

State Flood Assessment

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Unless specifically noted, this presentation does not necessarily reflect official board positions or decisions.



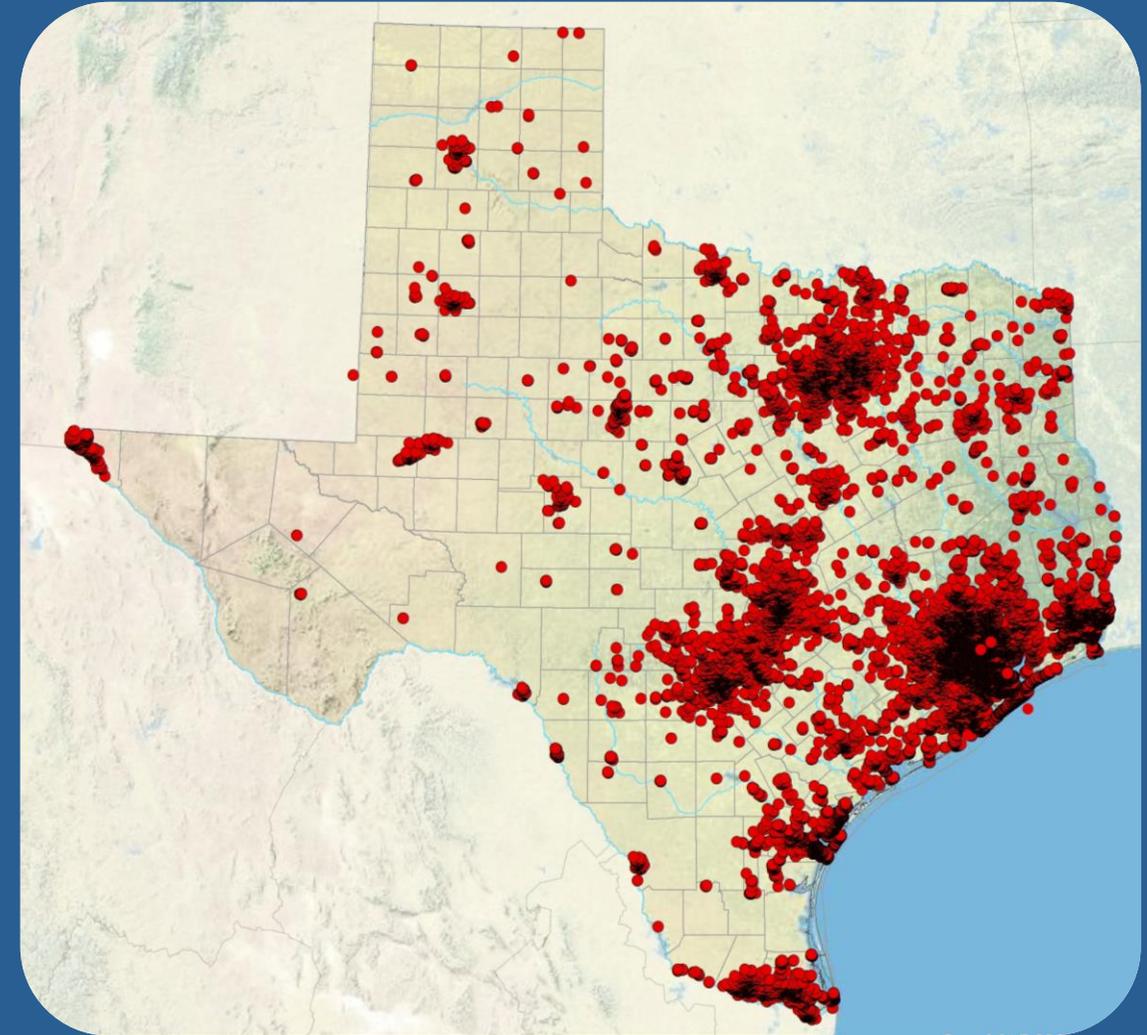
STATE FLOOD ASSESSMENT

1. Assess risk and roles
2. Estimate flood mitigation costs
3. Envision the future of flood planning in Texas

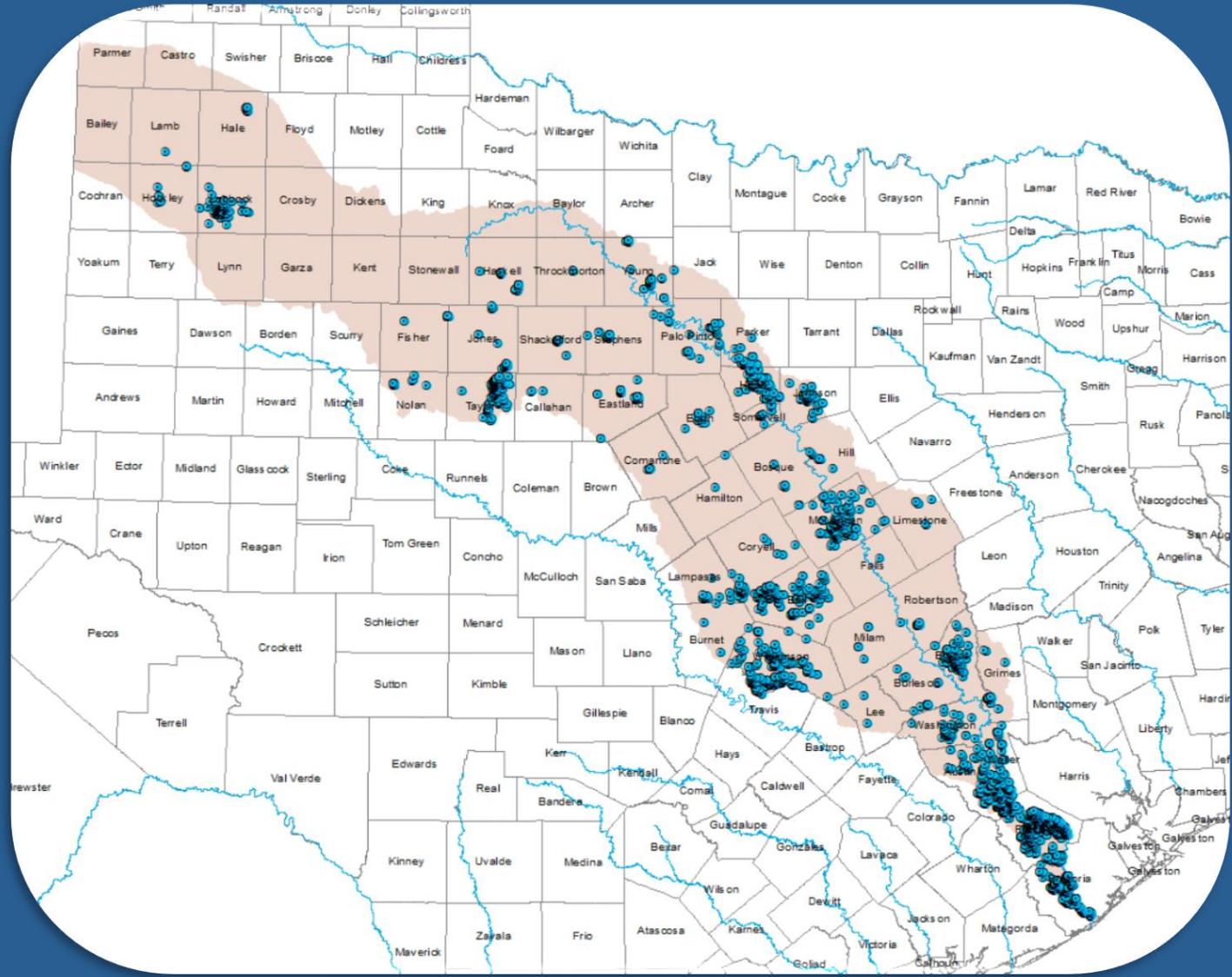
Texas Floods

Different types; all across Texas

Riverine – Flashy
Riverine – Slow rise
Coastal
Stormwater
Structural Failure

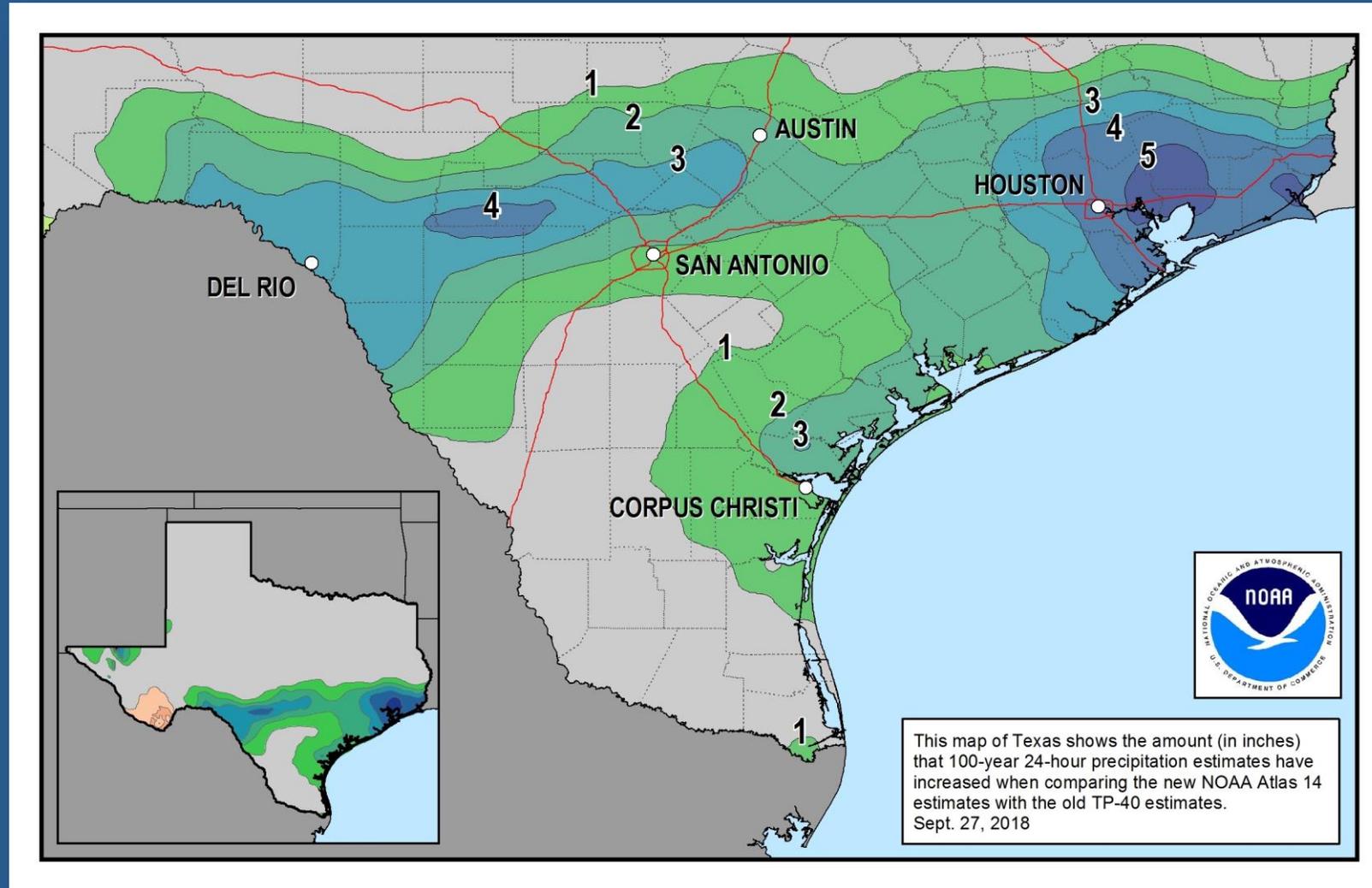


Brazos Basin NFIP Claims



Risk

Risk is high and increasing



Roles

A complex web of entities contribute resources to reduce flood impacts

		Stream gaging	Weather forecasting	Flood insurance rate mapping	Flood inundation mapping	National Flood Insurance Program floodplain regulation enforcement	Hazard mitigation planning	Emergency operations planning (State and Local)	Dam/reservoir ownership and management	Levee ownership and management	Stormwater and drainage management
Local	City governments	P		S	S	P	P	P	P	P	P
	County governments	P		S	S	P	P	P	P	P	P
	Special purpose districts	P		S	S	P	P	S	P	P	P
	Councils of government	S		S	S		P	S			S
State	Texas Commission on Environmental Quality						S	S	S	S	S
	Texas Department of Transportation	S					S	S			P
	Texas Division of Emergency Management				P		P	P			
	Texas General Land Office						S	S			
	Texas State Soil & Water Conservation Board						S	S	S		
	Texas Water Development Board	P		S	P	S	S	S			
Federal	Federal Emergency Management Agency			P	P	S	S	S			
	National Weather Service	P	P	S	P		S	S			
	U.S. Army Corps of Engineers	S		S	P		S	S	P	P	P
	Natural Resources Conservation Service						S		S	S	
	U.S. Geological Survey	P		S	P		S				

P = Primary role; in charge or takes the lead

S = Secondary role; provides data or technical support or has regulatory responsibility

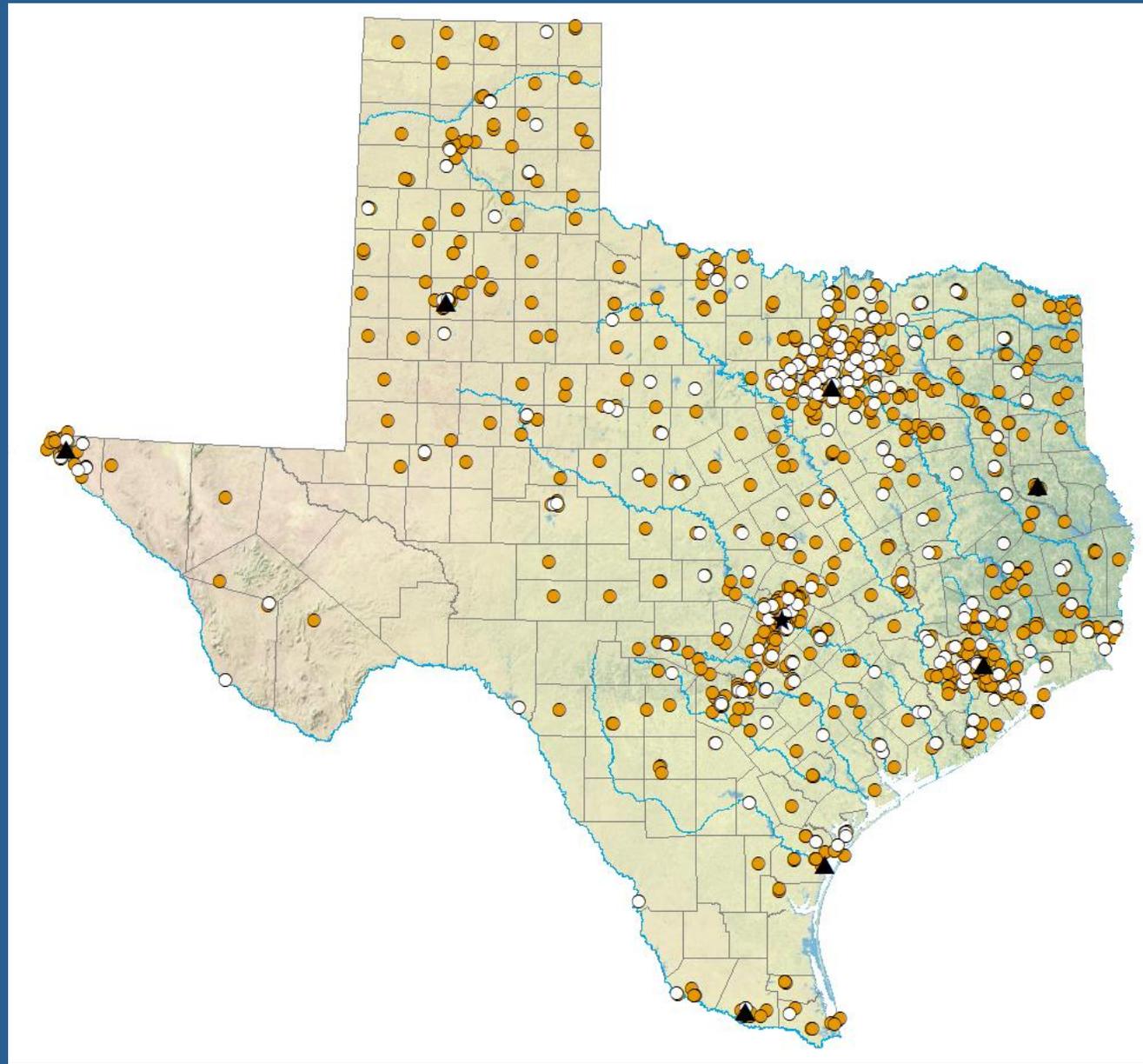
■ = Entities take on responsibility

■ = Some, but not all, entities take on responsibility

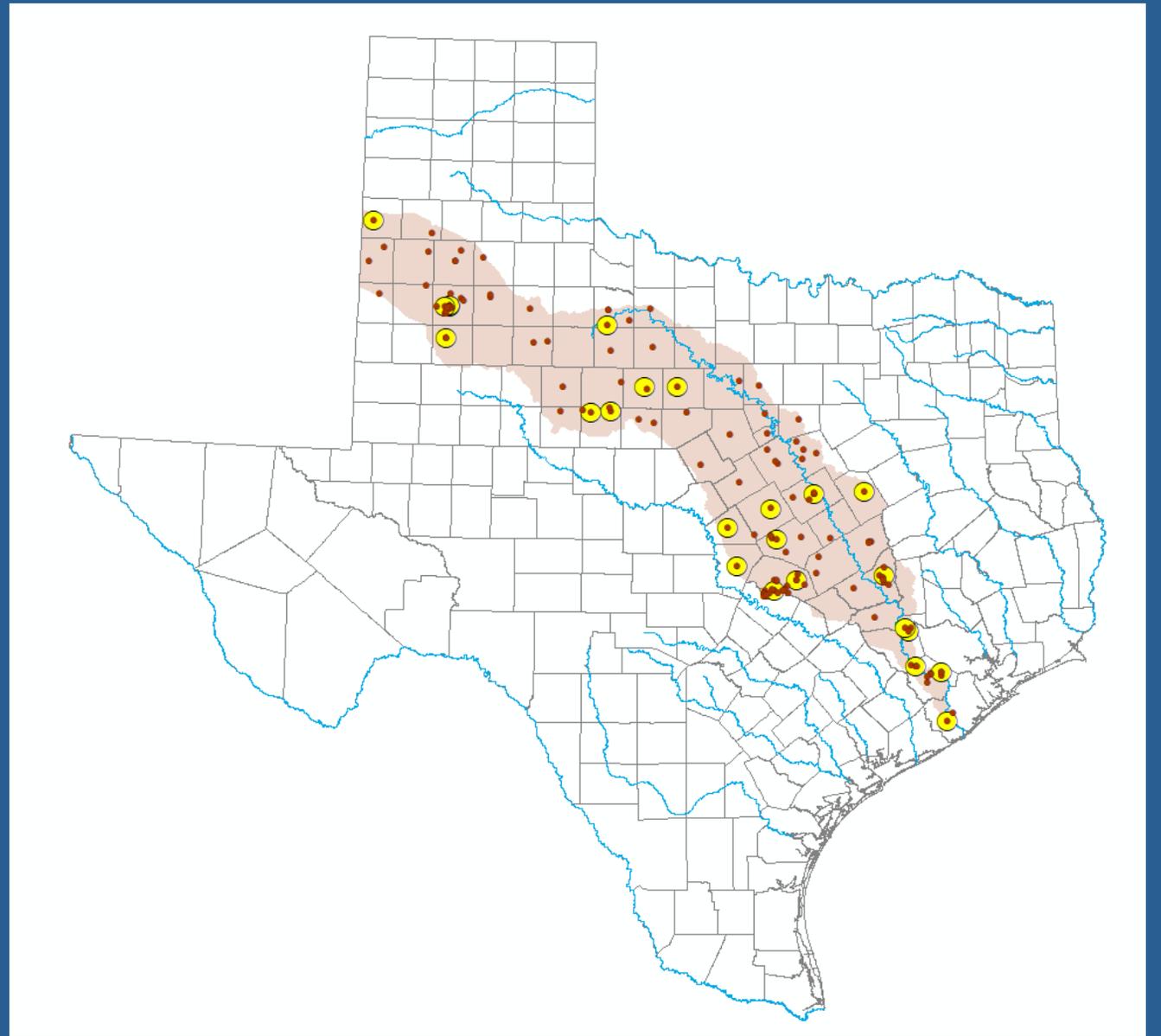
Stakeholder driven

Manager
Consultant
Appointed/Elected
Floodplain Administrator
Public Sector
Texan

*To better understand flood
planning, mitigation needs,
and associated costs*



Brazos Basin Stakeholder Response



Floodplain management

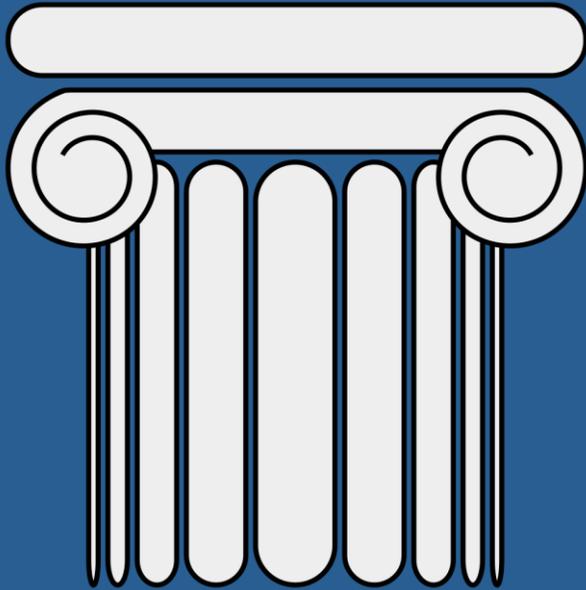


enforcement
future local infrastructure
ordinance
projects
development
planning
drainage
watershed

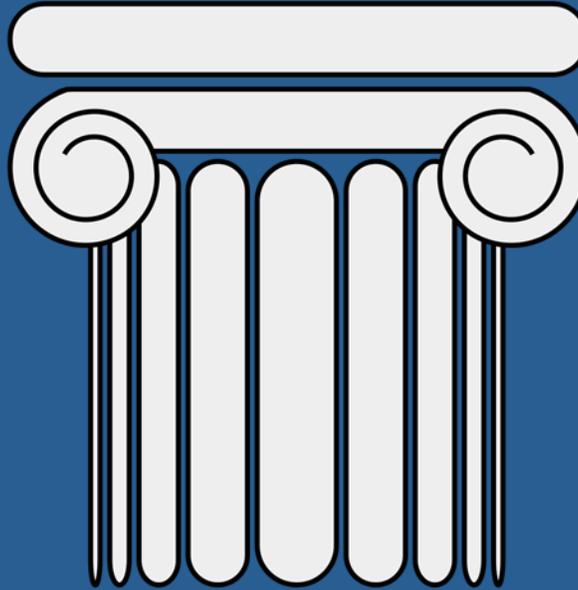
***Proper floodplain management
reduces the need for flood
mitigation projects***

Three Pillars of Flood Risk Management

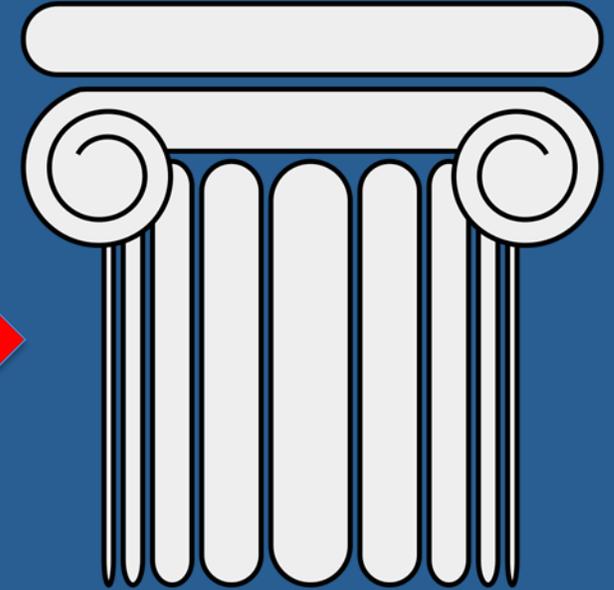
Mapping



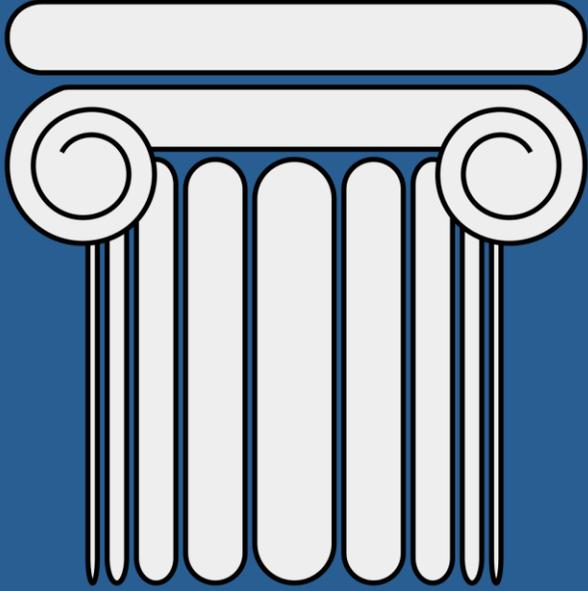
Planning



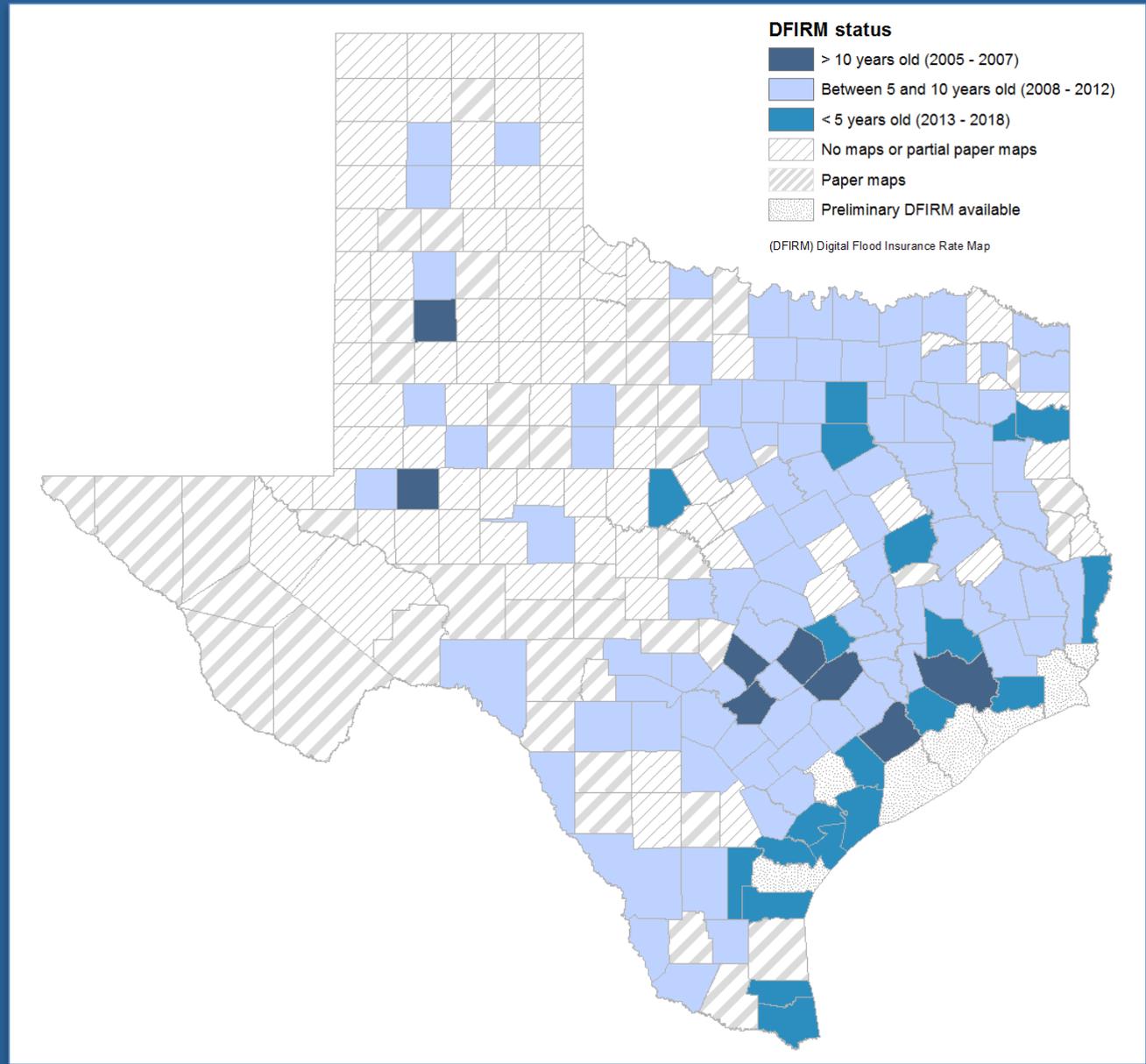
Mitigation



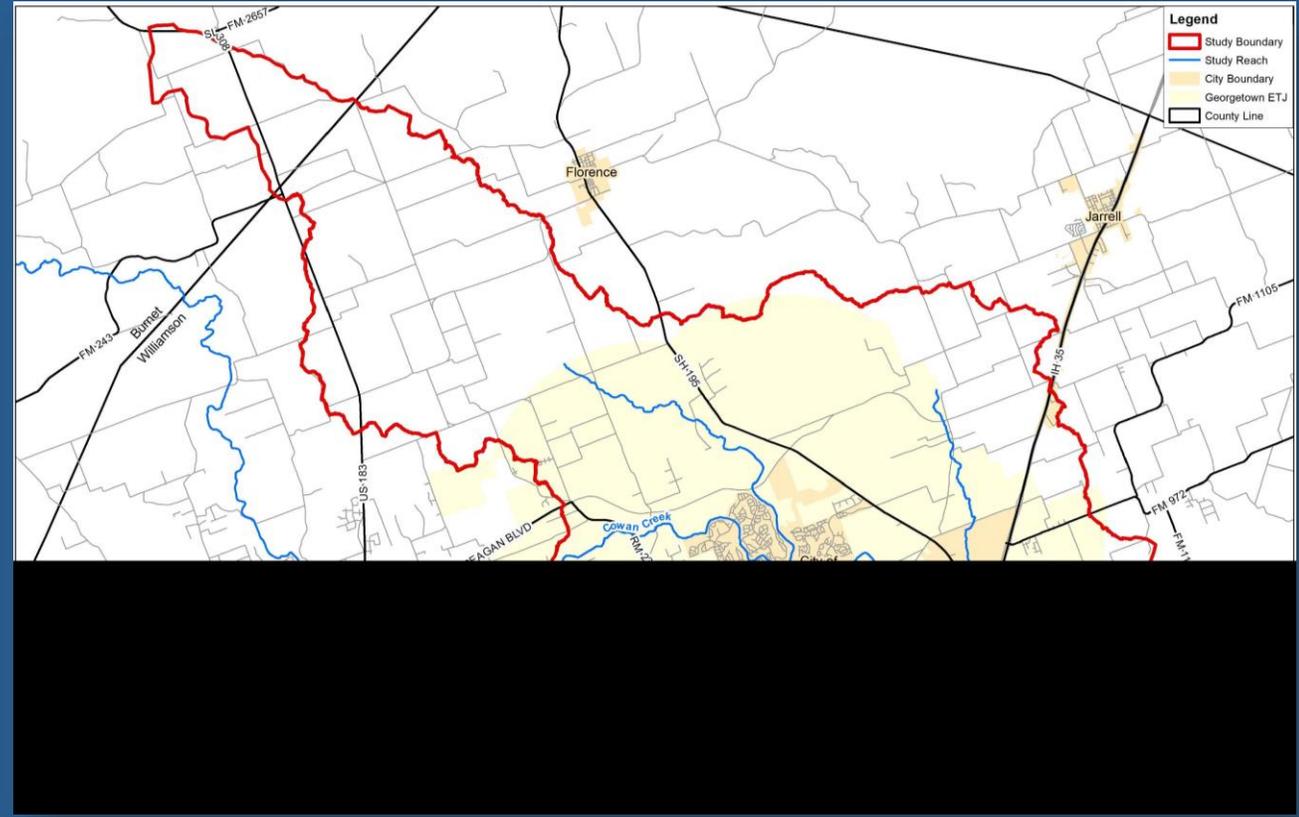
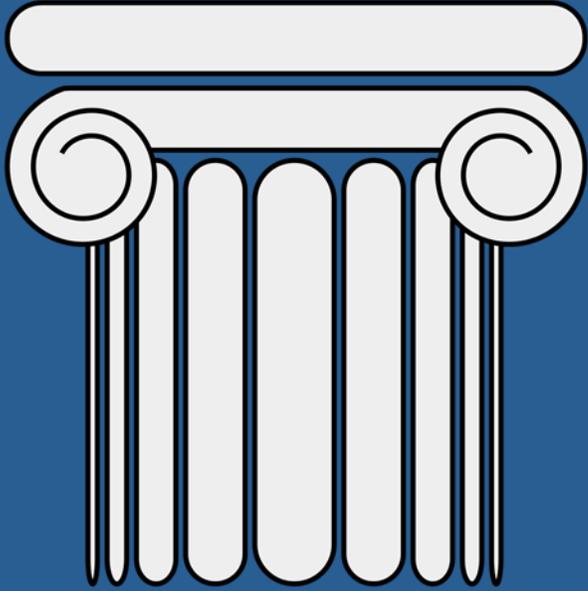
Mapping



Not all flood maps are the same — but all are created using the same information

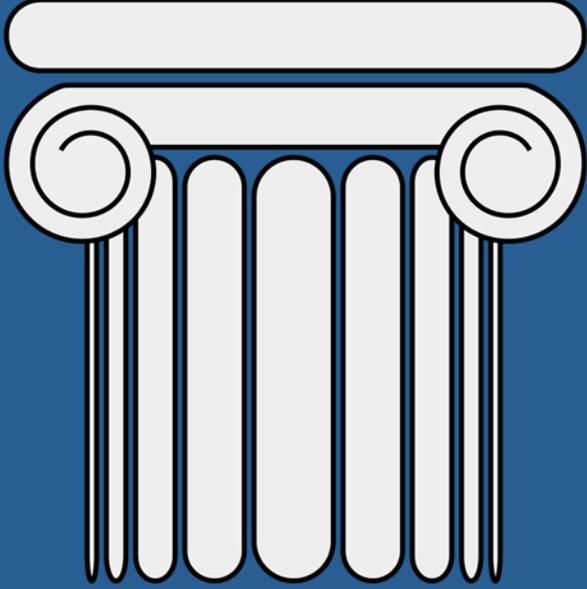


Planning

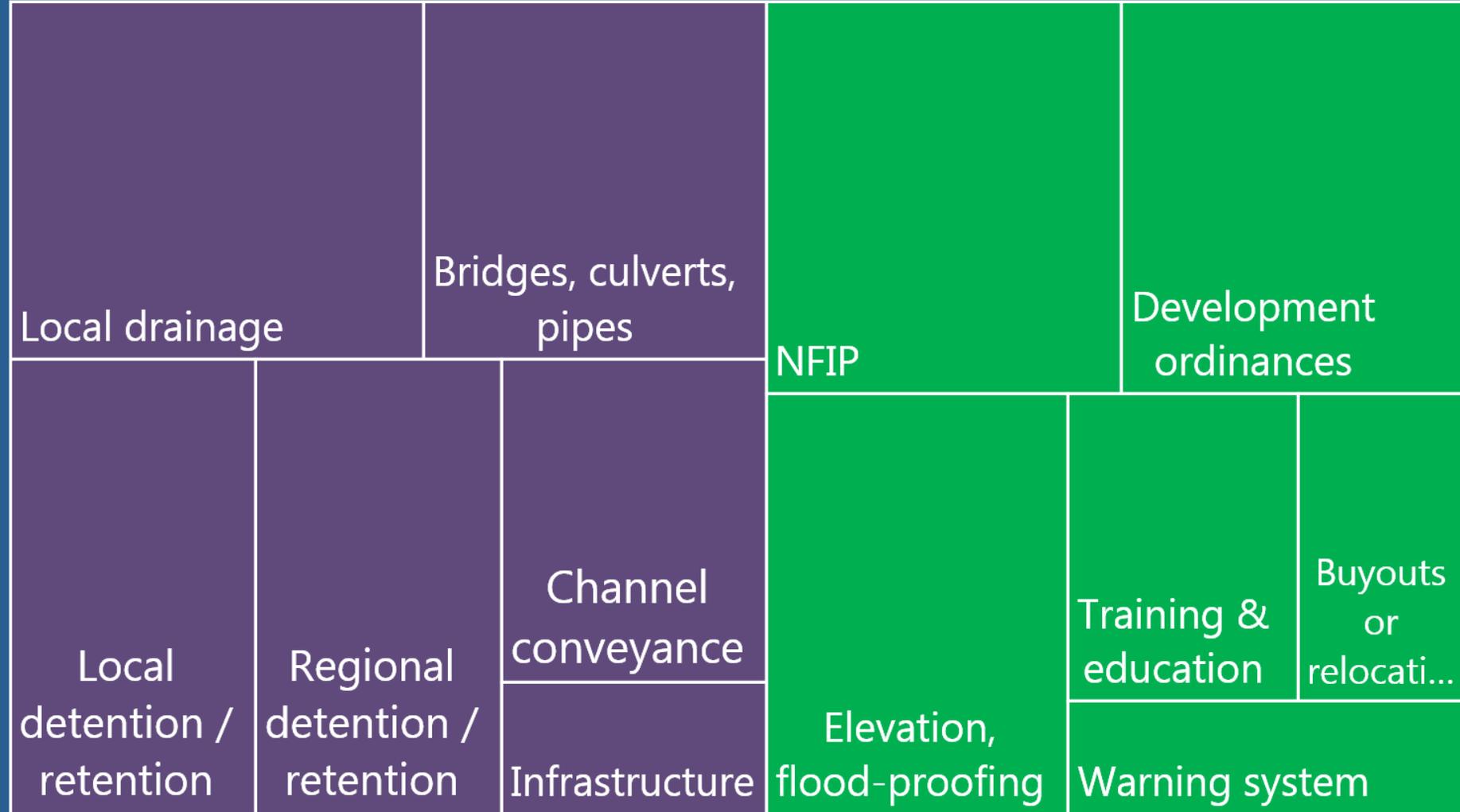


*Locally driven, watershed-based
(regional) flood planning*

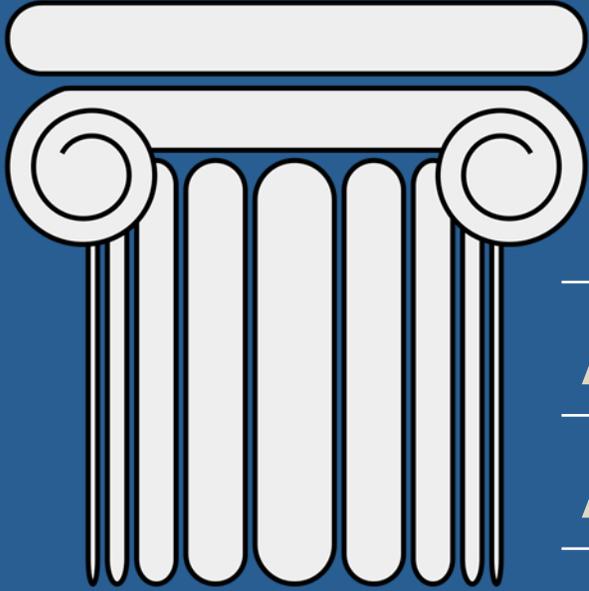
Mitigation



▫ Structural ▫ Non-structural



Mitigation



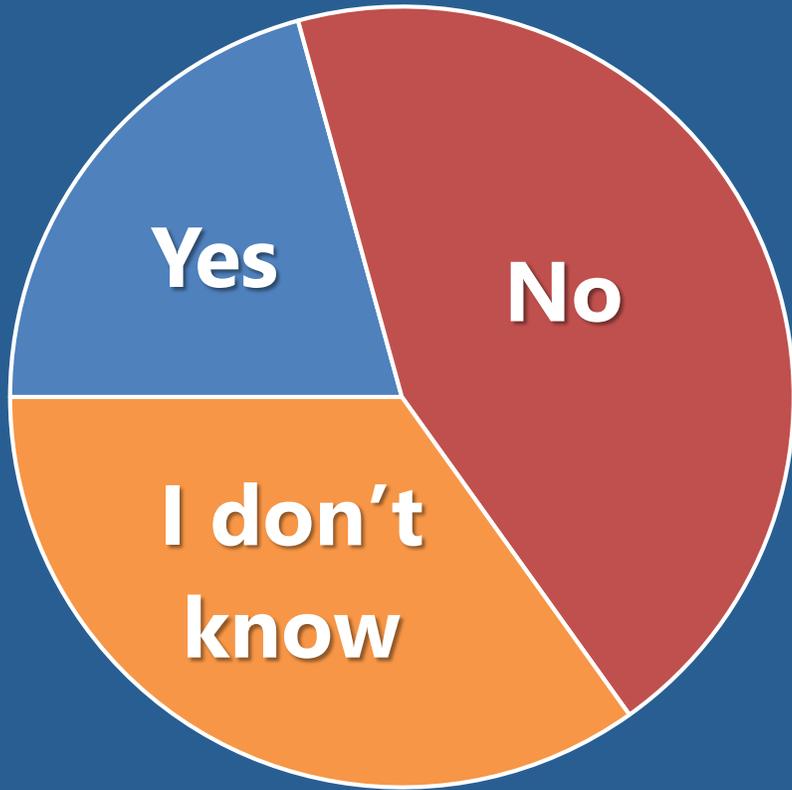
Mitigation Cost Estimates

in billions

Anticipated costs	\$31.5 - \$36.0
Available local funds	\$7.1 - \$8.2
Available non-local funds	\$2.3 - \$5.3
Statewide funding shortfall	\$18.0 - \$26.6

*Does not include disaster response or recovery costs.

Local revenue stream to repay a loan?



Other barriers to implementation:

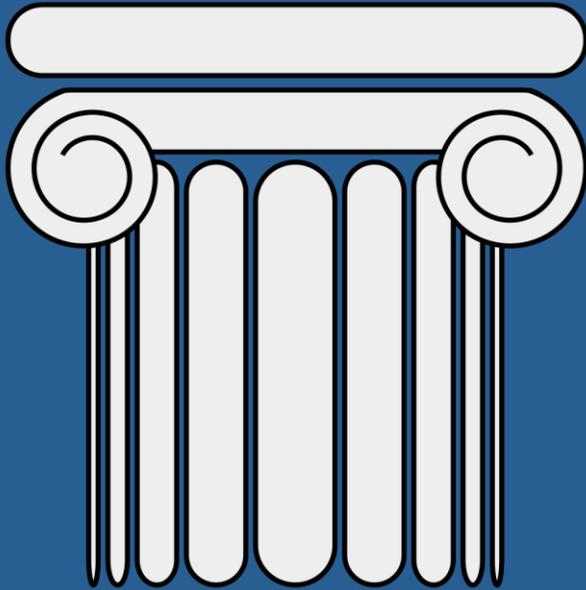
- Lack of local match
- Confusing funding options
- Complicated application processes
- Lack of staffing
- Lack of training
- Prolonged timelines

Key findings

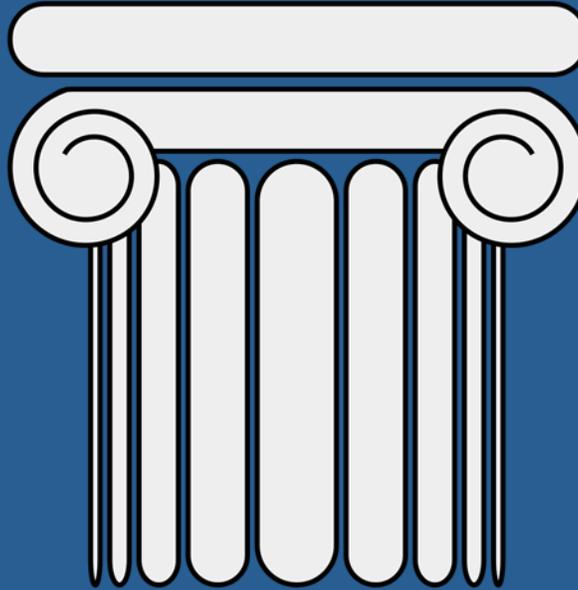
- Flooding is a fact of life in Texas
- Stormwater flooding is a top concern
- Communities tend to have outdated flood hazard information
- Mitigation needs vary across the state
- Coordinated, collaborative flood planning is needed
- Lack of revenue to pay off loans or meet local match requirements
- Lack of access to trained professionals

Three Pillars of Flood Risk Management

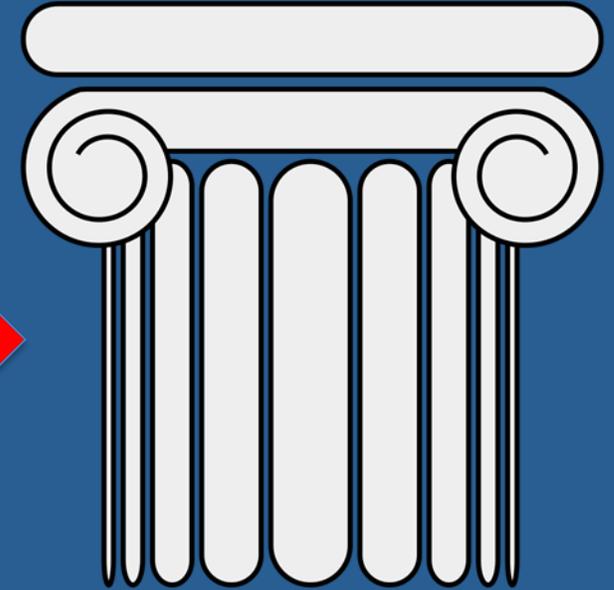
Mapping



Planning



Mitigation



Thank you

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