



MPO Agreements, Roles, and Responsibilities



March 17, 2021

What is H-GAC?



- Regional forum for cooperative action by local governments in 13 county region.
- Created by Texas, Functions Defined by State and Local Governments:
 - Area Agency on Aging (12 Counties)
 - Job Training (13 Counties)
 - Gulf Coast 911 District (8 counties)
 - HGACBuy; Energy Purchasing; SBA; and more.

Metropolitan Planning Organization

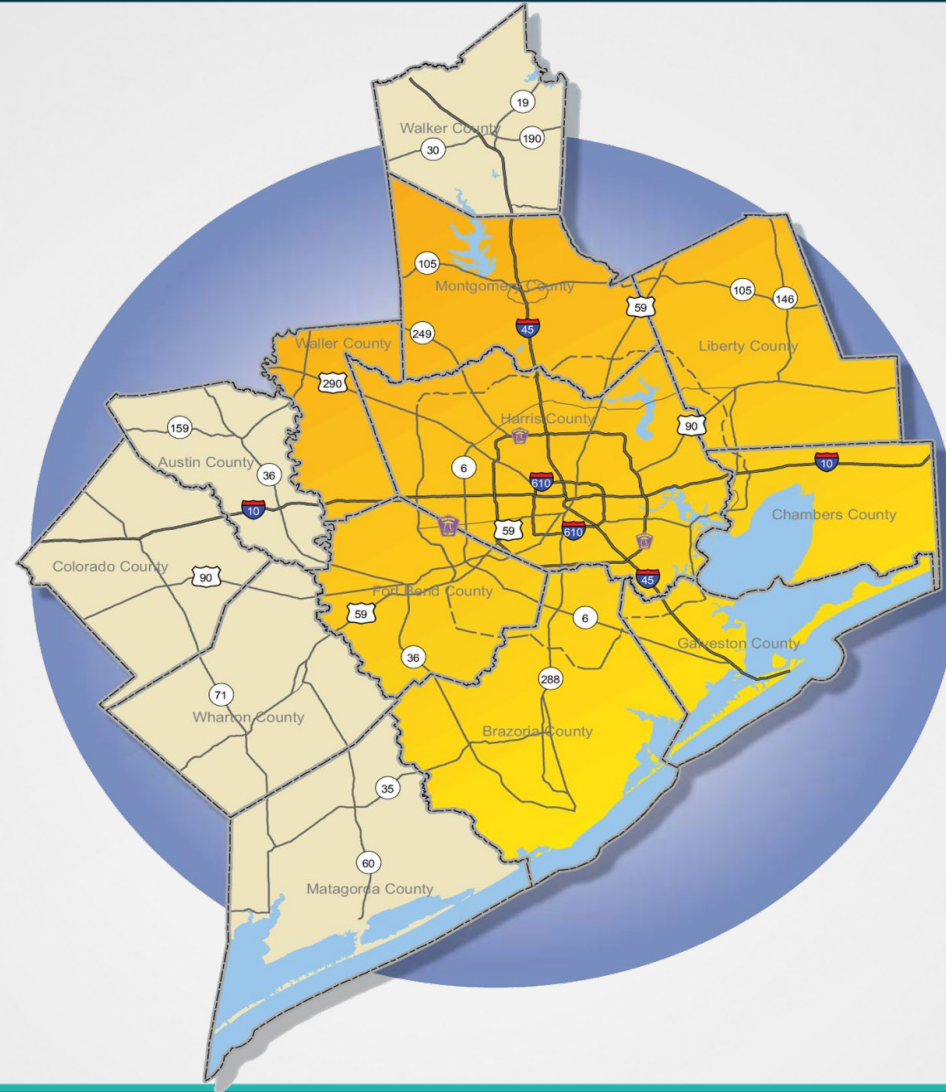


- Designated by Governor in 1974, includes:
- 8 H-GAC Counties with 6.7 million residents
- 2 Texas Dept. of Transportation Districts
- 120 local governments
- Largest ports on the Gulf Coast

Metropolitan Planning Area

MPO Counties

- Brazoria
- Fort Bend
- Waller
- Montgomery
- Liberty
- Chambers
- Galveston
- Harris



Additional COG Counties

- Austin
- Colorado
- Matagorda
- Walker
- Wharton

H-GAC as MPO



- **H-GAC Board of Directors**
 - 36 voting members representing:
 - 13 Counties
 - 107 Cities
 - 11 School Districts
- **Serves as the Fiscal Agent for MPO**
 - Responsible for providing staff support
 - Executes agreements with TxDOT, local governments, contractors

Transportation Policy Council

- Independent Policy Making Body
- Membership Largely Self Determined
- TPC Membership
 - 28 voting, 6 non-voting (ex-officio)
 - Local Elected and Appointed Officials
 - Major Modes of Transportation
 - State Elected Officials

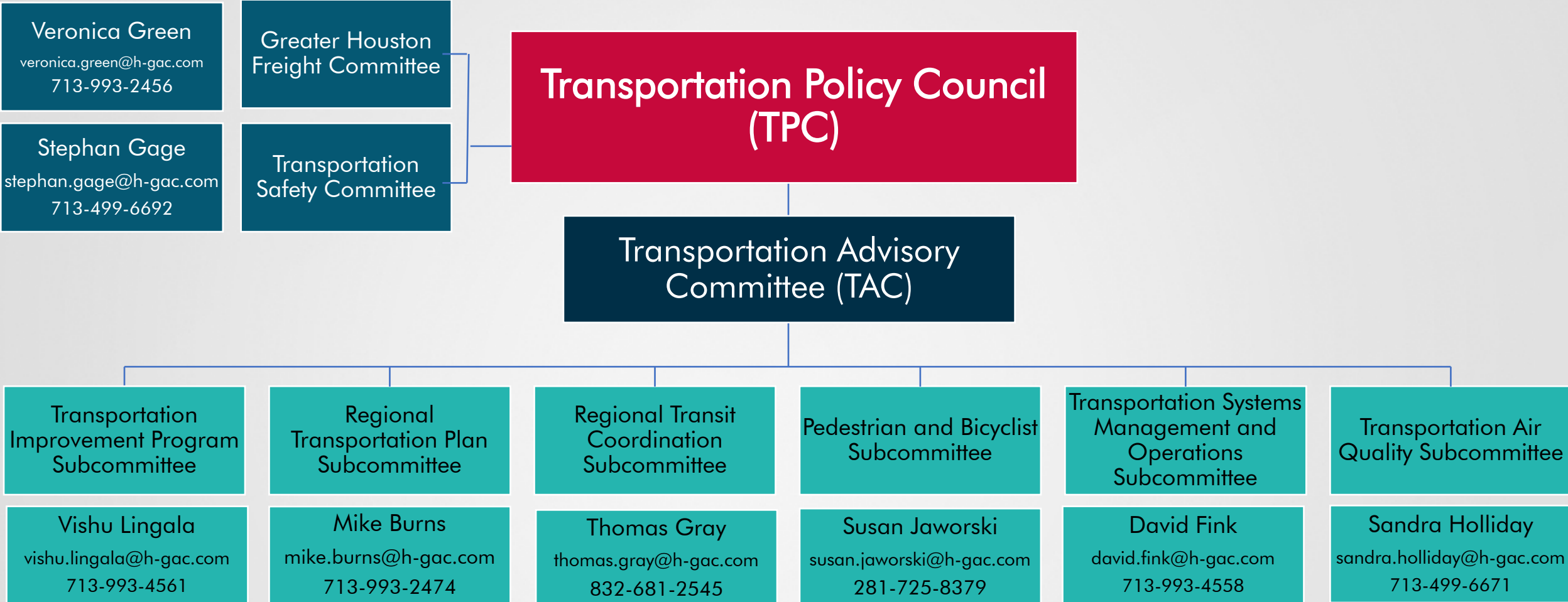


TPC Member Responsibilities



- Adopt Regional Transportation Plan
- Select or Approve Federally (and most State) Funded Transportation Projects
- Conduct Continuing, Comprehensive Coordinated (3C) Planning
- Demonstrate Compliance with On-road Vehicle Emissions Reductions

MPO Committee Structure



Transportation Department

Craig Raborn

Director, Transportation Department
craig.raborn@h-gac.com
713-993-4584

Patrick Mandapaka

Assistant Director, Transportation Department
patrick.mandapaka@h-gac.com
713-993-4513

Neely Kim

Manager, Accounting and Finance/Admin Support
neely.kim@h-gac.com
713-993-2490

Accounting and Finance

Administrative Support

David Fink

Manager, Regional Incident Management
david.fink@h-gac.com
713-993-4558

Regional Incident Management

Safety

Intelligent Transportation Systems

Chris Van Slyke

Manager, Traffic Modeling & GIS
chris.vanslyke@h-gac.com
713-993-4574

Traffic Modeling

Geographic Information Systems (GIS)

Data Management

Adam Beckom

Manager, Planning and Project Development
adam.beckom@h-gac.com
713-993-4567

Project Programming

Project Delivery

Environmental Planning

Allie Isbell

Manager, Multimodal Planning
allie.isbell@h-gac.com
713-993-2411

Regional Planning

Sub-regional Planning

Resiliency Planning

Freight Planning

Sandra Holliday

Manager, Air Quality
sandra.holliday@h-gac.com
713-499-6671

Clean Cities

Clean Vehicles

Jamila Owens

Manager, Travel Demand Management
jamila.owens@h-gac.com
832-681-2522

Travel Demand Management

Transit Planning

Bicyclist and Pedestrian Planning

Transit Provider Participation

- TPC Membership – 5 Providers
- TAC Membership – 7 Providers
- Transit Subcommittee – All Providers



Role of MPO Staff



- Support TPC and TPC committees
 - Agenda and meeting logistics
 - Communication of TPC actions
 - Minutes and other records
- Prepare Transportation Plans
- Execute Air Quality Programs
- Provide Information & Technical Analyses
- Facilitate Public Participation

Unified Planning Work Program (UPWP)

Task I: Program Management

Task II: Data Development and Maintenance

Task III: Short Range Planning

Task IV: Long Range Planning

Task V: Special Planning Studies



MPO Structure



- Clean Cities and Clean Vehicles
- Commute Alternatives and Travel Demand Management
- Incident Management
- Multimodal Planning
- Planning and Project Development
- Program Administration
- Traffic Modeling and GIS

Transportation Advisory Committee Responsibilities

- Advises TPC on Policy Issues
- Makes Recommendations to TPC based on Transportation Plans and on Project Priorities

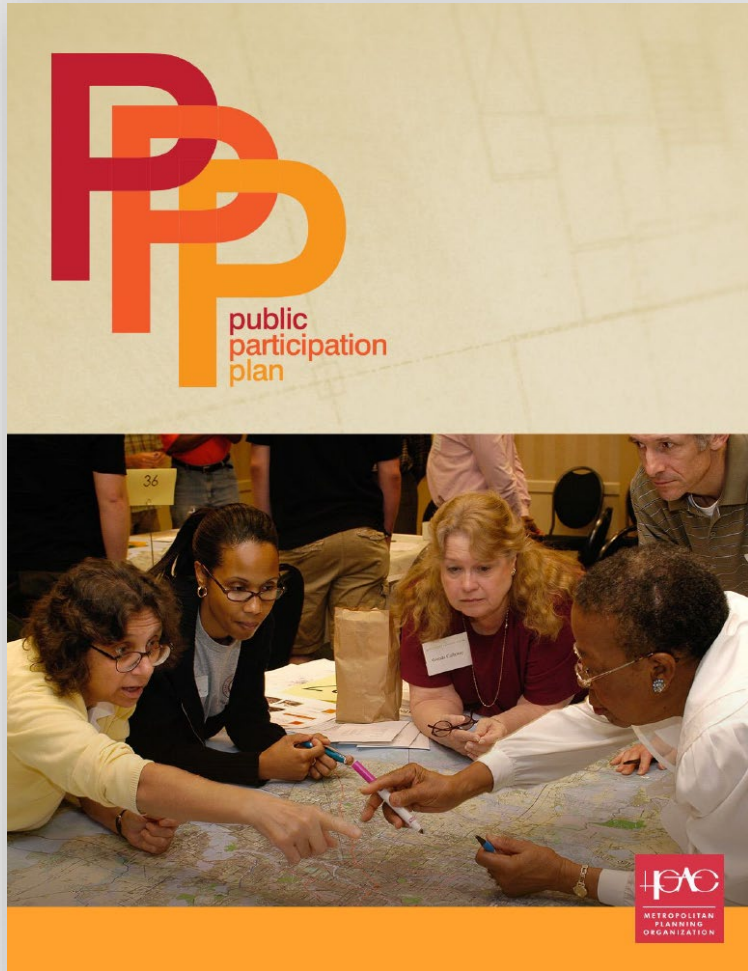




Public Involvement



Public Participation Plan



2045 Regional Transportation Plan



The screenshot shows the top of the website. The header is teal with the '2045 RTP REGIONAL TRANSPORTATION PLAN' logo on the left and navigation links: 'Get Involved', 'Public Meetings', 'Media Room', 'FAQs', 'Contact Us', '#2045RTP', and a 'Select Language' dropdown. The main banner features a large image of a port with a red shipping container in the foreground and a ship on the right. Below the image, the text reads '2045 Regional Transportation Plan' and 'Moving Our Region into Tomorrow'.

Public Comment Period Ends May 10

What's Next?

The [Houston-Galveston Area Council](#) hosted three successful rounds of public meetings and received more than 1,000 public comments for the 2045 Regional Transportation Plan. The conformity determination and the long-range plan will be presented to the Transportation Policy Council for adoption on May 24. Following adoption by the policy council, the Houston-Galveston Area Council will submit the conformity determination to our transportation partners for state and federal review.


[2045 RTP Documents](#)

[2019 Conformity Documents](#)

[Submit a Comment](#)

[Interactive Map](#)

Brochure and Newsletter



**HOUSTON-GALVESTON AREA COUNCIL
METROPOLITAN PLANNING ORGANIZATION**

Regional Collaboration • Transportation Planning • Multimodal Mobility

Houston-Galveston Area Council Transportation Newsletter: April 2019

REGION view

Visit the H-GAC Website View Archived Newsletters

The latest news from the Houston-Galveston Area Council's Transportation Department!

Transportation Policy Council - March 22, 2019

At its March meeting, the Transportation Policy Council approved:

- A Resolution for approval of three amendments to the 2019-2022 TIP and 2040 RTP;
- A Resolution for approval of amendments to the 2018-2019 Unified Planning Work Program;
- The Technical Advisory Committee's recommendation to approve \$761M of federal funds for the 2018 Call for Projects.

View the Archived Meeting Livestream [HERE](#).

2045 Regional Transportation Plan - Final Draft Public Meeting



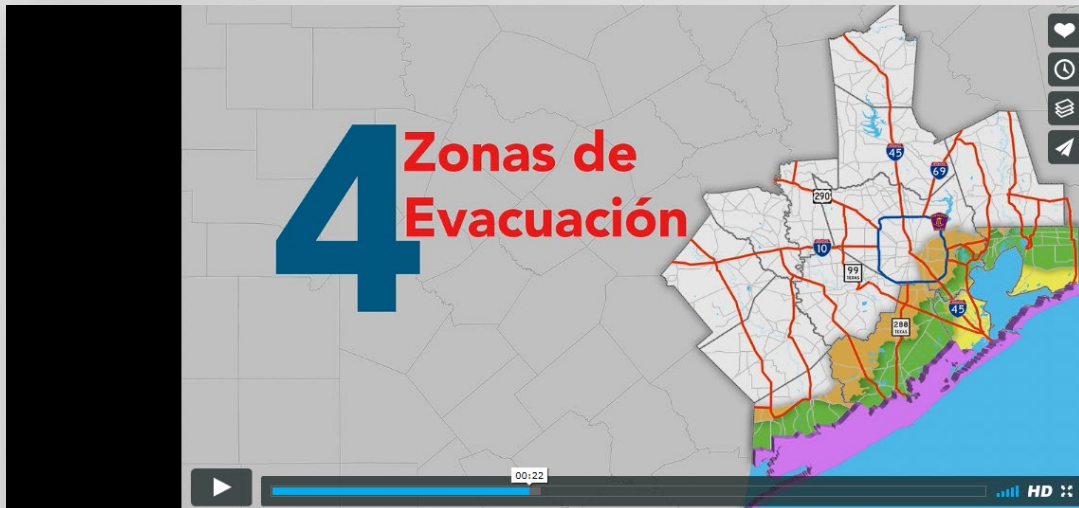
The Houston-Galveston Area Council's transportation team is hosting the final 2045 Regional Transportation Plan (RTP) and transportation conformity public meeting on April 24 at 5:30 p.m. We traveled the Houston-Galveston region highlighting our transportation experts at public meetings, discussed what's next for this region-wide transportation plan, and asked our residents what they need most from their transportation network. During this session, we will take an in-depth look at the 2045 RTP, the role it plays in regional air quality, and ask for final public comments. The public comment period for the 2045 RTP and transportation conformity begins on April 5 and ends on May 5.

Attend the public meeting at the Houston-Galveston Area Council at 3555 Timmons Lane or stream it online at [2045RTP.com](#).

SAVE THE DATE - May Brown Bag Lunch Series

Together Monday, May 20, 2019
Noon - 1:00 p.m.
Houston-Galveston Area Council
3555 Timmons Lane, 2nd Floor, Suite 2000

Transportation PSAs



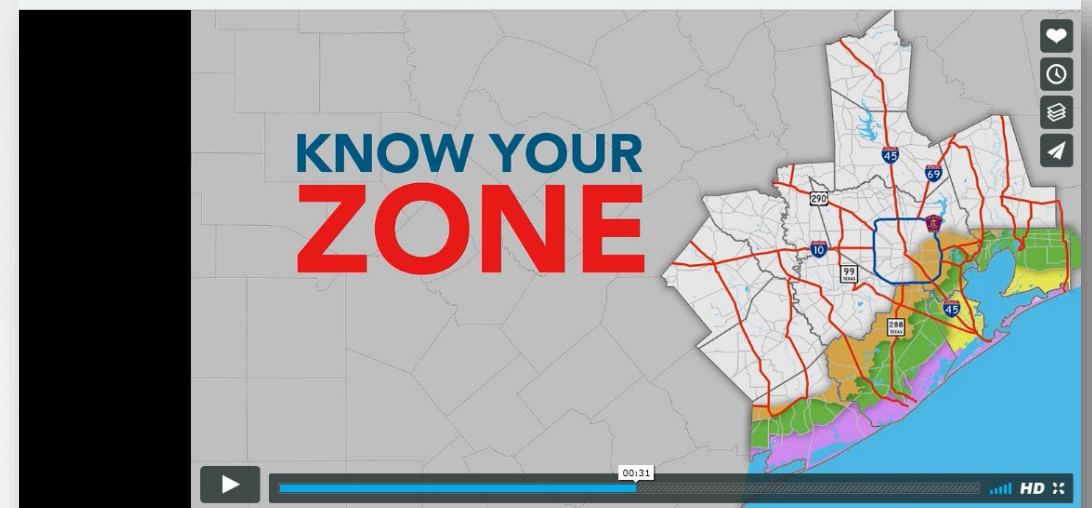
4 Zonas de Evacuación

Transportation Minute - Hurricane ESP
from Multop Media PRO 1 week ago

More from Multop
Autoplay next video

+ Follow

This video player shows a map of a coastal region with four distinct evacuation zones highlighted in different colors: blue, orange, green, and purple. The zones are numbered 1 through 4. The video title is 'Transportation Minute - Hurricane ESP' and it was posted 1 week ago. The player interface includes a play button, a progress bar at 00:22, and a 'Follow' button.



KNOW YOUR ZONE

Transportation Minute - Hurricane
from Multop Media PRO 1 month ago

More from Multop
Autoplay next video

+ Follow

This video player shows the same map as the first video, but with the text 'KNOW YOUR ZONE' overlaid in large blue and red letters. The video title is 'Transportation Minute - Hurricane' and it was posted 1 month ago. The player interface includes a play button, a progress bar at 00:31, and a 'Follow' button.

Together Against Weather



Hurricane Preparedness Information to Help People With Access and Functional Support Needs

[Educators](#) [Emergency Management Officials](#) [Family & Parents](#) [Healthcare Providers](#) [Houses of Worship](#) [Media](#) [Service Groups](#)



Together Against the Weather was created to help people with access and functional support needs better plan and prepare for hurricanes in the 13-county region of the Houston-Galveston Area Council. The *Together Against the Weather* strategies and tool kit of materials were developed to help overcome challenges experienced by the program's targeted audiences and to encourage the formation of supportive partnerships in advance of a storm.

[English](#) | [Español](#) | [Watch More Videos](#)

Contact Your Office of Emergency Management

[GO TO PAGE](#)



2019 Evacuation Maps!

[GO TO PAGE](#)



Register Now!

[GO TO PAGE](#)

State of Texas
Emergency Assistance Registry



Additional Resources



[Visit H-GAC's Website](#)



[Visit Houston Transtar's Website](#)



[Visit FEMA's Website](#)



Are you ready for hurricane season?

If you, or someone you know, have special needs such as medical problems, hearing loss, or impaired vision, is there a plan in place when a hurricane is coming?

Planning for possible emergencies is crucial to survival and safety. Do you know someone who needs a person they can count on to help in an emergency?

Team up, find or become a "Hurricane Helper" and start by making a list of what you need every day, like batteries for hearing aids, medications, equipment and food and water for service animals.

Start storing extras like food and water, a little at a time, so that you have enough to last at least a week or two at home without electricity or a way to get supplies.

Because we're better together against the weather.

| A program of the Houston-Galveston Area Council



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Social Media

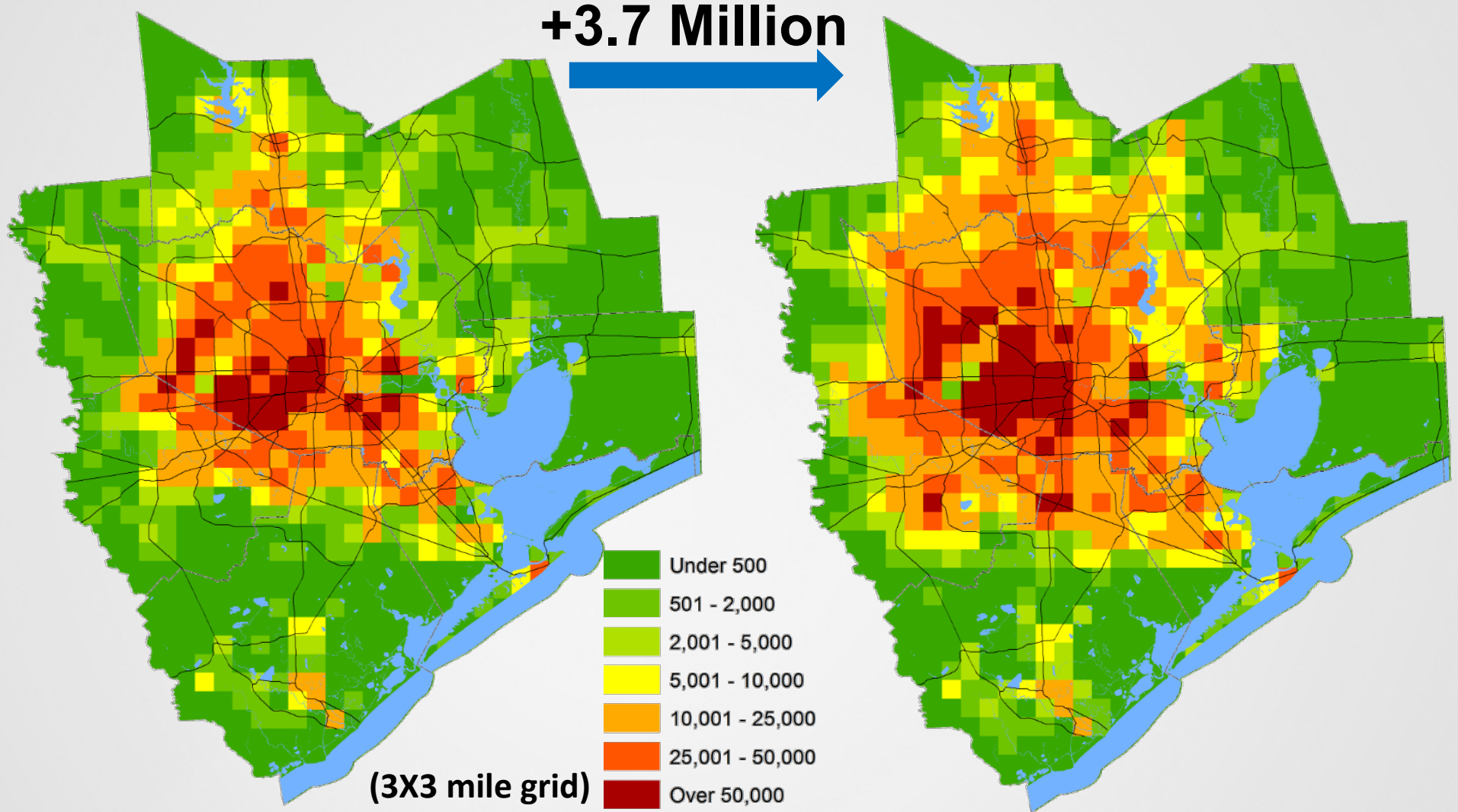
Socio-Economic Modeling



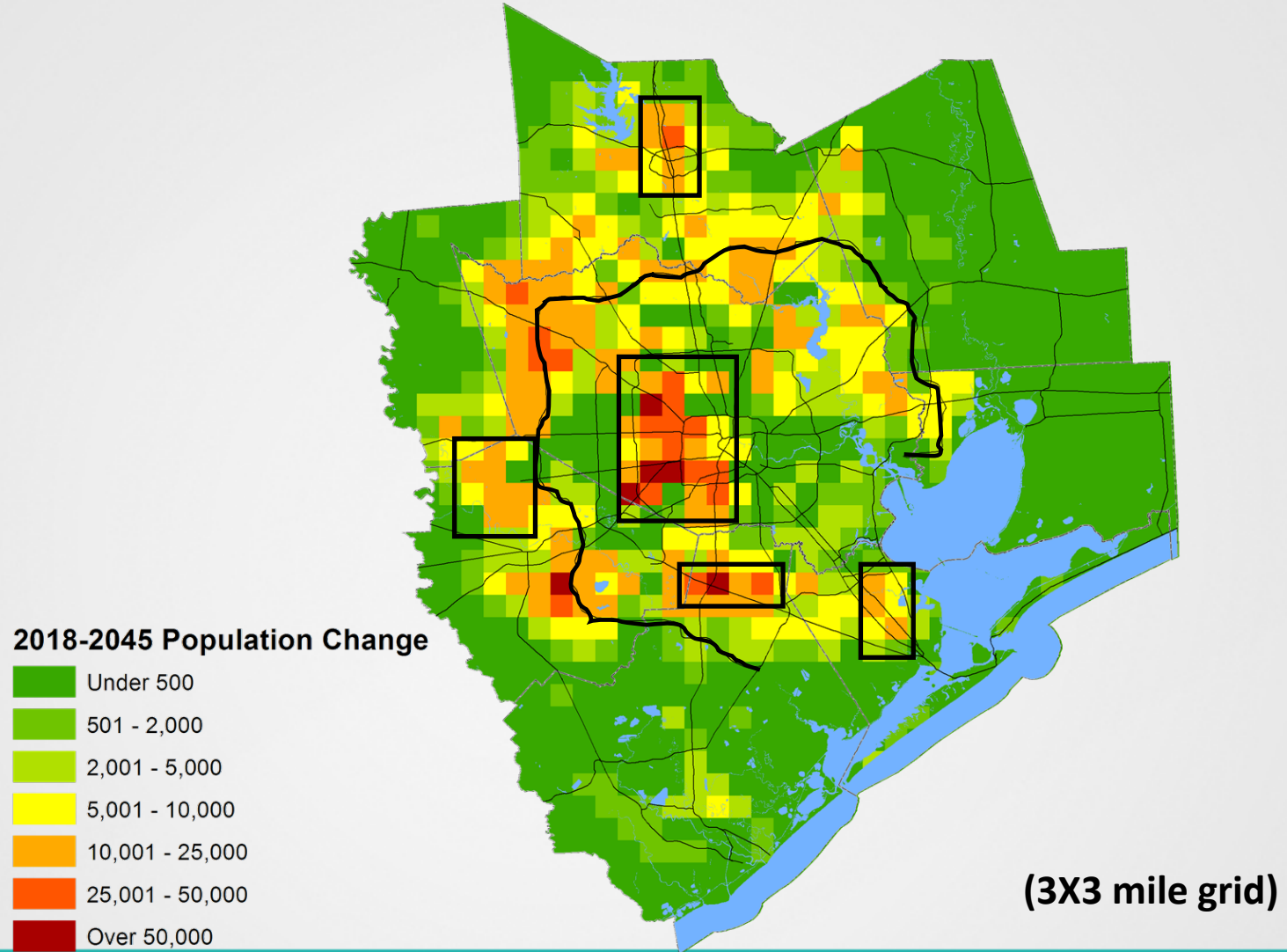
- Manage Regional Data (Demographic, Economic, and Real Estate)
- Produce Regional Growth Forecast (Population, Employment and Land Use)
- Develop Interactive Tools and Web Mapping Applications
- Provide Informational Services and Analytical Support

Household Population

2018 (6.9 Million) 2045 (10.6 Million)



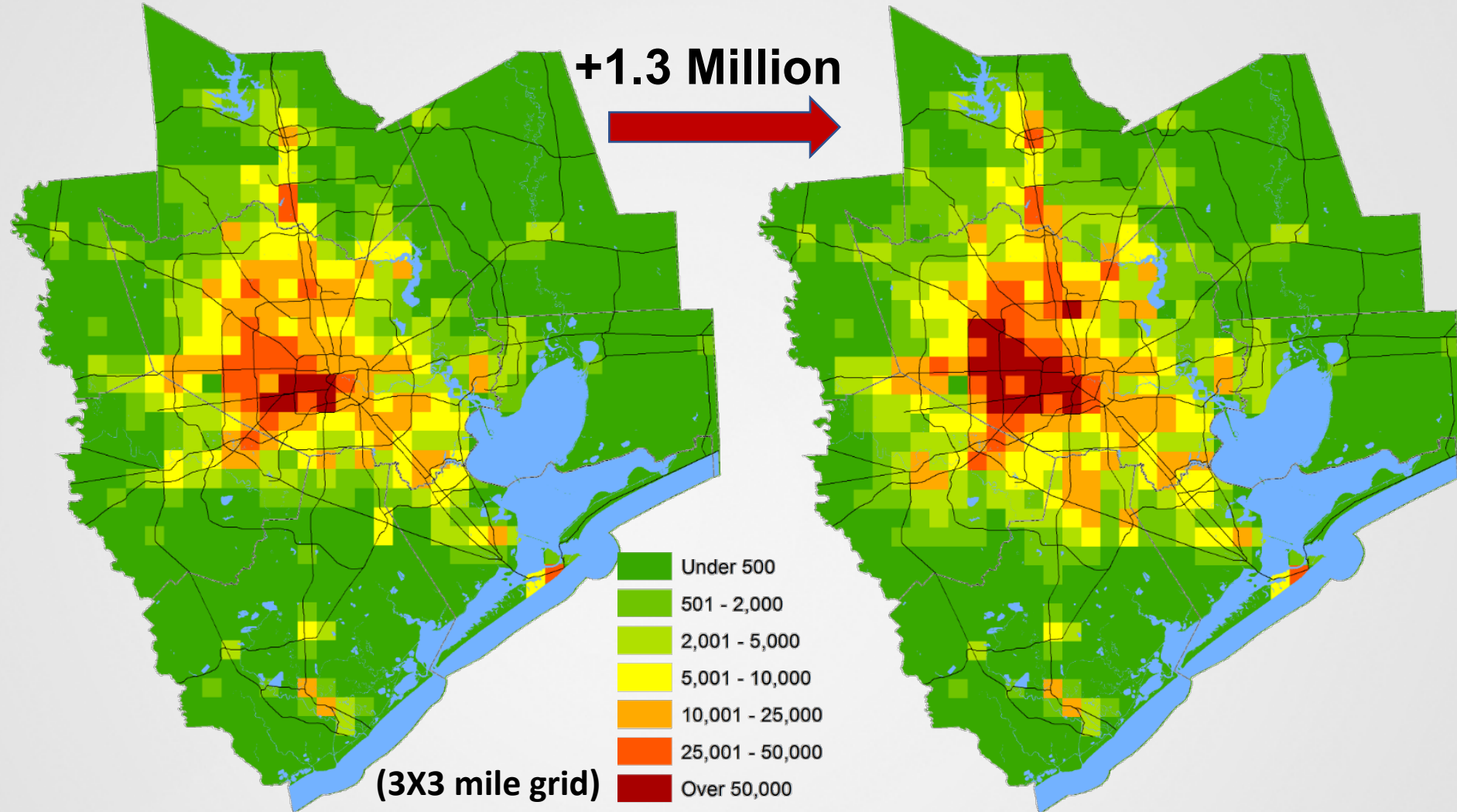
Household Population Growth 2018 to 2045



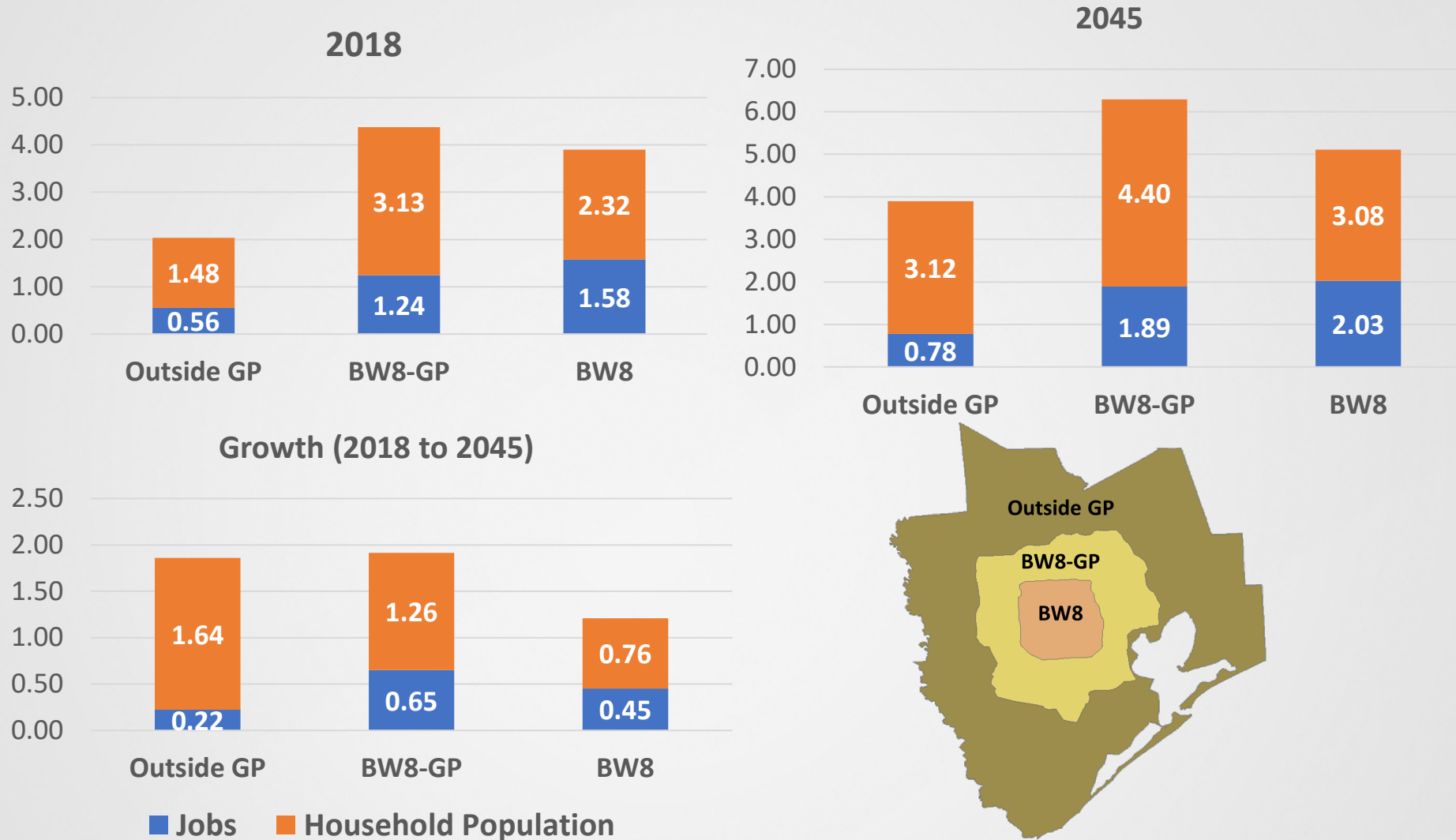
2018
(3.38 Million)

Employment

2045
(4.70 Million)



Household Population and Jobs (in millions) 2018-2045



Interactive Web Mapping Applications for Transportation Planning



The screenshot shows the H-GAC website interface. At the top left is the H-GAC logo and the text 'Houston-Galveston Area Council'. To the right are navigation icons for 'Residents', 'Business', and 'Government', and a 'H-GAC Resources' button. Below this is a search bar with the text 'Search H-GAC' and a 'Search' button. The main heading is 'Interactive Web Applications'. Below the heading is a paragraph: 'This page showcases the interactive web applications developed by H-GAC's Community & Environmental Planning Department, as well as a few related external applications.' This is followed by instructions: 'Click on a thumbnail below to view a brief description of the application. To view the application click on "Launch Application".' and 'You can filter the applications using the list of filters listed below. You can select "Show All" at anytime to show all the applications.' A note states: 'Please note that when you select an "External App" you will be leaving H-GAC's website.' A 'Disclaimer' section follows, stating: 'These applications are intended for general reference and planning purposes only. Mapping may not reflect on the ground conditions. The Houston-Galveston Area Council makes no further claims as to the accuracy or reliability of the data, and neither assumes, nor will accept liability for their use.' Below the disclaimer is a 'List of Filters' section with buttons for 'Show All', 'Census', 'Employment', 'Environment', 'Growth Forecast', 'Land Use', 'Planning', 'Transportation', 'Water Quality', and 'External Apps'. The 'List of Applications' section shows three thumbnails: 'Job-To-Job Flows in the', 'Houston MSA Job-to-Job Flow Explorer', and 'Demographic and Socio-Economic'. On the right side of the page, there are sections for 'Interactive Web Applications' (with a link to 'Interactive Planning Tools Seminar Series'), 'Contact Us' (with email 'CEGIS@h-gac.com' and phone '713-627-3200'), 'DataLab on Social Media' (with a Facebook icon), and 'H-GAC News & Events' (with a 'See More' button).



www.h-gac.com/go/apps

<https://datalab.h-gac.com/>

Regional Demographic Snapshot

Regional Demographic Snapshot



13-Counties

8-Counties (MPO)

Cities/Places

ISDs

Congressional Districts

Texas State Senate Districts

Texas State House Districts

Zip Codes

Tracts

Block Groups



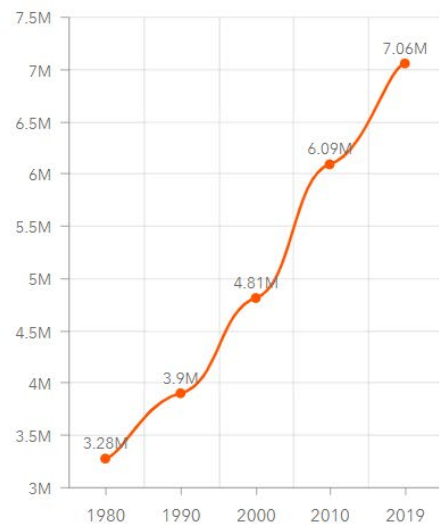
Total Population (2019):
7,056,034

Population

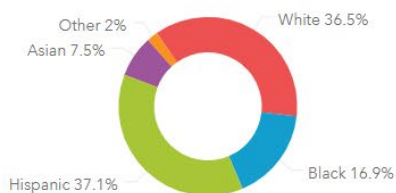
Households

Housing Units

Historical Population Change (1980-2019)



Race (2019)



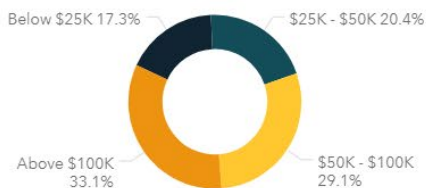
Race

Age

Language

Education

Incomes (2019)

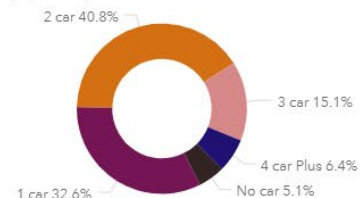


Incomes

Home Ownership

Poverty

Vehicle Ownership (2019)



Vehicle Ownership

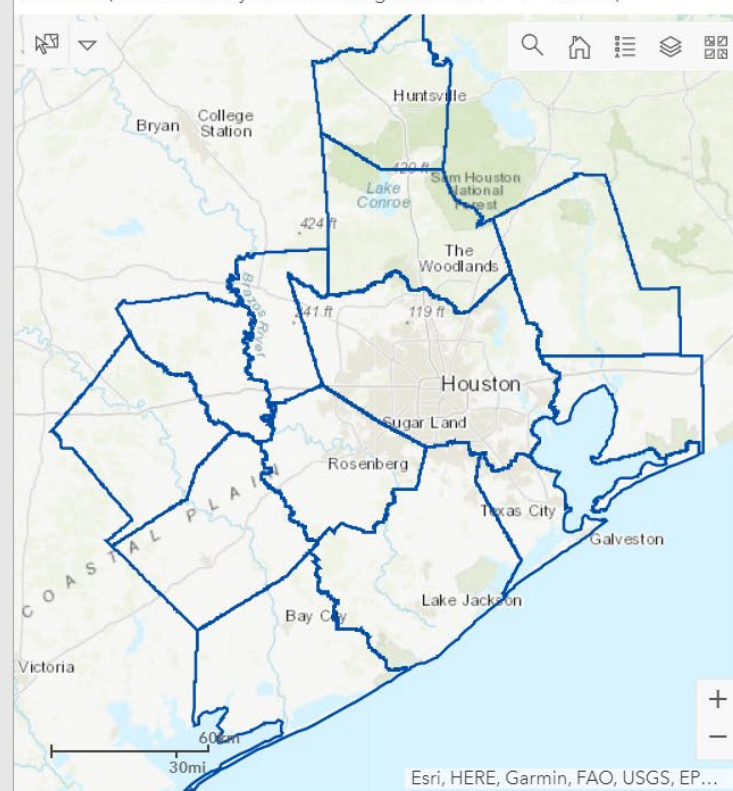
Travel Mode

Travel Time

Select a county (click again to deselect)

- Austin County
- Brazoria County
- Chambers County
- Colorado County
- Fort Bend County
- Galveston County
- Harris County
- Liberty County
- Matagorda County
- Montgomery County
- Walker County

Counties (select a county/counties using select tool below)



Please, select a county on the map and [Click for More Information](#) to find more detailed information.

Regional Demographic Snapshot Katy-Fulshear-Richmond area

Regional Demographic Snapshot

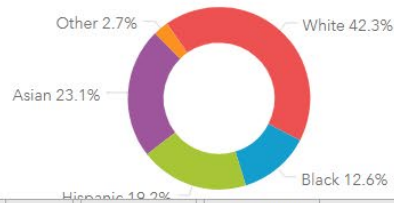


- 13-Counties
- 8-Counties (MPO)
- Cities/Places
- ISDs
- Congressional Districts
- Texas State Senate Districts
- Texas State House Districts
- Zip Codes
- Tracts
- Block Groups**

Total Population (2019):
212,890

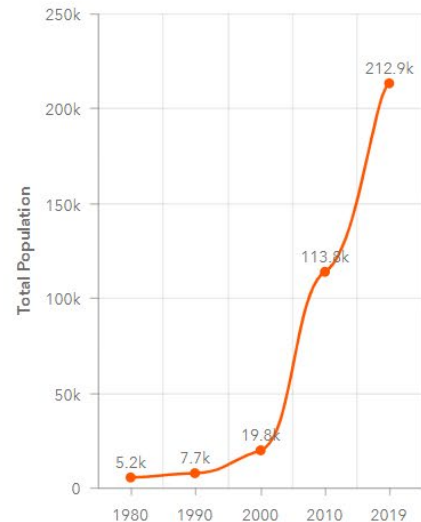
- Population**
- Households
- Housing Units

Race (2019)

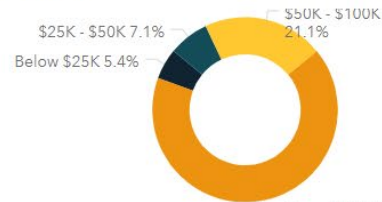


- Race**
- Age
- Language
- Education

Historical Population Change (1980-2019)

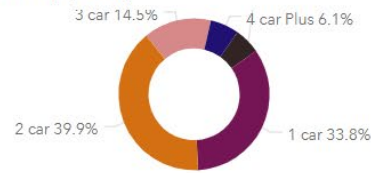


Incomes (2019)



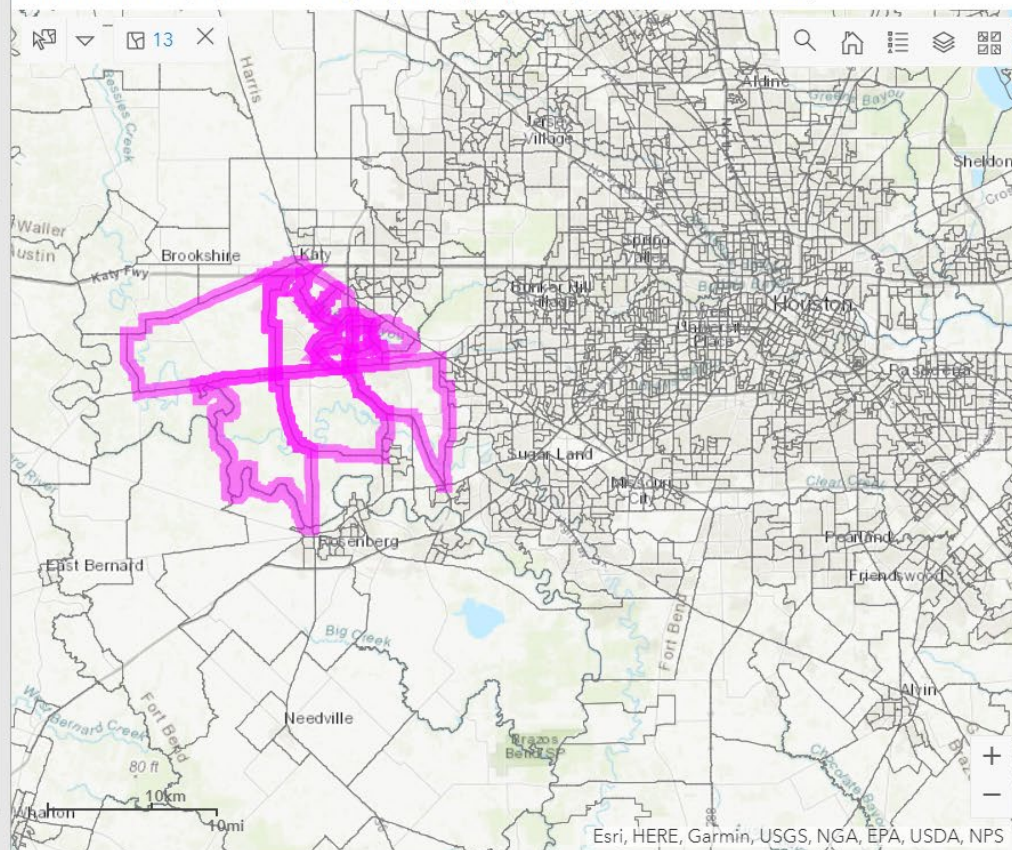
- Incomes**
- Home Ownership
- Poverty

Vehicle Ownership (2019)

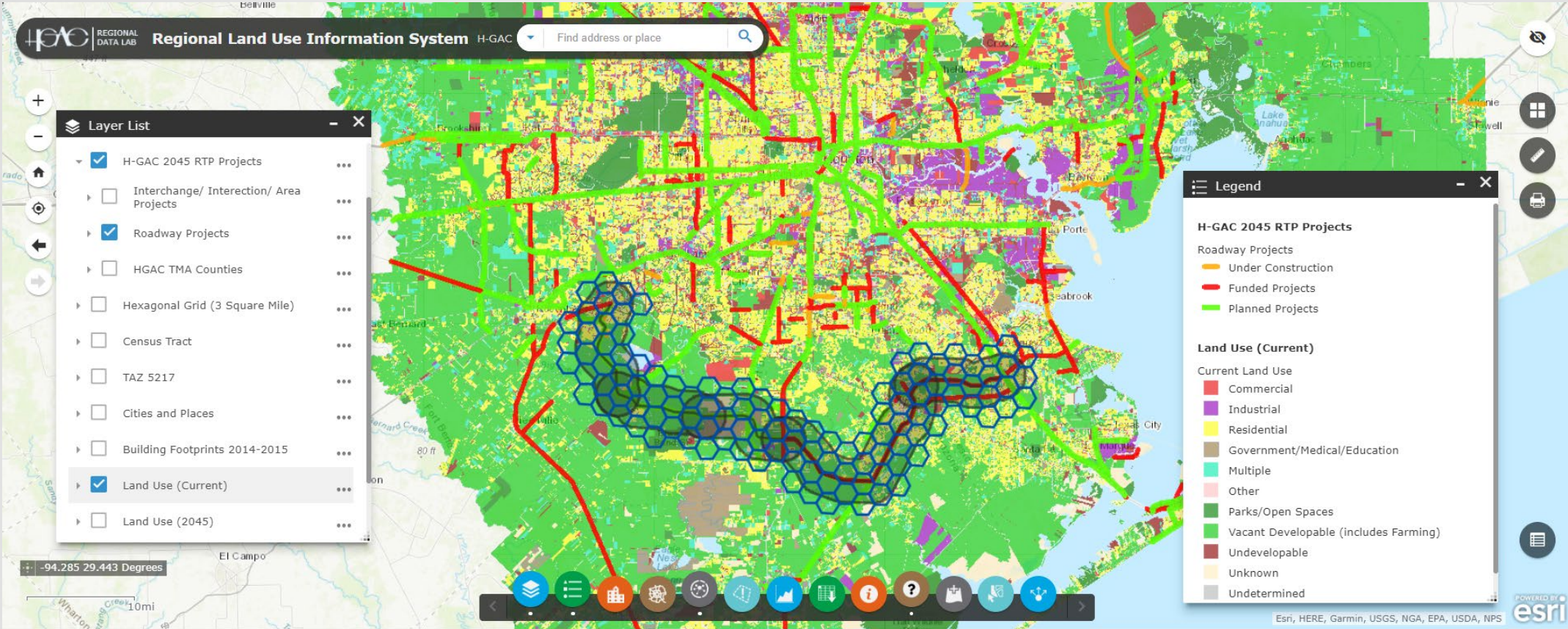


- Vehicle Ownership**
- Travel Mode
- Travel Time

Census Block Groups (select a blockgroup/blockgroups using select tool below)



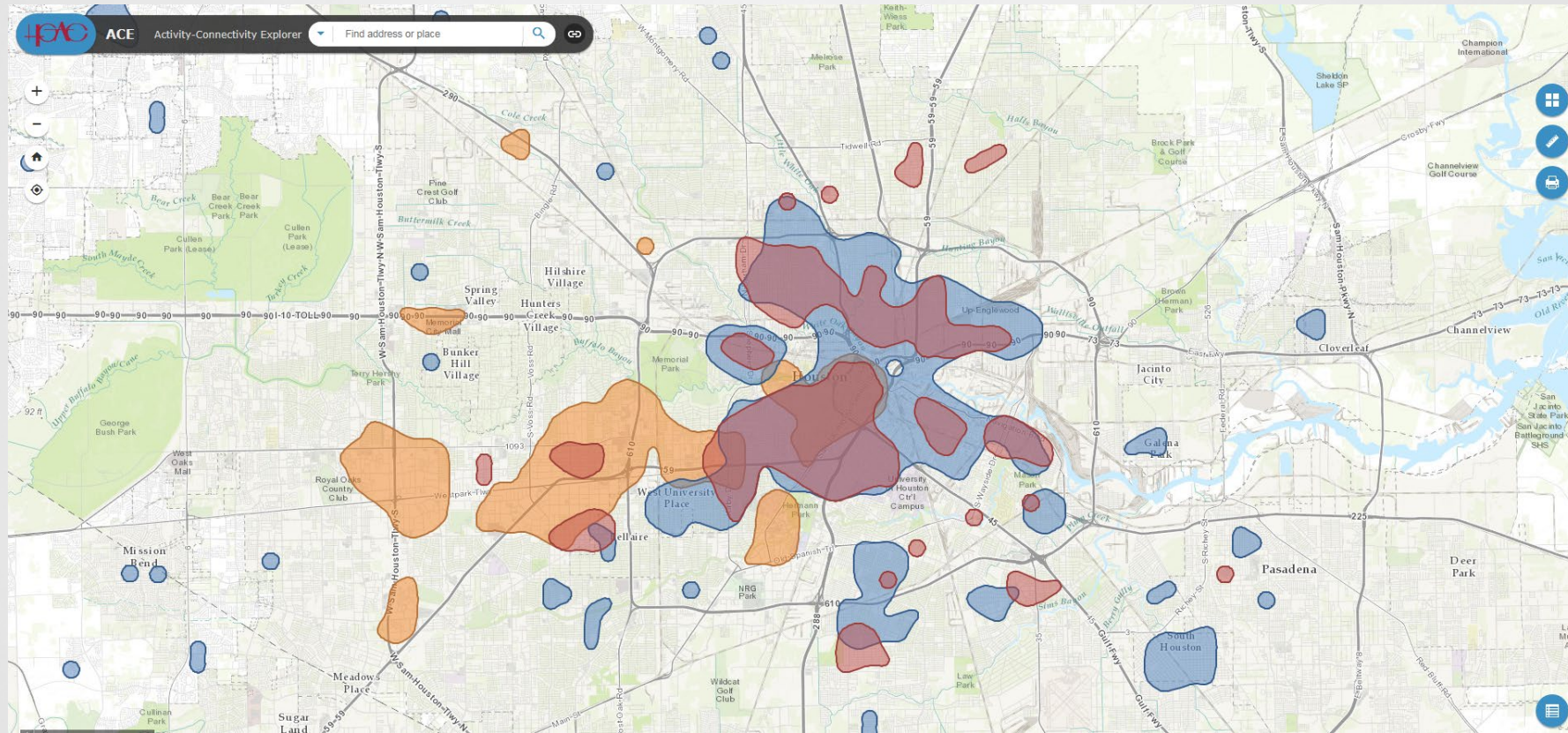
Regional Growth Forecast



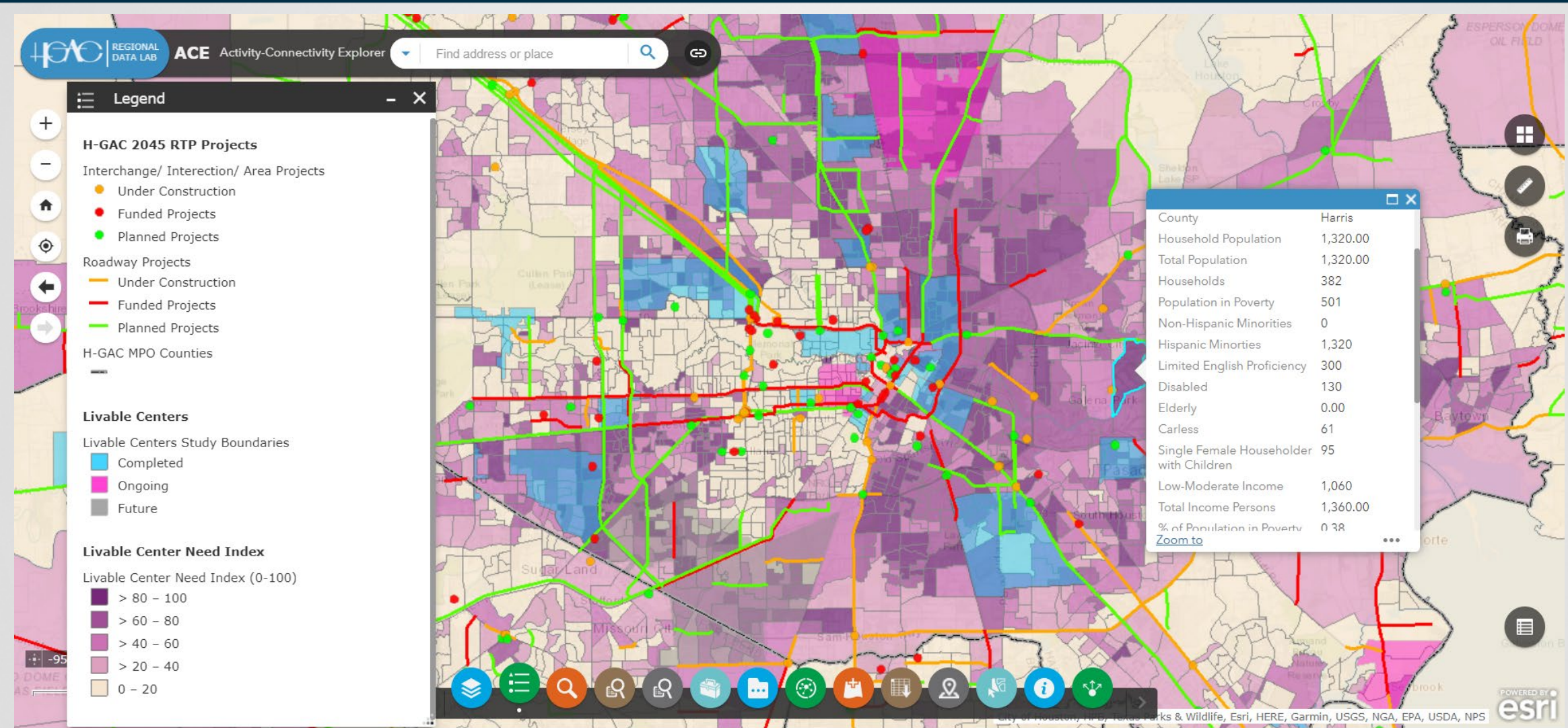
Incident	Land Use (Current)	Land Use (2045)	Census Tract (38)	TAZ 5217 (0)	Hexagons (115)	Households (2018)	Households (2045)	Jobs (2018)	Jobs (2045)
COUNT	Household Population (2018)	Household Population (2045)	Household Population (2018)	Household Population (2045)	Households (2018)	Households (2045)	Jobs (2018)	Jobs (2045)	
115	210,192	504,850	76,501	187,431	52,163	102,503			

Activity-Connectivity Explorer (ACE)

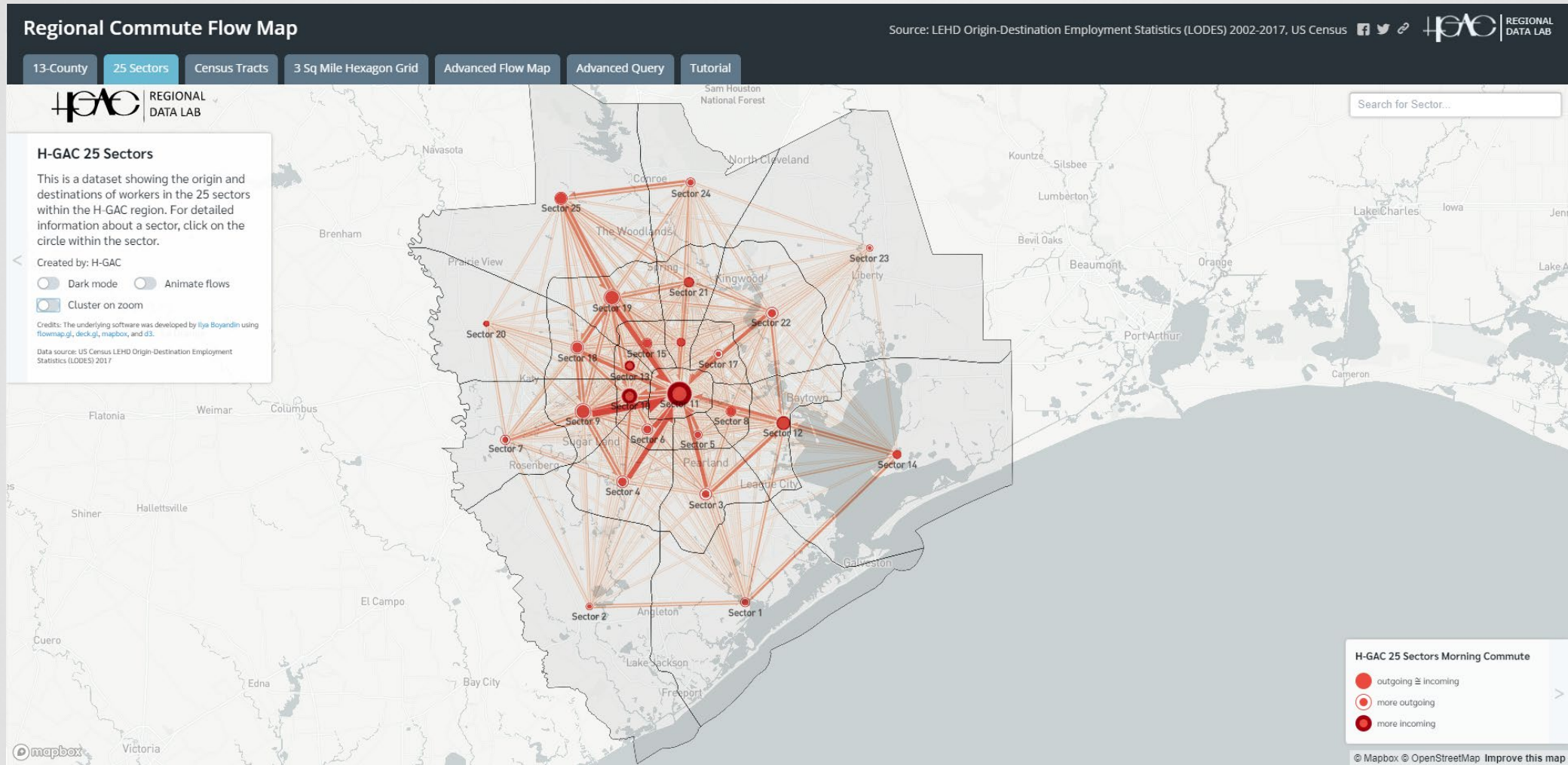
- Top 10% Connectivity
- Top 10% Amenity Concentration
- Top 10% Activity



Livable Center Needs Index (LCNI)



Regional Commute Flows

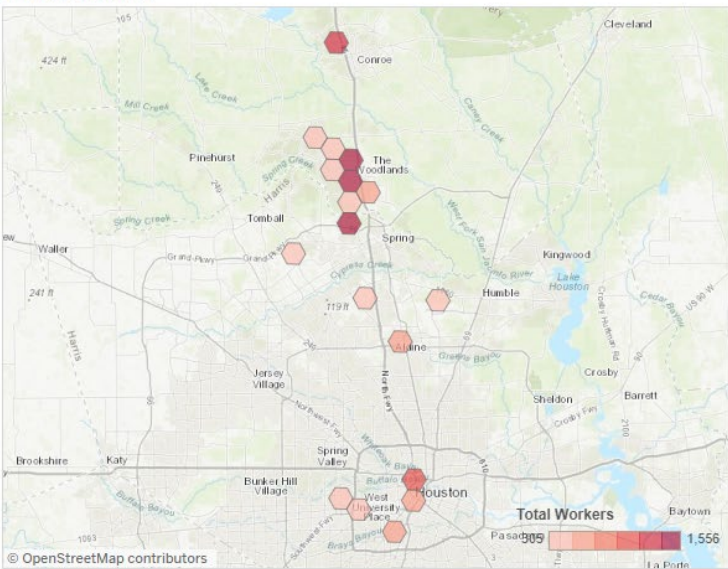


Regional Commute Patterns

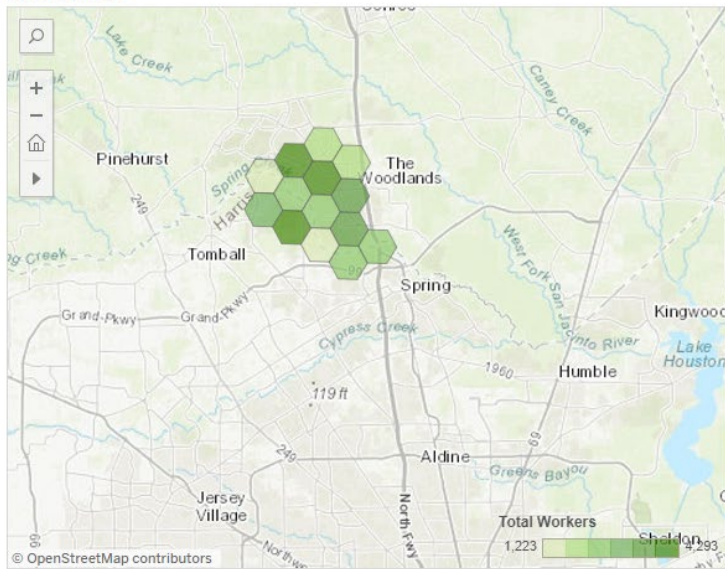
Commuting Patterns by Hexagonal Grids (3 square-mile) in H-GAC Region (2002-2018)



Workplace (2018)



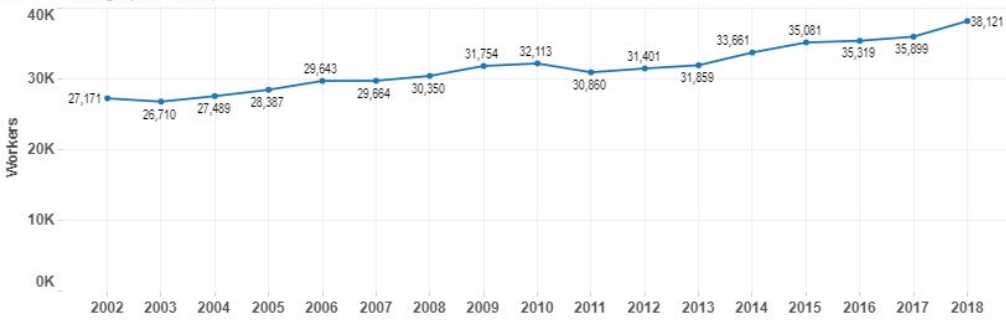
Home (2018)



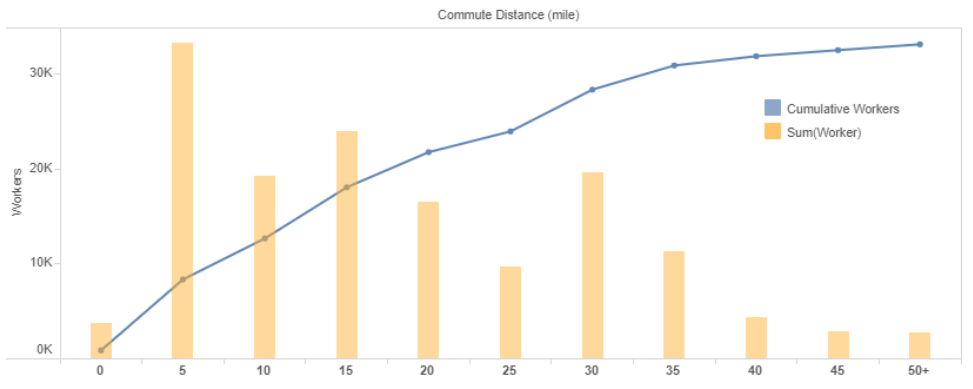
Summary (2018)

Total Workers	38,121
Age 29 or younger	7,435
Age 30 to 54	21,737
Age 55 or older	8,949
\$1,250 or less	6,334
\$1,251 to \$3,333	8,283
More than \$3,333	23,504
Goods Producing	7,211
Trade, Transportation, & Utilities	8,266
Other Services	22,644

Worker Change (2002-2018)



Commute Distance (2018) *Excluded out-of-region commute workers



Regional Crash Data

Year

2014 2015 2016 2017 2018

Month

Day of Week

Hour

First Harmful Event *

TOTAL CRASHES	
MOVING VEHICLE	555,026
FIXED OBJECT	79,588
PARKED CAR	32,829
PEDESTRIAN	7,198
OVERTURNED	7,164
CYCLIST	3,469
OTHER OBJECT	3,106
ANIMAL	2,495
OTHER NON COLLISION	1,207
TRAIN	463

Crash Severity *

TOTAL CRASHES	692,545
FATALITY	3,011
SERIOUS INJURY	12,181
NON-SERIOUS INJURY	52,507
POSSIBLE INJURY	117,905
NOT INJURED	478,223
UNKNOWN	28,718

Injury Summary

	Total	2014	2015	2016	2017	2018
FATALITY	3,221	619	616	707	698	581
SERIOUS INJURY	14,627	2,770	3,159	3,111	2,957	2,630
NON-SERIOUS INJURY	71,434	12,571	14,290	15,476	15,272	13,825
POSSIBLE INJURY	182,898	33,535	38,503	38,481	35,577	36,802
NOT INJURED	1,491,582	260,758	312,783	314,811	307,051	296,179
UNKNOWN	131,059	21,371	26,780	27,689	27,466	27,753

Injury Details (scroll down to see more)

	Total	2014	2015	2016	2017	2018
FATALITY: MOTORIST	2,410	492	457	505	529	427
FATALITY: PEDESTRIAN	715	111	140	182	147	135
FATALITY: CYCLIST	96	16	19	20	22	19
SERIOUS INJURY: MOTORIST	12,872	2,440	2,819	2,729	2,622	2,262
SERIOUS INJURY: PEDESTRIAN	1,362	259	258	288	264	293
SERIOUS INJURY: CYCLIST	393	71	82	94	71	75
NON-SERIOUS INJURY: MOT...	67,583	11,847	13,554	14,668	14,445	13,069

YEAR/MONTH/DAY OF WEEK

Year: (All)
 Month: (All)
 Day of Week: (All)

GEOGRAPHY

County: (All)
 In/Unincorporated Area: (All)
 Co. Commissioner Precinct: (All)
 City: (All)
 City Council District: (All)
 Zip Code: (All)

SPECIFIC CONDITION

First Harm...: (All)
 Crash Severity: (All)
 Intersection Related: (All)

Primary Contributing Factors

(All)

Grouped Contributing Factors

(All)

No. of Crashes

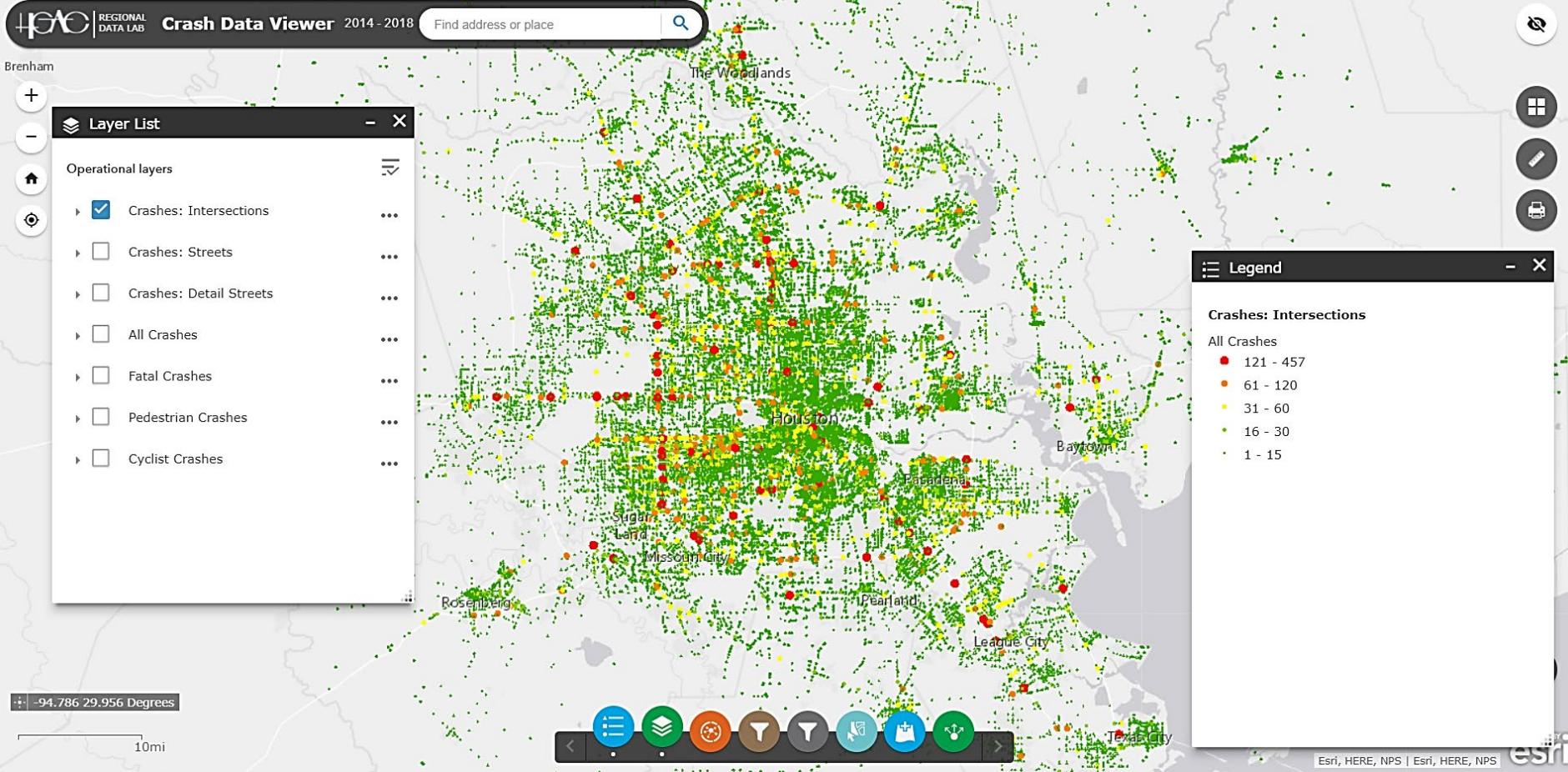
1 100 200 300 381

Factor	Count
TOTAL CRASHES	692,545
FAILED TO CONTROL SPEED	192,433
UNKNOWN	92,978
FAILED TO DRIVE IN SINGLE LANE	55,203
CHANGED LANE WHEN UNSAFE	47,767
DRIVER INATTENTION	30,504
FAILED TO YIELD RIGHT OF WAY - TURNING LEFT	30,459
FAILED TO YIELD RIGHT OF WAY - STOP SIGN	28,927
DISREGARD STOP AND GO SIGNAL	26,800
FAILED TO YIELD RIGHT OF WAY - PRIVATE DRIVE	24,946
OTHER (EXPLAIN IN NARRATIVE)	17,204
BACKED WITHOUT SAFETY	17,193

Regional Crash Data

Regional Crash Data (2014-2018)

Introduction Crash Data Dashboard Crash Data Viewer More Info.

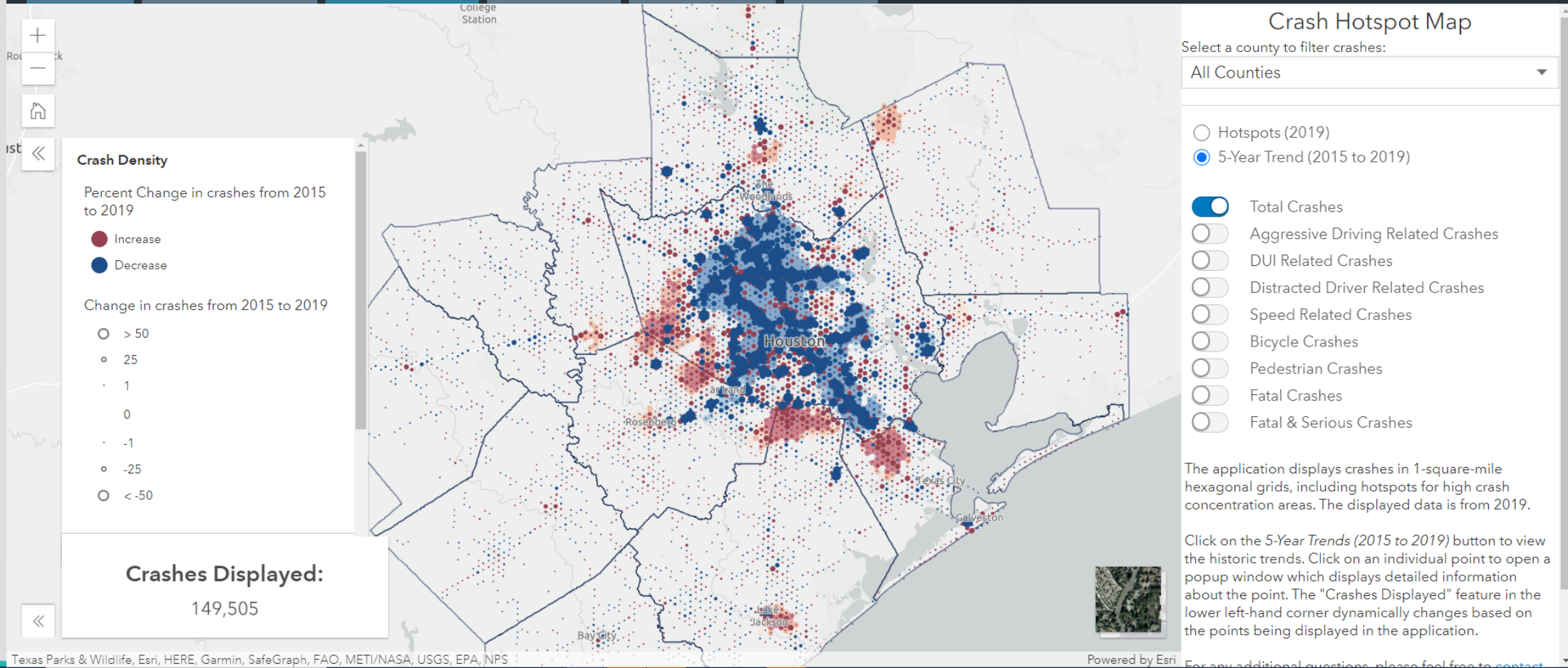


Regional Crash Hotspots

Regional Crash Data (2015-2019)



- Introduction
- Crash Data Dashboard
- Crash Hotspot Map
- Crash 3D Viewer
- Crash Data Viewer
- More Info.

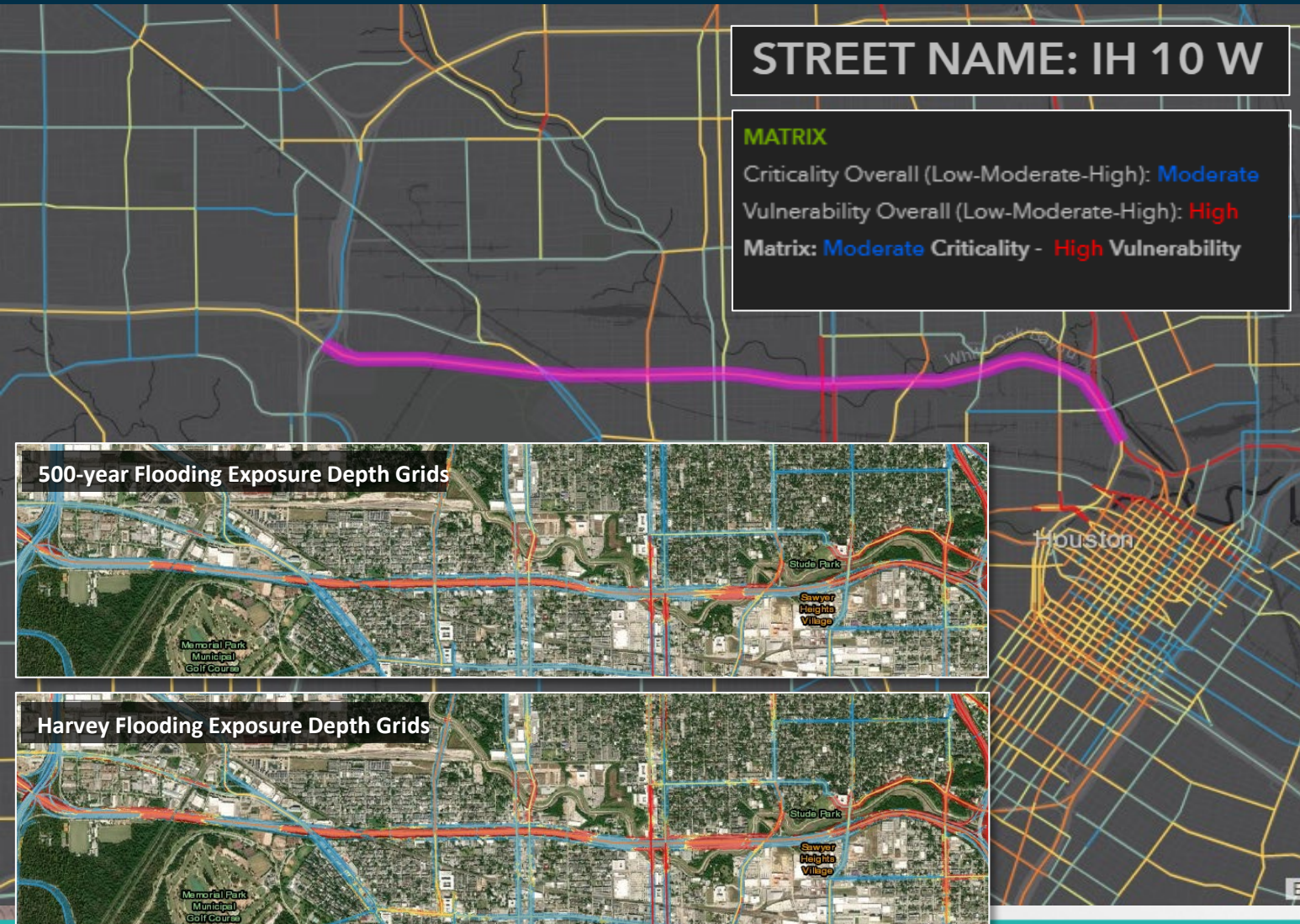


Texas Parks & Wildlife, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS

Powered by Esri

For any additional questions, please feel free to contact

Regional Resilience Tool: Resilience Street Profile



STREET NAME: IH 10 W

MATRIX
 Criticality Overall (Low-Moderate-High): **Moderate**
 Vulnerability Overall (Low-Moderate-High): **High**
 Matrix: **Moderate** Criticality - **High** Vulnerability

STREET INFORMATION

Street ID: FsegID_162
 FHWA Classification: Freeway
 Center-line Mile: 5.66
 Network Redundancy: 1.18

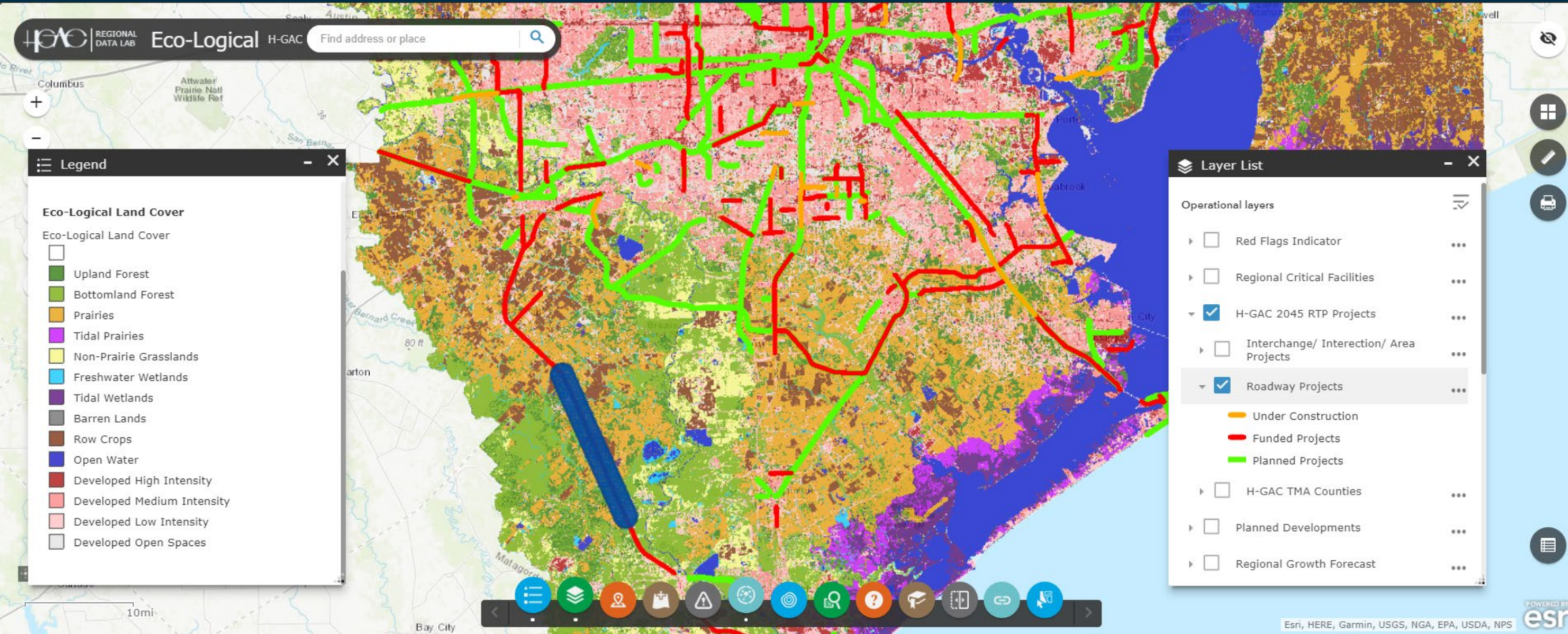
CRITICALITY
 Criticality Score : Moderate
 Detailed Scores (0-4):

- Linkage to airport: 0
- Linkage to port: 1
- Access to activity population: 2
- AADT: 2
- AADT-Truck: 2
- Transit Ridership: 0
- Linkage to hospital: 0
- Linkage to fire station: 2
- Access to vulnerable population: 0
- Evacuation Route: 0
- Linkage to shelter: 1
- Linkage to emergency operation: 1
- Military access: 4

VULNERABILITY
 Vulnerability Score (Flooding) : High
 Vulnerability Score (Storm Surge) : Low
 Vulnerability Score (Sea-Level Rise) : Low
 Detailed Scores:

- 500-Year: High
- Harvey: High
- CAT1 Storm Surge: Low
- CAT2 Storm Surge: Low
- CAT3 Storm Surge: Low
- CAT4 Storm Surge: Low
- CAT5 Storm Surge: Low
- Ike Storm Surge: Low
- 4-ft Sea-Level Rise: Low
- 5-ft Sea-Level Rise: Low

Eco-Logical



Incident	Eco-Type (acre)	Eco-Type (%)	Announced Developm...	Land Use (Current)	Land Use (2045)	TAZ 5217			
	Total Area (acre)	Total Eco-Type Area (acre)		Upland Forest (acre)	Bottomland Forest (acre)	Prairies (acre)	Tidal Prairies (acre)	Grasslands (acre)	Wetlands
	21,630.0	16,555.4		4,752.7	2,788.5	8,524.2	0.0	114.8	372

Contact Information



- Regional Growth Forecast

www.h-gac.com/forecast

- Interactive web mapping applications

www.h-gac.com/go/apps

Pramod Sambidi, PhD

Manager, Socioeconomic Modeling & GIS

Houston-Galveston Area Council

Ph. No.: 713-993-2451

Email: psambidi@h-gac.com





Travel Modeling and Data



Data, Forecasting and Modeling

- Model was developed in 1979, updated periodically
- Domain covers the 8 county region
- 5,400 Traffic Analysis Zones (TAZ)
- Multimodal
- Estimates 4 time-of-day volumes by mode, travel speeds, travel times, congestion levels (V/C ratio), vehicle miles traveled (VMT) and vehicle hours traveled (VHT), as well as transit related data
- Partnerships
 - TxDOT
 - TTI
 - METRO



Why Modeling is Important?



- Planning tool
- Estimates regional traffic patterns today and in the future
- Takes a look at supply and demand
- Analyzes the multimodal issues
- Helps prioritize funding

Modeling Work Plan

- Regional Transportation Plan (RTP)
- Mine “Big data”
 - Travel time, speeds and origin/destination
- TIP project ranking
- Conformity
- Toll revenue studies
- Environmental studies
- Traffic impact studies
- Transit feasibility studies
 - High capacity transit study



Modeling Work Plan Cont.



- 2021 - 2022 Travel Survey:
 - Household survey (TxDOT)
 - External survey (HGAC)
 - Commercial vehicle survey (HGAC)
 - Transit origin/destination survey (HGAC/METRO)
 - Airport survey (HGAC)
 - Bicycle user survey (HGAC)

Modeling Work Plan Cont.

- Simulation (Aimsun)



Modeling Work Plan Cont.

- STARS II – Statewide Traffic Analysis and Reporting System II



The screenshot shows the Traffic Count Database System (TCDS) web application. The interface includes a search form, a data table, a bar chart, and a map of Texas counties.

TCDS Quick Search

County	Select County
Community	Select Community
Located On (Road)	Select On Road
Location ID	Select Location ID
Count Year	

Station Data

Station Type	Continuous	Short	WIM
Total	2,238	0	0
AADT	0	0	0
Volume	1,772	0	0
Class	1,833	0	0
Speed	1,647	0	0
Gap	0	0	0
WIM	0	0	0

Percent of Data by Type

Category	Percent
AADT	0%
Volume	0%
Class	0%
Speed	0%
Gap	0%
WIM	0%

<https://hgac.ms2soft.com>

What is Conformity?



- Process that links the air quality State Implementation Plan with the regional roadway planning (RTP/TIP)
- Ensures that transportation plans do not delay attainment of NAAQS
- It is demonstrated when projected regional emissions from the RTP do not exceed the region's motor vehicle emissions budgets stated in the Air Quality SIP.

Conformity Requirements



- Use of the latest planning assumptions
- Latest emission model approved by EPA
- Interagency consultation (EPA, FHWA, TCEQ, TxDOT)
- Public comment period
- Timely implementation of control measures

Transportation Conformity



- Last conformity finding – August 2019
- Starting next finding – March 2020
- Conformity years: 2020, 2030, 2040, 2045
- Emissions Budgets
 - Bumped-up from Marginal to Moderate (2008 Ozone)
 - New Budgets found Adequate (Spring 2017)
 - NO_x= 121.81 tpd
 - VOC= 68.14 tpd
- Reason for new conformity:
Amendments to 2045 RTP and 2021-2024 TIP

Questions?



- How can we help?

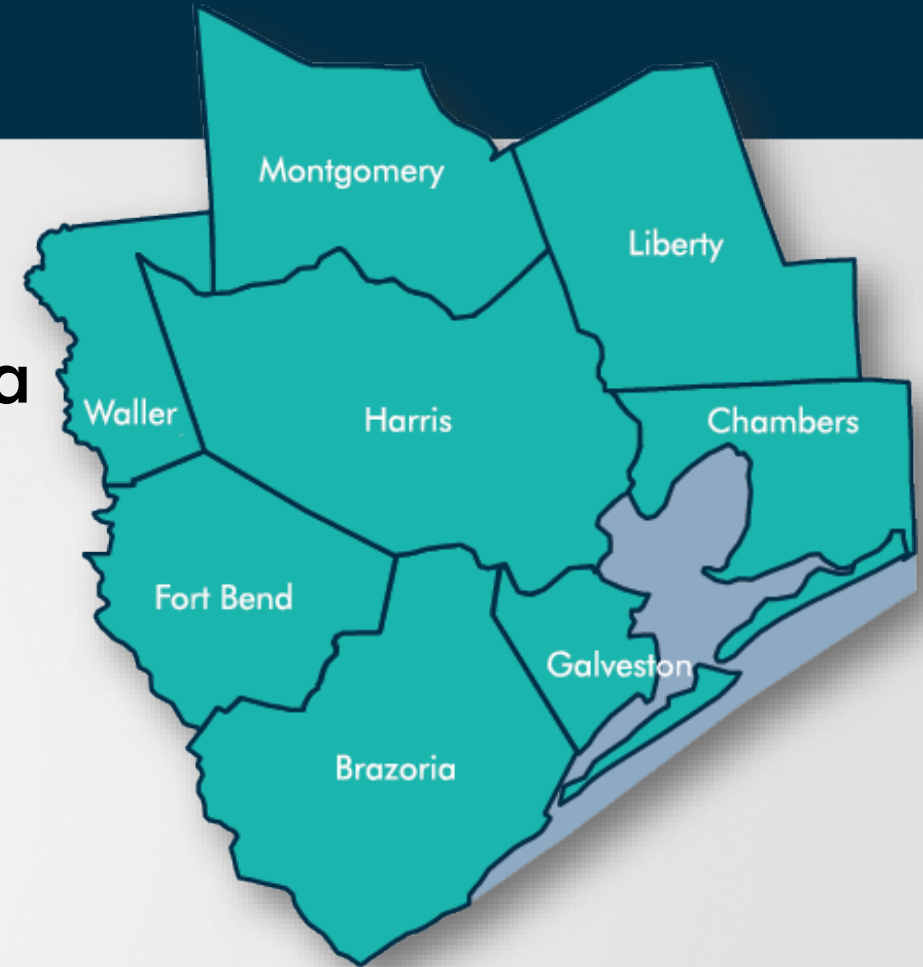


Regional Transportation Plan and Project Programming



What is the RTP?

- Transportation Investment Framework
- Eight County Metropolitan Planning Area
- Performance Based Plan
- Needs Assessment
- Financially Constrained
- Priorities and Implementation Steps
- Updated Every Four Years



2045RTP
REGIONAL TRANSPORTATION PLAN

Transportation Improvement Program (TIP)

- Federal and State mandated program of transportation projects
- Contains projects funded with local, State, and federal funding sources
- Covers four years of available funding
- Updated on a monthly basis and submitted to the State quarterly
- Re-developed every two years
- The TIP must be consistent with the Regional Transportation Plan and the latest Conformity Determination

RTP & Other Plans/Programs

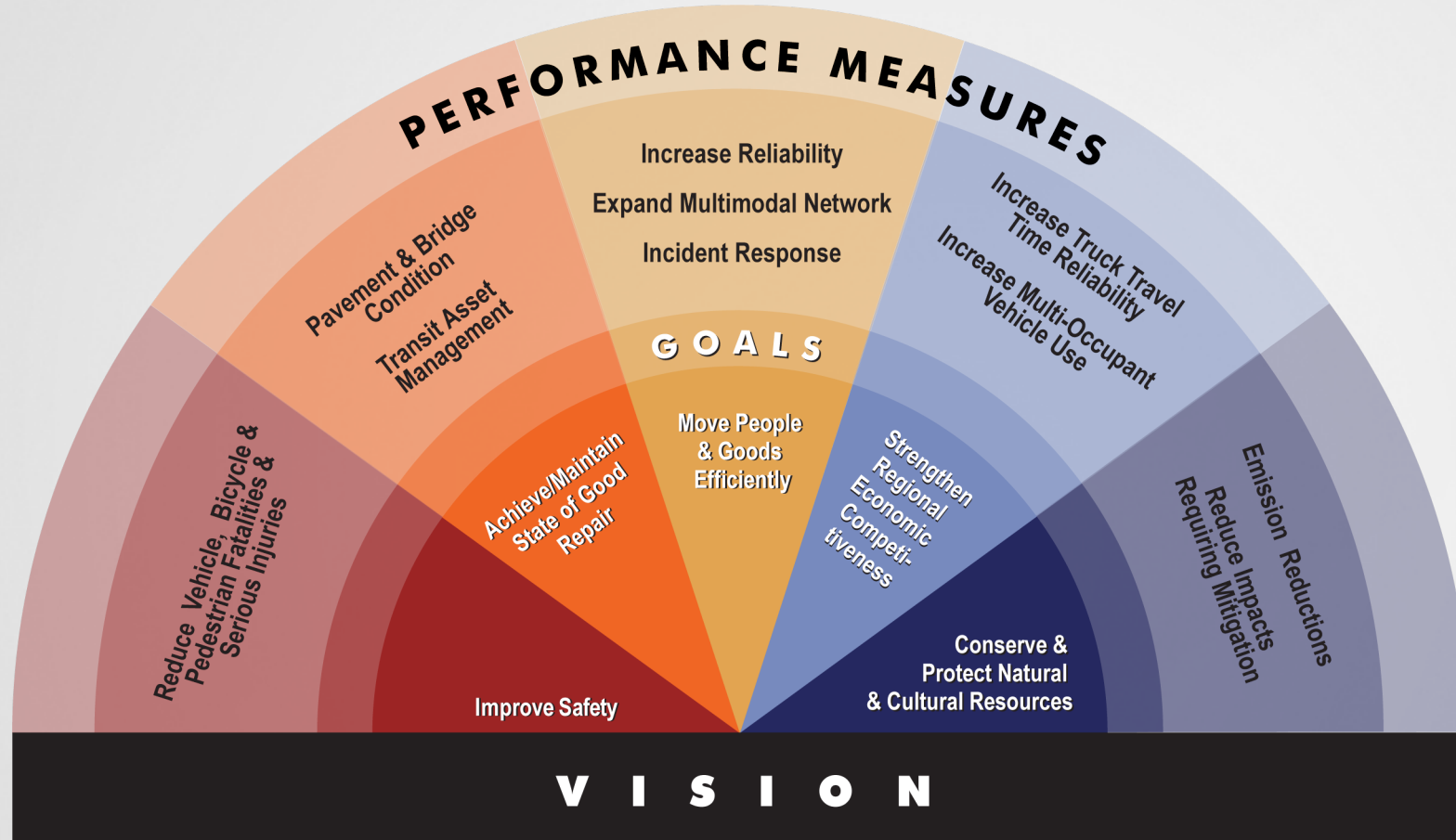


20+ Year Regional Transportation Plan
(2045 RTP)

**H-GAC Ten Year Plan /
TxDOT Unified Transportation Program**
(UTP)

4 Year TIP
(2019-2022 TIP)

Performance Measures



2045 RTP

STRATEGIES				
GOAL	MANAGE [Improve System Management & Operations]	MAINTAIN [Asset Management]	EXPAND [Transportation Network Capacity]	PERFORMANCE MEASURE
Improve Safety	●	●	◐	Reduce Crash Rates of Fatalities and Serious Injuries
Achieve/Maintain State of Good Repair	●	●	●	Pavement & Bridge Conditions and Transit Asset Management
Move People and Goods Efficiently	●	●	◐	Increase Reliability, Expand Multimodal Network and Improve Incident Response
Strengthen Regional Economic Competitiveness	●	●	●	Increase Truck Travel Time Reliability and Increase Multi-Occupant Vehicle Use
Conserve and Protect Natural and Cultural Resources	●	●	◐	Emission Reductions and Reduce Impacts Requiring Mitigation

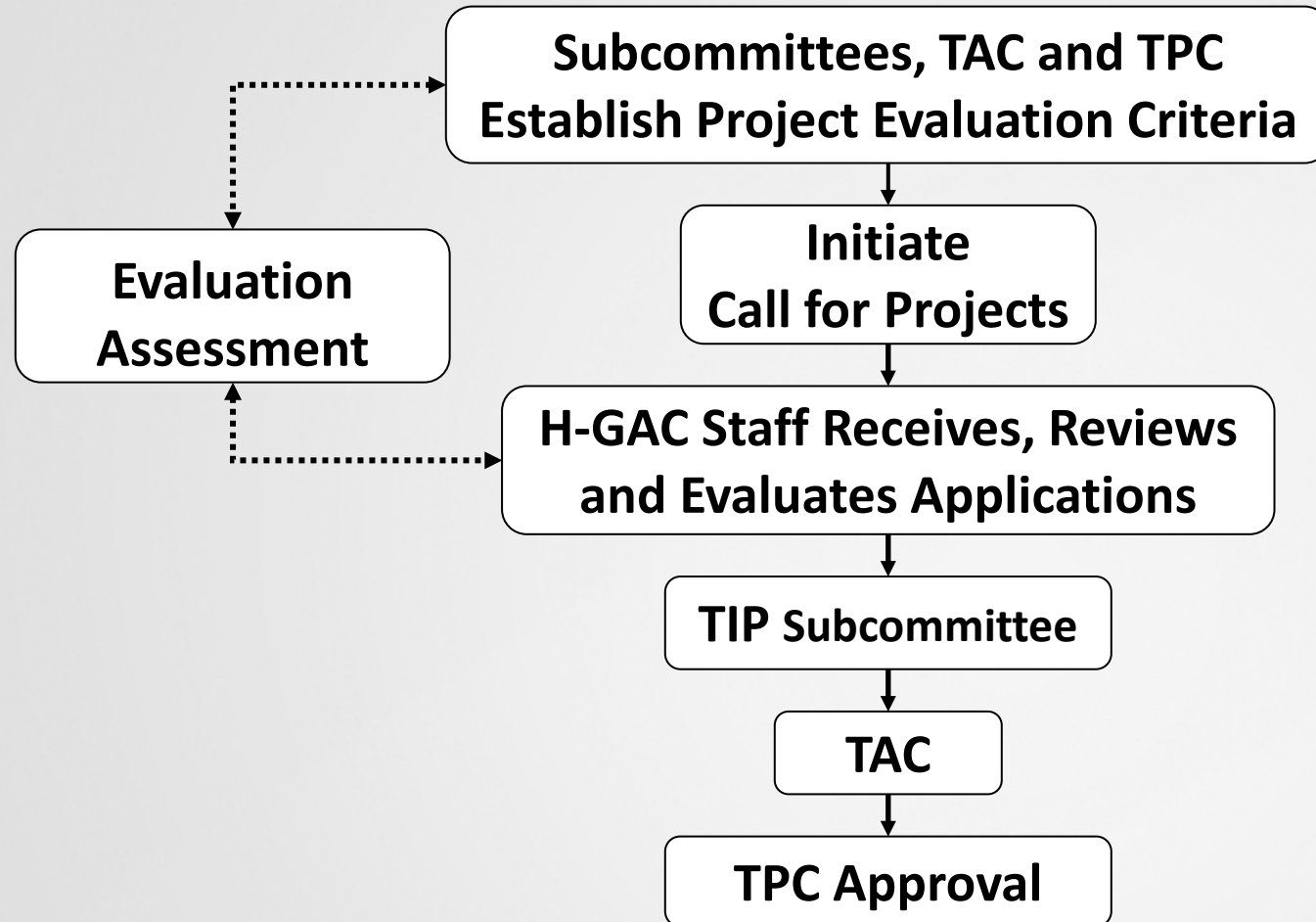
● Direct Impact ◐ Related Impact

Call For Projects



- Aligns project evaluation with 2045 RTP goals
- Evaluation Considered:
 - Benefit/Cost Analysis
 - Safety, Delay, and Emissions
 - Planning Factors
 - (e.g., Planning Coordination, Environmental Justice, Expands connectivity to employment/schools/medical facilities)

Call For Projects Process



Monitoring Project Development

- Active and Continuous Communication
 - Project Status Reports/Meetings (Readiness Milestones: AFA, Design, ROW, Utilities, etc.)
 - Engagement with TxDOT and Project Sponsors on Letting Schedule
- Local Project Sponsor Project Development Workshop
- District Support for Local Projects



Environmental Justice (EJ)

Environmental Justice Obligations

- Avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low income populations;
- Ensure full and fair participation by all potentially affected communities in the transportation decision-making process; and
- Prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

Environmental Justice Report

- Identifies and maps location of EJ sensitive communities
- Describes socio-economic characteristics of the population
- Assess the impact of transportation programs, plans, and activities
- Contains recommendations

Web Resources



2045 Regional Transportation Plan

- <http://2045rtp.com/>



Transportation Improvement Program

- <http://www.h-gac.com/transportation-improvement-program/>

2018 Call for Projects

- <http://www.h-gac.com/2018-call-for-projects/default.aspx>



Local Project Sponsor Workshop

- <http://www.h-gac.com/transportation-improvement-program/project-resources.aspx>

H-GAC Environmental Justice Report

- <http://www.h-gac.com/title-vi-program/documents/H-GAC-environmental-justice.pdf>





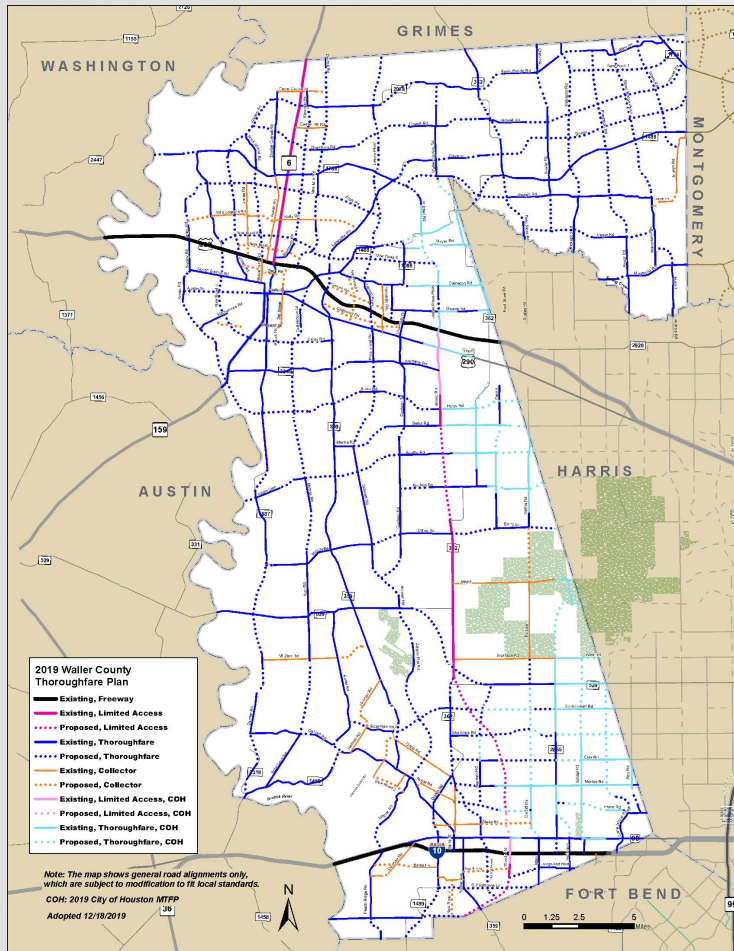
Subregional Planning



Regional Collaboration • Transportation Planning • Multimodal Mobility

Subregional Planning

2019 Waller County Thoroughfare Plan



Thoroughfare Plans











- Long-range (50+yrs)
- Preserves ROW
- Approximate location of future corridors
- Promotes Regional Roadway Connectivity & design uniformity

Mobility Plans




- Identifies existing and future mobility needs
- Short-, medium-, and long-range recommendations
- Multi-modal

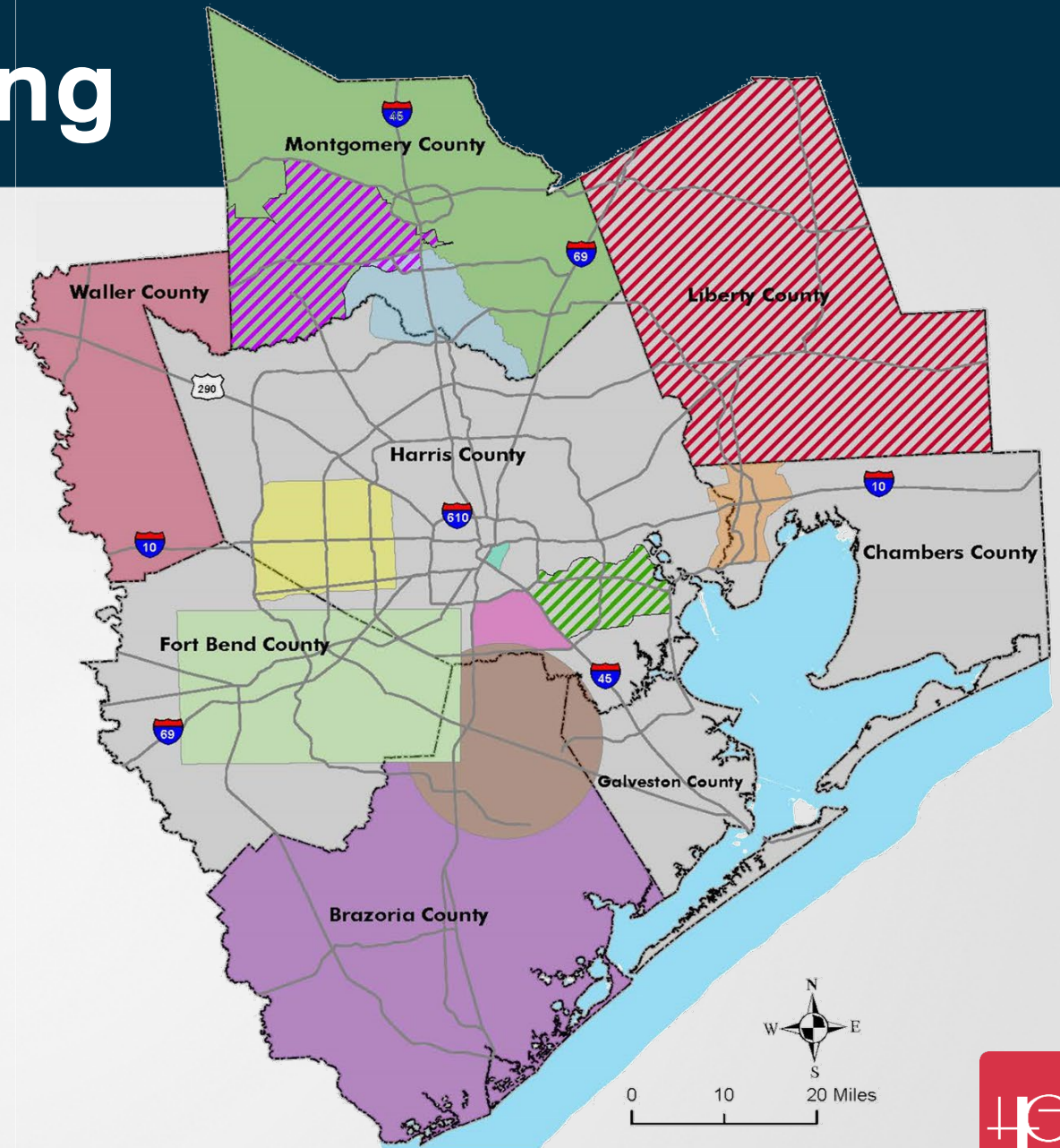
Subregional Planning

Completed

-  SH146 Sub-Regional Plan
-  Brazoria County Thoroughfare Plan
-  East End Mobility Plan
-  Fort Bend Sub-Regional Plan
-  Greater West Houston Mobility Plan
-  Montgomery County Thoroughfare Plan
-  Northern Brazoria County/Pearland Sub-Regional Plan
-  South County Mobility Plan
-  Southeast Houston Mobility Plan
-  Waller County Transportation Plan

Current

-  Liberty County Mobility Plan
-  Montgomery County Precinct 2 Mobility Plan
-  Southeast Harris Sub-Region





Freight Planning



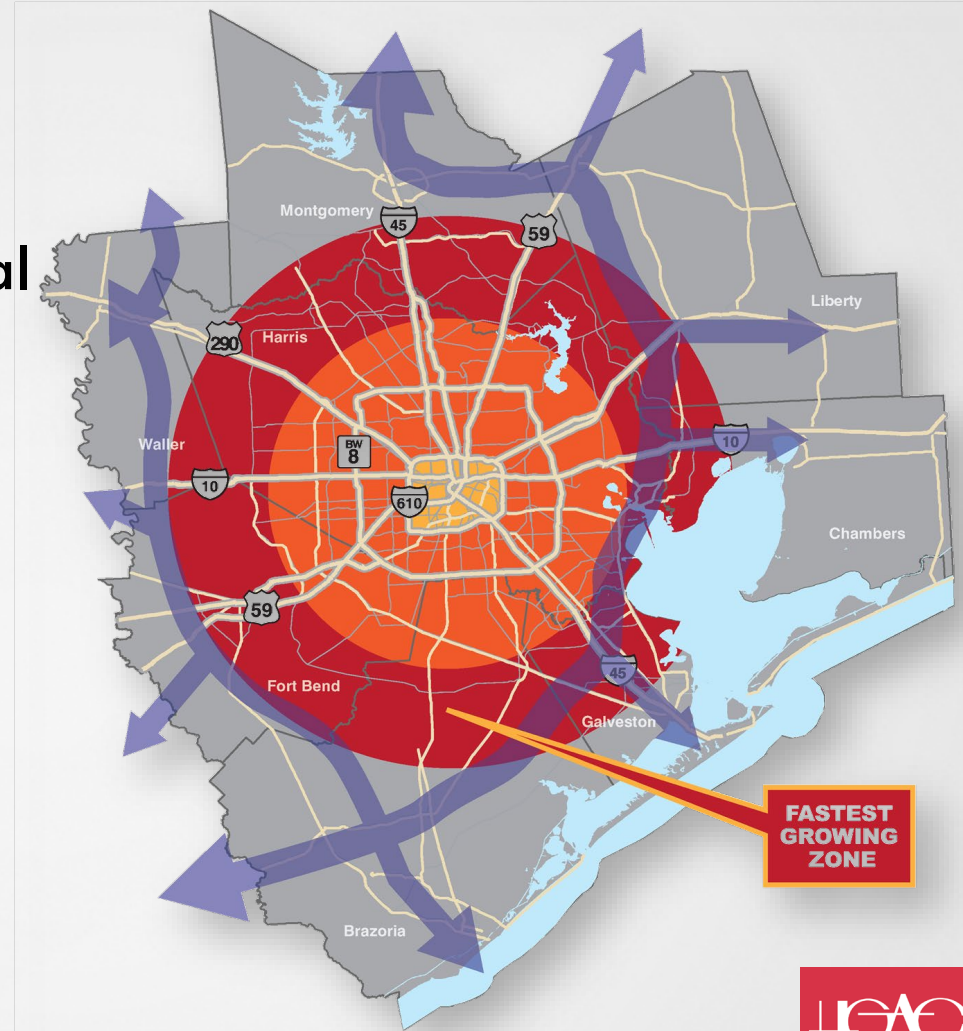
Regional Collaboration • Transportation Planning • Multimodal Mobility

Freight Planning



Ports Area Mobility Study

- Completed January 2020
- Recommendation from 2012 Regional Goods Movement Study
- Directly connect the region's ports with emerging markets in the region and hinterland
- Considerations
 - Diversion of freight flow from urban core
 - Changes in commodity flows
 - Panama Canal expansion
 - Resin boom



Freight Planning



Greater Houston Freight Committee

- Established by the Transportation Policy Council
- 2020 Co-Chairs: Judge Ed Emmett, Senior Fellow and Professor at Rice University & Brian Fielkow, CEO, JetCo Delivery
- Meets quarterly
- Prioritization and designation of Critical Urban Freight Corridors (FAST Act) – network of locally significant freight roads
- Participation in State Freight Plan
- Support of maritime ports' infrastructure needs

Freight Planning



Upcoming: Regional Goods Movement Plan

- Understand freight movement impacts to the economy
- Analysis of freight movement, land use, and economic growth
- Changing production and consumption patterns
- Inform policymakers regarding goods movement issues and benefits



Resiliency Planning



Resiliency Planning



Resiliency & Durability Pilot

- USDOT's Vulnerability Assessment Scoring Tool (VAST) + economic analysis + risk analysis to identify most vulnerable assets/ road segments
- Recommendations for most vulnerable assets/ road segments
- Update H-GAC publications and project selection criteria

Resiliency Planning



Resilience Street Profile

CONTROL PANEL

Functional Classification (select item/s)

Freeway Minor Arterial Collector

Principal Arterial

Street Name

None

Overall Criticality (0-1)

0 1

Vulnerability (Low-Moderate-High)

None

Combined Matrix

None

Select a street segment to display resilience profile on the map using selection tool

Map Street Elevation 500-year Flooding Harvey Flooding CAT 4 Storm Surge Ike Storm Surge 5-ft Sea Level Rise

STREET NAME: HARDY TOLL ROAD

1 of 7364

STREET INFORMATION

Street ID: FsegID_10
 FHWA Classification: Freeway
 Center-line Mile: 13.09
 Network Redundancy: 1.20

CRITICALITY

Criticality Score : Low
 Detailed Scores (0-4):

- Linkage to airport: 3
- Linkage to port: 0
- Access to activity population: 0
- AADT: 0
- AADT-Truck: 0
- Transit Ridership: 0
- Linkage to hospital: 0
- Linkage to fire station: 0
- Access to vulnerable population: 0
- Evacuation Route: 0
- Linkage to shelter: 0
- Linkage to emergency operation: 0
- Military access: 0

VULNERABILITY

Vulnerability Score (Flooding) : Low
 Vulnerability Score (Storm Surge) : Low
 Vulnerability Score (Sea-Level Rise) : Low

Detailed Scores:

- 500-Year: Moderate
- Harvey: Low
- CAT1 Storm Surge: Low
- CAT2 Storm Surge: Low
- CAT3 Storm Surge: Low
- CAT4 Storm Surge: Low
- CAT5 Storm Surge: Low
- Ike Storm Surge: Low
- 4-ft Sea-Level Rise: Low
- 5-ft Sea-Level Rise(R 5): Low

MATRIX

Criticality Overall (Low-Moderate-High): Low

Vulnerability Overall (Low-Moderate-High): Low

Overall Matrix: Low Criticality - Low Vulnerability

What is Matrix?

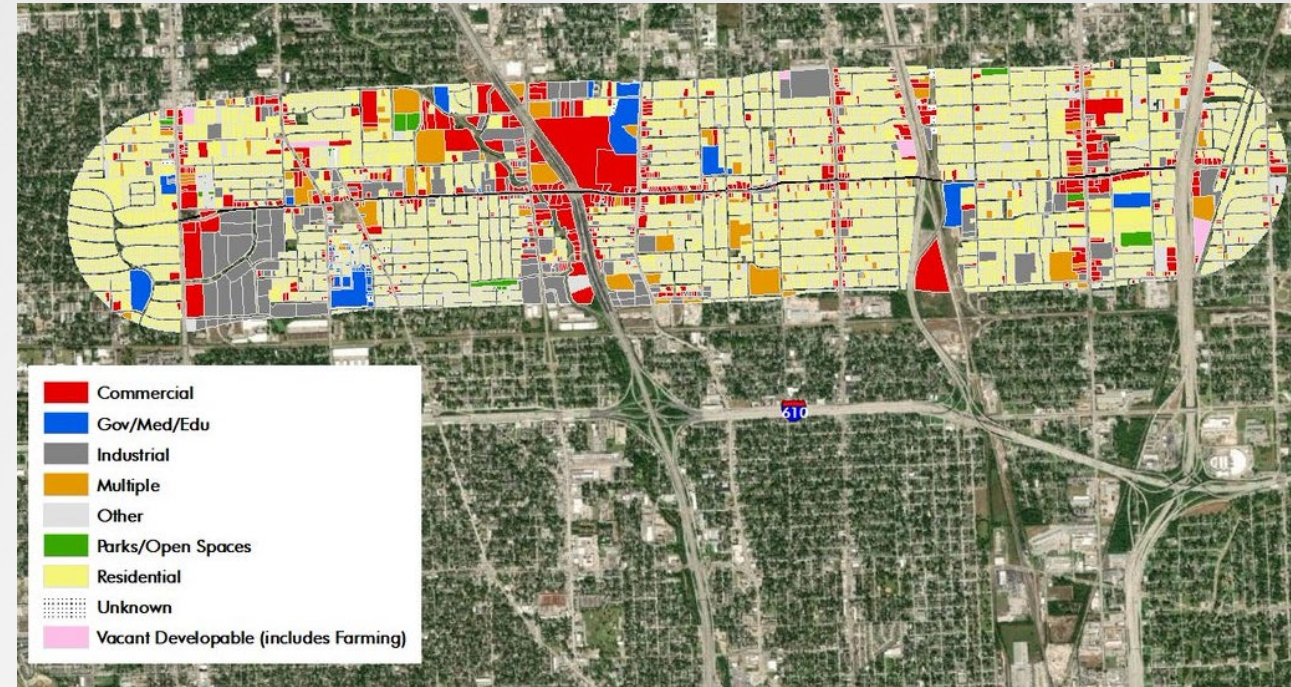
High Criticality Low Vulnerability	High Criticality Moderate Vulnerability	High Criticality High Vulnerability
Moderate Criticality Low Vulnerability	Moderate Criticality Moderate Vulnerability	Moderate Criticality High Vulnerability
Low Criticality Low Vulnerability	Low Criticality Moderate Vulnerability	Low Criticality High Vulnerability

<https://datalab.h-gac.com/resilience/>

Regional Planning



- Transit-Oriented Development Analysis
- Regional Transportation Low-Impact Development Toolkit





Livable Centers Planning



Do Not Sit On Shelves

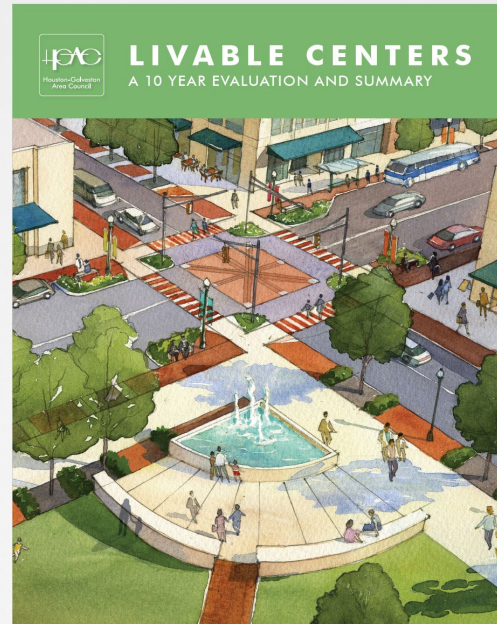
Compact +
Mixed Use



Walkable



Connected +
Accessible



- 700,000 car trips reduced daily
- \$467 million in local improvements implemented
- \$575.7M in Regional Transportation Plan

<https://www.h-gac.com/livable-centers/implementation>

2021 Call for Local Partners



Funding For:

- Full Livable Centers studies:
Aims to create walkable live, work, play environments at a neighborhood or district level.
- Focused Livable Centers Studies:
Targets small areas such as a community-node or destination, or focus on a specific livable centers goal.

Key Dates:

March

✓ Call Announced

04/15

✓ Pre-Application
Submittal Meeting

✓ Virtual
Registration

<https://www.h-gac.com/livable-centers/call-for-planning-study-partners>

Staff Contact: Anita.Hollmann@h-gac.com



Air Quality Planning



March, 2021

Air Quality Planning



- Partner and collaborate with the following agencies and stakeholders:
 - Texas Department of Transportation - TxDOT
 - Texas Commission of Environmental Quality -TCEQ
 - Environmental Protection Agency - EPA
 - Department of Energy - DOE
 - Environmental Defense Fund - EDF

Air Quality Program Areas

- In addition to transportation planning, the H-GAC Transportation Department works to reduce air pollution and assist the region's efforts to attain Federal Clean Air Act air quality standards.
- We oversee a number of clean air programs, committees and sub-committees to promote emission reductions within our eight-county nonattainment area.



Clean Vehicle Replacement Programs (CVP)

- Provides grant incentives to fleets, owner operators, government and public entities to:
 - Replace heavy-duty diesel vehicles and equipment with newer/cleaner vehicles and equipment.
 - Establish infrastructure for alternative fuel facilities and electric chargers and charging stations
- Grant funding sources:
 - Clean Vehicle Projects – CMAQ (TxDOT)
 - Heavy Duty Diesel Replacement Program – EPA
 - Clean School Bus Program – SEP AERCO

Houston-Galveston Clean Cities Coalition

Created in 1997 and is one of almost 100 Department of Energy – designated Clean Cities Coalitions across the nation that participates in the national Clean Cities Program.

Focused on advancing economic, environmental and energy security by supporting local actions to reduce petroleum use in the transport sector.

Locally Houston Clean Cities Coalition works by connecting stakeholders and alternative fuel manufacturers and refueling sources as well as to provide information about funding availability, case studies, and success stories.

Our region's coalition of alternative fuels advocates.
Raises awareness and educates the public on alternative fuels.
Focuses on decreasing our region's petroleum dependency.

Regional Air Quality Planning Advisory Committee (RAQPAC)

- Appointed by the H-GAC Board of Directors to assist and advise H-GAC, regional and local governments, transportation organizations and other agencies on air quality issues.
- Where appropriate, review and make recommendations to H-GAC's Transportation Policy Council on other mobile source emission control measures.
- Receive public comment and assist in disseminating public information on air quality issues, plans and programs.
- Assist in implementing air quality programs and in obtaining local commitment necessary to implement air quality measures
- Complete the PM 2.5 advance report

Transportation Air Quality TAQ

- Identification and analysis of the most cost-effective on-road transportation emission reduction measures.
- Development of a list of committed/transportation Control Measures to be implemented by the deadline outlined in the updated NAAQS for the next SIP.
- Provide guidance for programs funded through CMAQ funds such as the Clean Vehicles Program
- Maintain partnerships and regularly convene TAQ Committee every quarter – four times a year

Area Emission Reduction Credit Organization (AERCO)

- Promotes the improvement of air quality while helping to mitigate the adverse impacts of control strategies on economic development in the Houston –Galveston Region.
- Seeks and receives funds for the Clean School Bus Houston program – these funds may include Supplemental Environmental Project (SEP) funds and private donations.
- Administration of the Clean School Bus Houston program and distribution of grants to eligible school districts



Safety and Regional Incident Management



March 17, 2021

Program Areas

- Safety Planning
- Hurricane Evacuation
- Transportation Systems Maintenance and Operations (TSMO)
- Regional Incident Management

Safety Planning



- Publish State of Safety Report
- Implement a public outreach campaign for transportation safety
- Conduct bi-monthly Transportation Safety Committee Meetings
- Regional Intersection Safety Audits
- Teens in the Driver Seat Safety Program
- Texas Children's Hospital Youth Traffic Safety Education and Outreach Program
- Support State's Road to Zero Initiative and Regional Vision Zero Campaigns

Hurricane Evacuation

- Update Emergency Evacuation Traffic Management Plan in collaboration with State and regional partners
- Hurricane Preparedness/Zip Zone Awareness Public Outreach Campaign
- Maintain Web Based Evacuation Map
- Develop standard operating procedures for evacuation monitoring



Transportation Systems Maintenance and Operations (TSMO)



- Maintain regional ITS architecture to federal standards
- Maintain and update Regional Inventory for Signals, ITS and Fiber
- Hold quarterly TSMO subcommittee Meetings
- Support the Project Calls for ITS projects

Regional Incident Management

- Operate a Quick Clearance Towing (Tow and Go™) program.
- Provide Traffic Incident Management Training for responders
- Monthly Traffic Incident Management Meetings
- Monthly Tow and Go Operational meetings
- Participate in TxDOT Traffic Incident Management Activities.
- Expand Traffic Incident Management activities into surrounding counties or corridors.



Contact Info

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- David.fink@h-gac.com
- 713-993-4558
- Stephan Gage
- Principal Planner
- Stephan.gage@h-gac.com
- 713-499-6692

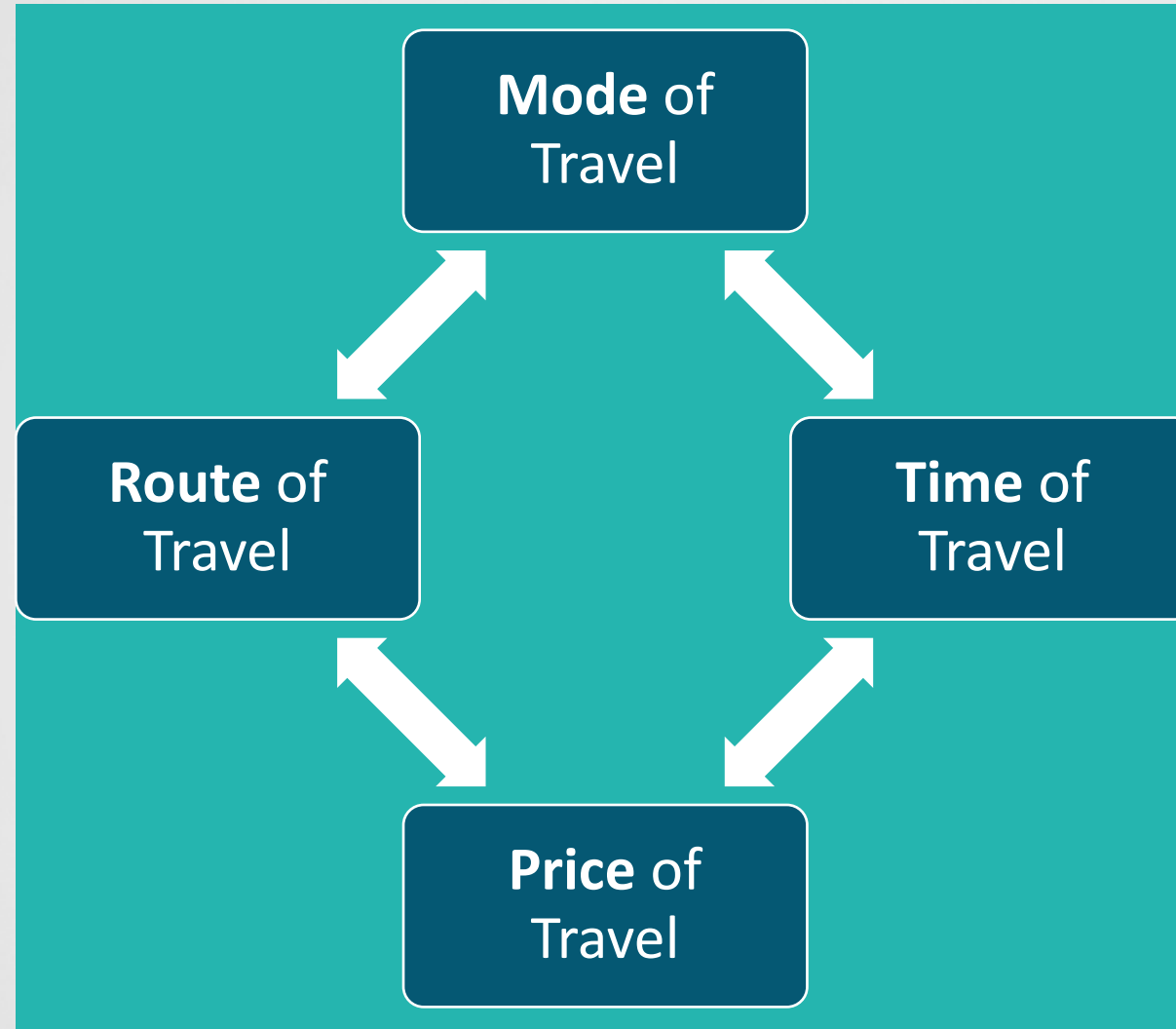


Travel Demand Management



March 2021

Travel Demand Management Overview



TDM Overview – Transit Planning



- Federal Performance Measures
- Sub-regional Transit Studies
 - Woodlands (2015)
 - Pearland (2021)
- Regionally Coordinated Transportation Plan
 - Mobility Links
 - Regional Connectivity

Mobility Links

Find a Transportation Service Provider

Search for transportation service providers in the Houston-Galveston region by using any of the following search criteria.

County Service Area

- | | | |
|---|--|---|
| <input type="checkbox"/> Austin County | <input type="checkbox"/> Galveston County | <input type="checkbox"/> Walker County |
| <input type="checkbox"/> Brazoria County | <input type="checkbox"/> Harris County | <input type="checkbox"/> Waller County |
| <input type="checkbox"/> Chambers County | <input type="checkbox"/> Liberty County | <input type="checkbox"/> Wharton County |
| <input type="checkbox"/> Colorado County | <input type="checkbox"/> Matagorda County | |
| <input type="checkbox"/> Fort Bend County | <input type="checkbox"/> Montgomery County | |

Service Type

- All Trip Purposes
- Non-Emergency Medical Trips
- Shopping/Recreational/Other Trips

Passenger Type

- General Public
- Disabled/Elderly
- Other (Veteran, Youth)

Organization Name

Search

Reset

TDM Overview – Bike/Pedestrian Planning

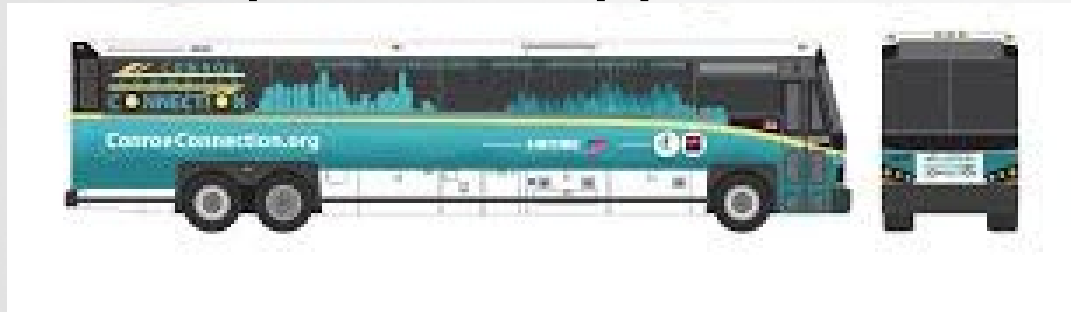


- Regional Active Transportation Plan
- Local Active Transportation Plans
 - Spring Branch (2019)
 - TBD (2021)
- Data Collection/Sharing
 - Permanent and Mobile Counter Program
 - Regional Bikeways Map



TDM Overview – Implementation/Education

- **Commuter and Transit Pilot Program**
 - Commuter or First Mile/Last Mile Solutions
 - Conroe Park and Ride (2019)
 - Woodlands to Energy Corridor (2021/2022)
 - Fort Bend to Downtown (January 2022)
 - Open Request for Applications through 2022



TDM Overview – Implementation/Education

■ Commute Solutions

- Telework and TDM Plans and Services
- Regional Marketing and Education Campaigns
 - Commute with Confidence
 - #SitSafe
- Expanded Emergency Ride Home Pilot Program
- Safe Routes to Schools Support

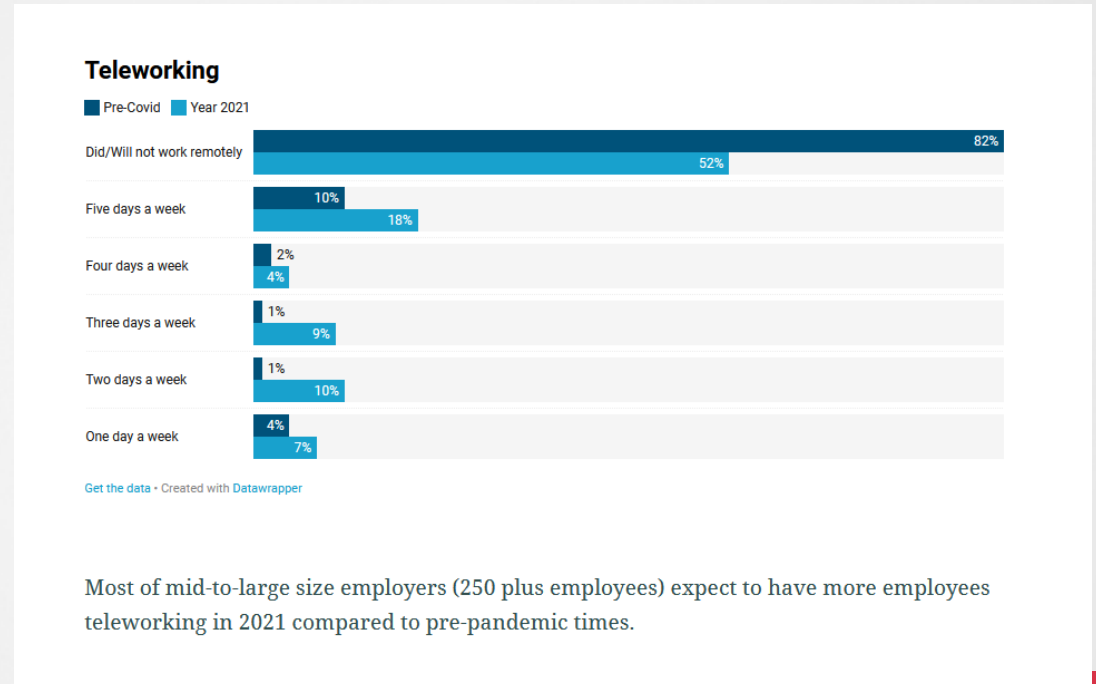
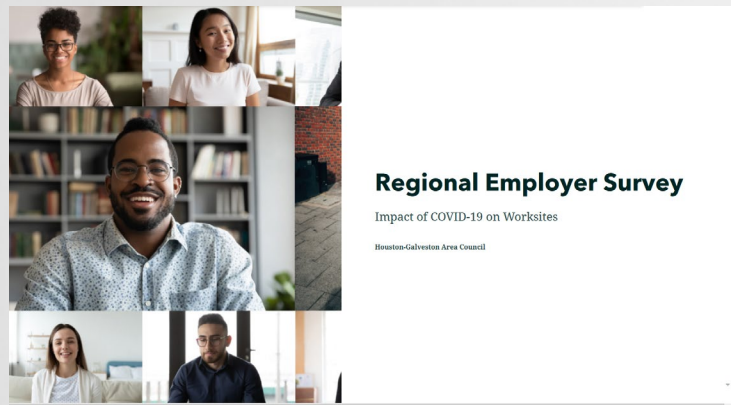


www.yourcommutesolution.org

TDM Overview – Implementation/Education

■ Commute Solutions

- Regional Employer Survey- <https://datalab.h-gac.com/employersurvey/>



TDM Overview – Special Initiatives

- Congestion Management Process
- Transit Oriented Development
- Automated Vehicles
- Sub-regional Studies Support
 - Liberty County
 - North Houston Communities Transportation Priorities Plan



Contact Information



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