

Disaster Assessment and Recovery - Mitigation

Planning ~ Green Infrastructure ~ CHARM

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History of service

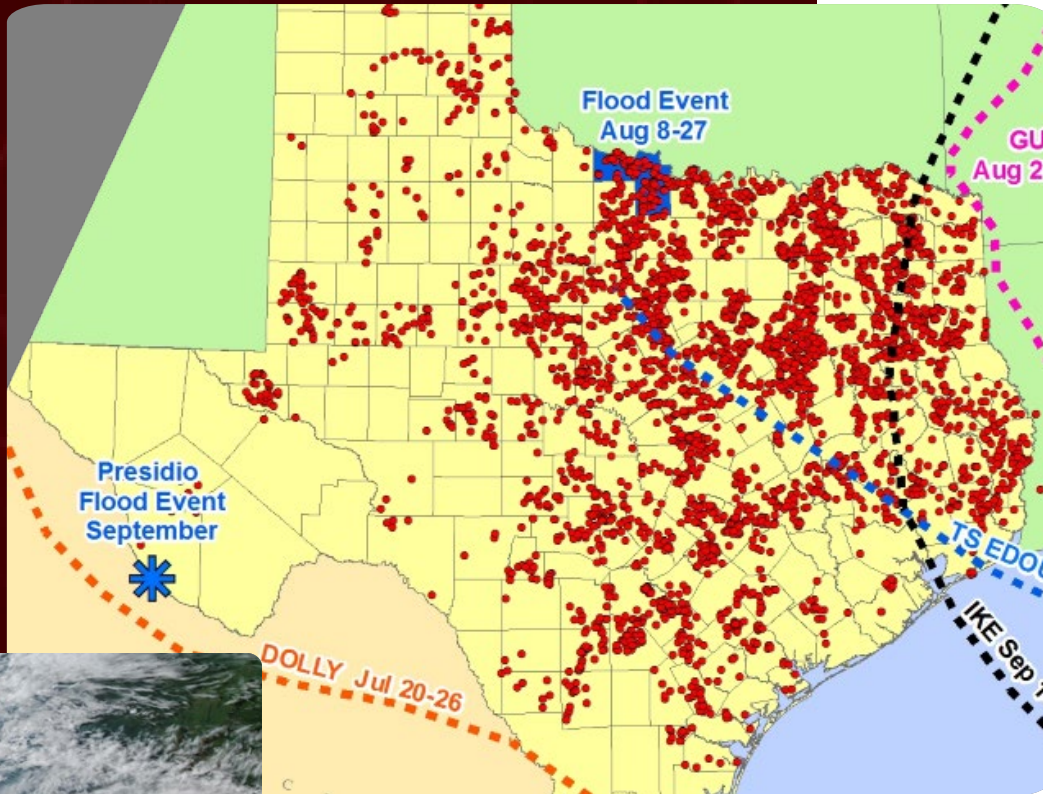
Extension provided support without an official unit or agency structure around emergency management

DAR Unit Established in 2019

In the 86th Texas Legislative Session with 19 Agent Positions

Continued Expansion

DAR now has 27 agents across the state as well as the Mitigation Branch in Clear Lake



Prepare

Getting ready for the next disaster.

Respond

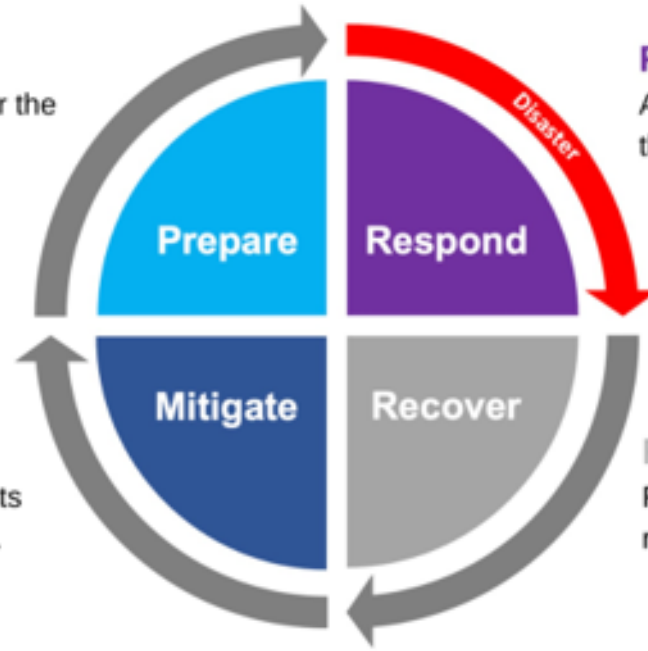
Addressing immediate threats.

Mitigate

Reducing impacts of future threats.

Recover

Rebuilding to be more resilient.



Preparedness, Response, Recovery

- Preparedness – emergency kits, making a plan, staying informed
- Response – deploy throughout the State and nation as support
 - Agriculture and Natural Resources lead - animal supplies and sheltering, animal health, soil and water testing
- Recovery - agricultural losses, land and water remediation, educational support



DAR Specialists

H-GAC Region

- Austin, Colorado, Fort Bend, Matagorda, Wharton
Stephen Burnett, Stephen.burnett@ag.tamu.edu
- Brazoria & Galveston
Will Stephens, will.stephens@ag.tamu.edu
- Chambers & Harris
Phoenix Rogers, phoenix.rogers@ag.tamu.edu
- Liberty, Montgonery, Walker, Waller
Cody Allen, cody.allen@ag.tamu.edu



DAR Mitigation

**More Mitigation Measures,
More Savings**



**\$1 invested in mitigation =
\$13 U.S. saves in future costs**



Green infrastructure for Texas

CHARM Tools

CHARM Planning

Green Infrastructure for Texas

Promoting nature-based solutions that are intended to work in conjunction with built drainage systems to meet the needs of communities in Texas.



AgriLife.org/GIFT



Green Infrastructure for Texas

Education



On-the-ground
Projects



Applied Research



Green Infrastructure for Texas

Site Scale



Address runoff from a single site. Is appropriate for both new developments and retrofits. Bioswales, pervious pavement, bioretention.

Mid-Scale



Neighborhood sized projects that reduce stormwater quantity and improve water quality. Construct wetlands, conservation subdivisions.

Large Scale

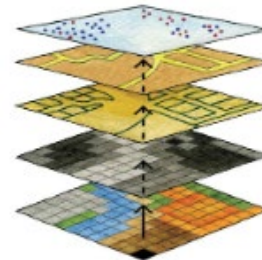


Conservation, restoration, and preservation of large tracts of land that provide ecological services.



Community Hazards and Resource Management

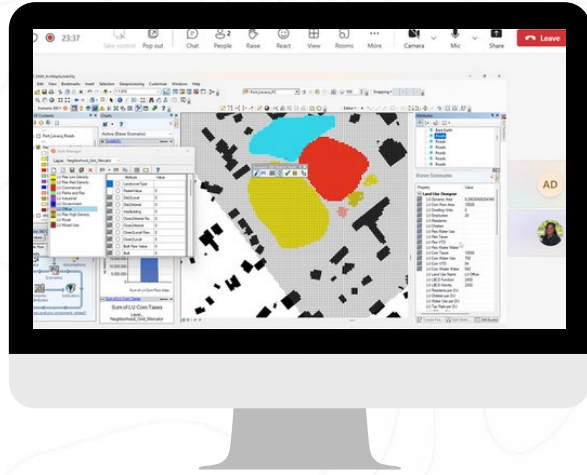
Mapping tools for **local officials** to create **planning scenarios** that are **complex and dynamic** with immediate results.



communitycharm.org

CHARM

Software Products

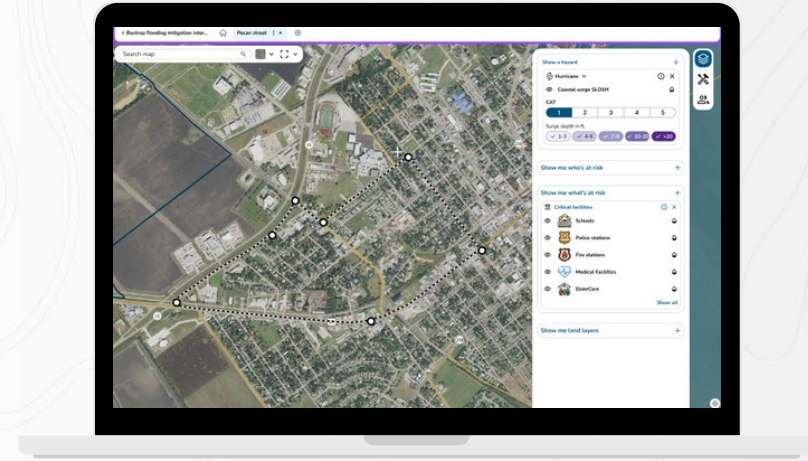


CommunityViz

Geospatial planning platform that works with ArcGIS Pro to provide:

- scenario modeling
- visualization
- analysis

Provides a way to translate complex data into actionable insights.



CHARM Studio (in development)

The CHARM web app.

Interactive planning and engagement platform that provides:

- data,
- visualization,
- collaboration

Simplifies complex information into accessible tools that drive collaboration and impact.

CHARM

Data Products

DATAGRID

- **Spatial Foundation:** Organizes data into a grid of cells for easy analysis
- **Unified Framework:** Links diverse datasets (environmental, flood, demographics, SOVI) using a common ID system
- **Ready-to-Use Data:** Provides consistent, curated data for planners without needing GIS expertise
- **Supports CHARM & CommunityViz :**
- Powers both platforms with the same reliable data backbone
- **Scalable & Consistent:** Works across regions and communities, ensuring standardized insights
- **Built for Collaboration & Growth:** Enables shared understanding and supports future AI and machine learning features

DATAGRID Portal (in development)

- **Custom Study Areas:** Users can select, draw, or import their area of interest
- **On-demand Geodatabase Creation:** Automatically generates a curated dataset tailored to the selected area
- **Compatible with CommunityViz Workflows:** Ensures compatibility with existing workflows and planning tools
- **Streamlined Clip -and -Ship Process:** Fast, user-friendly experience for accessing localized data
- **Supports CHARM & Local Planning:** Ready-to-use data integrates seamlessly into CHARM or desktop workflows
- **Accelerates Planning & Decision -Making:** Saves time and reduces technical barriers for planners and stakeholders



CHARM Planning Workshops



CHARM Workshops

Dialogue and discovery about local issues and priorities



Project Identification

Continued project identification and prioritization using CHARM



Technical Assistance

Short-term mentoring and technical services to support action

Partner with us

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