Implementing the Disaster Recovery Tracking Tool

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Presentation Overview

- Project Background
- Tool Demonstration
- End User Engagement
- Research Work and Accomplishments
- Anticipated Project Impact
- Proposed Follow-Up Work
- Discussion and Conclusions

Project Background

- Community recovery is a **key capability** for federal, state, and local governments

- To effectively support this capability, practitioners need **useful and validated metrics** to document how well a community is recovering from a disaster

- Long-term, systematically collected and shared data on recovery is needed to **improve resilience** to future disasters

Metrics

Characterize Recovery

Detect Problems with Recovery

Improve Future Recovery
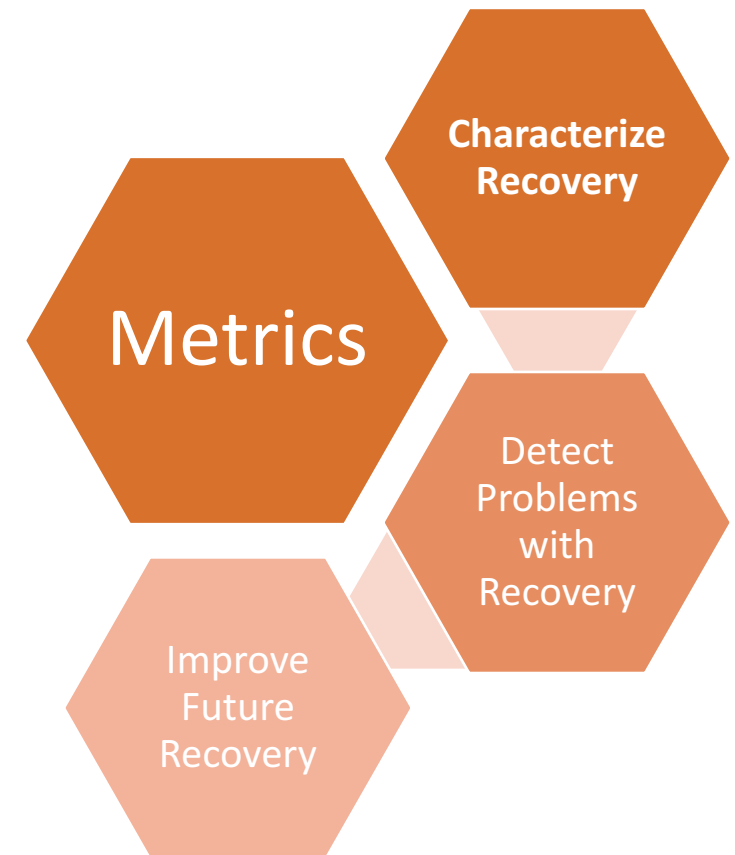
Project Background

- 4 Themes
  - Financial
  - Process
  - Public Sector
  - Social
- 10 Focus Areas
  - FEMA Recovery Support Functions (RSFs)
  - FEMA Core Capabilities
- 84 metrics
  - 35 Auto-Populate
  - 49 User-Entry

Themes

Focus Areas
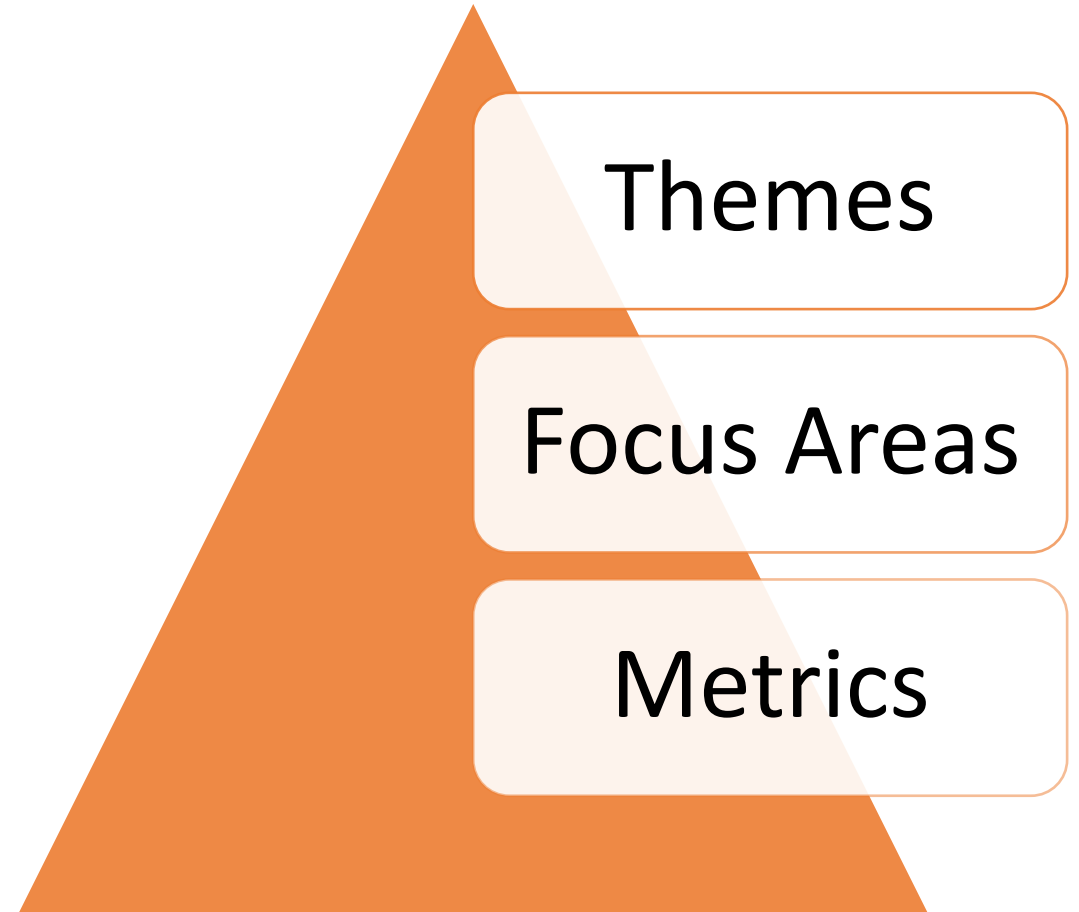
Metrics

Theme	Focus Area	Auto-Populate Metrics	User-Entry Metrics
Social	Population Characteristics	10	1
	Household Recovery	9	2
	Healthy Communities & Social Services	2	4
	Restoration of Cultural Sites & Resources	6	4
Public Sector	Public Sector Recovery	2	3
	Public Buildings & Infrastructure	0	7
	Restoration of Natural Resources	3	7
Financial	Business Recovery & Economic Stabilization	2	7
	Mobilization of Recovery Funding	1	5
Process	Disaster Recovery & Management	0	9

Tool Demonstration

www.trackyourrecovery.org

WELCOME

EDIT

FEATURES

The *Disaster Recovery Tracking Tool* is a web-based resource designed to aid local government stakeholders and other end users in tracking the progress and quality of post-disaster recovery.

Social Theme Metrics

Financial Theme Metrics

Public Sector Theme Metrics

Process Theme Metrics

Track Disaster Recovery

Resource Library

Recovery from disasters is a key capability for federal, state, and local governments. To support this capability, practitioners at all levels need useful and validated metrics to measure and monitor how well a community is recovering from a disaster over time. Practitioners' need for these metrics is echoed by the hazards research community, which has over the last decade made the case for more systematic ways of measuring the disaster recovery process across events and over time to improve planning for, and recovering from, disasters. To address these needs, a Disaster Recovery Tracking Tool was developed as part of the former Coastal Hazards Center of Excellence.

SUBSCRIBER PORTAL

User Profile

Tool Demonstration: Metric Details

Metric: Households with no vehicle available
Location: Harris County, TX
Source: U.S. Census Bureau
Program: American Community Survey 5-Year Estimates
Table Name: Selected Housing Characteristics
Table ID Code: DP04
Subject: Vehicles available – Occupied housing units – No vehicles available

Link to data source

Tool Demonstration: Metric Table

Graph	Table	Details	Add Metric

Households with no vehicle available in Harris County, TX

Year	Number of Households	Percent Change
2009	97195	–
2010	97941	0.77%
2011	97885	-0.06%
2012	99000	1.14%
2013	100557	1.57%
2014	100976	0.41%
2015	100,420	-0.55%

Tool Demonstration: Metric Graph
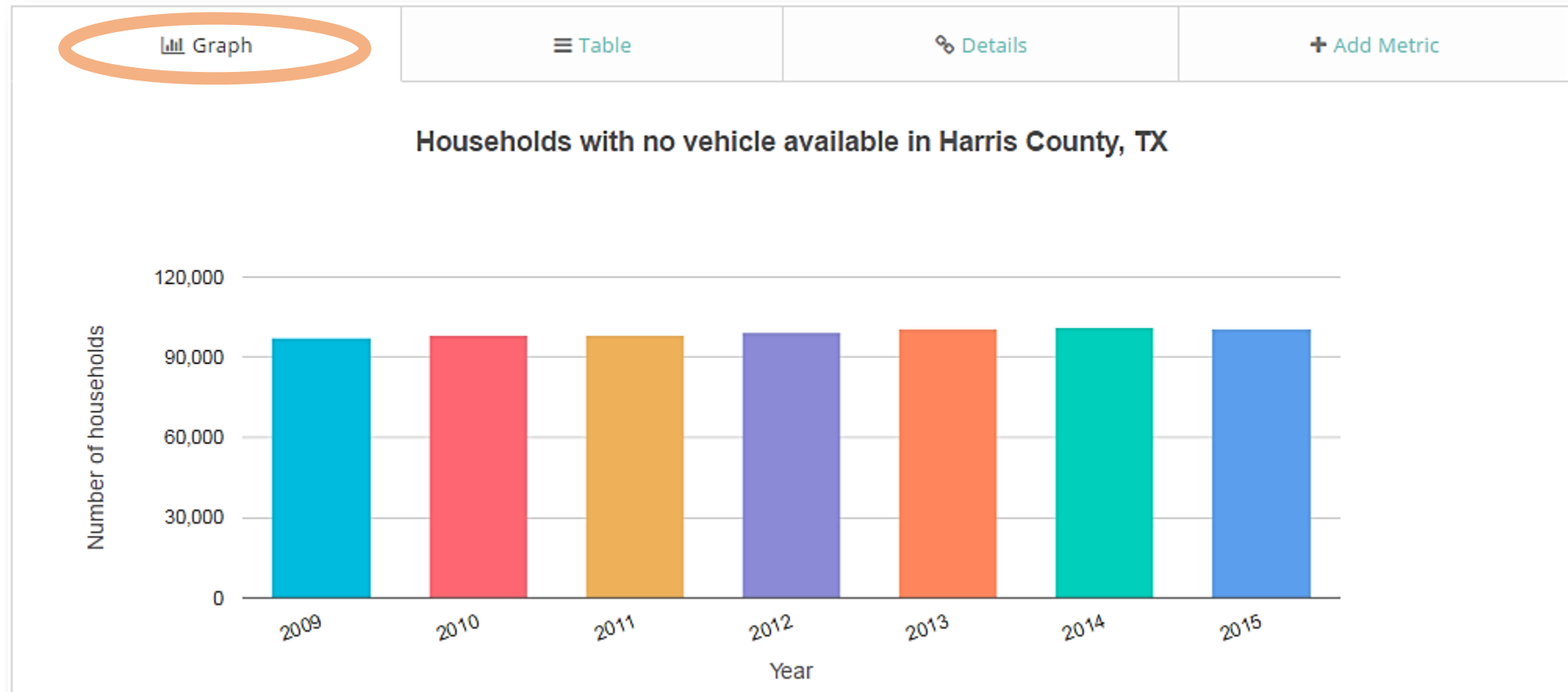
Tool Demonstration: Additional Utilities

FEMA Summary Record Forms

- Force Account Labor
- Force Account Equipment
- Rented Equipment
- Materials
- Contract Work

Other Tracking Functions

- Events & Activities
- Tasks & Progress
- Contacts
- Materials
- Expenditures
- Plans & Documents

Resource Library

- City, County, & State Recovery Plans
- Comprehensive Preparedness Guides
- National Planning Frameworks

Tool Demonstration: FEMA Form Generation

FORCE ACCOUNT LABOR SUMMARY RECORD

APPLICANT	PA ID NO.	PROJECT NO.	DISASTER
SAMPLE APPLICANT	111	1111	DISASTER SAMPLE

LOCATION/SITE	CATEGORY	PERIOD COVERING
LOCATION/SITE SAMPLE	CATEGORY SAMPLE	MM/DD/YYYY-MM/DD/YYYY

DESCRIPTION OF WORK PERFORMED
DESCRIPTION OF WORK PERFORMED SAMPLE

NAME / JOB TITLE	DATE	11/01	11/02	11/03	11/04	11/05	11/06	11/07	TOTAL HOURS	HOURLY RATE	BENEFIT RATE/HR	TOTAL HOURLY RATE	TOTAL COSTS
NAME / NAME 1	REG.	10	11	12	13	14	15	16	91	10	1	11	1,001.00
JOB TITLE / JOB TITLE 1	O.T.	1	2	3	4	5	6	7	28	11	2	13	364.00
NAME / NAME 2	REG.	10	11	12	13	14	15	16	91	20	2	22	2,002.00
JOB TITLE / JOB TITLE 2	O.T.	1	2	3	4	5	6	7	28	21	4	25	700.00
NAME / NAME 3	REG.	10	11	12	13	14	15	16	91	30	3	33	3,003.00
JOB TITLE / JOB TITLE 3	O.T.	1	2	3	4	5	6	7	28	31	6	37	1,036.00
NAME / NAME 4	REG.	10	11	12	13	14	15	16	91	40	4	44	4,004.00
JOB TITLE / JOB TITLE 4	O.T.	1	2	3	4	5	6	7	28	51	8	59	1,652.00

Column group headers: **DATES AND HOURS WORKED EACH WEEK** (11/01–11/07), **COSTS** (TOTAL HOURS, HOURLY RATE, BENEFIT RATE/HR, TOTAL HOURLY RATE, TOTAL COSTS).

TOTAL COSTS FOR FORCE ACCOUNT LABOR REGULAR TIME	$ 10,010.00
TOTAL COST FOR FORCE ACCOUNT LABOR OVERTIME	$ 3,752.00

I CERTIFY THAT THE INFORMATION ABOVE WAS OBTAINED FROM PAYROLL RECORDS, INVOICES, OR OTHER DOCUMENTS THAT ARE AVAILABLE FOR AUDIT.

CERTIFIED	TITLE	DATE

End User Engagement

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End User Engagement: Federal

Name	Interactions	Future Work
Project Manager, Research and Development Center U.S. Coast Guard	Expressed interest in linking the Disaster Recovery Tool to its oil spill impact forecasting	Maintain ongoing contact and collaboration
Regional Building Science Specialist Region II – Hazard Mitigation Division FEMA	The Disaster Recovery Tool will be leveraged by FEMA to assess the impacts of and opportunity for mitigation efforts on community-level disaster recovery	Maintain ongoing contact and collaboration

End User Engagement: Local

Name	Interactions	Future Work
Tom Branch Emergency Management Coordinator Office of Emergency Management Liberty County, TX	Liberty County, TX has agreed to serve as a pilot community for the Disaster Recovery Tracking Tool	Current disaster response and recovery plans are being reviewed and recommendations for improvement will be provided
John Chung Emergency Planner Office of Emergency Management Los Angeles County, CA	The Disaster Recovery Tracking Tool metrics are being incorporated in the Los Angeles County Recovery Plan/Framework	The Emergency Planner has agreed to provide feedback and suggestions for improvement related to the metrics
Sheila Lowe Executive Director Long Term Recovery Team Bastrop County, TX	Bastrop County, TX has agreed to serve as a pilot community and provide feedback for the Disaster Recovery Tracking Tool	Leverage partnership to identify community needs and improve tool to better meet these needs

End User Engagement: Academia

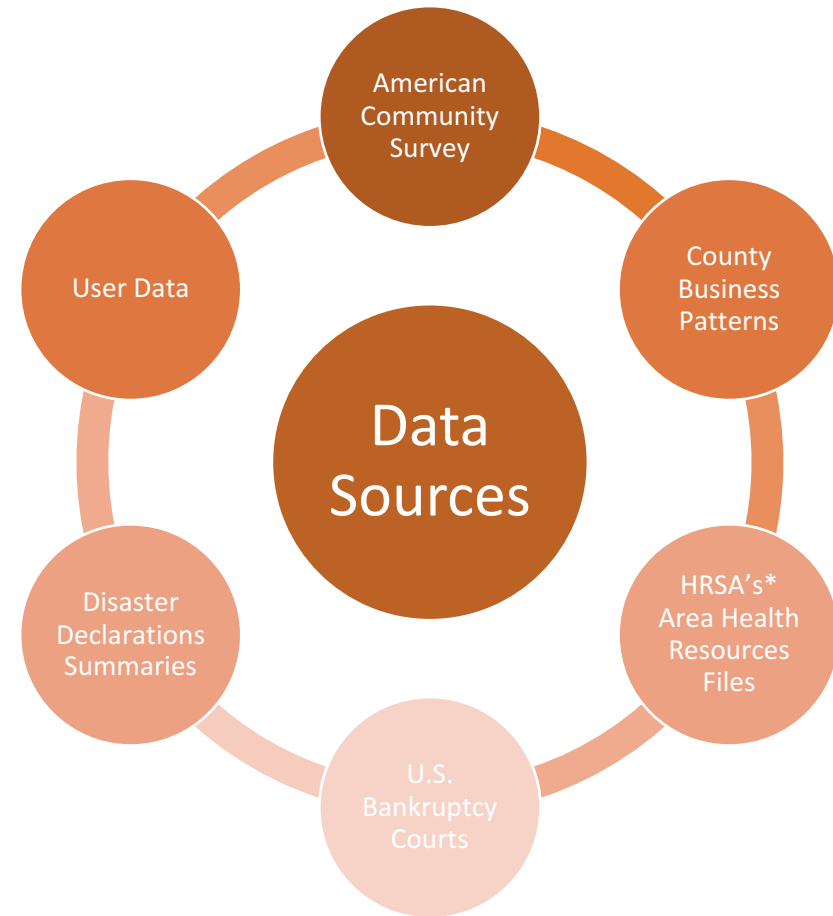| Name	Interactions	Future Work
Larissa Graham Oil Spill Science Extension Specialist Mississippi-Alabama Sea Grant Consortium	The Disaster Recovery Tool could be used by the Texas Sea Grant College Program to assess recovery progress in oil spill-affected communities	Maintain ongoing contact and collaboration
Christine Hale Oil Spill Science Outreach Specialist Texas Sea Grant College Program Texas A&M University – Corpus Christi	The Disaster Recovery Tool could be used by the Texas Sea Grant College Program to assess recovery progress in oil spill-affected communities	Maintain ongoing contact and collaboration
Mia Zwolinski Research Coordinator Texas Sea Grant College Program Texas A&M University	The Disaster Recovery Tool could be used by the Texas Sea Grant College Program to assess recovery progress in oil spill-affected communities	Maintain ongoing contact and collaboration

Research Work and Accomplishments

www.trackyourrecovery.org

Research Work and Accomplishments

- Worked with CHC / RENCI to research appropriate processes and actions for IP related to the web-based tool
  - Lisa Stillwell, a research software developer at RENCI, provided technical assistance during the development of the Disaster Recovery Tracking Tool
  - The results of this assistance include:
    - Improved user interface
    - Additional tracking functions
    - Greater number of automatically-populated metrics

- Released open Beta version of the Disaster Recovery Tracking Tool website

Research Work and Accomplishments

- Refined metrics for tracking disaster recovery
  - Gathered end-user feedback generated using surveys and key informant interviews
  - Increased the number of auto-populate metrics from 17 to 39

American Community Survey

County Business Patterns

User Data

Data Sources

HRSA's* Area Health Resources Files

Disaster Declarations Summaries

U.S. Bankruptcy Courts

* Health Resources and Services Administration
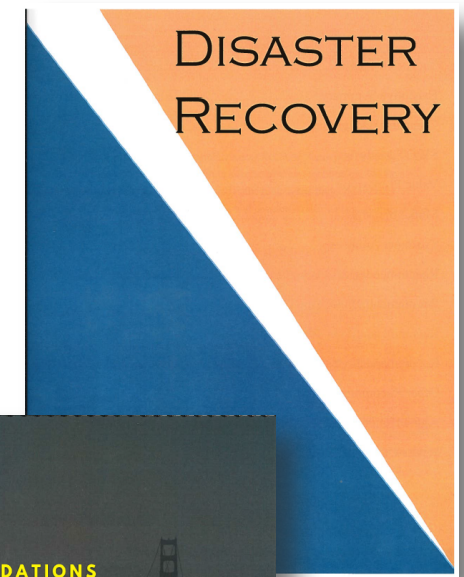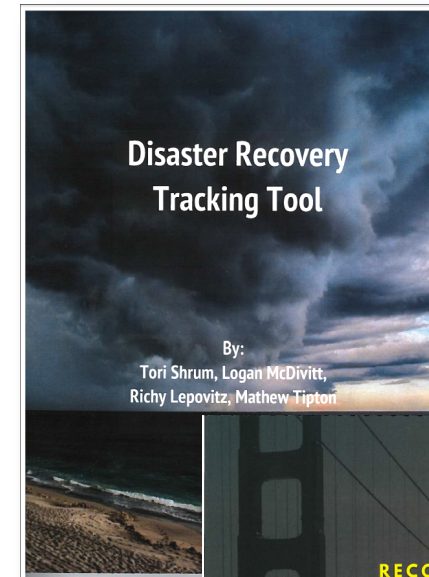
Research Work and Accomplishments

- Recruited local partners
  - Partnerships have been secured with Bastrop County, Texas and Liberty County, Texas

- Secured commitment of at least one local partner to begin pilot
  - Representatives of Bastrop County, Texas and Liberty County, Texas have agreed to serve as pilot communities to evaluate the Disaster Recovery Tracking Tool

Research Work and Accomplishments

- Conducted horizon scans
  - A horizon scan of similar web-based tools dedicated to disaster recovery tracking and pre-disaster recovery planning revealed that this product is unique
  - Subsequent horizon scans were performed by 3 undergraduate honors marketing teams

MAYS BUSINESS SCHOOL
TEXAS A&M UNIVERSITY

Disaster Recovery Tracking Tool

By:
Tori Shrum, Logan McDivitt,
Richy Lepovitz, Mathew Tipton

DISASTER RECOVERY

RECOMMENDATIONS
DISASTER RECOVERY TRACKING TOOL

Macy Hicks, Connor Holden, Aakash Pai, Jake Shields
11.30.16

Research Work and Accomplishments

- Placed appropriate links to site on virtual locations identified in horizon scans

Research Work and Accomplishments

Disaster Recovery Tracking Tool

XXX-XXX (Course Number)
Course Design Document
Version 1 – January 2017

- Texas A&M Engineering Extension Service (TEEX) Course
  - Course design document is being drafted
  - ~26 to 32 people per session
  - Target audience:
    - Emergency management officials
    - Government administrators
    - Disaster recovery professionals
    - State and local stakeholders

Research Work and Accomplishments

- Publications
  - Kirsch, K. R., & Horney, J. A. (in press). Recovery. An integrated platform for disaster recovery planning, management, and tracking. *Carolina Planning Journal*.
  - Horney, J., Dwyer, C., Aminto, M., Berke, P., & Smith, G. (2017). Developing indicators to measure post-disaster community recovery in the United States. *Disasters, 41*, 124-149. doi:10.1111/disa.12190

Anticipated Project Impact

- The primary outcome of this project is the systematic measurement of the disaster recovery process in various locations, across events, and over time.
  - Throughout the project period, metrics and analytic approaches will be refined based on feedback from end users from this and other leveraged research projects.
  - The community status tracking function of the Disaster Recovery Tracking Tool will be leveraged to quantify these impacts using publicly-available government datasets.

- Data collected for the 84 recovery metrics may be used to guide the development of a recovery plan element as part of a larger plan, or the development of a stand-alone recovery plan.
  - For this purpose, we will develop a checklist based on the metrics for practitioners that can be used to update plans or begin the process of developing a fact base for a pre-disaster recovery plan.

Proposed Follow-on Work

- Disaster Recovery Plan Builder
  - Less than one-third of vulnerable U.S Atlantic and Gulf Coast jurisdictions have recovery plans, and those that do received low plan quality scores
  - Research has demonstrated that the stand-alone recovery plan:
    - Is the most effective at building local commitment to recovery (Berke et al., 2014)
    - Allows for a specific focus on rebuilding issues (Florida Division of Community Planning, 2009)
    - Offers the greatest opportunity to engage a core group of stakeholders

Questions?

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References

- Berke, P., Cooper, J., Aminto, M., Grabich, S., & Horney, J. A. (2014). Adaptive planning for disaster recovery and resiliency: an evaluation of 87 local recovery plans in eight states. *Journal of the American Planning Association, 80*(4): 310-323.

- Florida Division of Community Planning. (2009). *Post-disaster redevelopment planning*. Retrieved from http://www.dca.state.fl.us/fdcp/DCP/PDRP/index.cfm and www.dca.state.fl.us/fdcp/dcp/PDRP/overview.cfm