

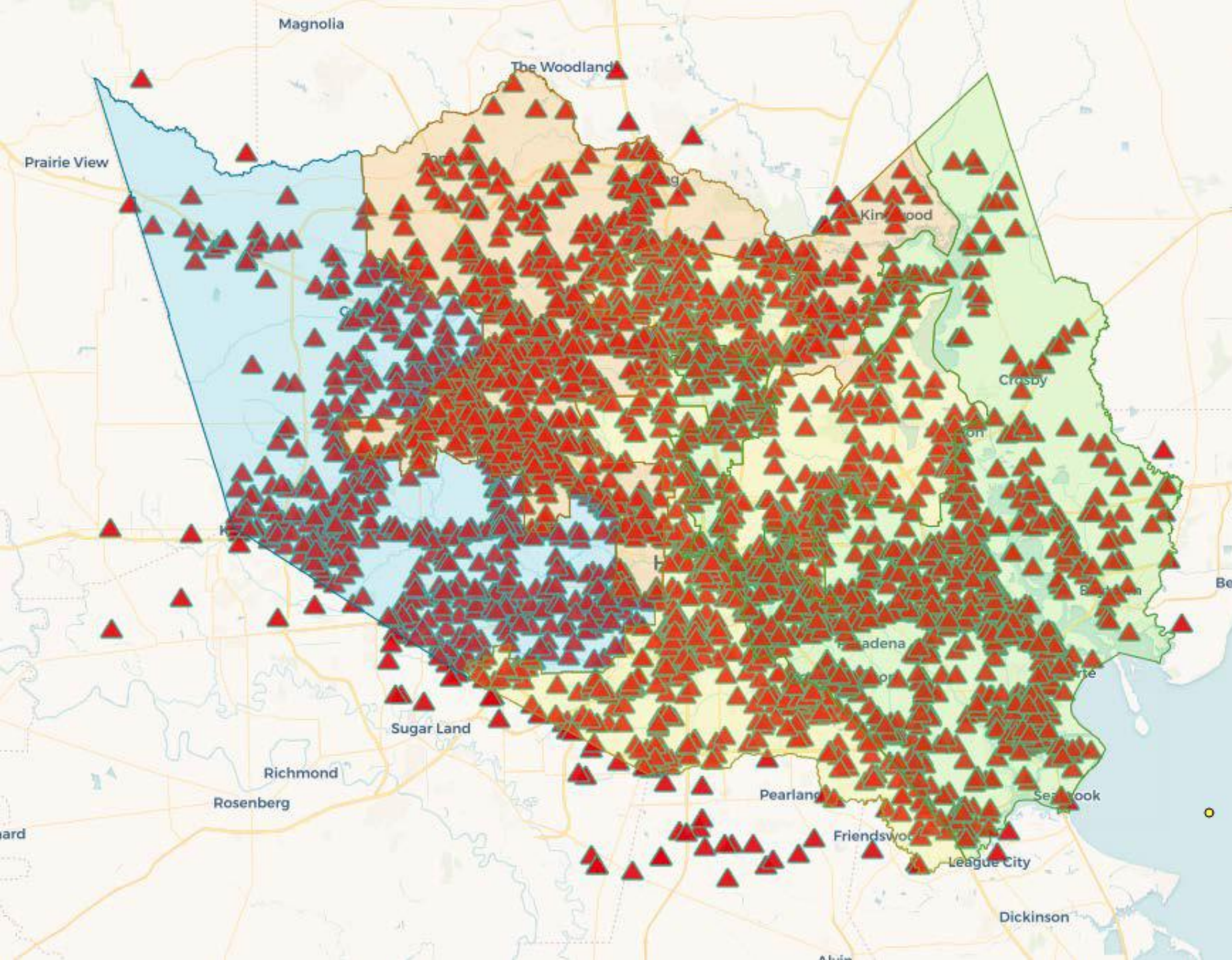


# ResilientAmerica

**Motivating Local Action to Mitigate Climate  
Threats and Build Resilience**

Tuesday, May 25, 2021

Dr. David Abraham



*Figure 1:  
2,927 Facilities Reporting under the  
Emergency Planning and Community  
Right to Know Act.*

*Of these facilities 1,734 reported that they  
had Extremely Hazardous Substances  
(EHSs) on their site  
(Source, Harris County 2019)*



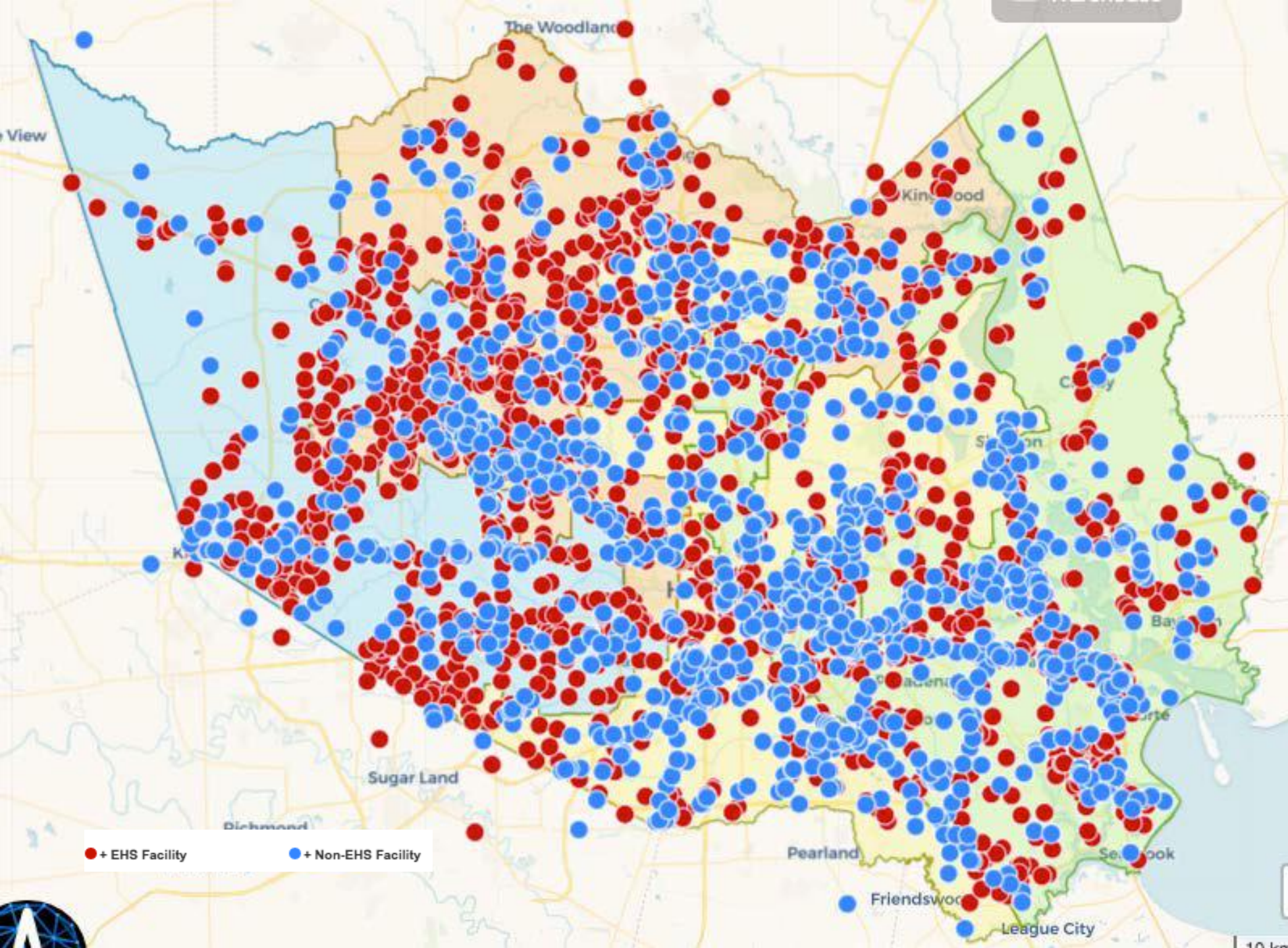
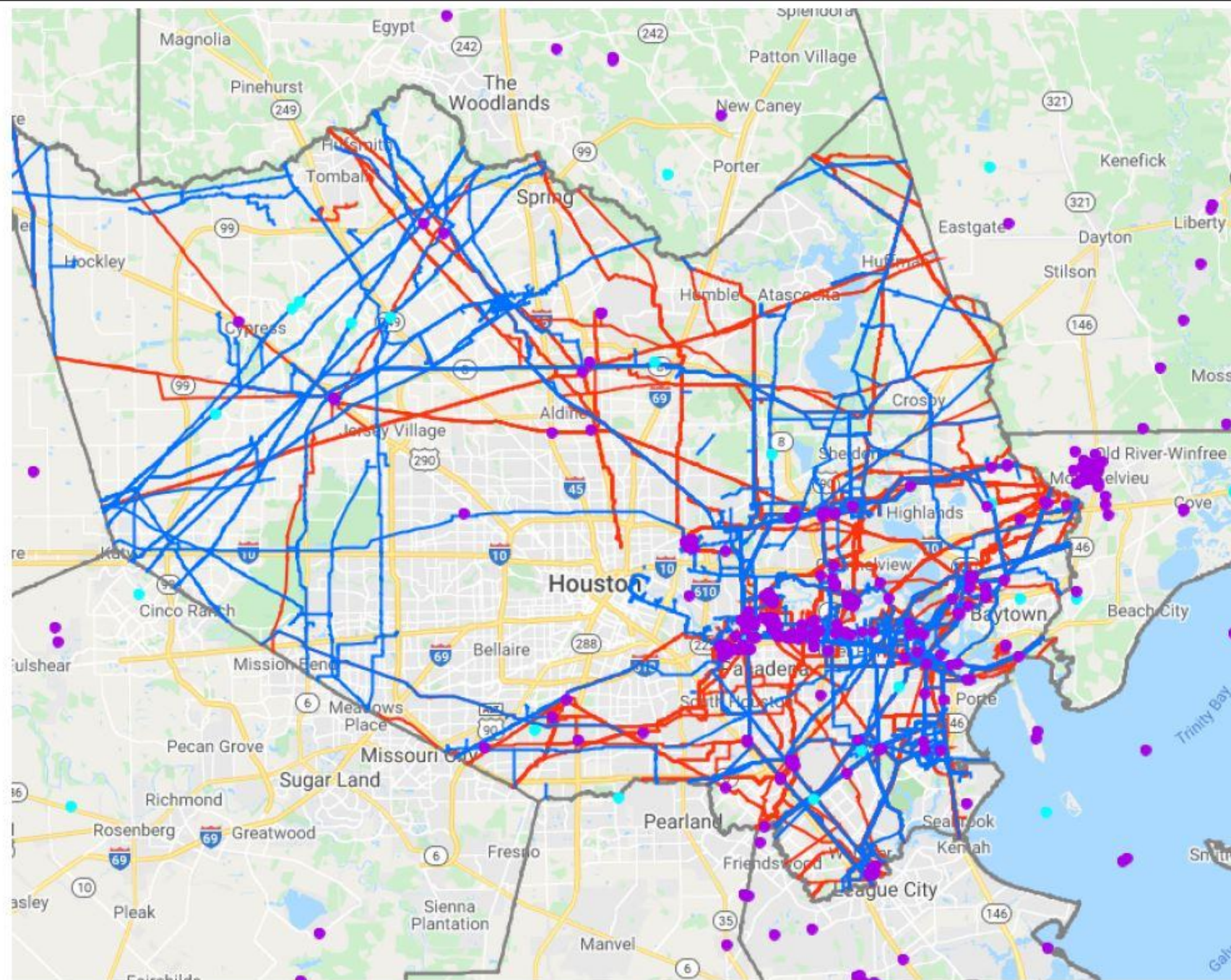


Figure 2:  
1,734 EHS Facilities vs 1,193 Non-  
EHS facilities reporting under EPCRA  
(Source, Harris County 2019).









## Legend

- Accidents (Liquid)
- Incidents (Gas)
- Gas Transmission Pipelines
- Hazardous Liquid Pipelines
- County Boundaries



Pipelines depicted on this map represent gas transmission and hazardous liquid lines only. Gas gathering and gas distribution systems are not represented.

This map should never be used as a substitute for contacting a one-call center prior to excavation activities. Please call 811 before any digging occurs.

Questions regarding this map or its contents can be directed to [npsms@dot.gov](mailto:npsms@dot.gov).

Projection: Geographic

Datum: NAD83

Map produced by the Public Viewer application at [www.npsms.phmsa.dot.gov](http://www.npsms.phmsa.dot.gov)

Date Printed: May 08, 2020



[Figure 4:  
Gas and  
Hazardous  
liquid  
pipelines in  
Harris  
County

## Workshops Objectives:

Determine *unmet applied research needs* about *motivating local action* to promote hazard mitigation and resilience, that are:

- Practical, achievable, *sustainable solutions* that are transferrable, scalable
- Emphasis on *community-engaged research*
- Considers the framing assumptions of:
  - *equity*,
  - *applicability* and *affordability* at a local level,
  - *economically feasible* and *justifiable*,
  - and support *resilience education* and *knowledge transfer*.



### **1970 - National Environmental Policy Act (NEPA)**

A national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man...

### **1973 – Resilience (C.S. Holling)**

"...a measure of the persistence of systems and of their ability to absorb change and disturbance and still maintain the same relationships between populations or state variables."

### **1986 - Emergency Planning & Community Right-to-Know Act (EPCRA)**

Help local communities protect public health, safety, and the environment from chemical hazards. The intent of EPCRA is to have the Local Emergency Planning Committees, identify vulnerable areas around hazardous facilities and to develop protective community strategies.

### **1987 - Sustainable Development**

Development which meets the needs of the present generation without compromising the ability for future generations to meet their own needs.

1970 – 2021 **51** years later – NASEM Workshop

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**Funding Problem!**

**Recommendation:** Put out research grants to develop a suite of best practices sustainability solutions for different types of hazards and contexts!

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**Governance Model Problem!**



## At the table...

### Plan Coordinator:

- Office of Emergency Management

### Primary Agencies:

- Fire Department
- Homeland Security
- Local Emergency Planning Committee

### Resources – State & Federal:

- Texas Comm. on Environmental Quality
- General Land Office
- Texas Attorney General Office
- Texas Department of Emergency Mgmt.
- Texas Department of Insurance
- Center for Disease Control & Prevention
- Occupational Safety & Health Admin
- Department of State (*foreign vessels*)
- Department of Transportation
- Environmental Protection Agency
- FEMA
- Department of Energy
- Department of the Interior
- Coast Guard

### Support Agencies:

- Appraisal District
- City Attorney
- Education: day care, K12, higher ed
- Elected Officials
- Flood Control
- Forensic Institute
- Health & Human Services
- Hospitals, SETRAC
- HGAC, Chambers of Commerce
- Industry/Private Sector
- Law Enforcement
- Mayor's Office
- Transportation: Metro, RR, TxDOT
- National Weather Service
- Nongovernmental Organizations (NGO)
- Pollution Control
- Port Authority
- Public Works
- Texas Workforce Commission
- U.S. Army Corps of Engineers
- Utilities, Water, Power, NG, Cable, Phone

...and others



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**Governance Model Problem!**

**Recommendation:** *Establish and FUND* Local Emergency Planning Committees at the Community Level. Following the EPCRA Act, but also composed of community members and *funded*.



## Economic Governance

Local property can be successfully managed by local commons without any regulation by central authorities or privatization. – Elinor Ostrom, 2009

### **Traditional Approach**

- Need for central government to protect the public commons.

### **Ostrom's Contribution**

- Organized local level groups are better suited to manage some resources than central government.



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**Recommendation: Trusted Community Engagement!**

- Funded Community level Engagement
- Funded Community level Organizing
- Funded Community level Planning

# Sustainable Development

Development that meets the needs of the present without compromising the ability of future generations to meet their own needs (WCED 1987)



DEFINING NEEDS &  
ASPIRATIONS VS WANTS



Abraham Maslow, the American humanist psychologist.



The hierarchy of needs as proposed by Maslow.



# SUSTAINABLE DEVELOPMENT GOALS

