starting a compost collection service could increase transportation emissions from diesel collection vehicles.

The region should investigate sharing vehicles across jurisdictions and low-emissions vehicles where available and feasible.

Transportation

Benefits: Freight truck emissions can be reduced from local food production and distribution, lowering the total distance to travel.

Disbenefits (and Solutions): None identified

Water and Wastewater

Benefits: Reducing landfill waste will reduce the potential for pollutants to leach into groundwater and surface water.

Disbenefits (and Solutions): None identified

Workforce Development

Benefits: New ongoing jobs can be created in the operations and maintenance of composting and recycling facilities and collection services.

Local volunteers and students can support education and communication efforts within the community.

Disbenefits (and Solutions): None identified

Measure 5: Promote Walking, Biking, and Riding Transit

Energy

Benefits: Using sustainable land use planning to develop higher density communities around public transit systems and active transportation networks can create more efficient buildings and transportation systems, lower utility and travel costs, and encourage opportunities for community solar.

Disbenefits (and Solutions): None identified

Health

Benefits: Walking and biking can promote cardiovascular and mental health.

Replacing personal vehicle trips with active transportation modes or transit can reduce noise and air pollution from vehicles, which can particularly benefit communities near major roadways.

Disbenefits (and Solutions): The region experiences extremely hot summers and there is a lack of shade in many areas, making it dangerous to walk or bike on very hot days.

Plant more trees in unshaded areas and along walking/biking trails to encourage these modes even on hotter days.

In areas that lack designated sidewalks or bike lanes, cyclists and pedestrians are forced to share the road with drivers, creating safety risks.

Reduce speeds on residential roads and install infrastructure that slows down drivers and promotes the safety of pedestrians and cyclists.

Housing

Benefits: Building active transportation infrastructure such as trails, shared-use paths, and sidewalks enhances neighborhoods currently lacking adequate infrastructure.

Mixed-use development provides a range of housing options in walking distance of amenities and necessities that can increase quality of life for residents.

Improvements to transit service can expand access to transit in neighborhoods that are currently underserved.

Disbenefits (and Solutions): Mixed-use housing developments, expanded transit service, and active transportation infrastructure may add value to neighborhoods that can lead to gentrification and community displacement. New housing units also may not be affordable and therefore may not be available to Low-Income and Disadvantaged Communities (LIDACs) community members.

The region should ensure the value of adding mixed-use development and active transportation infrastructure to a community does not attract investment in a way that is not beneficial to the established community, and that housing units developed include affordable options for a range of residents.

Transportation

Benefits: Encouraging more biking and walking as alternative modes of transportation can reduce personal vehicle traffic.

Expanding and improving active transportation infrastructure can reduce travel barriers and improve connectivity by offering low-cost modes of transportation and last mile access to public transit service. It can also help residents feel safe biking or walking along roadways.

Sustainable land use planning promotes transit-oriented developments (TODs) that can overcome transportation barriers and reduce the need for vehicles by building housing near public transit systems.

Improved access to transit increases mobility, especially for vulnerable populations who may be transit-dependent and for households without a vehicle.

Disbenefits (and Solutions): To realize the benefits from bike infrastructure, a significant portion of the community needs to have bike access and feel comfortable and safe riding a bike.

The region should investigate the feasibility of a bike resale or donation program to increase access to bicycles in Low-Income and Disadvantaged Communities (LIDACs), as well as a community education program to promote bike safety and comfort.

TODs may not be suitable or preferred in all communities.

The region should ensure community input is received before approving developments, and analysis should be done to ensure appropriate siting and project design.

In rural areas with disperse stops, expanding transit service may not be feasible for transit agencies, but these residents might be vulnerable or not have access to a vehicle.

The region should investigate non-fixed route options and other alternate solutions for rural areas.

Water and Wastewater

Benefits: Using sustainable land use planning to develop higher density communities can lead to more efficient water and wastewater systems with lower utility costs for residents.

Disbenefits (and Solutions): None identified

Workforce Development

Benefits: Expanding and improving active transportation infrastructure and transit services can increase access to jobs, increasing labor force participation and opportunities available to LIDACs.

Housing near public transit systems can increase access to jobs, reducing barriers to access jobs and workforce training opportunities available to LIDACs.

Disbenefits (and Solutions): None identified

Measure 6: Monitor and Improve Air Quality

Health

Benefits: Monitoring air quality in the region can help identify areas where levels of co-pollutants are high. Once the sources are identified, regulations can be put in place to reduce air pollution in those areas.

Optimizing truck routes can minimize air and noise pollution in communities near highways and ports of entry by reducing truck travel.

Optimizing ports of entry wait times can reduce truck idling, which can improve air quality on both sides of the border.

Disbenefits (and Solutions): None identified

Transportation

Benefits: Monitoring air quality in the region can help identify areas where levels of co-pollutants are high.

Developing efficient truck routes or investing in freight rail can reduce traffic in areas congested by freight movement.

Disbenefits (and Solutions): Additional infrastructure will likely need to be constructed to develop freight corridors and rail networks. Historically, highways have disconnected disadvantaged communities, and communities are at risk of being negatively impacted by transportation infrastructure development.

The region should ensure new infrastructure is developed in a way that does not disconnect or create disproportional negative impacts to LIDACs. Engage with communities early to understand their concerns and develop solutions.

Measure 7: Implement and Oversee Climate Action

Health

Benefits: Mini-grants can fund local climate-health initiatives, such as tree planting or air filter distribution.

Disbenefits (and Solutions): Limited technical support may hinder community organizations from accessing mini-grants.

Provide application assistance and prioritize projects that address climate-related health disparities.

Measure 8: Cool Communities, Protect Health, and Increase Native Ecosystems

Rio Bosque Wetlands Park – The restoration of the 372-acre Rio Bosque Wetlands Park created a vital green space in southeast El Paso, offering improved air quality, urban heat relief, outdoor recreation, and educational opportunities for local schools and residents. Its location is in direct proximity to LIDACs, channeling its benefits toward disadvantaged



Castner Range National Monument – This over 6,600,000-acre expanse of high desert wilderness was designated as a national monument to preserve its historic, cultural, and ecological significance. The national monument designation helps close the nature gap experienced by surrounding LIDACs, preserve the ancestral homeland of indigenous peoples, and safeguard natural springs and wildlife habitats.

915 Tree Keepers Program – The 915 Tree Keepers program is led by the City of El Paso's Office of Climate and Sustainability, Community and Human Development Department, and Parks and Recreation. It helps residents plant trees in public areas to increase shade and improve tree coverage. The program focuses on neighborhoods with low Tree Equity scores. Tree Equity Scores measure how equitably tree canopy is distributed in a community by combining data on tree cover, income, race, health, and other social and environmental factors. Trees planted through the program are climate-resilient and drought-tolerant. Since October 2024, over 270 trees have been planted. Benefits include cooler streets, cleaner air, better water retention, and more habitat for wildlife. The program also promotes community involvement and care for public spaces.

Climate Change

Benefits: Increased rainwater infiltration through trees and vegetation can reduce flood risk.

Increased vegetation reduces the urban heat island effect and creates cool, shady areas that provide relief during extreme heat.

Disbenefits (and Solutions): N/A

Health

Benefits: Increased trees and vegetation in natural spaces can filter and reduce air pollution, improving air quality and public health.

Natural, green spaces promote outdoor physical activities and exercise, which can improve cardiovascular and mental health.

Disbenefits (and Solutions): Natural spaces with poor water drainage can lead to water stagnation. Stagnant water serves as an ideal breeding ground for mosquitoes, flies, and other disease-carrying vectors.

The region should encourage mosquito-control measures, implement proper drainage systems, and adopt an integrated pest management strategy.

Housing

Benefits: Expanding natural space and tree planting in neighborhoods, especially those without adequate access, can beautify neighborhoods, reduce cooling costs (due to shade), and potentially improve home values.

Disbenefits (and Solutions): Natural spaces and trees may increase property values that can lead to gentrification and community displacement.

The region should ensure the value of adding natural spaces and trees to a community does not attract investment in a way that is not beneficial to the established community.

New trees planted in the right-of-way can cause increased water costs for residents.

The region should where feasible use native trees that require less water and ensure the new vegetation is not causing an unfair burden of water costs to residents.

Transportation

Benefits: Native trees along walkways and at transit stops provide shade and coverage that can increase the use of alternative transportation modes, such as walking, biking, and riding public transit.

Disbenefits (and Solutions): Trees require ongoing maintenance, especially in the first year when the trees are being established.

The region should ensure there are adequate resources to maintain public areas where trees are planted.

Water and Wastewater

Benefits: Trees and vegetation can filter and infiltrate stormwater, reducing flood risk and removing pollutants.

Disbenefits (and Solutions): None identified

Workforce Development

Benefits: Ongoing jobs and workforce training opportunities can be generated to plant and maintain the new trees and natural spaces.

Disbenefits (and Solutions): N/A

Measure 9: Build Drought Resilience and Conserve Water

AguasEsperanza Project – The County of El Paso and private partners are working to place hydropanels in underdeveloped parts of El Paso County with limited access to drinking water. Hydropanels are solar panels that create drinking water from water vapor in the air. Having begun as a pilot program in 2022, a \$150,000 grant from Wells Fargo will expand the program to 11 additional families in the area. This technology can improve water security in LIDAC communities.

Provision of First-Time Water and Wastewater Services in Colonias

El Paso County is investing \$39.2 million to provide first-time water and wastewater services to vulnerable communities, particularly in colonias that have lacked access to these essential utilities for nearly 40 years. Through partnerships with El Paso Water and the Lower Valley Water District, the County is funding the design and construction of centralized wastewater systems and first-time water service in select areas. These efforts are focused within two major regional projects: the Northwest Area Project and the Lower Valley/Far East Area Project. Upon completion, system management will be transferred to the respective utility providers. This investment addresses long-standing inequities in colonias, where residents have endured substandard housing and infrastructure due to historic patterns of land sales without proper utility access or safety codes. El Paso County is home to 300 colonias, representing nearly 20% of all colonias along the Texas-Mexico border, and this initiative marks a critical step toward improving health, safety, and quality of life in these communities.

Energy

Benefits: Solar-powered water systems reduce reliance on fossil fuels and lower operational costs.

Disbenefits (and Solutions): Installing and maintaining solar-powered systems in remote areas may require upfront capital.

Pair infrastructure rollouts with financing or grant support for low-income areas.

Health

Benefits: Expanding green spaces improves physical and mental health. Access to potable water in underserved areas supports basic health and hygiene.

Disbenefits (and Solutions): None identified

Workforce Development

Benefits: Water conservation, farming education, and green infrastructure projects support new local jobs in plumbing and landscape management.

Disbenefits (and Solutions): Training opportunities may not reach all populations.

Partner with workforce programs and schools in disadvantaged communities to provide access to jobs and paid training.

Measure 10: Reduce Flood Risk

Climate Change

Benefits: Green infrastructure in neighborhoods can reduce localized flooding, protect from climate-related property damage, and improve resilience.

Disbenefits (and Solutions): Low-Income and Disadvantaged Communities (LIDACs) may not be prioritized for green infrastructure investment.

Prioritize areas with history of repetitive loss and integrate with equity mapping tools.

Health

Benefits: Reduced flooding lowers the risk of waterborne disease, mold exposure, and stress-related health impacts.

Disbenefits (and Solutions): None identified

Housing

Benefits: Property buyouts in high-risk areas may prevent repeated flood damage and provide safer relocation options.

Disbenefits (and Solutions): Buyouts can displace families without affordable relocation.

Pair buyouts with adequate compensation, relocation assistance, support services, and affordable housing access.

Transportation

Benefits: Stormwater capture and green infrastructure may reduce street flooding and improve transportation access during storms.

Disbenefits (and Solutions): If stormwater infrastructure is not maintained water flow can be affected.

The region should ensure stormwater projects include funding for maintenance, so water continues to flow properly.

Workforce Development

Benefits: Ongoing jobs and workforce training opportunities can be created to install and maintain green infrastructure such as bioswales, rain gardens, and permeable pavements.

Disbenefits (and Solutions): None identified



10

Intersection with Other Funding Sources

Artist: Jesus 'Cimi' Alvarado

9. Intersection with Other Funding Sources

Key Takeaways

- CAP implementation is complex and resource-intensive, requiring long-term planning and coordination across jurisdictions and sectors.
 - Multiple funding and financing sources will be needed for most actions due to the diverse range of projects and stakeholders involved.
 - Available funding includes competitive federal and state grants, local and national philanthropy, traditional and innovative financing tools, and revenue-generating mechanisms like local taxes.
 - State and local sources will play an outsized role in the near term.,
- Planning for and implementing the CAP actions will be an ongoing, resource-intensive process, requiring local jurisdictions within the region to consider new funding and financing sources. Planning and implementing each action will likely require multiple funding and financing sources, given the diverse array of sectors and jurisdictions within the region and the number of projects and programs required to reach the scale of action envisioned by 2050.

This chapter provides a summary of funding sources that may be used to support CAP action implementation, including:

- **Competitive federal and state grant programs** available to local jurisdictions, including city and county governments, transportation agencies, and tribal governments, in addition to nonprofit and community-based partner organizations.
- **Financing strategies**, including traditional debt instruments like loans and bonds and more innovative debt instruments, in addition to revenue-generating mechanisms, like new local taxes.

Additional details related to these funding and financing sources, including specific grant program requirements, can be found in Appendix E. The appendix also includes information on federal, state, utility, or other funding opportunities that the region has pursued to support implementation of CAP measures. For each opportunity, the appendix lists the name of the funding source, the amount requested, and the status as of June 2025 (e.g., pending, requested, secured, or rescinded).

Key Considerations

When identifying new funding or financing sources to support the planning and implementation of CAP actions, agencies in the region may consider the following factors:

- **Timing:** The amount of time needed to secure funding and financing. For grant programs, this involves monitoring federal and state grant application deadlines on an annual or biannual basis. For financing tools, this requires time needed to issue loans, bonds, and other investments.
- **Feasibility:** The likelihood a local agency will receive approval, whether it be from the federal government (grants) or voters (revenue-generating mechanisms).
- **Administrative Complexity:** The degree to which funding and financing sources may be implemented within local agencies' existing resources. This includes resources needed to

oversee grant applications and administration, as well as resources needed to implement and provide ongoing support for financing tools and revenue-generating mechanisms.

- **Funding Amount or Revenue-Generating Potential:** The range of funds or revenue that each funding source could generate and the volatility of the funding source.
- **Funding Flexibility:** The funding source's requirements and restrictions, and potential to fund multiple measures.
- **Regional Coordination and Engagement:** Regional coordination to develop multi-jurisdiction, multi-benefit projects can strengthen the competitiveness of funding applications. Sustained partnerships with community-based organizations can help to build long-term community support to inform funding applications.

Grant Funding

Several competitive federal and state grant programs support CAP actions. The federal funding landscape has shifted, and in the near term, agencies in the region may need to shift to rely more on state and local funding and financing sources to move actions forward. As the landscape of federal funding opportunities is better defined in future years, projects seeking funding should ensure alignment with federal administration goals to maximize eligibility.

The competitive federal and state grant programs in this section are grouped by their relevance to mitigation and adaptation actions. While some programs are primarily focused on mitigation or adaptation, many are applicable to both.





11

Workforce Planning Analysis

Artist: Creative Kids, Inc.

10. Workforce Planning Analysis

Key Takeaways

- El Paso's Climate Action Plan will create new jobs through clean energy, EV infrastructure, and grid upgrades.
- This chapter analyzes how mitigation actions impact local labor needs.
- Hundreds of new jobs are projected over five years, especially in construction and clean energy technology.
- Current training systems aren't equipped to meet demand without targeted investment.
- A strong training-to-employment pipeline is needed to ensure local, equitable job access.
- Aligning workforce and climate efforts is essential for inclusive, sustainable growth.
- To meet CPRG program requirements, this analysis focuses on mitigation actions.

This chapter evaluates how climate actions will impact the regional labor market, identifies the occupations most critical to success, and outlines the training infrastructure and policy interventions needed to prepare a skilled, inclusive workforce. As El Paso advances its climate goals, workforce development will be a central lever to ensure these efforts translate into equitable economic opportunity for all residents. By aligning workforce strategies with climate initiatives, the analysis helps position the region for long-term sustainability, infrastructure readiness and inclusive growth. Investments in grid modernization and the expansion of EV charging infrastructure are expected to generate substantial job creation across the region. While exact figures will depend on the scale and timing of implementation, early projections suggest that these efforts could result in several hundred direct and indirect jobs over the next five years. This includes roles in construction, clean energy installation, and a range of supporting industries that will benefit from increased demand.

However, current training output and demographic trends indicate that the local labor market is unlikely to meet this growing demand without intentional investment in workforce development. Successfully implementing the CAP will require a strong workforce training-employment continuum. This includes ensuring that employers can access talent with the right skills; that job seekers and current workers are aware of emerging opportunities and have access to relevant training; and that training providers have the capacity, curriculum, and industry partnerships to prepare individuals effectively. Workers also need support services that improve training completion, job placement, and retention.

Without a coordinated strategy to build a local workforce aligned with CAP priorities, the region risks delaying implementation, missing economic opportunities, and reinforcing existing workforce disparities. Building this continuum now is essential to translating climate goals into inclusive, sustainable employment.

This chapter focuses specifically on the mitigation measures outlined in the CAP to meet CPRG program guidelines.

Methodology

This chapter provides a demographic baseline of the region, models climate-aligned occupational demand, establishes an inventory of regional training capacity, and provides policy and funding recommendations for workforce planning and development. To craft an understanding of the workforce impacts that can be expected from implementation of El Paso's mitigation measures, this chapter followed guidance from the EPA's CPRG program, which outlined an approach to conducting the workforce planning analysis. The EPA's guidance included the following six steps:

1. **Mapped CAP mitigation measures:** standardizing categories of industries and occupations using North American Industry Classification System (NAICS) and SOC (Standard Occupational Classification) codes.
2. **Defined the labor-market area** as the El Paso Metropolitan Statistical Area (the El Paso region), which includes El Paso and Hudspeth counties in Texas.
3. **Quantified the current workforce:** Employment and wage statistics from JobsEQ, the Texas Workforce Commission (TWC), and the Bureau of Labor Statistics (BLS) informed an understanding of the size of the region's existing workforce.
4. **Modeled future demand for workers:** using employment projections from JobsEQ (5-year and 1-year occupational forecasts). A broader estimate of the region's economic impact was estimated using the Input-Output Impact Analysis for Planning (IMPLAN) model, as well as TWC) occupation growth projections (2022-2032).
5. **Validated assumptions:** current structure and partnerships between local workforce development boards, employers, training providers, and community advocates provided additional insights into the region's workforce, in-demand skills and knowledge, regional training capacity, and opportunities for collaboration between workforce system actors.
6. **Applied an equity screen** to identify opportunities for low-income neighborhoods to benefit from lowered energy costs and the creation of new jobs resulting from the implementation of the region's CAP mitigation measures.

This analysis draws on a range of data sources, including industry, occupation, and wage statistics from JobsEQ and the U.S.BLS; short-term (1-year) and long-term (5-year) occupational forecasts from JobsEQ; occupational employment projections from the TWC through 2032; and economic impact modeling using IMPLAN Input-Output analysis. Demographic and workforce characteristics are based on 5-year estimates from the 2023 American Community Survey , conducted by the U.S. Census Bureau. Data on education and training programs were obtained from the Texas Workforce Commission and Workforce Solutions Border plex.

Population and Workforce Demographics

The labor market area for this analysis is the El Paso region which encompasses both El Paso County and Hudspeth County. While most job opportunities associated with CAP mitigation measures are expected to be concentrated in the City of El Paso, the broader region serves as the primary labor pool. This regional scope reflects commuting patterns and the availability of workforce, training institutions, and employers across the region.

The region's population of just over 869,000 offers a strong foundation for workforce development, with nearly two-thirds of residents between 18 and 64 years of age. This core

working age group drives the local economy and will continue as new industries and training pathways take shape. Alongside this base, more than a quarter of the population is under 18, pointing to a future pipeline of workers needing support from schools, families, and programs that help them transition into meaningful careers, and as more people reach retirement age, the community will need to plan for more services related to health, caregiving, and safe housing giving as the number of residents aged 65 and older continues to rise.

The region comprises approximately 297,000 households, with a median household income of \$59,000 in 2023 dollars. Roughly one-third of these households include families with children under the age of 18. As such, any comprehensive strategy aimed at supporting workforce participation must account for the needs of working families, including flexible training schedules and supportive services such as childcare and transportation.

According to the 2023 American Community Survey, nearly 20% of households in the region fall below the federal poverty level. In the most energy-burdened neighborhoods, utility costs can exceed 8% of a household's monthly income. These disproportionately high energy expenditures underscore the dual role of energy efficiency interventions—such as weatherization and HVAC system upgrades—as both climate mitigation and equity strategies. Reducing energy costs through such measures can alleviate financial strain, lower greenhouse gas emissions, and enhance indoor comfort for vulnerable populations.

The region has a labor force participation rate of 63%. Employment is concentrated in three primary sectors—Trade, Transportation, and Utilities; Government; and Private Education and Health Services—which collectively account for 58% of total regional nonfarm employment. In terms of average weekly wages, the highest paying sectors are Public Administration (\$1,637), Financial Activities (\$1,223), and Manufacturing (\$1,172).

Occupation-Industry Mix

Building on the region's demographic profile, understanding where and how those industries are evolving is essential for identifying pathways to climate-aligned economic growth. The occupational landscape is shaped by a mix of legacy sectors and emerging opportunities. By analyzing employment concentrations and sector-specific skill demands, we can better assess where workforce investments are most needed and where they will yield the greatest climate and economic returns.

The distribution of employment across key industries provides critical insight into the region's current economic structure and its connections to climate-focused industries. To assess alignment with climate actions and workforce development opportunities in priority occupations, select industries were mapped to relevant workforce sectors based on job concentration, climate relevance, and growth potential. The following sectors shown in Table 25 were identified in relation to the CAP measures.

Table 25. Key Industries and Relevant Sectors

NAICS	NAICS Industry	Relevant Sector
11	Agriculture, Forestry, Fishing and Hunting	Agriculture, Natural & Working Land
53	Real Estate and Rental and Leasing	Commercial & Residential Buildings
23	Construction	
562	Waste Management and Remediation Services	Waste and Materials Management
2211	Electric Power Generation, Transmission and Distribution	Electricity Generation
31-33	Manufacturing	Industry
48-49	Transportation and Warehousing	Transportation and Warehousing

Source: Workforce Solutions Borderplex

Table 26. Relevant Sector Employment Snapshot

Sector	Employment 2024Q4	% of Relevant Sector Employment	Avg. Hourly Wage 2024	Avg. Number of Establishments 2024
Agriculture, Natural and Working Land	1,408	2%	\$21.33	96
Commercial & Residential Buildings	28,613	39%	\$26.66	1,161
Electricity Generation	898	1%	\$37.28	4
Industry	18,067	25%	\$29.29	659
Transportation and Warehousing	22,718	31%	\$27.84	1,098
Waste and Materials Management	798	1%	\$25.87	66
Total Employment in Relevant Sectors	72,502			

Source: Workforce Solutions Borderplex

As provided in Table 26, the six identified climate-relevant sectors accounted for 20% of total employment in the region in 2024, representing 72,502 jobs across the MSA. The largest employment concentrations were in Commercial and Residential Buildings (28,613 jobs), Transportation and Warehousing (22,718 jobs) and Industry (18,067). In contrast, sectors such as Electricity Generation (898 jobs), Waste and Materials Management (798 jobs), and Agriculture, Natural and Working Lands (1,408 jobs) had significantly lower employment levels.

Despite employing the fewest workers, Electricity Generation occupations have the highest average hourly wage at \$37.28, suggesting a premium for specialized or technical labor. Conversely, Agriculture, Natural and Working Lands have one of the lowest average hourly wage, at \$21.33 per hour. The number of establishments also varies significantly, with Commercial and Residential Buildings and Transportation and Warehousing having the highest average number of establishments (1,161 and 1,098, respectively), while sectors like Electricity Generation operate within four establishments. These patterns suggest that employment growth and wage dynamics are tied to both sectoral demand and structural industry characteristics.

As the next section outlines, the relevant sectors were evaluated using a set of reference measures, including job growth projections, training requirements, and climate alignment, to guide workforce strategies and inform the design of targeted workforce development initiatives. Understanding this alignment supports the goal that future actions not only address climate goals but also broaden access to high-quality employment across the region.

Industries Most Vulnerable to Extreme Heat: Certain industries are at a higher risk to be impacted by the effects of extreme heat.^{80,81} According to recent research, four of the seven industries in Table 25 are classified as high risk: Construction, Manufacturing, Transportation and warehousing, and Agriculture, forestry, fishing and hunting.^{82,83} These industries include work that is primarily performed outdoors or in facilities that are not typically climate-controlled, making extreme heat a greater factor in work capabilities and efficiencies. The impacts of extreme heat to these industries should be considered when developing workforce development strategies and initiatives.

Climate Mitigation Actions Overview

To assess the potential impact of climate actions on regional industries and occupations, several reference measures guided the analysis, including projected job growth, median wages, educational requirements, and alignment with CAP priorities. Additional factors such as industry relevance to decarbonization goals, susceptibility to climate-related disruption, and the potential for job quality improvements were also considered. Together, these indicators provided a framework for identifying high-impact occupations and sectors that are both critical to the region's economic resilience and essential to the success of the following CAP measures:

Measure 1: Promote Walking, Biking, and Riding Transit

Measure 2: Increase Energy Efficiency and Decarbonize Buildings

⁸⁰Behrer, Park. 2017. *Will We Adapt? Temperature, Labor, and Adaptation to Climate Change*. Harvard University.

⁸¹Graff Zivin, Neidell. 2014. *Temperature and the Allocation of Time: Implications for Climate Change*. Journal of Labor Economics, Vol 32, No.1, pp.1-26. <https://www.jstor.org/stable/10.1086/671766>

⁸²Behrer, Park. 2017. *Will We Adapt? Temperature, Labor, and Adaptation to Climate Change*. Harvard University.

⁸³Graff Zivin, Neidell. 2014. *Temperature and the Allocation of Time: Implications for Climate Change*. Journal of Labor Economics, Vol 32, No.1, pp.1-26. <https://www.jstor.org/stable/10.1086/671766>

Measure 3: Install Renewable Energy Systems

Measure 4: Promote Sustainable Food Systems and Waste Management Practices

Measure 5: Support the Zero Emissions Vehicle Transition

Measure 6: Cool Communities, Protect Health, and Increase Native Ecosystems

Measure 9: Monitor and Improve Air Quality

Measure 10: Implement and Oversee Climate Action

Workforce Analysis by Occupation

Table 27 provides the analysis of the top ten occupations within the relevant sectors and highlights a labor market dominated by roles in transportation, construction, and operations management (full list in Appendix F).

Table 27. Top ten Occupations in relevant sectors.

SOC	Occupation	Regional Employment Relevant Sectors	Total, Regional Employment All Sectors	(LQ) ⁸⁴	Median Hourly Wage
53-3032	Heavy and Tractor-Trailer Truck Drivers	7,894	8,686	1.8	\$22.26
47-2061	Construction Laborers	3,302	3,515	1.1	\$15.58
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	2,838	5,406	0.8	\$15.53
11-1021	General and Operations Managers	2,152	9,289	1.2	\$36.83
47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	1,702	1,871	1.0	\$29.33
11-9021	Construction Managers	1,697	1,785	1.6	\$39.76
47-2031	Carpenters	1,660	1,725	0.9	\$19.04
47-2111	Electricians	1,513	1,711	1.0	\$23.32
53-3033	Light Truck Drivers	1,250	2,141	0.9	\$17.74
53-7051	Industrial Truck and Tractor Operators	1,218	1,785	1.0	\$17.74

⁸⁴The Employment Location Quotient (LQ) measures the concentration of employment of an industry within a specific geographic area, compared to the national average. An LQ greater than 1.0 indicates a higher concentration of the industry in the local area compared to the national average. An LQ Less than 1.0 indicates a lower concentration of the industry in the local area compared to the national average.

Across relevant sectors, Heavy and Tractor-Trailer Truck Drivers is the most common occupation, employing 7,894 individuals and accounting for 91% of the total regional employment in that role. The occupation has an employment location quotient (LQ) of 1.8 - indicating strong regional specialization. Construction-related occupations, including Construction Laborers (3,302 jobs), also feature prominently, reflecting the dominance of the Commercial & Residential Buildings sector. These roles offered modest wages, with Construction Laborers and Freight/Material Movers earning median hourly wages around \$15.50. More specialized roles command significantly higher pay, such as Construction Managers (\$39.76/hour) and General and Operations Managers (\$36.83/hr). Despite lower employment numbers, Construction Managers (LQ 1.6) and General and Operations Managers (LQ 1.2) are notably overrepresented in relevant sectors compared to the broader economy, underscoring their strategic importance. The data suggests that sustainability-related employment is not only physically intensive but also operationally complex, requiring both a large base of manual labor and a smaller, well-compensated management tier to support it.

Projected Demand Modeling

After completing the workforce analysis by occupation, data was compiled for 550 occupations, including an occupation-industry crosswalk, current employment levels, projected growth through 2029, and anticipated separations due to exits and occupational transfers. Of these, 55 occupations were identified as potentially impacted by the CAP's mitigation actions (see Appendix F,). For these 55 occupations, projected employment demand associated with CAP mitigation actions was estimated using average annual growth rates from 2024 to 2029 (5-year forecast).

To assess potential labor market alignment, occupational demand projections were compared against estimated labor supply to identify potential workforce surpluses or shortages. Estimated labor supply was derived from the volume of active job postings over the past twelve months, assuming each posting corresponded to a filled position. This modeling approach quantified expected labor market imbalances and informed the selection of priority occupations. These priority roles were identified based on four key criteria: their critical role across the six target industries, the presence of a projected labor shortage, their anticipated sensitivity to implementing CAP mitigation actions and whether the median hourly wage was above the living wage⁸⁵. This prioritization is intended to guide workforce development efforts and policy interventions where they are most urgently needed.

Based on the criteria described above, 14 occupations were identified as high-priority targets for workforce planning as shown in Table 28. These roles are critical to the success of CAP-related mitigation actions, face projected labor shortages, and span multiple high-impact industries.

⁸⁵ El Paso's living wage for fiscal year 2024 is \$17.24/hour (2 adults working, 1 dependent). Living wage refers to the hourly rate an individual must earn to support their family without the need for public assistance. Living wage calculations reflect geographic costs related to typical minimum family expenses such as food, childcare, health insurance, housing, transportation, & other basic necessities. Massachusetts Institute of Technology (MIT) Living Wage Calculator (June 2023), Source: <https://livingwage.mit.edu/>

Table 28. Priority occupations ordered by median hourly wage.

SOC	Occupation	Regional Employment Relevant Sectors	Total, Regional Employment All Sectors	(LQ)⁸⁶	Median Hourly Wage
13-1041	Compliance Officers	138	941	1.1	\$40.91
11-9021	Construction Managers	1,697	1,785	1.6	\$39.76
11-3071	Transportation, Storage, and Distribution Managers	397	660	1.4	\$38.32
11-1021	General and Operations Managers	2,152	9,289	1.2	\$36.83
13-1199	Business Operations Specialists, All Other	184	2,050	0.8	\$36.68
17-2051	Civil Engineers	137	641	0.8	\$36.01
13-1082	Project Management Specialists	792	1,982	0.9	\$34.71
13-1081	Logisticians	208	483	1.0	\$33.22
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	497	1,446	1.1	\$30.05
47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	1,702	1,871	1.0	\$29.33
47-2152	Plumbers, Pipefitters, and Steamfitters	784	962	0.9	\$23.85
47-2111	Electricians	1,513	1,711	1.0	\$23.32
51-4121	Welders, Cutters, Solderers, and Brazers	645	818	0.8	\$20.38
49-9071	Maintenance and Repair Workers, General	1,111	3,160	0.9	\$17.84

⁸⁶The Employment Location Quotient (LQ) measures the concentration of employment of an industry within a specific geographic area, compared to the national average. An LQ greater than 1.0 indicates a higher concentration of the industry in the local area compared to the national average. An LQ Less than 1.0 indicates a lower concentration of the industry in the local area compared to the national average.

Table 29. Potential shortage for priority occupations.

SOC	Occupation	Hires	Exits	Transfers	Empl Growth	Projected Needed for CAP	Total Projected Employment Demand (2029)	Potential Shortage
11-1021	General and Operations Managers	310	1,055	2,782	339	15	4,191	(3,881)
47-2111	Electricians	111	273	528	122	21	944	(833)
13-1082	Project Management Specialists	0	217	507	95	7	826	(826)
47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	113	292	448	87	15	842	(729)
49-9071	Maintenance and Repair Workers, General	842	683	780	101	7	1,571	(729)
11-9021	Construction Managers	169	225	477	96	17	815	(646)
47-2152	Plumbers, Pipefitters, and Steamfitters	40	139	279	38	6	462	(422)
51-4121	Welders, Cutters, Solderers, and Brazers	14	112	294	11	2	419	(405)
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	214	243	339	29	2	613	(399)
13-1041	Compliance Officers	85	160	219	34	1	414	(329)
13-1199	Business Operations Specialists, All Other	685	316	568	62	1	947	(262)
11-3071	Transportation, Storage, and Distribution Managers	100	90	187	35	4	316	(216)
13-1081	Logisticians	82	64	156	51	4	275	(193)
17-2051	Civil Engineers	107	63	133	28	1	225	(118)

An analysis of projected employment demand across key sustainability-related occupations reveals significant workforce shortages over the coming years, particularly in construction, operations, and technical trades. As shown in Table 29, among the 14 occupations examined, General and Operations Managers exhibit the highest total projected employment demand (4,191 jobs) but also face a potential shortage of 3,881 workers (a gap driven primarily by high exit and transfer rates). Similar trends are evident across skilled trades such as Electricians (shortage of 833), First-Line Supervisors of Construction Trades (729), and Maintenance and Repair Workers (729), suggesting critical workforce pressure points in the construction and maintenance pipeline essential to decarbonization and infrastructure resilience. Even occupations with relatively modest current employment, such as Project Management Specialists and Compliance Officers, are projected to fall significantly short (826 and 329 respectively), despite their strategic importance in regulatory and project oversight roles. Notably, occupations tied to managerial or coordination functions (including Construction Managers, Logisticians, and Business Operations Specialists) also reflect substantial workforce gaps. Overall, these projected shortages, if unaddressed, may hinder the region's ability to meet the CAP implementation goals, underscoring an urgent need for targeted workforce development, training programs, and policy interventions to build capacity in both frontline and managerial positions.

Training and Apprenticeship Pipeline

Preparing individuals for quality employment begins with aligning local training programs to in-demand and emerging workforce needs. In the El Paso region, a diverse ecosystem of community colleges, labor unions, and private training providers plays a critical role in equipping residents with the skills required to support both the local economy and the region's climate and infrastructure goals.

Training Providers and Credentials

El Paso Community College (EPCC) continues to expand its role as a central hub for workforce development. Over the past two years, EPCC has doubled its training capacity for new electricians and introduced a 16-week fast-track Electrical Level I certificate program. This program integrates instruction on solar technologies and EV charging systems, providing students with competencies that extend beyond traditional construction to include emerging energy systems and grid modernization efforts.

The International Brotherhood of Electrical Workers (IBEW) Local 583 also enhances the regional training landscape by developing a paid pre-apprenticeship program. Modeled after the Utility Pre-Craft Trainee program in Los Angeles, this initiative blends classroom instruction with compensated hands-on work experience. The program is designed to build foundational competencies that align with the requirements of registered apprenticeships, including safety training (e.g., Occupational Safety and Health Administration 10 certification, CPR/First Aid), applied math and measurement, basic tool use, and exposure to jobsite protocols. It also emphasizes work-readiness skills such as punctuality, teamwork, communication, and career navigation support to help participants understand union pathways and long-term advancement opportunities. Graduates are expected to transition directly into formal apprenticeship programs that offer structured career progression and family-sustaining wages.

The University of Texas at El Paso (UTEP) contributes to the training pipeline at the post-baccalaureate level. Its newly launched graduate certificate in Sustainable Infrastructure is designed to prepare civil and mechanical engineers to design resilient buildings and systems capable of withstanding climate-related stressors.

In addition to public institutions, private training providers are needed to help fill critical gaps in the regional workforce system. Sun City Welding Academy offers an American Welding Society (AWS) structural welding certification for bridge retrofits and low-carbon industrial applications. Airstreams Renewables provides an intensive 11-week program focused on training wind and solar technicians in operations, safety procedures, and maintenance of turbine infrastructure.

Together, these providers form a foundation for a climate-aligned workforce development system that spans a range of occupations and credentials, from entry-level certifications to advanced engineering specialization. Continued investment and coordination across these partners will be essential to meet growing demand and build a resilient, skilled workforce.

Seats, Costs, and Barriers

Developing a robust training and apprenticeship pipeline requires more than simply expanding the number of available courses. It also necessitates the systematic removal of common barriers to participation, including tuition costs, family responsibilities, and language accessibility. Training programs that are intentionally designed to address these challenges are more likely to enable a broader segment of the population to access stable, well-paying employment, advancing both individual economic mobility and the region's broader climate and workforce goals.

Despite the availability of various training options in the region, current program capacity remains insufficient to meet projected labor market demands. On average, the El Paso region produces approximately 60 new electricians, 50 HVAC technicians, 40 welders, and 30 renewable energy technicians annually. These graduation rates are inadequate considering the anticipated growth in demand for skilled labor associated with the implementation of regional climate infrastructure projects.

Cost remains a significant obstacle for many prospective trainees. Tuition for short-term credential programs ranges from approximately \$1,800 to \$7,000, depending on the occupation and institution. When additional expenses such as textbooks, equipment, lost wages, childcare, and transportation are considered, the total financial burden becomes prohibitive for many students. For these individuals, access to scholarships, stipends, and flexible scheduling options, such as evening and weekend classes, can be the determining factors in whether they complete their training or exit prematurely.

Strategic Workforce Alignment Plan

To connect El Paso region's climate-driven infrastructure and industry expansion to a locally trained, inclusive workforce. The goal is to ensure that occupations tied to grid resilience, energy efficiency, clean construction, water management, and advanced manufacturing are filled in a timely and equitable manner.

Guiding Principles

1. **Demand-Driven:** Training investments are based on verified employer needs.
2. **Equity-Focused:** At least 40 percent of training resources are directed to individuals from LIDAC-designated communities.
3. **Cross-Sector Efficiency:** Training emphasizes skills that are transferable across multiple sectors, such as electricians needed in both data centers and water infrastructure.
4. **Wraparound Support:** Childcare, transportation, and stipends are integrated to support completion and retention.

5. **Stackable Pathways:** Pre-apprenticeships, certifications, and licenses are aligned to enable long-term career advancement.
6. **Accountable and Iterative:** Workforce outcomes are tracked and adjusted quarterly to inform continuous improvement.

Aligned Investments and Strategic Funding Leverage

El Paso region has several active workforce investments that align with climate, energy, and infrastructure priorities. These investments serve as a strong foundation for scaling CAP-related workforce initiatives.

City of El Paso American Rescue Plan Act (ARPA) Funds. Currently supporting incumbent worker training programs for employers across construction, healthcare, and energy sectors. These funds, which must be expended by mid-2026, are helping existing workers adapt to new technologies and industry needs related to energy efficiency and climate resilience.

Workforce Solutions Borderplex (WSB) State and Federal Formula Funds. The region is prioritizing the allocation of formula funding to support workforce development in advanced manufacturing, healthcare, information technology and cybersecurity, energy systems, and critical infrastructure sectors, including water, transportation, and broadband. These strategic priorities are closely aligned with the objectives of the CAP, particularly in areas that aim to reduce emissions, increase energy efficiency, expand access to essential services, and build climate-resilient infrastructure. Many of the occupations associated with these sectors—such as HVAC technicians, electricians, and civil engineering—are already identified as priority occupations within the regional workforce development framework. Targeting these fields not only addresses existing labor market demands but also supports the region’s climate mitigation goals by fostering a skilled workforce capable of implementing and maintaining CAP-related projects.

Supervisory Control and Data Acquisition (SCADA) Training Partnership with the Texas Workforce Commission and The Trust for the Americas (Washington DC). This initiative provides certification and career advancement opportunities in SCADA systems. These roles are essential to operating and maintaining the smart grid and modern utility infrastructure.

Department of Labor (DOL) “Pathways for Heroes” Grant. This program supports transitioning service members with job training and placement in infrastructure and climate-resilient occupations such as infrastructure, management, logistics, and electrical work. These occupations align closely with energy sector needs. Additionally, WSB continues to expand partnerships with research institutions to align emerging federal investments with regional workforce priorities. Beginning in Fall 2025, a new pilot and collaboration with the University of Texas at El Paso will support paid internships for engineering students through a USDA-funded initiative focused on water conservation and agriculture. This effort illustrates the region’s capacity to support interdisciplinary, grant-aligned workforce initiatives at the intersection of infrastructure, climate, and innovation sectors.

To meet the region’s climate and workforce goals under the CAP, a multi-pronged strategy has been developed to build a robust talent pipeline in climate-aligned sectors. Table 30 outlines refined key actions across six strategic pillars designed to prepare new workers, upskill existing

ones, and ensure equitable access to emerging opportunities. These efforts are concentrated in priority sectors such as energy systems, water infrastructure, broadband, HVAC, and building systems, which are central to both the region's climate mitigation objectives and workforce development priorities. The approach emphasizes flexibility, equity, and employer engagement, with milestones that balance immediate workforce needs with long-term systems change.

WSB, the workforce development agency and workforce board for the region, plays a central role in addressing workforce challenges. As the operator of the region's American Job Centers, the organization actively connects job seekers, employers, training providers, and community-based partners to build a more inclusive workforce pipeline. Through collaboration, WSB is uniquely positioned to bridge the gap between community need and opportunity—supporting reskilling, career pathway development, and equitable access to high-quality jobs in weatherization, solar installation, HVAC efficiency, and other green sectors.

Table 30 Strategic Pillars

Pillar	Refined Key Actions	Suggested Leads/Collaborators	Flexible Milestones
Expand Entry Pipelines	- Launch targeted pre-apprenticeship or bootcamp-style cohorts in climate-aligned trades such as HVAC, solar, and electrical. - Integrate foundational skills into existing high school and community-based programs.	- WSB - Independent School Districts (ISDs) - Community-based organizations - Labor partners	- Launch pilot(s) in 2025 - Track participation and retention
Accelerate Credentialing	Develop or adapt short-term, stackable credentials in priority occupations (e.g., energy efficiency, building systems, water operations). Options may include bootcamps, hybrid models, or modular training.	Workforce board in collaboration with multiple training providers	Catalog existing offerings and pilot 1–2 new credential models
Upskill Incumbents	Customize training for incumbent workers in utilities, facilities, and manufacturing. Emphasis on controls,	- Employers - Chambers - WSB - Training partners	- Secure 3–5 employer partners - Monitor job advancement outcomes

	automation, and energy systems. Align ARPA and Skills Development Funds to support this work.		
Prioritize Equity & LIDAC Recruitment	- Use navigators and trusted messengers to recruit from priority census tracts. - Incorporate support such as stipends, tools, or child care.	- CBOs - WSB - Local literacy and housing organizations	Ensure strong LIDAC representation and track engagement
Coordinate Employer & Sector Leadership	- Form a working group of employers, unions, and educators to advise on training content and provide early hiring commitments. - Establish shared goals (e.g., interview guarantees, job fairs).	- Economic development entities - Employers - Industry associations	- Launch working group - Secure initial Memorandum of Understandings or partnership letters
Build Monitoring & Transparency Systems	Integrate all programs into a centralized tracking system (e.g., Monday.com or similar) to monitor outcomes and ensure transparency.	- WSB - City data & performance staff	- System live in 2025 - Develop dashboard to track workforce pipeline metrics

Policy and Funding Recommendations

To fully realize the workforce potential of the region's climate initiatives, supportive policy and funding mechanisms must be implemented at the local, regional, and state levels. The following recommendations are designed to align public investments with workforce goals, ensure long-term sustainability, and maximize the impact of CAP activities.

Local Policy Levers

Local governments can play a catalytic role in shaping climate workforce outcomes by embedding workforce requirements into permitting, procurement, and infrastructure policies. The following policy levers can help ensure that public investments generate quality jobs and equitable access to career pathways:

- Require workforce language and apprenticeship participation in City-funded climate infrastructure projects.

- Provide expedited permitting and other incentives for projects that include local hiring and training commitments.
- Align new industrial water conservation policies with workforce programs that train licensed plumbers and utility technicians.

Funding and Sustainability Recommendations

Sustained and coordinated investment is essential to building and scaling a climate workforce strategy that addresses current shortages while positioning the region for long-term economic growth. The following recommendations outline key strategies to braid resources, engage diverse partners, and ensure workforce initiatives remain aligned with infrastructure and industry needs:



Workforce Planning Conclusion

The El Paso region stands at a pivotal moment where climate action, economic opportunity, and workforce transformation are uniquely aligned. While high-demand occupations face growing shortages, the region's assets, including a strong training ecosystem, industry partnerships, and emerging infrastructure investments, create a powerful platform for strategic response. A robust network of education and workforce institutions such as El Paso Community College, UTEP, IBEW Local 583, Western Tech, Region 19, and regional high school Career and Technical Education (CTE) programs are actively working to expand credential access, pre-apprenticeship pipelines, and career pathways aligned with clean energy, infrastructure, and skilled trades.

WSB, in coordination with regional partners, is focused on strengthening five key sectors: advanced manufacturing (particularly aerospace and defense), IT and IT-adjacent fields, healthcare, energy, and infrastructure. These sectors share a common reliance on increased energy capacity and climate-resilient systems to support sustainable growth. WSB's workforce strategies are guided by labor market data and informed by employer engagement to ensure alignment with emerging demands.

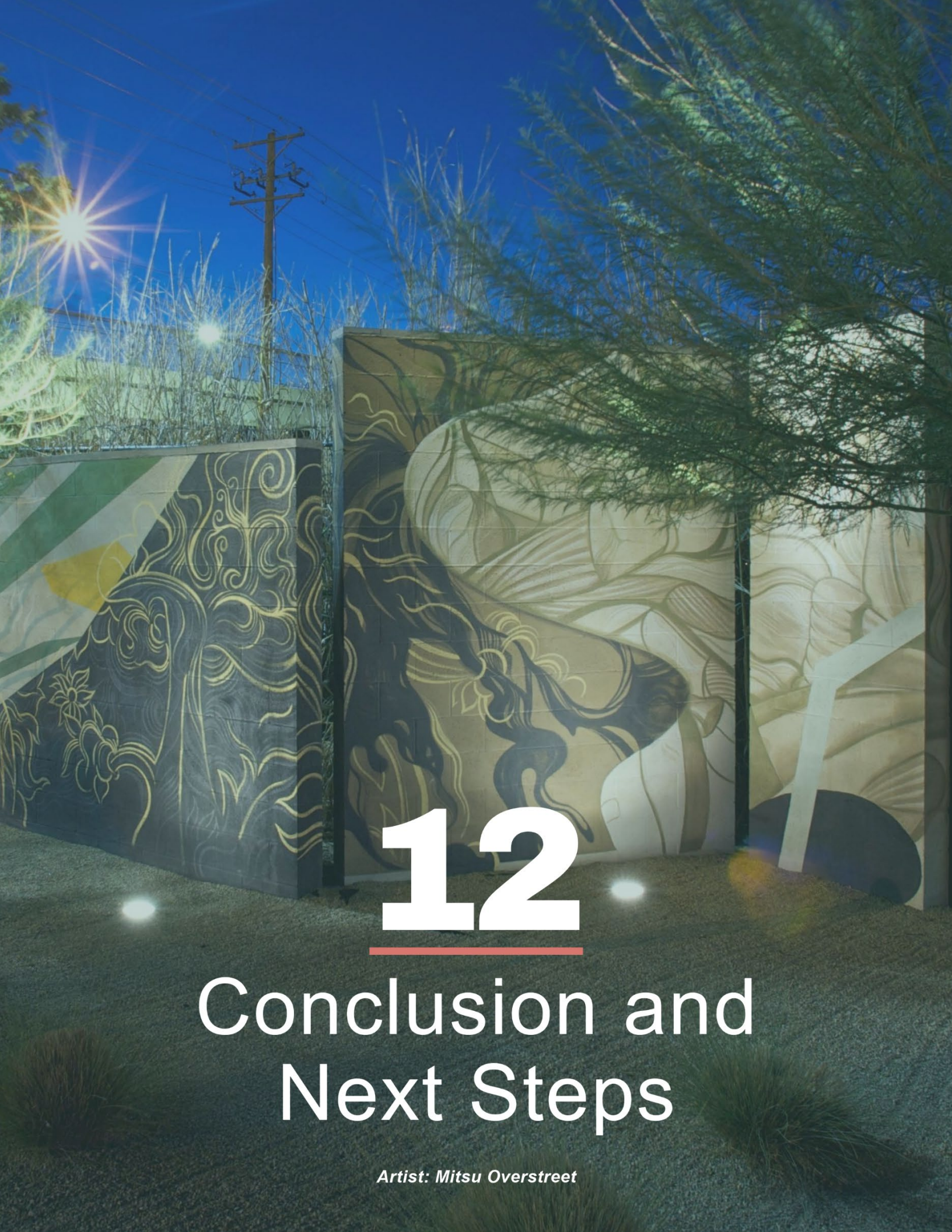
As technologies such as distributed energy, smart grid systems, and next-generation manufacturing reshape the landscape, workforce development must remain responsive, inclusive, and future-oriented. Wraparound supports such as childcare, transportation, and digital access are essential for increasing access to training and sustaining long-term labor market participation, especially for historically underserved populations.

Fort Bliss represents a major regional asset in this effort. As one of the largest military installations in the country, it plays a key role in energy resilience, logistics infrastructure, and defense innovation. Aligning workforce strategies with Fort Bliss's evolving mission offers an opportunity to support national security objectives while creating high-quality civilian career pathways. This intersection also strengthens the region's ability to meet LIDAC goals and enhance workforce capacity and economic development impact.

The Strategic Workforce Alignment Plan provides a coordinated roadmap built around six core pillars, with a focus on employer engagement, sector alignment, equitable access, and integrated policy. Realizing its potential will require ongoing collaboration across public, private, and institutional partners, sustained investment, and community-wide commitment.

By embedding workforce development within El Paso region's broader climate and economic goals, the region can lead by example, building a resilient future where opportunity is inclusive, innovation thrives, and people are empowered to lead and succeed.





12

Conclusion and Next Steps

Artist: Mitsu Overstreet

11. Conclusion and Next Steps

Key Takeaways

- The CAP outlines 10 priority measures and 53 specific actions targeting GHG reduction, climate resilience, and community co-benefits.
- The next phase begins with formal adoption of the CAP by the City and regional entities, followed by coordinated implementation led by the City and CDCC.
- A climate action dashboard will display implementation progress, performance metrics, and community benefits to keep the public, stakeholders, staff and officials informed.
- Remaining climate bond funds will be directed through a framework that prioritizes projects benefiting disadvantaged communities.
- The City will launch a climate mini-grant program to support small-scale, community-led climate action projects with technical assistance.

The CAP represents a significant milestone in the El Paso region's commitment to addressing climate change while enhancing quality of life for all residents. Developed through a collaborative and community-driven process, the CAP reflects the shared priorities of stakeholders and communities across El Paso and Hudspeth Counties. Throughout its development, the City and its regional partners conducted an extensive bilingual engagement effort, which included community open houses, pop-up events, public surveys, and partnerships with local institutions. Community input played a central role in shaping the 10 priority measures and 53 specific actions presented in this plan.

The CAP focuses on reducing GHG emissions and advancing climate adaptation strategies that provide multiple co-benefits, including improved public health; increased access to green space and clean energy; job creation; and enhanced resilience to extreme heat, drought, and flooding. Many actions have been designed with equity in mind, targeting the needs of LIDACs, which represent approximately 65% of the region's population and face disproportionate climate-related risks.

This CAP is the second formal deliverable under the EPA's CPRG planning grant awarded to the El Paso region and follows the development of the PCAP. In alignment with CPRG requirements, the City will publish a formal status report in 2027. This report will assess progress on implementation, provide updated emissions and co-benefits analyses, and outline future steps to advance CAP goals. Submission of this 2027 status report is mandatory under the CPRG grant program.

The region is ready to build on climate work already underway. Local agencies have demonstrated a strong commitment to sustainability through a range of climate-focused initiatives:

- El Paso Water leads the drought response program, which aims to conserve water and strengthen the region's resilience to long-term water shortages.
- The City of El Paso's Office of Climate and Sustainability, Community and Human Development Department, and Parks and Recreation manages the 915 Tree Keepers tree planting program, which expands the urban tree canopy and engages residents in improving neighborhood resilience to extreme heat.

- The Office of Climate and Sustainability oversees the City's LEED for Cities certification through the U.S. Green Building Council, which tracks progress on key economic, environmental, and social sustainability indicators and supports accountability in climate action.

The CAP provides a plan to grow and connect these efforts across the region. It helps align goals, attracts funding, and supports collaboration between regional partners.

Plan Adoption and Ongoing Collaboration

The next phase begins with formal adoption of the CAP by the City and participating regional entities. Following adoption, the City will continue to coordinate with the CDCC to oversee implementation, align departmental and regional efforts, pursue funding opportunities, and monitor progress against performance indicators. The CDCC will play a key role in maintaining accountability to community priorities and advancing cross-sector coordination.

Equitable Investment Framework

In 2021, the Climate Crisis Advisory Committee brought together stakeholders from the region to identify resources required for a regional climate action plan.⁸⁷ In November 2022, 50.6% of voters supported Proposition C of the City's Community Progress Bond, which allocated \$5 million for climate initiatives. In 2023, the City created the Office of Climate and Sustainability to implement resilience programs and projects across the community and City's departments and operations.⁸⁸

Launch of the Mini-Grant Program

The City will launch a climate-focused mini-grant program. This program will provide small grants to community-based organizations, schools, neighborhood groups, and small businesses to implement local climate action projects. Eligible activities could be, among others, tree planting, energy or water conservation, air quality monitoring, or outreach campaigns. The program will be designed to empower residents to lead solutions in their own neighborhoods. Grant recipients will receive technical assistance to support implementation and reporting, helping to build long-term capacity and foster grassroots climate leadership.

Public Dashboard

The City will maintain a publicly accessible climate action dashboard on its website to promote transparency and accountability. This platform will track progress on key actions; display relevant performance metrics; and highlight benefits related to equity, resilience, and public health. The dashboard will serve as a central tool for residents, stakeholders, and partners to monitor implementation and remain actively engaged in the region's climate progress.

The success of the CAP depends on sustained public involvement and cross-sector collaboration. The City and its partners remain committed to an inclusive, transparent, and iterative approach; one that empowers residents to shape and benefit from climate solutions in

⁸⁷Climate Crisis Advisory Committee. (2023). Climate Crisis Advisory Committee Framework. https://escobar.house.gov/uploadedfiles/ccac_framework.pdf

⁸⁸City of El Paso. (2023). Native El Pasoan to Lead City of El Paso's New Climate and Sustainability Office. https://www.elpasotexas.gov/assets/Press-Releases/2023.02.03-NEWS-RELEASE_City-Appoints-Native-El-Pasoan-Climate-and-Sustainability-Officer.pdf

their communities. Through continued leadership, investment, and community partnerships, the region can advance a healthier, more resilient, and more equitable future for all.





Resumen Ejecutivo

Artist: Jesus 'Cimi' Alvarado

Plan de Acción Climática Regional de El Paso

La Ciudad de El Paso y los socios regionales desean agradecer a los numerosos miembros del público que participaron en el proceso de planificación ofreciendo su tiempo, inquietudes, sugerencias y apoyo.

Este proyecto ha sido financiado parcialmente por la Agencia de Protección Ambiental de los Estados Unidos (EPA) bajo el acuerdo de asistencia 02F38901 con la Ciudad de El Paso. El contenido de este documento no refleja necesariamente las opiniones ni las políticas de la EPA, ni esta avala las marcas comerciales ni recomienda el uso de los productos comerciales mencionados en este documento.



Resumen Ejecutivo

El Área Estadística Metropolitana de El Paso (región de El Paso) enfrenta riesgos climáticos como sequías, inundaciones repentinas y calor extremo. Casi el 65% del Condado de El Paso y el 100% del Condado de Hudspeth se consideran comunidades de bajos ingresos y desfavorecidas (LIDAC, por sus siglas en inglés), las cuales enfrentan problemas como el aislamiento lingüístico y la mala salud, lo que dificulta que los residentes respondan a los riesgos climáticos. Para abordar estos complejos desafíos, la Ciudad de El Paso colaboró con socios de los Condados de El Paso y Hudspeth para crear este Plan de Acción Climática (PAC). Este PAC, desarrollado bajo el programa de Subvenciones para la Reducción de la Contaminación Climática (CPRG, por sus siglas en inglés) de la Agencia de Protección Ambiental de los Estados Unidos (EPA, por sus siglas en inglés), prioriza medidas para reducir las emisiones de gases de efecto invernadero (GEI) en la región de El Paso, a la vez que brinda otros beneficios a los residentes, como la creación de empleos, la mejora de la calidad del aire local y la mejora de la calidad de vida en general.

Este plan aborda los desafíos ambientales, económicos y de salud pública únicos de la región, como el calor extremo, la sequía, las inundaciones y la contaminación atmosférica, que afectan desproporcionadamente a las LIDAC. Con más del 65% del condado de El Paso y todos los tramos censales del condado de Hudspeth clasificados como LIDAC, este CAP prioriza la acción climática equitativa y la participación comunitaria.

Participación

Para desarrollar este CAP, la Ciudad de El Paso colaboró extensamente con gobiernos regionales, entidades tribales y organizaciones comunitarias. La sólida coordinación regional a través del Colaborativo Climático del Desierto Chihuahuense (CDCC) y el Comité Directivo de Liderazgo ayudó a alinear los objetivos locales, mientras que la difusión específica de los Climate Fellows y las promotoras fue fundamental para recopilar información de vecindarios de difícil acceso. Los Climate Fellows son profesionales en el inicio de su carrera, capacitados para apoyar la planificación climática y las iniciativas de participación, mientras que las promotoras son trabajadores de salud comunitarios de confianza que utilizan sus profundos vínculos locales para recolectar y compartir información de vecindarios históricamente desfavorecidos. Las organizaciones comunitarias y las empresas locales ayudaron a dar forma y apoyar el CAP a través de cumbres climáticas. Este extenso proceso de participación comunitaria llegó a más de 3,000 personas a través de reuniones bilingües, encuestas y eventos. La participación y la colaboración continuarán después de la adopción del CAP, y las actualizaciones y oportunidades se compartirán en el sitio web del proyecto.

Emisiones de Gases de Efecto Invernadero (GEI) y Objetivos

El inventario regional de GEI del CAP incluye las principales fuentes de emisiones en los condados de El Paso y Hudspeth para el año 2019. La mayor parte de las emisiones de la región provienen del consumo de energía en el transporte (48%) y en edificios e instalaciones (44%). Las proyecciones de emisiones de GEI, en un escenario de continuidad, estiman una posible reducción del 45% en las emisiones netas entre 2019 y 2050, debido principalmente a fuentes de generación de electricidad más limpias y a una mayor adopción de vehículos eléctricos (VE) (véase la Figura 1).

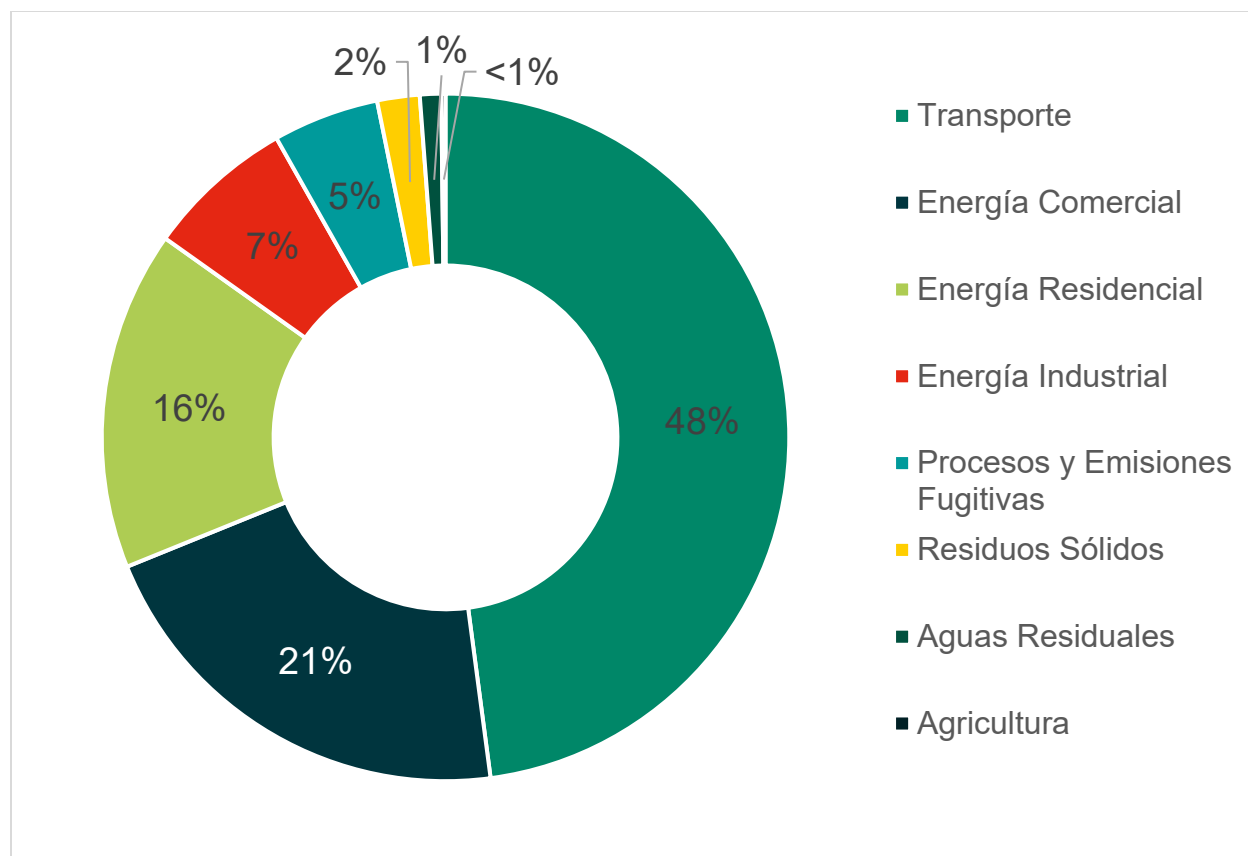


Figura 27. Inventario de Gases de Efecto Invernadero (GEI) de la Región de El Paso 2019

El PAC establece dos tipos de objetivos de reducción para la región: un objetivo ambicioso, que se basa en las mejores prácticas científicas, y un objetivo localizado, que representa las reducciones que se pueden lograr si El Paso implementa plenamente las acciones climáticas descritas en este PAC (véase la Tabla 1).

Tabla 31. Objetivos de Reducción de GEI

Proyección de Emisiones	2030	2050
Objetivo Ambicioso	50% por debajo de los niveles de 2019	Cero Emisiones Netas
Objetivo Localizado	21% por debajo de los niveles de 2019	67% por debajo de los niveles de 2019

El objetivo localizado muestra que dos tercios de las emisiones de GEI de 2019 de la región podrían reducirse para 2050. Sin embargo, se necesita asistencia externa adicional de socios regionales, estatales y/o federales para alcanzar el objetivo ambicioso definido como cero emisiones netas para 2050.

Vulnerabilidad Climática y Estrategias de Adaptación

El CAP también incluye una evaluación de la vulnerabilidad climática, que identifica la infraestructura de transporte, los servicios públicos, los recursos naturales y las comunidades socialmente vulnerables con mayor riesgo ante los futuros impactos del cambio climático para mediados de siglo. Se proyecta que el calor extremo, las inundaciones y las sequías

aumentarán con severidad en la región de El Paso, poniendo potencialmente en peligro a las comunidades e infraestructuras esenciales. Más del 70% de las carreteras y el 65% de las vías férreas son altamente vulnerables al calor extremo, ya que puede dañar el pavimento y deformar las vías. Alrededor del 90% de las instalaciones esenciales, como escuelas, centros comunitarios, centros para personas mayores, bibliotecas y centros médicos, también son altamente vulnerables al calor, ya que puede provocar cortes de energía e inestabilidad en la red eléctrica, aumentar los costos de energía y poner en peligro la salud y la seguridad de los ocupantes. La sequía es otra amenaza climática importante en la región que puede reducir la disponibilidad de agua para la agricultura, la refrigeración (por ejemplo, en edificios residenciales, industriales y comerciales), los ecosistemas y el saneamiento, además de aumentar la cantidad de polvo. Si bien la ciudad de El Paso ya ha emprendido acciones para aumentar su resiliencia, este plan describe futuras acciones de adaptación y enfatiza la importancia de mantener y expandir los recursos naturales para mejorar la resiliencia regional.

Acciones Climáticas

El CAP incluye 10 medidas climáticas generales y 53 acciones que las respaldan. Una medida es una estrategia general que aborda una fuente de emisiones o un riesgo climático en la región de El Paso, se alinea con los objetivos regionales y es importante para la comunidad. Las acciones son políticas, programas o proyectos específicos que respaldan una de las 10 medidas. Cada acción se evaluó en función de su potencial de reducción de emisiones de GEI y co-contaminantes, la capacidad de las autoridades locales para implementarla, el costo de implementación, las posibles métricas de seguimiento del progreso y los beneficios adicionales, como la adaptación climática, la salud y el bienestar públicos, la gestión ambiental, la conservación de recursos, la prosperidad económica, el ahorro para residentes y empresas, y el desarrollo comunitario (véase la Tabla 2).

Tabla 32. Acciones Climáticas de CAP

Medida 1: Aumentar la eficiencia energética y descarbonizar los edificios	
-	Acción M1: Mejorar o crear un programa comunitario de reembolsos por eficiencia energética y electrificación de edificios
-	Acción M2: Desarrollar una Norma de Eficiencia Energética para edificios comerciales
-	Acción M3: Colaborar con las industrias para reducir las emisiones relacionadas con las actividades industriales
-	Acción M4: Mejorar o desarrollar un programa de climatización
-	Acción M5: Aumentar la eficiencia energética en edificios públicos
-	Acción M6: Desarrollar una política para centros de datos que incorpore consideraciones ambientales, comunitarias y de desarrollo económico
Medida 2: Apoyar la transición a vehículos de cero emisiones	
-	Acción M7: Implementar políticas de carga de vehículos eléctricos (VE) en edificios nuevos
-	Acción M8: Organizar eventos de conducción de vehículos híbridos y de cero emisiones para los miembros de la comunidad
-	Acción M9: Transición de las flotas municipales a vehículos de cero emisiones (VEC)

- Acción M10: Instalar estaciones públicas de carga de VE
- Acción M11: Desarrollar centros de combustibles alternativos para autobuses y vehículos de carga pesada
- Acción M12: Desarrollar corredores de transporte de mercancías con combustibles alternativos

Medida 3: Instalar sistemas de energía renovable

- Acción M13: Colaborar con empresas de servicios públicos y startups para aumentar el uso de energía geotérmica.
- Acción M14: Adquirir energía renovable mediante contratos o suscripciones con empresas de servicios públicos para satisfacer la demanda de electricidad.
- Acción M15: Implementar políticas de adaptación a la energía solar en edificios nuevos.
- Acción M16: Fomentar instalaciones de almacenamiento de baterías.
- Acción M17: Instalar paneles solares en edificios y terrenos públicos como fuentes de energía alternativas y estructuras de sombra.

Medida 4: Promover sistemas alimentarios sostenibles y prácticas de gestión de residuos

- Acción M18: Mejorar las prácticas de reciclaje
- Acción M19: Implementar el compostaje comunitario para residuos de alimentos y jardín
- Acción M20: Desarrollar una ordenanza para la desviación de residuos de construcción y demolición y explorar la posibilidad de establecer instalaciones de reutilización o reciclaje
- Acción M21: Capturar y mejorar el biogás para su uso como fuente de energía
- Acción M22: Utilizar sistemas de cultivo basados en agua, como la hidroponía y la acuaponía, para cultivar alimentos sin suelo
- Acción M23: Desarrollar centros locales de distribución de alimentos

Medida 5: Promover la caminata, el ciclismo y el uso del transporte público

- Acción M24: Implementar proyectos de conversión de Calles Completas para mejorar el uso de peatones, ciclistas y del transporte público.
- Acción M25: Ampliar los sistemas de micro movilidad existentes para bicicletas y patinetas.
- Acción M26: Explorar opciones para ofrecer transporte público gratuito.
- Acción M27: Construir desarrollos orientados al transporte público para aumentar el acceso.
- Acción M28: Ampliar proyectos de micro transporte, como pequeños autobuses, para facilitar el desplazamiento de las personas desde sus hogares hasta las paradas.
- Acción M29: Implementar horarios sin automóviles para aumentar el acceso peatonal en las calles.
- Acción M30: Actualizar el código de zonificación para eliminar los requisitos mínimos de estacionamiento.
- Acción M31: Mejorar la frecuencia y la calidad de los servicios de transporte.

Medida 6: Monitorear y mejorar la calidad del aire

- Acción M32: Coordinar la infraestructura, las políticas y las operaciones para reducir el tiempo de inactividad de los camiones en los puertos y corredores de carga.
- Acción M33: Crear, ampliar o mejorar las áreas designadas de estacionamiento para camiones en el cruce fronterizo de El Paso Ysleta para reducir el tiempo de inactividad.
- Acción M34: Reducir los tiempos de espera en los puentes internacionales.
- Acción M35: Instalar sistemas de monitoreo de la calidad del aire en los puentes internacionales.
- Acción M36: Instalar sistemas de monitoreo de la calidad del aire en las comunidades afectadas de manera desproporcionada por la mala calidad del aire.

Medida 7: Implementar y supervisar acciones climáticas

- Acción M37: Establecer fondos renovables de préstamos verdes para apoyar proyectos de sostenibilidad en edificios públicos.
- Acción M38: Integrar una perspectiva climática y de sostenibilidad en las operaciones y la toma de decisiones gubernamentales.
- Acción M39: Crear un programa de mini subvenciones para apoyar la acción climática a nivel vecinal.

Medida 8: Enfriar las comunidades, proteger la salud y aumentar los ecosistemas nativos

- Acción A1: Desarrollar un programa de gestión comunitaria para mitigar el calor mediante el aumento de la cobertura arbórea y la sombra, centrado en la refrigeración de viviendas, centros comunitarios y vecindarios.
- Acción A2: Adoptar un código de construcción resiliente al calor.
- Acción A3: Desarrollar códigos de construcción resilientes al clima y normas de desarrollo.
- Acción A4: Ajustar el diseño estructural de pavimentos, puentes y vías férreas, y utilizar superficies más frescas y reflectantes (paredes, techos, pavimentos).
- Acción A5: Desarrollar centros de resiliencia multirriesgo en comunidades vulnerables.
- Acción A6: Desarrollar un sólido marco y recursos multilingües para la respuesta ante emergencias.
- Acción A7: Implementar proyectos de secuestro de carbono en terrenos públicos.

Medida 9: Desarrollar resiliencia ante la sequía y conservar el agua

- Acción A8: Ampliar los humedales y parques para apoyar la recarga de aguas subterráneas.
- Acción A9: Ampliar el uso de agua reciclada y aguas grises para riego, y establecer proyectos para captar la escorrentía.
- Acción A10: Educar, fomentar y brindar asistencia técnica a los agricultores de la región para que adopten prácticas agrícolas respetuosas con el medio ambiente.
- Acción A11: Desarrollar sistemas de captación de agua que funcionen con energía solar para generar agua potable en zonas no incorporadas y colonias.

Medida 10: Reducir el riesgo de inundaciones

- Acción A12: Implementar infraestructura verde y reducir las superficies impermeables a lo largo de las carreteras y en instalaciones críticas.
- Acción A13: Adquirir estratégicamente terrenos en la llanura aluvial de 100 años.
- Acción A14: Estabilizar los arroyos en zonas empinadas y con signos de erosión.

LIDAC Análisis

El CAP incluye un análisis robusto de LIDAC para la región de El Paso, que identifica 112 distritos censales y al 65% de la población total como desfavorecidos, según la Herramienta de Evaluación de Justicia Climática y Económica (CEJST). Estas comunidades enfrentan problemas complejos, como costos altos de energía, mala calidad del aire, acceso limitado a espacios verdes e infraestructura inadecuada. La región de El Paso puede optar por priorizar los LIDAC para la implementación de acciones, a fin de garantizar que la distribución de beneficios se centre en las áreas necesitadas. Teniendo esto en cuenta, el CAP evalúa las reducciones de GEI y co-contaminantes que podrían lograrse en los LIDAC gracias a las acciones del CAP. El CAP también describe los posibles beneficios y desventajas de los LIDAC como resultado de las acciones y propone estrategias de mitigación para evitar daños no deseados. Por ejemplo, si bien la electrificación de edificios puede reducir las emisiones y mejorar la calidad del aire interior, el plan recomienda apoyo financiero para evitar costos adicionales para los inquilinos de bajos ingresos. Este enfoque centrado en la equidad garantiza que las soluciones climáticas sean inclusivas, justas y respondan a las necesidades de las poblaciones más vulnerables.

Análisis de la Planificación de la Fuerza Laboral

Este capítulo evalúa el impacto de las medidas de mitigación descritas en el CAP en el mercado laboral regional. Identifica ocupaciones de alta demanda que son críticas para la implementación, evalúa la capacidad actual de capacitación de la fuerza laboral y recomienda estrategias para construir una reserva de talentos calificados e inclusivos. Ante el crecimiento laboral proyectado en áreas como energía limpia, construcción e infraestructura para vehículos eléctricos, el capítulo destaca la necesidad de inversiones coordinadas en capacitación, participación de los empleadores y servicios de apoyo.

Intersección con Otras Fuentes de Financiación

La implementación del PAC es compleja y requiere muchos recursos, lo que requiere planificación y coordinación a largo plazo entre jurisdicciones y sectores. Se necesitarán múltiples fuentes de financiación para la mayoría de las acciones debido a la diversidad de proyectos y participantes involucrados. La financiación disponible incluye subvenciones federales y estatales competitivas, filantropía local y nacional, herramientas de financiación tradicionales e innovadoras, y mecanismos de generación de ingresos como los impuestos locales. Las fuentes estatales y locales desempeñarán un papel fundamental en el proceso, y podrían desempeñar un papel aún mayor a corto plazo.

Próximos Pasos

La siguiente fase comienza con la adopción formal del CAP por parte de la Ciudad y la participación de las entidades regionales. Tras su adopción, la Ciudad continuará coordinando con el CDCC para supervisar su implementación, alinear las iniciativas departamentales y

regionales, buscar oportunidades de financiamiento y monitorear el progreso con respecto a los indicadores de desempeño. La Ciudad utilizará un marco de inversión de capital para dirigir recursos a proyectos que promuevan la equidad, apoyen las prioridades comunitarias y fortalezcan la capacidad a largo plazo en zonas históricamente desfavorecidas. La Ciudad también lanzará un programa de mini subvenciones centrado en el clima para otorgar pequeñas subvenciones a organizaciones comunitarias, escuelas, grupos vecinales y pequeñas empresas para implementar proyectos locales de acción climática. Para promover la transparencia y la rendición de cuentas, la Ciudad mantendrá un panel de acción climática de acceso público y, de acuerdo con los requisitos del CPRG, publicará un informe formal sobre el estado del CAP en 2027. Estos próximos pasos contribuyen al objetivo principal del CAP: reducir las emisiones de la región para mejorar la calidad del aire, la salud y las oportunidades económicas, a la vez que se minimiza el estrés económico en la comunidad debido a la implementación del plan.



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Apéndices

Los apéndices están disponibles y pueden ser solicitados contactando a Fernando Berjano a través de berjanofl@elpasotexas.gov

Apéndice A: Metodología de Acción Climática para la Reducción de Gases de Efecto Invernadero

Apéndice B: Metodología de Acción Climática para la Reducción de Co-contaminantes

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