Presentation Resources

GLO Disasters Page

GLO-CDR GIS Hub

Leveraging Technology in Disaster Recovery:

Advancing Fiscal Responsibility Through Innovation Stewardship

Thursday, November 7, 2025

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Overview

1. Texas GLO-CDR Department
2. Definitions & Goals
3. Innovation Stewardship
4. Texas GLO-CDR Transformation of Process

Texas GLO, Community Development & Revitalization Department

Texas General Land Office

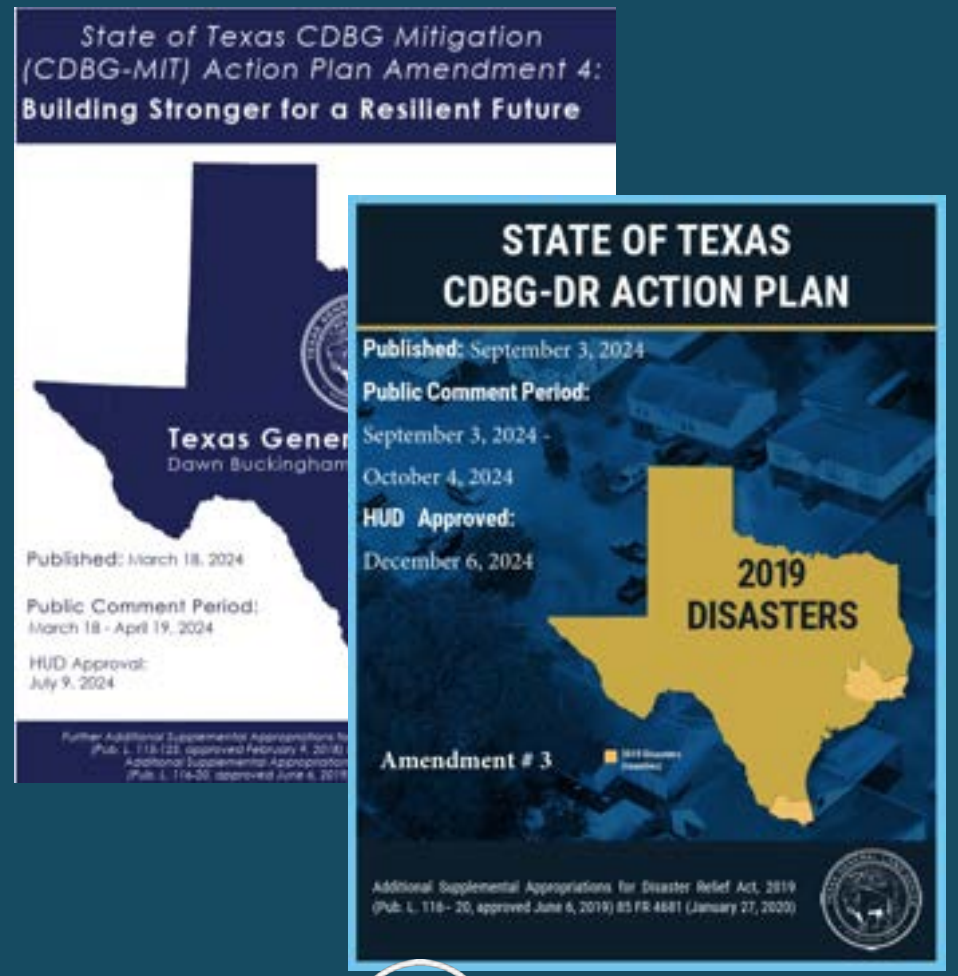
Community Development and Revitalization (CDR) Department

Disaster recovery and mitigation funds to help communities recover after a disaster.

Funds part of the U.S. Department of Housing and Urban Development's (HUD) Community Development Block Grant (CDBG) program.

CDR Grant Portfolio

More than $14.8 billion in HUD CDBG-DR/MIT funds for disasters dating back to 2005



CDBG-DR ($10.5 Billion) to Recover From:

- Hurricanes Rita, Dolly, Ike, and Harvey
- 2011 Wildfires
- 2015 and 2016 Storm and Flood Events
- 2018 South Texas Floods and 2019 Disasters
- 2021 Winter Storms
- 2024 Disasters

CDBG Mitigation Funds ($4.3 Billion):

- 2015, 2016, Harvey (2017), and 2018

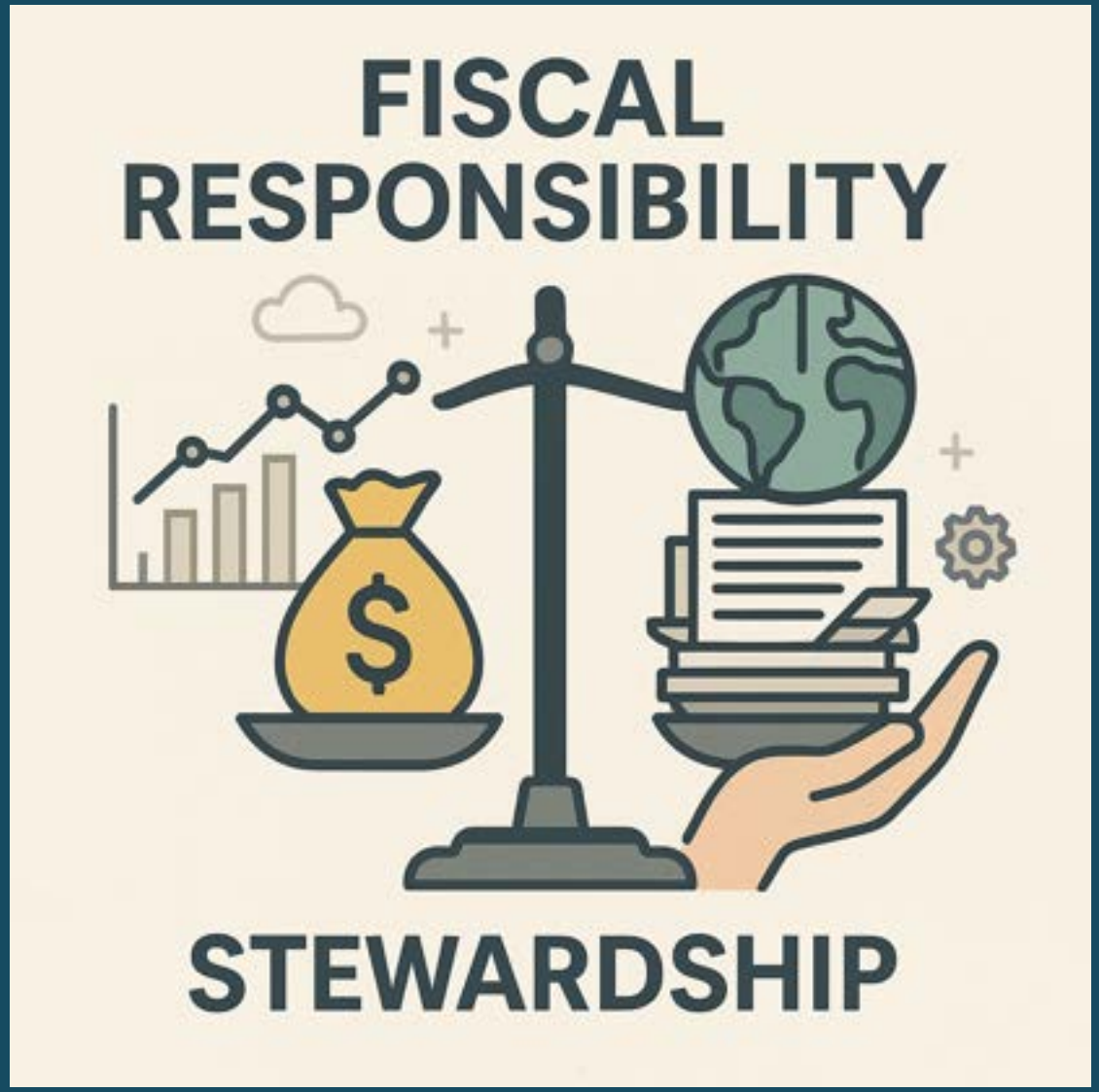
Definitions & Goals

Definitions

Presentation Title Components

- **Fiscal Responsibility**: Efficient, transparent, and strategic use of public funds to maximize impact, ensure accountability, and build long-term resilience in disaster recovery and mitigation efforts (1).

- **Stewardship: R**esponsible and forward-looking management of public resources to appropriately serve both current and future needs, while ensuring long-term value, trust, and accountability (2).



Bottom Line

- **Bottom Line (Private Sector)**: Net profit of a company after all expenses have been deducted from revenue—used as a key measure of financial performance and business success.

- **Bottom Line (Government Sector)**: Value delivered to the public through effective, efficient, and unbiased use of resources—measured by outcomes, impact, and trust rather than profit.

Definition

Innovation Stewardship (*John Kao*)

- **Stewardship over Governance**: Emerges through representative, strategic collaboration across diverse stakeholders.
- **Top-Down and Bottom-Up**: Requires empowered leadership and bottom-up insight from those closest to the work (*context*).
- **Conceptual to Practical**: Connects big ideas to real outcomes by balancing creativity with structure and guiding diverse input toward clear goals.

Balancing Innovation & Accountability

The Fiscal Steward Challenge

⚖️ Urgent need for faster, smarter disaster response

🧱 Regulatory frameworks can lag behind emerging tools

🛠️ Tools exist, but adoption is uneven

🔄 Balancing process transformation with fiscal responsibility

🏛️ Public trust requires accountability and transparency

Texas GLO-CDR
Transformation of Process

Framework: Innovation & Fiscal Stewardship

Evolving Approach to the Solution

- Integrate appropriate technology
- Enable adaptability and ongoing evolution
- Drive process transformation
- Leverage leadership commitment to streamline operations
- Improve efficiency

The Business of the GLO

- Determining Applicant/Project Eligibility
  - Low- and Moderate-Income (LMI) Summary Data (HUD – LMISD)
- Environmental Review
- Documenting Beneficiaries
  - Census/ACS data
- Scoring Applications
- Tracking Progress/Documenting Expenditures/Grant Reporting
  - TIGR & DRGR

Leveraging Existing Assets

ESRI

- ArcGIS Pro
- AGOL
- Hub (Basic & Premium)
- Survey123
- Dashboard
- Experience Builder

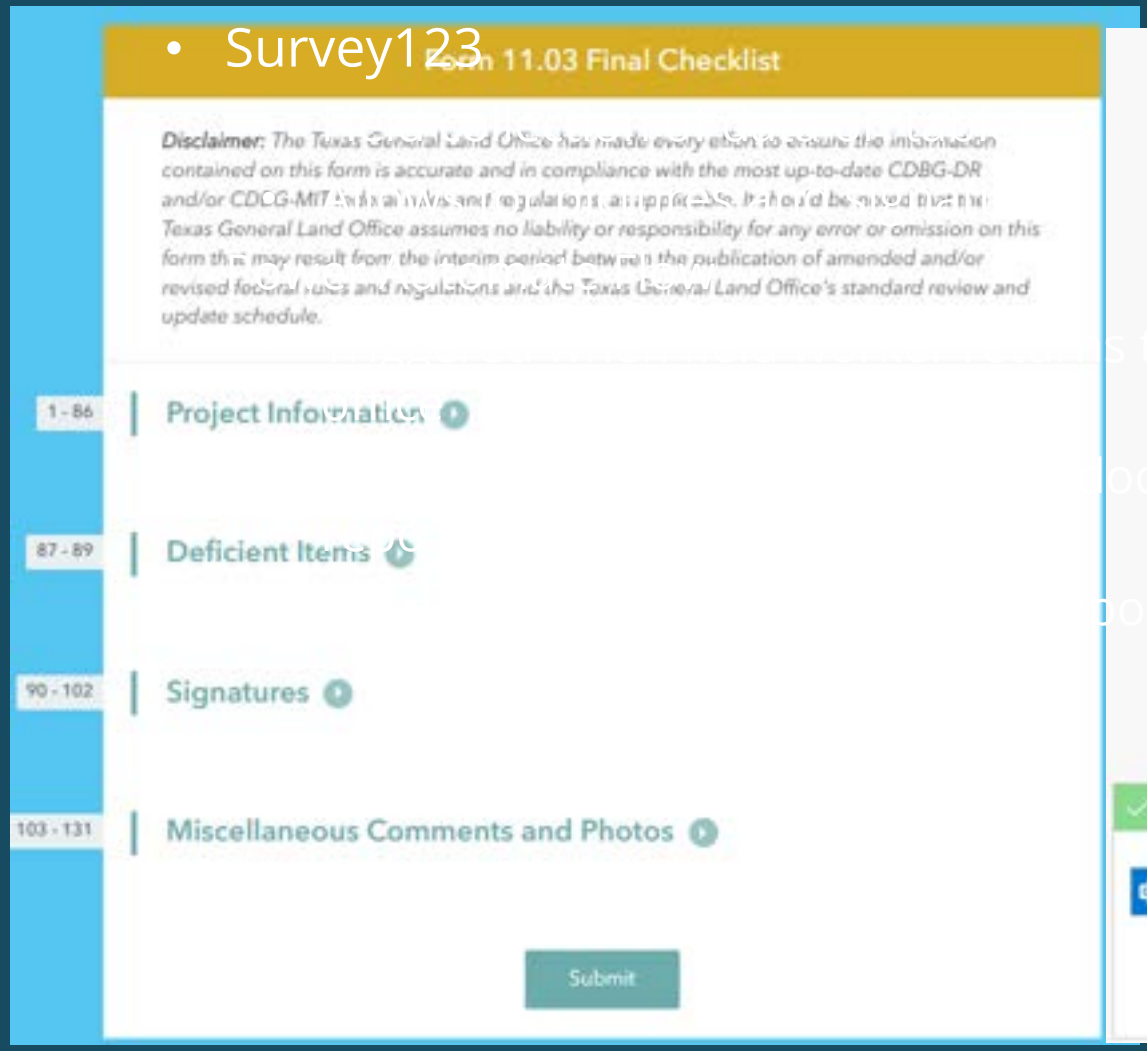
Microsoft

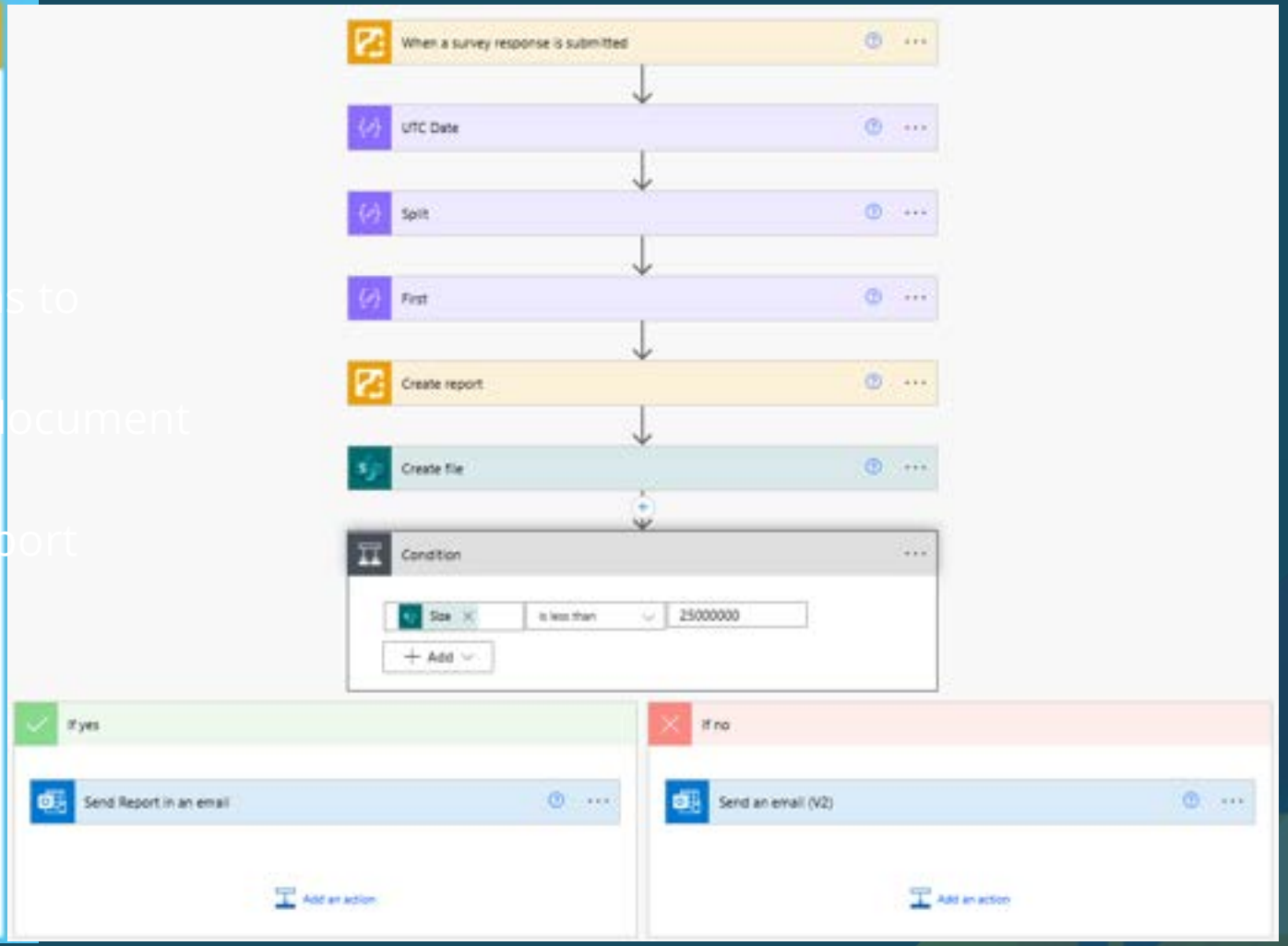
- SharePoint List
- Power Apps
- Power Automate
- PowerBI

Feature Manipulation Engine/Data Interoperability Tool

Survey123/ Power Automate: Construction Quality Assurance Checklist

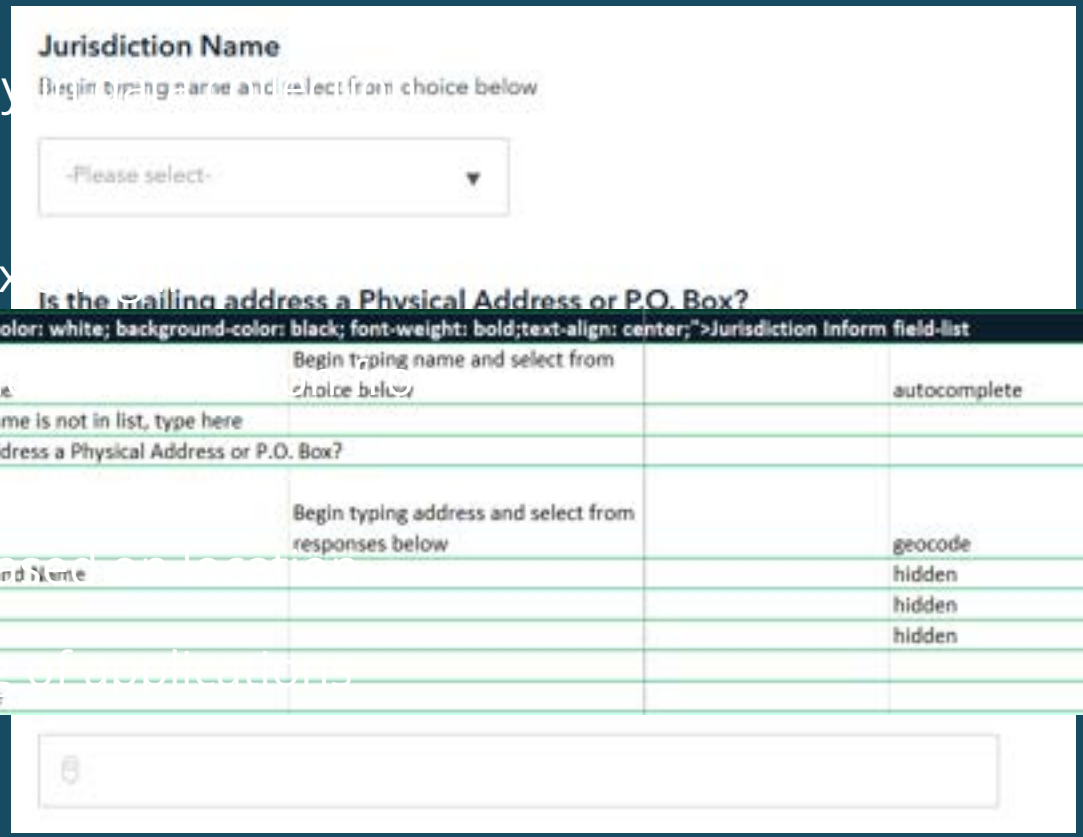
- Survey123





Survey123 Connect: Disaster Recovery Funding Application

- Enforces greater accuracy
  through:
  - Selecting from pre-ex



begin group	applicantInfo	<p span style="color: white; background-color: black; font-weight: bold;text-align: center;">Jurisdiction Inform field-list			
select_one_from_file Location_Names.csv	applicantName	Jurisdiction Name	Begin typing name and select from choice below	autocomplete	
text	applicantName2	If Jurisidction Name is not in list, type here			
select_one mail	applicantMailType	Is the mailing address a Physical Address or P.O. Box?			
text	applicantAddress	Mailing Address	Begin typing address and select from responses below	geocode	
text	applicantStAddr	Street Number and Name		hidden	pulldata("@json",${applicantAddress}, "attributes.StAddr")
text	applicantCity	City		hidden	pulldata("@json",${applicantAddress}, "attributes.City")
text	applicantZip	Zip		hidden	pulldata("@json",${applicantAddress}, "attributes.Postal")
text	applicantPO	Enter P.O. Box			
select_one juris_type	applicantType	Jurisdiction Type			

Survey123 Connect: Disaster Recovery Funding Application

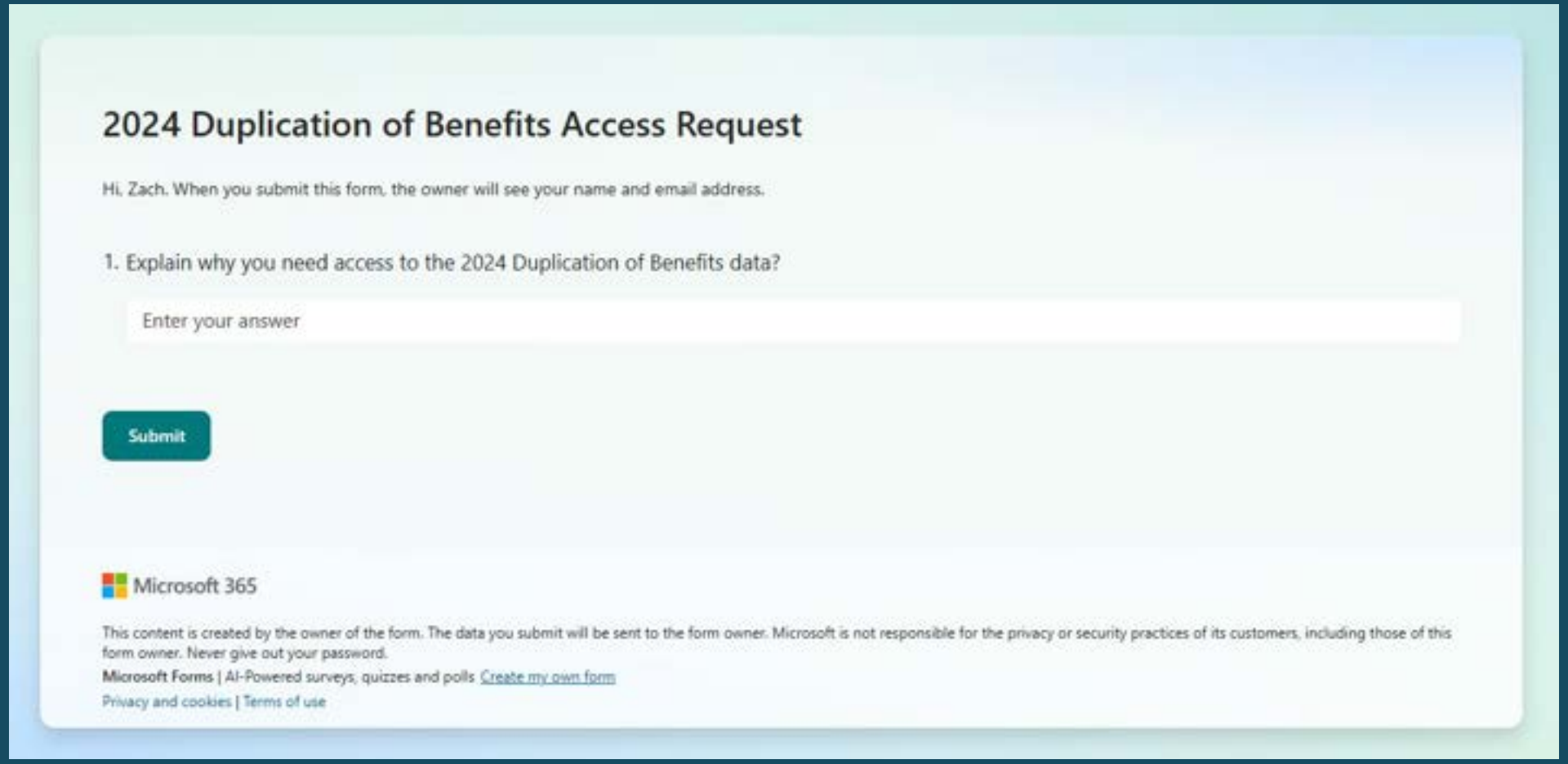
	begin group	projectInfo	<p span style="color: white; background-color: black; font-weight: bold;text-align: center;">Projec field-list		
1	select_one project_type	projectType	Project Type		
2	decimal	projectCDBGAmt	CDBG-DR Request Amount	For Hurricanes Ike & Dolly and Hurricane Harvey the maximum CDBG-DR Request Amount is $20,000,000. For the remaining gra	.<=20000000
3	note		CDBG-DR Request Amount(friendly format)		if(string-length(string(${projectCDBGAmt})) <= 3, concat("$", string(${projectCDBGAmt})), if(string-length(string(${projectCDBGA
4	decimal	projectLev	Project Leverage (Match) Amount	Projects that will entail non-CDBG Leverage that is at least 10% of the CDBG-DR funds requested receive 5 points in the scoring	
5	note		Project Leverage Amount (friendly format)		if(string-length(string(${projectLev})) <= 3, concat("$", string(${projectLev})), if(string-length(string(${projectLev})) = 4, concat("$
6	note		Project Leverage %		concat((${projectLev} div ${projectCDBGAmt})*100,"%")
7	decimal	projectAmt	Total Project Amount	hidden	${projectCDBGAmt}+${projectLev}
8	note		Total Project Amount		if(string-length(string(${projectAmt})) <= 3, concat("$", string(${projectAmt})), if(string-length(string(${projectAmt})) = 4, concat(
9	select_one nat_ob	natObj	Under which National Objective will the project qualify?		
10	select_one lmi_cert	lmiCert	How will you be demonstrating that the project meets the national objective?		
11	integer	lmiScore	LMI Score	20 Points if the project meets the LMI national objective.	if(selected(${natObj}, 'lmi'), 20, 0)
12	text	disDeclar	Disaster Declarations	hidden	pulldata("@layer","getRecordAt","https://services3.arcgis.com/13DnfApjhE0EY9ik/arcgis/rest/services/Texas_Counties_DisasterD
13	integer	dr1791	Ike DR-1791	hidden	pulldata("@json",${disDeclar}, "attributes.Ike__DR_1791_")
14	integer	dr1780	Dolly DR-1780	hidden	pulldata("@json",${disDeclar}, "attributes.Dolly__DR_1780_")
15	integer	dr4029	Wildfires DR-4029	hidden	pulldata("@json",${disDeclar}, "attributes.Wildfire__DR_4029_")
16	integer	dr4223	2015 Floods DR-4223	hidden	pulldata("@json",${disDeclar}, "attributes.F2015_Floods__DR_4223_")
17	integer	dr4245	2015 Floods DR-4245	hidden	pulldata("@json",${disDeclar}, "attributes.F2015_Floods__DR_4245_")
18	integer	dr4266	2016 Floods DR-4266	hidden	pulldata("@json",${disDeclar}, "attributes.F2016_Floods__DR_4266_")
19	integer	dr4269	2016 Floods DR-4269	hidden	pulldata("@json",${disDeclar}, "attributes.F2016_Floods__DR_4269_")
20	integer	dr4272	2016 Floods DR-4272	hidden	pulldata("@json",${disDeclar}, "attributes.F2016_Floods__DR_4272_")
21	integer	dr4332	Harvey DR-4332	hidden	pulldata("@json",${disDeclar}, "attributes.F2017_Harvey__DR_4332_")
22	integer	dr4377	2018 South Texas Floods DR-4377	hidden	pulldata("@json",${disDeclar}, "attributes.F2018_ST_Floods__DR_4377_")
23	integer	dr4454	2019 Disasters DR-4454	hidden	pulldata("@json",${disDeclar}, "attributes.F2019_Disasters__DR_4454_")
24	integer	dr4466	2019 Disasters DR-4466	hidden	pulldata("@json",${disDeclar}, "attributes.F2019_Disasters__DR_4466_")
25	integer	numDis	Number of CDBG-DR Eligible Presidential Declarations from 2008 to 2019	hidden	${dr1791} + ${dr1780}+${dr4029}+${dr4223}+${dr4245}+${dr4266}+${dr4269}+${dr4272}+${dr4332}+${dr4377}+${dr4454}+${ds
26	integer	numDisScore	Number of CDBG-DR Eligible Presidential Declarations from	20 Points Possible (10-12 Disaster Declarations = 20; 7-9 Disaster	if(${numDis}<=3, 5, if(${numDis}<=6, 10, if(${numDis}<=9, 15, if(${numDis}>=10,20, 0))))
27	integer	leverage	Leverage	5 Points if the project entails non-CDBG Leverage that is at least 1	if(${projectLev} div ${projectCDBGAmt}) >= 0.10, 5, 0)
28	text	soviCounty	County SoVI	hidden	pulldata("@layer","getValueAt","attributes.SoVI_5_Class","https://services3.arcgis.com/13DnfApjhE0EY9ik/arcgis/rest/services/S
29	text	soviPlace	Place SoVI	hidden	pulldata("@layer","getValueAt","attributes.CLASS_5","https://services3.arcgis.com/13DnfApjhE0EY9ik/arcgis/rest/services/SoVI_
30	text	sovi	SoVI	hidden	if(selected(${applicantServArea}, 'city'),${soviPlace}, ${soviCounty})
31	integer	soviScore	SoVI Score	15 Possible Points (15 - High; 12 - Medium High; 9 - Medium; 6 - l	if(${sovi}="High", 15, if(${sovi}="Medium High", 12, if(${sovi}="Medium", 9, if(${sovi}="Medium Low", 6, if(${sovi}="Low", 3, 0))
32	integer	cdi	CDI	hidden	pulldata("@layer","getValueAt","attributes.Comp_Rnk","https://services3.arcgis.com/13DnfApjhE0EY9ik/arcgis/rest/services/Cor
33	integer	cdiScore	CDI Score	20 Possible Points (20 - Top 10%; 15 - Top 25%; 10 - Top 75%; 5 -	if(${cdi}=5, 20, if(${cdi}=4, 15, if(${cdi}=3, 10, if(${cdi}=2, 5, 0))))
34	integer	pha	Project is from a Public Housing Authority	10 Points if the Project is proposed by a Public Housing Authority.	if(selected(${applicantType}, 'pha'), 10, 0)
35	decimal	povCounty	County Poverty	hidden	pulldata("@layer","getValueAt","attributes.Poverty_Rate","https://services3.arcgis.com/13DnfApjhE0EY9ik/arcgis/rest/services/P
36	decimal	povCity	City Poverty	hidden	pulldata("@layer","getValueAt","attributes.Poverty_Rate","https://services3.arcgis.com/13DnfApjhE0EY9ik/arcgis/rest/services/P
37	decimal	poverty	Poverty Rate	hidden	if(selected(${applicantServArea}, 'county'), ${po[illegible]
38	note		Poverty Rate	In circumstances where applicants have a tie score, Poverty Rate v	concat(round(${poverty}*100,2),"%")

Texas General Land Office
Commissioner Dawn Buckingham, M.D.
TXGLO

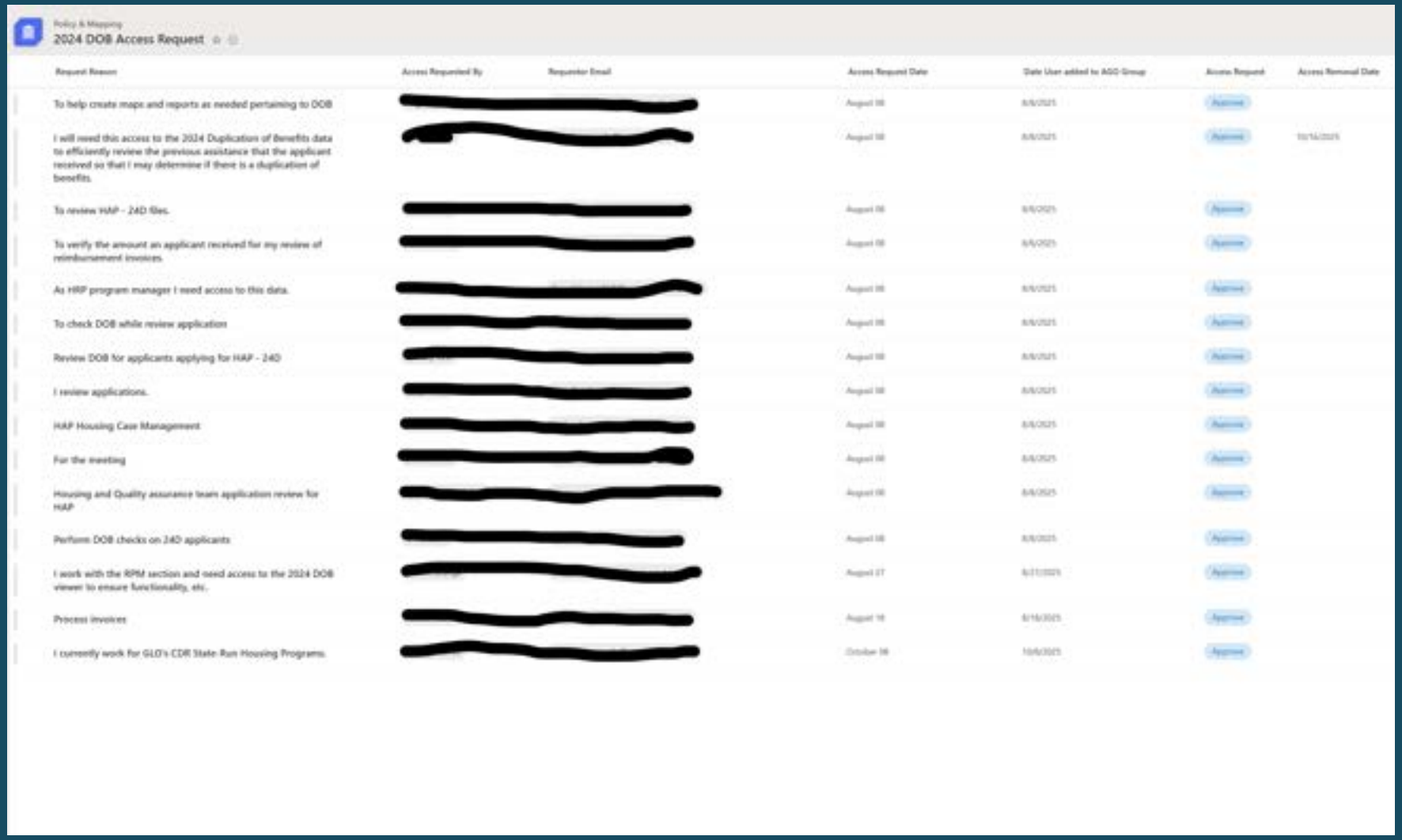
Pulling it all Together: The Whole Stack

- Microsoft Forms
- SharePoint Lists for account tracking
- Power Automate generates email and updates SharePoint
- AGOL Groups for security
- ArcGIS Hub Premium for hosting data
- FME/Data Interoperability Tool to ETL data from Excel to AGOL
- AGOL Experience Builder to visualize and make data internally available

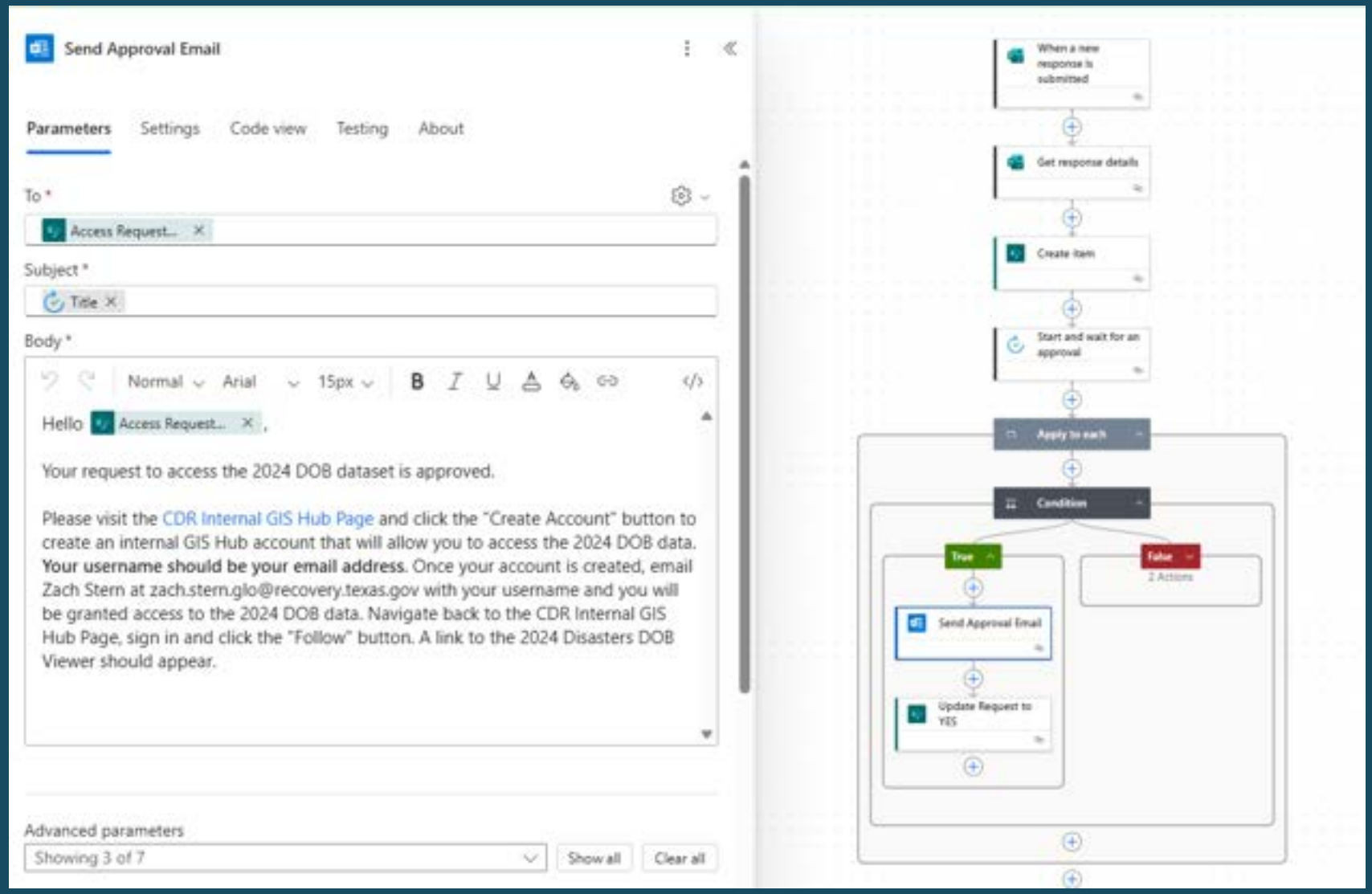
Pulling it all Together: Microsoft Forms



Pulling it all Together: SharePoint

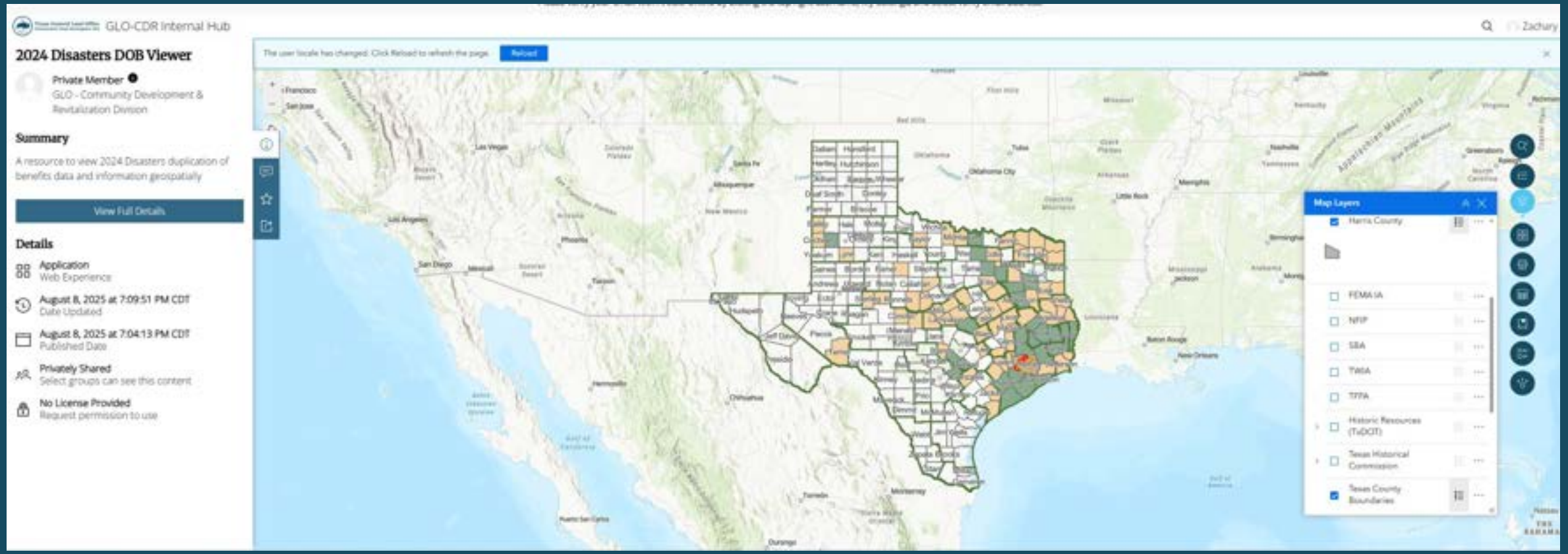


Pulling it all Together: Power Automate



Pulling it all Together: ArcGIS Hub

Pulling it all Together: Experience Builder



ArcGIS StoryMaps

Showing the benefits: Three examples in a StoryMap

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Thank You!

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