

**RESILIENT HOUSTON DRAFT OUTLINE  
FOR FEEDBACK PURPOSES  
SEPTEMBER 10, 2019 TO OCTOBER 1, 2019**

For background on the Resilient Houston Draft Outline, intended to solicit feedback from working group members and other interested partners, please review the Resilience Assessment at <https://www.houstontx.gov/mayor/Resilient-Houston-Resilience-Assessment-2019may.pdf>.

Please submit feedback via online survey at <https://www.surveymonkey.com/r/GNMMKHT> Tuesday, October 1st. Comments can also be sent directly to Chief Resilience Officer, Marissa Aho, at [Marissa.aho@houstontx.gov](mailto:Marissa.aho@houstontx.gov).

## **INTRODUCTION**

Resilient Houston is based on five themes that emerged from the “discovery areas” identified in the Resilience Assessment and used by Resilient Houston working group members to organize our approach to increasing resilience in Houston. These themes are:

- A Healthy Place to Live
- An Equitable and Inclusive City
- A Transformative Economy
- A Leader in Climate Adaptation
- A City That Grows Up, Not Out

## **CHAPTER ONE: PREPARED AND THRIVING HOUSTONIANS**

### **GOAL 1: WE WILL SUPPORT HOUSTONIANS TO BE PREPARED FOR AN UNCERTAIN FUTURE**

Action 1: Ensure Houstonians have the information, skills, and capacity, to prepare for any emergency they face

- Sub-action 1.1: Build community through preparedness and disaster literacy
- Sub-action 1.2: Grow climate risk awareness
- Sub-action 1.3: Improve mobility during emergencies
- Sub-action 1.4: Increase flood insurance coverage
- Sub-action 1.5: Develop cash and direct assistance programs for vulnerable populations during disaster recovery

Action 2: Mobilize Houstonians to adapt in the face of climate change

- Sub-action 2.1: Leverage private property with incentives for green retrofits
- Sub-action 2.2: Educate Houstonians on property maintenance
- Sub-action 2.3: Weatherize existing homes and properties

Action 3: Support small businesses to better withstand any disruption

## **RESILIENT HOUSTON DRAFT OUTLINE FOR FEEDBACK PURPOSES**

**SEPTEMBER 10, 2019 TO OCTOBER 1, 2019**

Action 4: Encourage Houstonians to shape the future of our city through community leadership and stewardship

- Sub-action 4.1: Increase Super Neighborhood Council representation
- Sub-action 4.2: Expand leadership and stewardship opportunities for Houston's youth
- Sub-action 4.3: Support community stewardship through a Resilience Ambassador program

## **GOAL 2: WE WILL INCREASE ACCESS TO OPPORTUNITIES TO BUILD WEALTH AND EMPLOYMENT FOR ALL**

Action 5: Maximize access to economic opportunity and prosperity for all Houstonians

- Sub-action 5.1: Support access to capital for all individuals and families
- Sub-action 5.2: Offer municipal identification to help more Houstonians access banking, jobs, and services
- Sub-action 5.3: Expand financial empowerment centers
- Sub-action 5.4: Advance local hire practices
- Sub-action 5.5: Encourage family-sustaining/living wage jobs for more Houstonians

Action 6: Provide opportunities for more Houstonians to start, maintain, and grow small businesses

- Sub-action 6.1: Work with small business coalition to conduct a resilience assessment
- Sub-action 6.2: Provide supportive programs for minority-owned and women-owned small businesses on commercial corridors
- Sub-action 6.3: Create a microloan program targeted at minority-owned and women-owned small businesses
- Sub-action 6.4: Create a grant or forgivable loan program targeted at minority-owned and women-owned small businesses
- Sub-action 6.5: Establish more cooperatively owned businesses

Action 7: Prepare Houston's workforce and all young Houstonians for the jobs of the future

- Sub-action 7.1: Create a commission that engages the public and private sectors to proactively address workforce opportunities
- Sub-action 7.2: Create career pathways in resilience-related industries
- Sub-action 7.3: Train and develop a green infrastructure workforce
- Sub-action 7.4: Prepare Houston's youth for jobs of the future

## **GOAL 3: WE WILL IMPROVE SAFETY AND WELL-BEING FOR ALL HOUSTONIANS**

Action 8: Make our streets 100% safe for all Houstonians

- Sub-action 8.1: Develop and implement a Vision Zero Action Plan that keeps all Houstonians safer
- Sub-action 8.2: Expand access to high-comfort bike lanes

**RESILIENT HOUSTON DRAFT OUTLINE  
FOR FEEDBACK PURPOSES  
SEPTEMBER 10, 2019 TO OCTOBER 1, 2019**

- Sub-action 8.3: Develop and implement a plan for pedestrians

Action 9: Shelter and house any Houstonian in need

- Sub-action 9.1: Expand and enhance the housing supply and access to supportive services
- Sub-action 9.2: Capture and reinvest cost savings created by supportive housing
- Sub-action 9.3: Make greater use of Medicaid services for supportive housing

Action 10: Integrate mental/behavioral health with preparedness, response, and recovery programs to improve the wellbeing of Houstonians

- Sub-action 10.1: Train more first responders in psychological first aid
- Sub-action 10.2: Increase mental/behavioral health training for young people

Action 11: Make a city more inclusive for Houstonians with different accessibility needs

Action 12: Foster age-friendly, livable communities to improve health and overall quality of life for an aging population

## **CHAPTER TWO: SAFE AND EQUITABLE NEIGHBORHOODS**

### **GOAL 4: WE WILL PLAN EQUITABLY FOR ALL NEIGHBORHOODS**

Action 13: Support equitable neighborhoods through community planning and programs

- Sub-action 13.1: Integrate resilience in Complete Community planning and implementation and pilot Resilience Districts
- Sub-action 13.2: Support neighborhood to develop their own Complete Community Action Plans
- Sub-action 13.3: Advance neighborhood scale planning with community partners.

Action 14: Accelerate investments in inclusive housing and neighborhoods

- Sub-action 14.1: Create an equitable housing and neighborhood development investment fund
- Sub-action 14.2: Leverage publicly-owned land to invest in neighborhoods
- Sub-action 14.3: Preserve community wealth and cohesion through Land Bank and Community Land Trust pilots
- Sub-action 14.4: Attract Opportunity Zone funds for transformative community development

Action 15: Launch an educational campaign that promotes the need for safe, secure, and affordable homes for all Houstonians

### **GOAL 5: WE WILL INVEST IN ARTS AND CULTURE TO STRENGTHEN COMMUNITY RESILIENCE**

**RESILIENT HOUSTON DRAFT OUTLINE  
FOR FEEDBACK PURPOSES  
SEPTEMBER 10, 2019 TO OCTOBER 1, 2019**

Action 16: Invest in local arts and culture to accelerate economic opportunity for all Houstonians.

- Sub-action 16.1: Grow the number of Arts Districts
- Sub-action 16.2: Establish a Percent for Arts program
- Sub-action 16.3: Launch a “Made in Houston” program to support local production

Action 17: Leverage arts and culture to build community resilience through engagement, education, and awareness of risks and resources.

- Sub-action 17.1: Partner with local arts institutions and artists to creatively engage Houstonians in risk awareness
- Sub-action 17.2: Promote creative STEAM-based learning methods to engage the next generation of climate leaders

**GOAL 6: WE WILL ENSURE THAT ALL NEIGHBORHOODS ARE HEALTHY, SAFE, AND CLIMATE-READY**

Action 18: Create healthy places to reduce the life expectancy gap

Action 19: Combat extreme heat and urban heat islands with proven tactics

- Sub-action 19.1: Launch an Urban Heat Island mapping campaign
- Sub-action 19.2: Expand cool and green roofs
- Sub-action 19.3: Pilot cool pavement
- Sub-action 19.4: Accelerate tree planting
- Sub-action 19.5: Shade structures

Action 20: Develop “Neighborhood Resilience Hubs”

- Sub-action 20.1: Leverage schools and other public facilities
- Sub-action 20.2: Advance “lily pad” concept

Action 21: Make Houston neighborhoods more green

- Sub-action 21.1: Make equitable Green Infrastructure investments
- Sub-action 21.2: Foster green and healthy homes

Action 22: Ensure all neighborhoods have access to quality parks and nature

- Sub-action 22.1: Launch 5050 Park Partners program to enhance our existing neighborhood parks
- Sub-action 22.2: Develop a park equity metric for new parks
- Sub-action 22.3: Increase young Houstonians access to nature
- Sub-action 22.4: Leverage schools and other public facilities as neighborhood oasis

Action 23: Invest in food equity through education, workforce development, and urban farming

## **RESILIENT HOUSTON DRAFT OUTLINE**

### **FOR FEEDBACK PURPOSES**

**SEPTEMBER 10, 2019 TO OCTOBER 1, 2019**

- Sub-action 23.1: Increase nutrition awareness and urban farming education in neighborhoods
- Sub-action 23.2: Promote urban farming and food production training in schools
- Sub-action 23.3: Eliminate food deserts in neighborhoods without access to quality fresh food
- Sub-action 23.4: Increase community gardens, fruit forests and community compost through partnerships

Action 24: Develop a comprehensive approach to prevent, mitigate, and recover from the effects of environmental injustice in our communities

### **GOAL 7: WE WILL INCREASE AFFORDABLE HOUSING AND MOBILITY OPTIONS FOR ALL COMMUNITIES**

Action 25: Build up, not out, to promote smart growth as Houston's population increases

- Sub-action 25.1: Integrate new forms of housing development such as Accessory Dwelling Units.
- Sub-action 25.2: Incentivize transit-oriented and trail-oriented development to improve connections between where Houstonians live and work
- Sub-action 25.3: Pilot Park & Ride transformations
- Sub-action 25.4: Build equitable development near transit
- Sub-action 25.5: Promote trail-oriented development

Action 26: Provide Houstonian neighborhoods with more mobility choices that help reduce the cost of living and improve their well-being.

- Sub-action 26.1: Connect all mobility options
- Sub-action 26.2: Improve last mile connections
- Sub-action 26.3: Provide transit options for affordable neighborhoods
- Sub-action 26.4: Reducing costs and barriers to greater mobility choices

## **CHAPTER THREE: HEALTHY AND CONNECTED BAYOUS**

### **GOAL 8: WE WILL RESTORE THE ENVIRONMENTAL AND HYDROLOGICAL FUNCTIONS OF THE BAYOUS AND THEIR WATERSHEDS**

Action 27: Live safely with water

- Sub-action 27.1: Make room for water
- Sub-action 27.2: Create a buy-in/buy-out program
- Sub-action 27.3: Use technology to manage water
- Sub-action 27.4: Clean Houston's bayous
- Sub-action 27.5: Improve water quality

Action 28: Reinforce the role of bayous as an integral part of Houston's urban nature

## **RESILIENT HOUSTON DRAFT OUTLINE**

### **FOR FEEDBACK PURPOSES**

**SEPTEMBER 10, 2019 TO OCTOBER 1, 2019**

- Sub-action 28.1: Create an ecosystem toolkit for bayou restoration
- Sub-action 28.2: Enhance ecological patches and corridors

### **GOAL 9: WE WILL LEVERAGE BAYOUS TOWARD COMMUNITY AND ECONOMIC BENEFITS**

Action 29: Leverage investments in the bayous for recreational and other community benefits

- Sub-action 29.1: Leverage investments in Buffalo Bayou by implementing the Buffalo Bayou Partnership's Buffalo Bayou East Expansion Plan
- Sub-action 29.2: Expand and enhance the Bayou Greenways 2020 linear park system.
- Sub-action 29.3: Prioritize recreational and environmental goals within flood projects.

Action 30: Encourage inclusive growth and economic development along bayou corridors

- Sub-action 30.1: Promote trail-oriented development
- Sub-action 30.2: Grow bayou tourism

## **CHAPTER FOUR: ACCESSIBLE AND ADAPTIVE CITY**

### **GOAL 10: WE WILL ADVANCE CITY LEADERSHIP TO TACKLE OUR GREATEST CHALLENGES OF THE FUTURE**

Action 31: Promote equity through citywide policies and programs

- Sub-action 31.1: Increase equity training opportunities
- Sub-action 31.2: Develop and adopt an equity framework
- Sub-action 31.3: Establish an equity indicators program
- Sub-action 31.4: Create an equitable policy analysis approach

Action 32: Adopt and implement the Climate Action Plan goals and actions to make Houston carbon neutral by 2050 in accordance with the Paris Agreement

- Sub-action 32.1: Shift to electric vehicles and low/no emission vehicles
- Sub-action 32.2: Increase renewable energy generated within Houston
- Sub-action 32.3: Expand investments in energy efficiency
- Sub-action 32.4: Reduce residential landfill waste

Action 33: Conduct a climate risk assessment to inform city and partner investments in Houston's future infrastructure

Action 34: Embrace the One Water movement to advance efficient, equitable, and sustainable management and development of water resources

- Sub-action 34.1: Coordination with local agencies
- Sub-action 34.2: Implement the city's Water Conservation Plan

## **RESILIENT HOUSTON DRAFT OUTLINE FOR FEEDBACK PURPOSES**

**SEPTEMBER 10, 2019 TO OCTOBER 1, 2019**

Action 35: Plan for the next million Houstonians by developing a citywide affordable housing and mobility strategy.

- Sub-action 35.1: Create a citywide comprehensive housing plan
- Sub-action 35.2: Incentivize denser urban infill development to reduce pressure on greenfield areas

## **GOAL 11: WE WILL MODERNIZE HOUSTON'S INFRASTRUCTURE TO BUILD FORWARD AND ADDRESS THE CHALLENGES OF THE FUTURE**

Action 36: Integrate green infrastructure into Houston's built environment

- Sub-action 36.1: Lead by example on green infrastructure
- Sub-action 36.2: Apply a resilient quotient to Green Stormwater Infrastructure projects
- Sub-action 36.3: Create a comprehensive nature-based solutions program
- Sub-action 36.4: Develop nature-based solutions pilot program
- Sub-action 36.5: Advance fee in lieu of detention program

Action 37: Advance and modernize building codes and standards to build forward

- Sub-action 37.1: Comprehensive review of current building codes
- Sub-action 37.2: Amend and enforce Chapter 42
- Sub-action 37.3: Review Chapter 19
- Sub-action 37.4: Adopt a 5-year review cycle
- Sub-action 37.5: Adopt resilient building criteria for city disaster recovery and capital projects
- Sub-action 37.6: Review watershed based regulations for detention and drainage requirements
- Sub-action 37.7: Identify additional critical facilities for additional fortification (i.e. senior housing, daycares, medical facilities, large shelters)

Action 38: Advance and modernize Houston's integrated resource recovery management

- Sub-action 38.1: Increase long-term landfill sustainability
- Sub-action 38.2: Develop cost recovery plan
- Sub-action 38.3: Advance multi-family and commercial recycling
- Sub-action 38.4: Support organizations that expand capacity for waste reduction through entrepreneurialism.

Action 39: The City will increase partnerships that create and incentivize infrastructure investment and maintenance.

- Sub-action 39.1: Obtain an accurate asset inventory and evaluate maintenance cycles
- Sub-action 39.2: Transfer of ownership and maintenance responsibilities
- Sub-action 39.3: Partnerships to enhance maintenance
- Sub-action 39.4: Educate the community with trash and debris pilot, adopt-a-drain, adopt-a-ditch programs

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### **FOR FEEDBACK PURPOSES**

**SEPTEMBER 10, 2019 TO OCTOBER 1, 2019**

- Sub-action 39.5: Partner for improved tree planting and maintenance

Action 40: Continue to implement the Houston Complete Streets and Transportation Plan (HCSTP)

- Sub-action 40.1: Implement the objectives of the Complete Streets and Transportation Plan Executive Order
- Sub-action 40.2: Build resilient roads
- Sub-action 40.3: Update HCSTP to incorporate green infrastructure priorities
- Sub-action 40.4: Explore adding a “dig once” policy to existing street cut requirements
- Sub-action 40.5: Coordinate Complete Street investments with Complete Communities

## **GOAL 12: WE WILL TRANSFORM CITY GOVERNMENT TO OPERATIONALIZE RESILIENCE AND INCREASE TRANSPARENCY AND TRUST**

Action 41: Make resilience a permanent part of Houston’s systems and services

- Sub-action 41.1: Grow the Mayor’s Office for Resilience to lead the implementation of Resilient Houston
- Sub-action 41.2: Appoint Departmental Chief Resilience Officers in every city department to coordinate resilience across departments.
- Sub-action 41.3: Track progress on the implementation of Resilient Houston through an annual report and a strategy update every five years
- Sub-action 41.4: Develop and lead a resilience advisory committee

Action 42: Advance resilience through city budgeting and develop public-private partnerships that fund resilience-building

Action 43: Reach all Houstonians through equitable community engagement

Action 44: Further diversify Houston’s boards and commissions

Action 45: Enhance multilingual communication and engagement opportunities to engage all Houstonians

- Sub-action 45.1: Enhance multilingual communication and engagement opportunities to engage all Houstonians
- Sub-action 45.2: Introduce culturally-informed disaster case management
- Sub-action 45.3: Grow our comprehensive language access program

Action 46: Leverage Smart Cities initiatives to address our most critical resilience challenges

Action 47: Advance open data policies for city and partner data, mapping, and dashboards

- Sub-action 47.1: Develop additional Open Data and mapping capabilities
- Sub-action 47.2: Develop dashboards to show the status of city goals
- Sub-action 47.3: Coordinate and collaborate on a resilience data network



## **CHAPTER FIVE: INNOVATIVE AND INTEGRATED REGION**

### **GOAL 13: WE WILL BUILD ON GREATER HOUSTON'S LEADERSHIP IN INNOVATION THROUGH CONTINUED INVESTMENT IN THE REGION'S DIVERSE ECONOMY**

Action 48: Leverage Houston's role as the global energy capital to lead innovation in the energy transition to renewable options

Action 49: Incubate, connect, and support new businesses in established and emerging industries to maintain Houston's regional, national, and global economic leadership

- Sub-action 49.1: Create connected, vibrant, live-work innovation districts that attract and retain top talent
- Sub-action 49.2: Increase connections between the members of Greater Houston's innovation ecosystem
- Sub-action 49.3: Support higher education institutions' investments in innovation and education access

Action 50: Work with major healthcare providers to further Houston's primacy within the healthcare industry

Action 51: Protect anchor institutions through resilience planning

### **GOAL 14: WE WILL COORDINATE REGIONALLY TO INCREASE TRANSPORTATION CHOICE**

Action 52: Work with regional partners to invest in an integrated mobility network

- Sub-action 52.1: Expand bikeshare in major activity centers and throughout the city
- Sub-action 52.2: Regulate the use of micro-mobility devices as a safe first and last mile solution
- Sub-action 52.3: Upgrade Houston's highway network with two-way HOV and HOT lanes
- Sub-action 52.4: Improve bicycle and pedestrian connections to METRO stations
- Sub-action 52.5: Expand Houston's high-comfort bike network and become a gold-level bike-friendly city
- Sub-action 52.6: Connect more communities to Houston's Bayou Greenways
- Sub-action 52.7: Develop an engagement framework with the Texas Department of Transportation (TxDOT) for major infrastructure projects
- Sub-action 52.8: Target Transportation Demand Management (TDM) programs to the area's largest employment centers

**RESILIENT HOUSTON DRAFT OUTLINE  
FOR FEEDBACK PURPOSES  
SEPTEMBER 10, 2019 TO OCTOBER 1, 2019**

Action 53: Support the METRONext Moving Forward Plan to help build Houston forward

Action 54: Identify value capture and dynamic pricing strategies to enhance regional transit infrastructure

- Sub-action 54.1: Leverage METRO's joint development process that includes ground leases, air rights, and enhanced bonding capacity
- Sub-action 54.2: Unbundle parking costs
- Sub-action 54.3: Coordinate with HGAC to leverage regional and state financing tool

**GOAL 15: WE WILL MANAGE OUR WATER AND LAND RESOURCES HOLISTICALLY SO OUR ENVIRONMENT AND HOUSTONIANS CAN THRIVE**

Action 55: Use nature-based solutions to reduce the impacts of flooding and extreme heat, improve regional air quality, and support sedimentation capture and erosion control

- Sub-action 55.1: Develop a regionally focused nature-based infrastructure research and innovation lab
- Sub-action 55.2: Advance watershed thinking
- Sub-action 55.3: Improve sedimentation control

Action 56: Preserve regional lands for flood mitigation, environmental health, and recreation

- Sub-action 56.1: Conserve city park land as nature preserves
- Sub-action 56.2: Promote and incentivize private land conservation
- Sub-action 56.3: Acquire, restore, and preserve land resources

Action 57: Encourage multiple lines of defense on the Gulf Coast by advancing coastal resilience and restoration through innovation and investments

**GOAL 16: ENHANCE REGIONAL PREPAREDNESS FOR AND RESPONSE TO EMERGENCIES THROUGH COORDINATION AND COLLABORATION**

Action 58: Enhance regional preparedness

- Sub-action 58.1: Improve effectiveness of regional emergency alert system
- Sub-action 58.2: Prepare for hostile threat emergencies
- Sub-action 58.3: Promote Ready Houston

Action 59: Increase protection of critical digital assets from cyberattacks

- Sub-action 59.1: Houston UASI regional cybersecurity tool suite
- Sub-action 59.2: Solidify the regions cyber security posture through a shared source
- Sub-action 59.3: Leverage Cyber Houston as the Houston region's trusted cyber resource center
- Sub-action 59.4: Grow the annual Houston cyber summit

## **RESILIENT HOUSTON DRAFT OUTLINE FOR FEEDBACK PURPOSES**

**SEPTEMBER 10, 2019 TO OCTOBER 1, 2019**

- Sub-action 59.5: Promote cyber preparedness assessment online tool
- Sub-action 59.6: Engage additional partners in Cybersecurity Leadership Forum opportunities

Action 60: Improve emergency response and post-disaster follow up

- Sub-action 60.1: Grow Community Emergency Response Teams (CERT)
- Sub-action 60.2: Improve hazardous materials management
- Sub-action 60.3: Improve regional response to and enforcement of environmental emergencies
- Sub-action 60.4: Improve enforcement of air quality regulations through enhanced coordination and collaboration with TCEQ

Action 61: Further our regional asset management program and critical infrastructure catalog

### **GOAL 17: LEVERAGING EXISTING INVESTMENTS TO ACCELERATE IMPLEMENTATION OF RESILIENCE PROJECTS THROUGH PARTNERSHIPS**

Action 62: Leverage Hurricane Harvey recovery efforts to accelerate the implementation of resilience measures

- Sub-action 62.1: Make housing equitable and resilient through recovery Investments
- Sub-action 62.2: Incorporate resilient design into hazard mitigation projects
- Sub-action 62.3: Prioritize and invest in resilient infrastructure
- Sub-action 62.4: Transform city assets
- Sub-action 62.5: Enhance communication on recovery
- Sub-action 62.6: Plan for recovery from future disasters
- Sub-action 62.7: Partner with regional, state and Federal entities to expedite delivery of recovery programs

Action 63: Leverage planned and proposed transformative regional projects to increase resilience

- Sub-action 63.1: Leverage all regional transportation planning, including the proposed I-45 expansion to increase mobility, equity, and resilience
- Sub-action 63.2: Advance a resilient Houston Ship Channel Improvement Project
- Sub-action 63.3: Integrate nature-based solutions to storm surge protection projects
- Sub-action 63.4: Invest in coastal protection infrastructure

Action 64: Advocate for addressing legal and legislative barriers to resilience with local, state, and Federal partners

Action 65: Learn with and from other cities on resilience through leadership and participation in local, national and global networks and partnerships

- Sub-action 65.1: Lead through membership in 100 Resilient Cities Network, C40 and other national and global networks

**RESILIENT HOUSTON DRAFT OUTLINE  
FOR FEEDBACK PURPOSES  
SEPTEMBER 10, 2019 TO OCTOBER 1, 2019**

- Sub-action 65.2: Align resilience actions with The United Nations' Sustainable Development Goals
- Sub-action 65.3: Continue resilience and recovery exchange with New Orleans
- Sub-action 65.4: Further partnerships with international partners to build greater resilience

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