

BUILDING RESILIENT LRGV COMMUNITIES EMPOWERING LOCAL PLANNING WITH

2026 Regional Small Cities Coalition Meeting
August 4, 2026

AMANDA CAIN, CFM
Resilience Planner
Disaster Assessment & Recovery Unit
DAR Mitigation Branch

TODAY'S DISCUSSION

- DAR Overview
- What is CHARM?
- Putting Data in Local Hands
- Participatory Mapping: CHARM Demos
- Other Programs
- Future of CHARM

TEXAS A&M
AGRI LIFE
EXTENSION

DISASTER ASSESSMENT
AND RECOVERY

RESPONSE & RECOVERY

MITIGATION



DAFOVERVIEW

Planning, Preparedness, & Mitigation (Blue Sky)

- Resiliency Workshops, Preparedness Education, & Programmatic Outreach Support

Response and Recovery (Gray Sky)

- Deploy throughout the State and Nation in support of various incidents.
- Lead Agency for ESF-11 (Agriculture and Natural Resources)
- Support Recovery Efforts throughout COADS/VOADS/LTRG etc.



More Mitigation Measures, More Savings



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



DAR Mitigation

- Green Infrastructure for Texas
- CHARM Tools
- CHARM Planning

What is CHARM?

CHARM

Community
Hazard
and
Resource
Management



The CHARM Approach



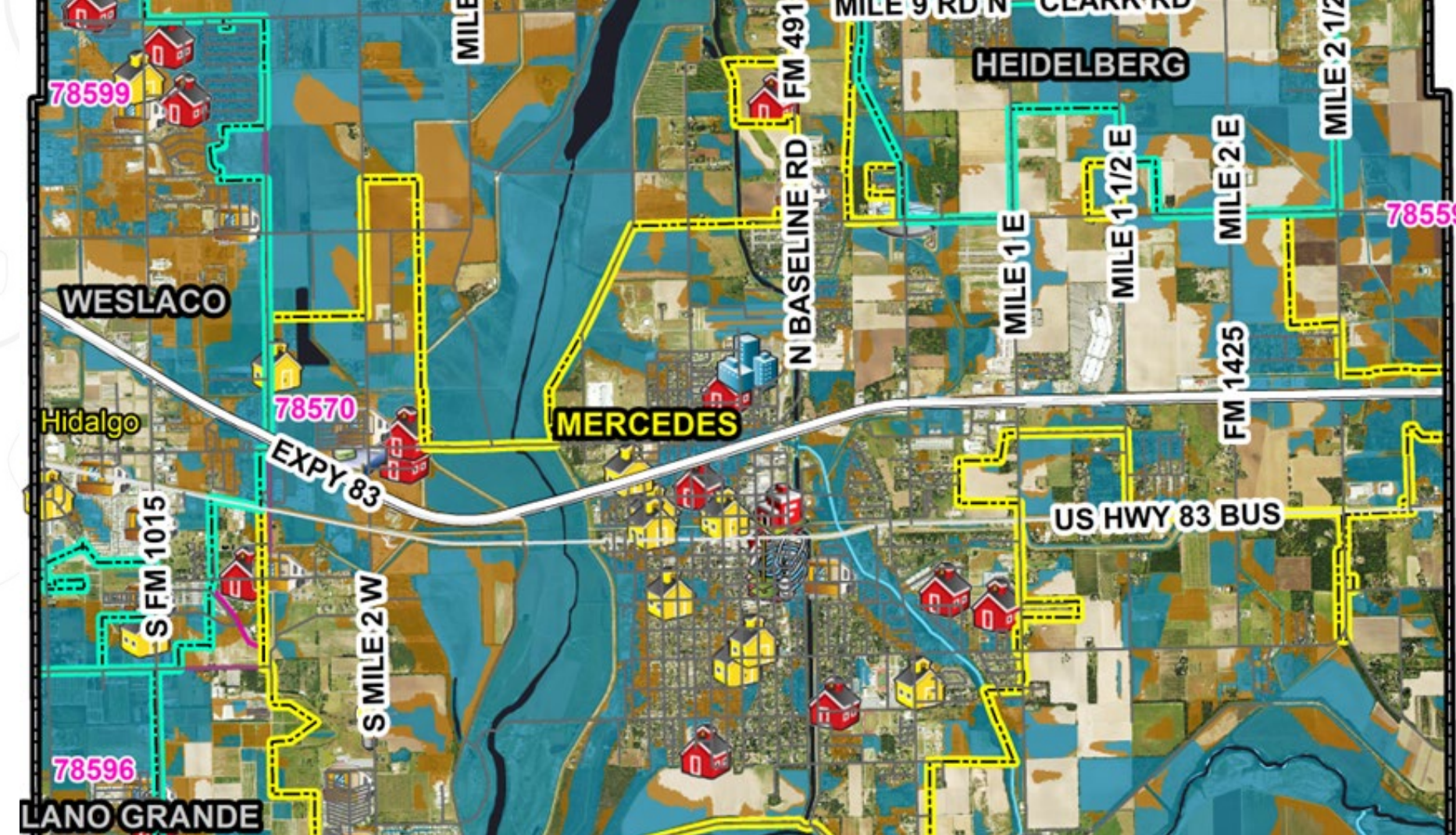
CHARM Workshops

Dialogue and
discovery about
local issues and
priorities



Making the Information Accessible

- Translate engineering models and technical data into digestible information that others can use
- Empower local decision -makers with clear, accurate risk data
- Moving beyond technical jargon to build consensus on infrastructure needs





Putting Data in Local Hands

Meeting Communities Where They Are

- No one-size-fits-all approach
- Shift from passive conversations to active collaboration
- Adapt to unique local needs and capacities



Capturing Lived Experiences

- Ground -truthing models with lived experience
- Establishing baseline data before the disaster hits (when we can!)
- Identifying actionable steps a community can take (from low-hanging fruit to multi-year capital improvement projects)



Cameron

Resiliency Workshop Report
April 5-6, 2022

PORT



Smart Home America: Willacy County

Workshop Report
August 31, 2023

Texas A&M AgriLife Extension Service

The C
Project



PARTICIPATORY MAPPING: CHARM DEMOS

Participatory Mapping CHARM Demo:

Visualizing Flood Risk

Base Scenario

Scenarios Tags Data Charts Assumptions Indicators Attributes SavedViews Analysis Settings Update Analysis View in 3D Help Templates Paint Style Manager Suspend Updates Suitability Land Use Designer Allocator BuildOut

CViz Pro Active Scenario Analysis Components Analysis Utilities Analysis Sketch Guided Analysis Modeling

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Drawing Order

☒ Critical Facilities

☒ Open Water

☐ Stream

☐ Zipcode

☒ Local Data

☒ Demographics

☐ Census Block

☐ Census Block Group

☐ Census Tract

☐ Estimated Population Per Cell

☐ Estimated Homes Per Cell

☐ Age 65 or over per Block Group

☐ Age 17 or under per Block Group

☐ Per Capita Income per Block Group

☐ Below Poverty

☐ People with No High School Diploma per Block Group

☐ Single Parent Households per Block Group

☐ Limited English Households per Block Group

☐ Mobile Homes per Block Group

☐ No Vehicle Access Household per Block Group

☒ Land Use and Density

☐ Building Footprints

☒ Housing Density per Acre

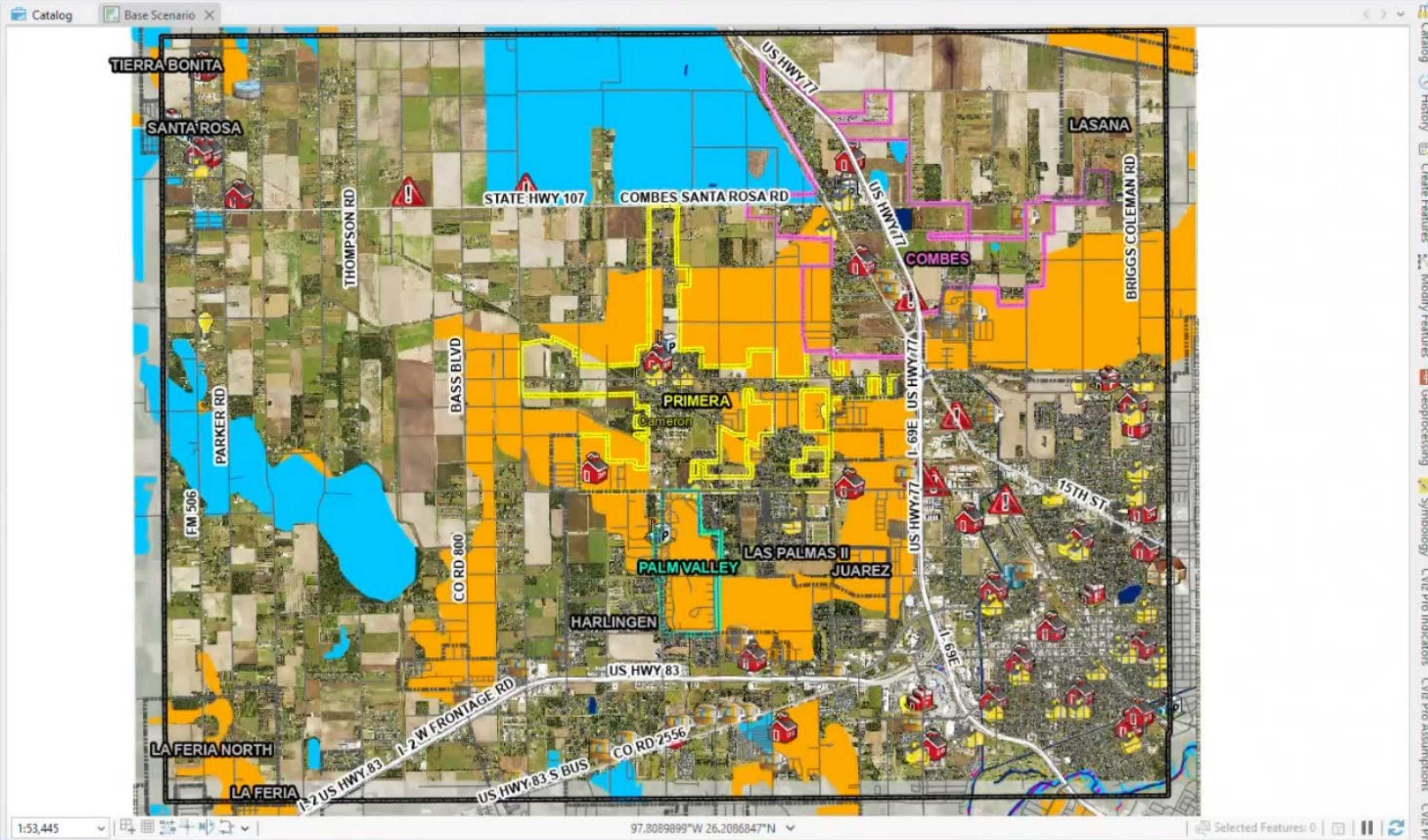
☐ Parcels

☐ Land Coverage Intensity

☐ Undeveloped

☒ Landscape and Habitat

☐ Elevation



Participatory Mapping CHARM Demo:

Discovery Flooding



Turning Input into Resilient Outcomes

- **Local knowledge** validates and improves technical data
- **Pre-disaster relationships** can speed up post -disaster recovery
- **Empowered communities** build resilient systems



Green Infrastructure for Texas

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

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

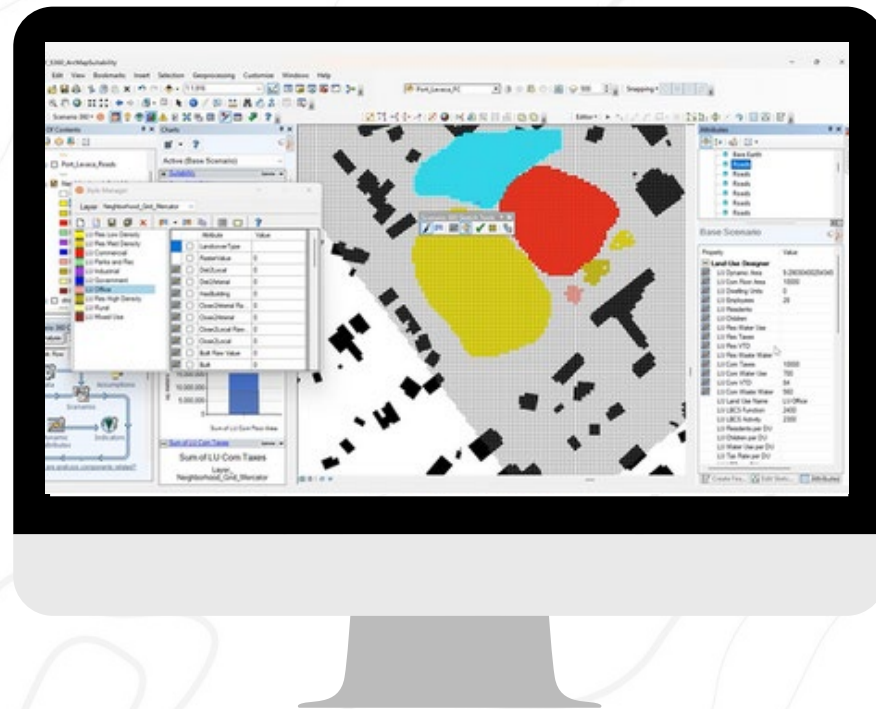


Conservation, restoration, and preservation of large tracts of land that provide ecological services.

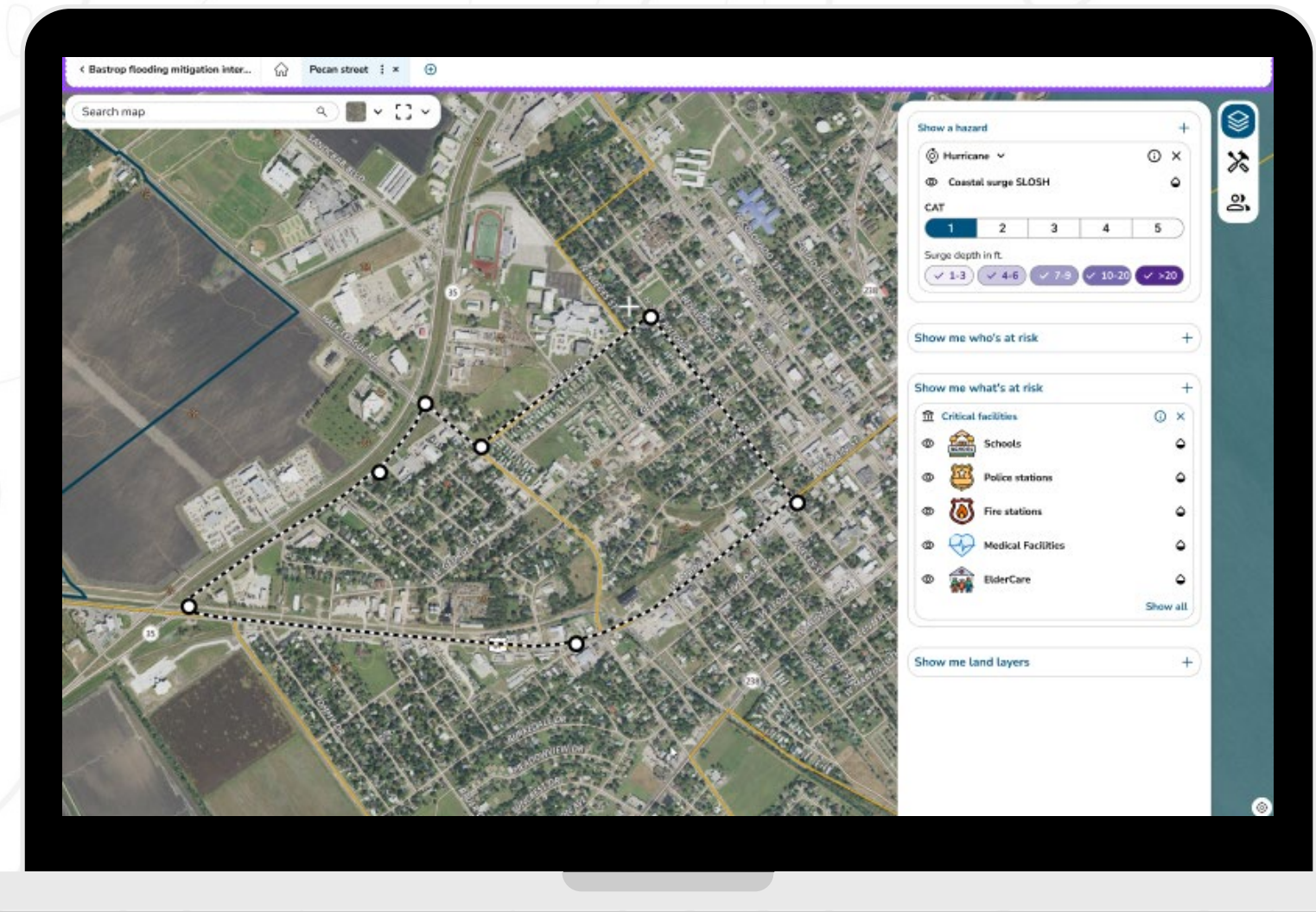


The Future of CHARM

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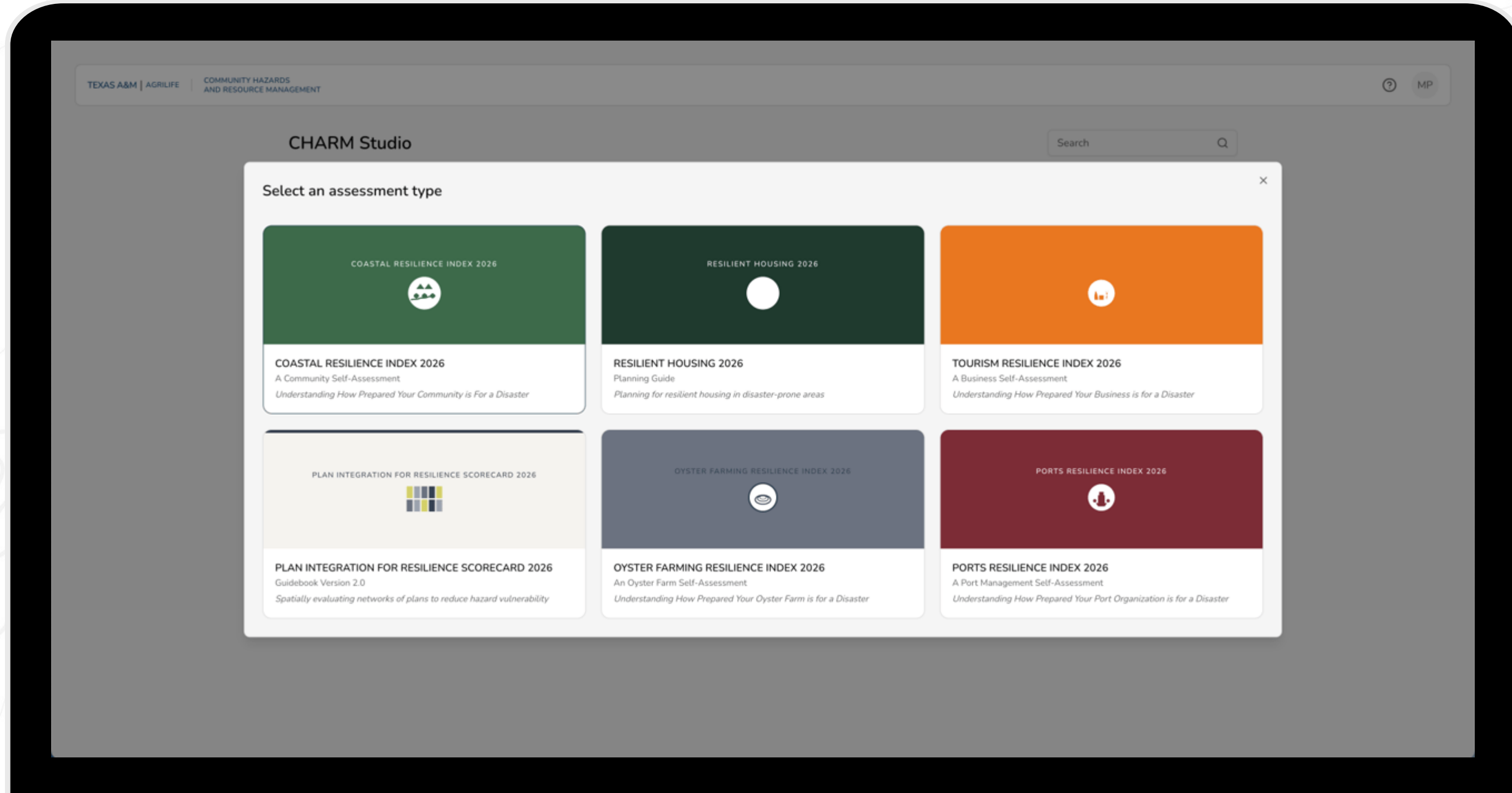


CommunityViz for ArcGIS Pro



CHARM Online Studio
Scaling Our Impact

CHARM Online Studio





**DISASTER ASSESSMENT
AND RECOVERY**

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