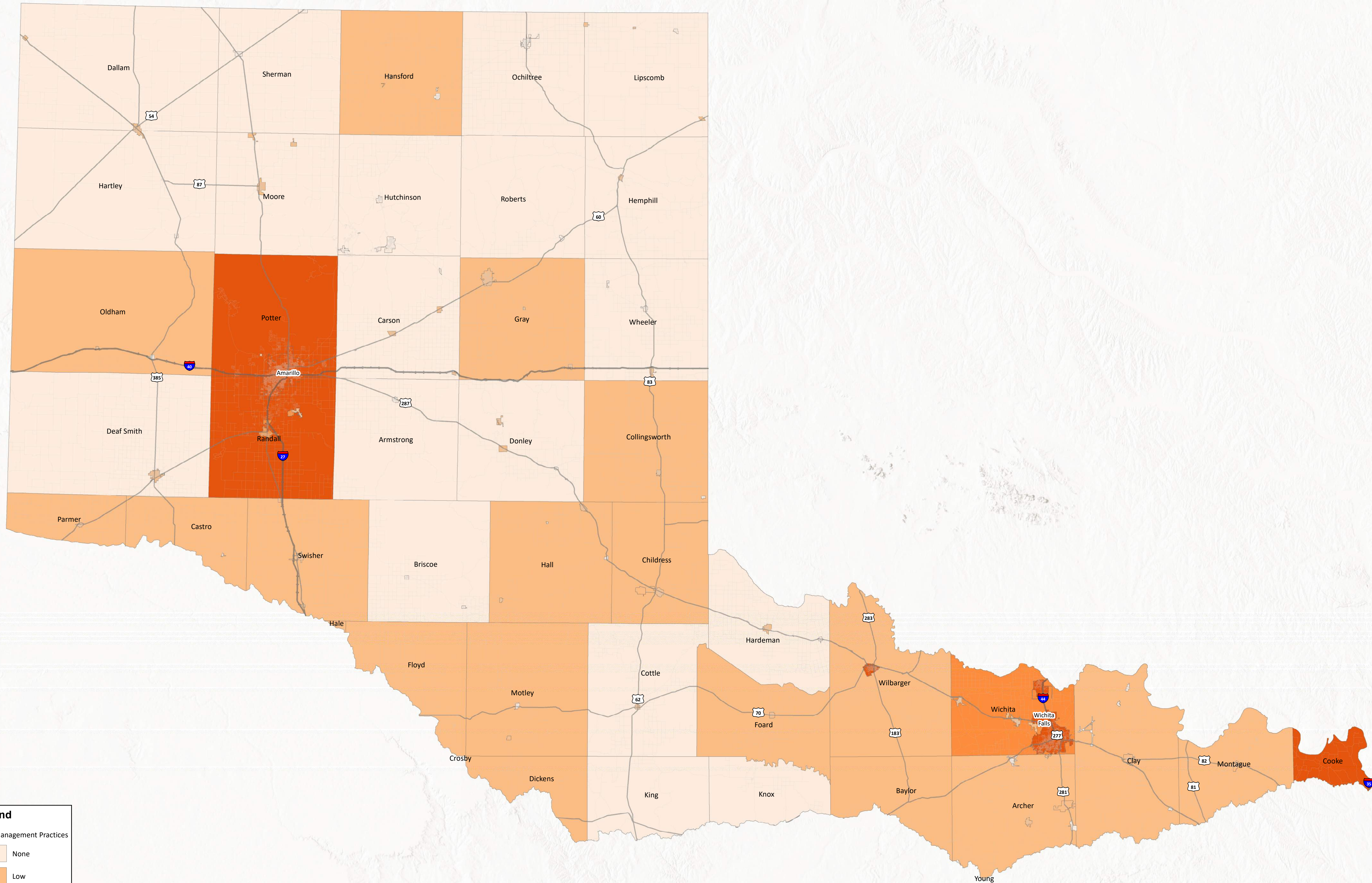


## **Appendix C-1 | C-1.1**

### **Map 13 – Floodplain Management**



**Legend**

Flood Management Practices

- None
- Low
- Moderate
- Strong

**FREESE AND NICHOLS, INC.**  
OFFICE: (817) 735-7300

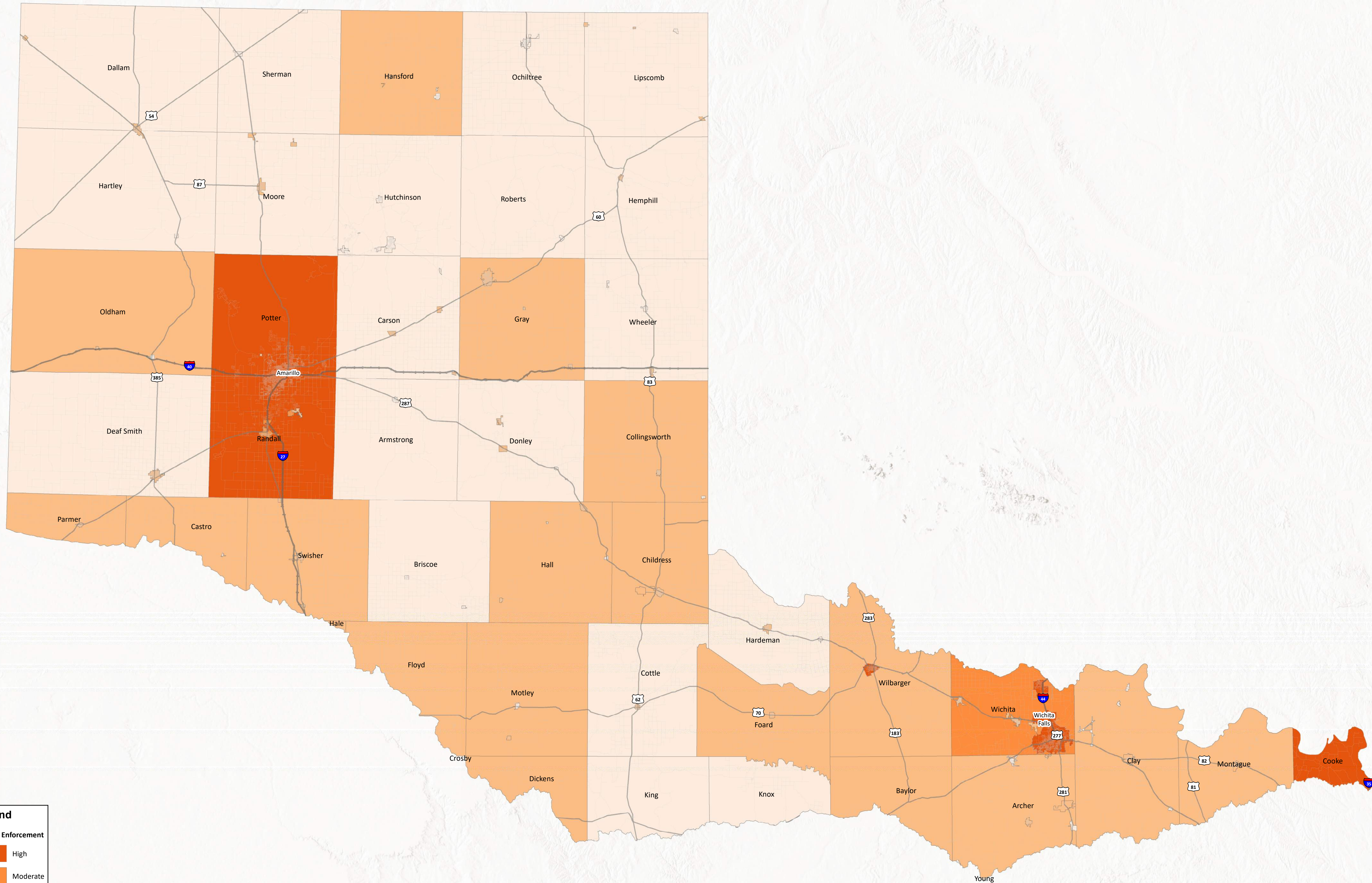


Region 1 - Canadian - Upper Red  
**Flood Management Practices**

0 5 10 Miles

PN JOB NO	PPC21321
FILE	Map13_FMPractices
DATE	12/21/2022
SCALE	1:750,000
DRAFTED	08071

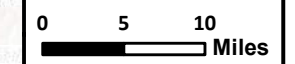
**Map 13-1**



**Legend**

Level of Enforcement

- High
- Moderate
- Low
- None



## Appendix C-2 | C-2.1

### Table 6 – Existing Floodplain Management Practices

Entity	Floodplain management regulations (Yes/ No/ Unknown)	Adopted minimum regulations pursuant to Texas Water Code Section 16.3145? (Yes/ No)	NFIP participant (Yes/ No)	Higher standards adopted (Yes/ No)	Level of enforcement of practices (High/ Moderate/ Low/ None)	Floodplain management practices (Strong/ Moderate/ Low/None)1	Existing stormwater or drainage fee (Yes/ No)	Web Link to entity regulations
Cities/Towns/Villages								
Adrian	Yes	Yes	No	No	Low	Low	No	
Amarillo	Yes	Yes	Yes	Yes	High	Strong	Yes	
Archer City	Yes	Yes	Yes	No	No	Low	No	
Belleue	Unknown	No	No	No	None	None	No	
Bishop Hills	Yes	Yes	Yes	No	No	Low	No	
Booker	Yes	Yes	Yes	No	No	Low	No	
Borger	Yes	Yes	Yes	No	No	None	No	
Bowie	Yes	Yes	Yes	No	No	Low	No	
Burkburnett	Yes	Yes	Yes	Yes	High	Strong	Yes	
Byers	Yes	Yes	Yes	No	No	None	No	
Cactus	Yes	Yes	Yes	No	No	Low	No	
Canadian	Yes	Yes	Yes	No	No	Low	No	
Canyon	Yes	Yes	Yes	No	Moderate	Moderate	No	
Cashion	Unknown	No	No	No	None	None	No	
Channing	Unknown	No	No	No	None	None	No	
Childress	Yes	Yes	Yes	No	No	Low	No	
Chillicothe	Unknown	No	No	No	None	None	No	
Clarendon	Yes	Yes	Yes	No	No	Low	No	
Claude	Unknown	No	No	No	None	None	No	
Crowell	Yes	Yes	Yes	No	No	Low	No	
Dalhart	Yes	Yes	Yes	No	No	Low	No	
Darrouzett	Yes	Yes	Yes	No	No	Low	No	
Dean	Unknown	No	No	No	None	None	No	
Dodson	Unknown	No	No	No	None	None	No	
Dumas	Yes	Yes	Yes	No	No	Low	No	
Electra	Yes	Yes	Yes	No	No	Low	No	
Estelle	Unknown	No	No	No	None	None	No	
Follett	Unknown	No	No	No	None	None	No	
Friona	Yes	Yes	Yes	No	No	Low	No	
Fritch	Yes	Yes	Yes	No	No	None	No	
Gainesville	Yes	Yes	Yes	Yes	High	Strong	No	
Groom	Yes	Yes	Yes	No	No	Low	No	
Grover	Yes	Yes	Yes	No	No	Low	No	
Happy	Yes	Yes	Yes	No	No	Low	No	
Hedley	Unknown	No	No	No	None	None	No	
Henrietta	Yes	Yes	Yes	No	No	Low	No	
Hereford	Yes	Yes	Yes	No	No	Low	No	
Higgins	Yes	Yes	Yes	No	No	Low	No	
Holliday	Yes	Yes	Yes	No	No	None	No	
Howardwick	Yes	Yes	Yes	No	No	Low	No	
Iowa Park	Yes	Yes	Yes	No	No	Low	No	
Jolly	Yes	Yes	Yes	No	No	None	No	
Kress	Yes	Yes	Yes	No	No	Low	No	
Lake Tanglewood	Yes	Yes	Yes	No	No	Low	No	
Lakeside City	Yes	Yes	Yes	No	No	Low	No	
Lakeview	Unknown	No	No	No	None	None	No	
Lefors	Yes	Yes	Yes	No	No	Low	No	
Lindsay	Yes	Yes	Yes	No	No	Low	No	
Lockney	Unknown	No	No	No	None	None	No	
Matador	Unknown	No	No	No	None	None	No	
McLean	Unknown	Yes	No	No	Low	Low	No	
Megargel	Yes	Yes	Yes	No	No	None	No	
Memphis	Yes	Yes	Yes	No	No	Low	No	
Miami	Unknown	No	No	No	None	None	No	
Mobeetie	Unknown	No	No	No	None	None	No	
Nazareth	Unknown	No	No	No	None	None	No	
Nocona	Yes	Yes	Yes	No	No	Low	No	
Paducah	Yes	Yes	Yes	No	No	Low	No	
Palisades	Yes	Yes	Yes	No	No	Low	No	
Pampa	Yes	Yes	Yes	No	No	Low	No	
Panhandle	Yes	Yes	Yes	No	No	Low	No	
Perryton	Unknown	No	No	No	None	None	No	
Petrolia	Yes	Yes	Yes	No	No	None	No	
Pleasant Valley	Yes	Yes	Yes	No	No	Low	No	
Quanah	Yes	Yes	Yes	No	No	Low	No	
Quitaque	Unknown	No	No	No	None	None	No	
Roaring Springs	Yes	Yes	Yes	No	No	Low	No	
Sanford	Unknown	No	No	No	None	None	No	
Scotland	Yes	Yes	Yes	No	No	Low	No	
Seymour	Yes	Yes	Yes	No	No	Low	No	
Shamrock	Yes	Yes	Yes	No	No	Low	No	
Silverton	Unknown	No	No	No	None	None	No	
Skellytown	Unknown	No	No	No	None	None	No	
Spearman	Yes	Yes	Yes	No	No	None	No	
St. Jo	Yes	Yes	Yes	No	No	Low	No	
Stinnett	Unknown	No	No	No	None	None	No	
Stratford	Unknown	No	No	No	None	None	No	
Sunray	Yes	Yes	Yes	No	No	Low	No	
Texhoma	Unknown	No	No	No	None	None	No	
Texline	Yes	Yes	Yes	No	No	Low	No	
Timbercreek Canyon	Yes	Yes	Yes	No	Moderate	Moderate	No	
Tulia	Yes	Yes	Yes	No	No	Low	No	
Turkey	Yes	Yes	Yes	No	No	Low	No	
Vega	Unknown	No	No	No	None	None	No	
Vernon	Yes	Yes	Yes	Yes	High	Strong	Yes	
Wellington	Yes	Yes	Yes	No	No	Low	No	
Wheeler	Yes	Yes	Yes	No	No	None	No	
White Deer	Yes	Yes	Yes	No	No	Low	No	<a href="http://www.whitedeer.us/web/?page_id=4655">http://www.whitedeer.us/web/?page_id=4655</a>

Entity	Floodplain management regulations (Yes/ No/ Unknown)	Adopted minimum regulations pursuant to Texas Water Code Section 16.3145? (Yes/ No)	NFIP participant (Yes/ No)	Higher standards adopted (Yes/ No)	Level of enforcement of practices (High/ Moderate/ Low/ None)	Floodplain management practices (Strong/ Moderate/ Low/None)1	Existing stormwater or drainage fee (Yes/ No)	Web Link to entity regulations
Wichita Falls	Yes	Yes	Yes	Yes	High	Strong	Yes	
Windthorst	Unknown	No	No	No	None	None	No	
<b>Counties</b>								
Archer County	Yes	Yes	Yes	No		Low	No	
Armstrong County	Unknown	No	No	No	None	None	No	
Baylor County	Yes	Yes	Yes	No		Low	No	
Briscoe County	Unknown	No	No	No	None	None	No	
Carson County	Unknown	No	No	No	None	None	No	
Castro County	Yes	Yes	Yes	No		Low	No	
Childress County	Yes	Yes	Yes	No		Low	No	
Clay County	Yes	Yes	Yes	No		Low	No	
Collingsworth County	Yes	Yes	Yes	No		Low	No	
Cooke County	Yes	Yes	Yes	Yes	High	Strong	No	
Cottle County	Unknown	No	No	No	None	None	No	
Crosby County	Yes	Yes	Yes	No		Low	No	
Dallam County	Unknown	No	No	No	None	None	No	
Deaf Smith County	Unknown	No	No	No	None	None	No	
Dickens County	Yes	Yes	Yes	No		Low	No	
Donley County	Unknown	No	No	No	None	None	No	
Floyd County	Yes	Yes	Yes	No		Low	No	
Foard County	Yes	Yes	Yes	No		Low	No	
Gray County	Yes	Yes	Yes	No		Low	No	
Hale County	Yes	Yes	Yes	No		Low	No	
Hall County	Yes	Yes	Yes	No		Low	No	
Hansford County	Yes	Yes	Yes	No		Low	No	
Hardeman County	Unknown	No	No	No	None	None	No	
Hartley County	Unknown	No	No	No	None	None	No	
Hemphill County	Unknown	No	No	No	None	None	No	
Hutchinson County	Unknown	No	No	No	None	None	No	
King County	Yes	Yes	Yes	No		None	No	
Knox County	Unknown	No	No	No	None	None	No	
Lipscomb County	Unknown	No	No	No	None	None	No	
Montague County	Yes	Yes	Yes	No		Low	No	
Moore County	Unknown	No	No	No	None	None	No	
Motley County	Yes	Yes	Yes	No		Low	No	
Ochiltree County	Unknown	No	No	No	None	None	No	
Oldham County	Yes	Yes	Yes	No		Low	No	
Parmer County	Yes	Yes	Yes	No		Low	No	
Potter County	Yes	Yes	Yes	Yes	High	Strong	No	
Randall County	Yes	Yes	Yes	Yes	High	Strong	No	
Roberts County	Unknown	No	No	No	None	None	No	
Sherman County	Unknown	No	No	No	None	None	No	
Swisher County	Yes	Yes	Yes	No		Low	No	
Wheeler County	Unknown	No	No	No	None	None	No	
Wichita County	Yes	Yes	Yes	No	Moderate	Moderate	No	
Wilbarger County	Yes	Yes	Yes	No		Low	No	
Young County	Yes	Yes	Yes	No		None	No	
<b>Other Entities</b>								
Archer County MUD 1	Unknown	No	No		None	None		
Bowie Water Supply District	Unknown	No	No		None	None		
Brazos River Authority	Unknown	No	No		None	None		
Canadian River Municipal Water Authority	Unknown	No	No		None	None		
Clear Creek Watershed Authority	Unknown	No	No		None	None		
Deaf Smith County FWSD 1	Unknown	No	No		None	None		
Dickens County WCID 1	Unknown	No	No		None	None		
Farmers Creek Watershed Authority	Unknown	No	No		None	None		
Gray County MUD 1	Unknown	No	No		None	None		
Greater Texoma Utility Authority	Unknown	No	No		None	None		
Greenbelt Municipal & Industrial Water Authority	Unknown	No	No		None	None		
Knox County WCID 1	Unknown	No	No		None	None		
Llano Estacado Water District	Unknown	No	No		None	None		
Mackenzie Municipal Water Authority	Unknown	No	No		None	None		
Matador Water District	Unknown	No	No		None	None		
Nortex Regional Planning Commission	Unknown	No	No		None	None		
Palo Duro River Authority	Unknown	No	No		None	None		
Panhandle Regional Planning Commission	Unknown	No	No		None	None		
Potter County FWSD 1	Unknown	No	No		None	None		
Randall County MUD 1	Unknown	No	No		None	None		
Red River Authority of Texas	Unknown	No	No		None	None		
Roberts County FWSD 1	Unknown	No	No		None	None		
South Plains Association of Governments	Unknown	No	No		None	None		
Texoma Council of Governments	Unknown	No	No		None	None		
West Central Texas Council of Governments	Unknown	No	No		None	None		
Wheeler County Water Supply District	Unknown	No	No		None	None		

Entity	Floodplain management regulations (Yes/ No/ Unknown)	Adopted minimum regulations pursuant to Texas Water Code Section 16.3145? (Yes/ No)	NFIP participant (Yes/ No)	Higher standards adopted (Yes/ No)	Level of enforcement of practices (High/ Moderate/ Low/ None)	Floodplain management practices (Strong/ Moderate/ Low/None) <sup>1</sup>	Existing stormwater or drainage fee (Yes/ No)	Web Link to entity regulations
Wichita County Water Improvement District 2	Unknown	No	No		None	None		

1. High – actively enforces the entire ordinance, performs many inspections throughout construction process, issues fines, violations, and Section 1316s where appropriate, and enforces substantial damage and substantial improvement.  
 Moderate – enforces much of the ordinance, performs limited inspections and is limited in issuance of fines and violations.  
 Low – provides permitting of development in the floodplain, may not perform inspections, may not issue fines or violations.  
 None – does not enforce floodplain management regulations.

## Appendix C-2 | C-2.2

**Table 11** – Regional Flood Plan Flood Mitigation and Floodplain Management Goals



Goal ID	Goal	Term of Goal	Target Year	Applicable to	Residual Risk	How Will the Goal Be Measured	Overarching Goal(s)	Associated Goal IDs
01000001	Evaluate watersheds to confirm/refine flood risk for 50% of habitable structures identified within the planning region's 1% existing flood hazard area.	Short Term (10-year)	2033	Entire RFPG	No change in flood risk; increased confidence in flood risk data for 50% of affected structures in the region	Number of evaluations performed; Number of structures contained within studied watersheds	Protect against loss of life and property (362.3.b.13-14)	01000002
01000002	Evaluate watersheds to confirm/refine flood risk for 100% of habitable structures identified within planning region's 1% existing flood hazard area.	Long Term (30-year)	2053	Entire RFPG	No change in flood risk; increased confidence in flood risk data for 100% of affected structures in the region	Number of evaluations performed; Number of structures contained within studied watersheds	Protect against loss of life and property (362.3.b.13-14)	01000001
01000003	Reduce number of habitable structures within the planning region's 1% existing flood hazard area by 20%.	Short Term (10-year)	2033	Entire RFPG	80% of identified structures will have an annual risk of flooding of >1%; 20% of structures will have an annual risk of flooding of <1%	Number of structures removed from existing flood hazard layer	Protect against loss of life and property (362.3.b.13-14)	01000004
01000004	Reduce number of habitable structures within the planning region's 1% existing flood hazard area by 50%.	Long Term (30-year)	2053	Entire RFPG	50% of identified structures will have an annual risk of flooding of >1%; 20% of structures will have an annual risk of flooding of <1%	Number of structures removed from existing flood hazard layer	Protect against loss of life and property (362.3.b.13-14)	01000003
01000005	Improve safety at 20% of LWCs in the planning region through structural improvements or warning/signage systems.	Short Term (10-year)	2033	Entire RFPG	80% of low water crossings have no change in flood risk	Number of low water crossings with safety improvements	Protect against loss of life and property (362.3.b.13-14)	01000006
01000006	Improve safety at 50% of LWCs in the planning region through structural improvements or warning/signage systems.	Long Term (30-year)	2053	Entire RFPG	50% of low water crossings have no change in flood risk	Number of low water crossings with safety improvements	Protect against loss of life and property (362.3.b.13-14)	01000005
01000007	Develop a baseline understanding of the risks associated with high-hazard dams and levees within the planning region.	Short Term (10-year)	2033	Entire RFPG	No change in flood risk; better understanding of flood risk associated with high hazard dams and levees in the region	Number of dams and levees with a quantified level of risk	Protect against loss of life and property (362.3.b.13-14)	01000008
01000008	Bring 100% of deficient high-hazard dams and levees in the planning region up to current state and/or federal standards.	Long Term (30-year)	2053	Entire RFPG	50% of high hazard dams and levees will not meet state and/or federal standards, typically associated with an annual flood risk < 0.2%	Number of dams and levees improved	Protect against loss of life and property (362.3.b.13-14)	01000007
01000009	Increase NFIP participation or adoption of equivalent standards to 90% of municipalities and 75% of counties in the planning region.	Short Term (10-year)	2033	Entire RFPG	Risk to existing structures does not increase due to better floodplain management practices; Annual flood risk to new construction in participating communities will be <1%	Number of entities participating in NFIP; number of entities with equivalent standards	Protect against loss of life and property (362.3.b.13-14)	01000010
01000010	Increase NFIP participation or adoption of equivalent standards to 100% of municipalities and 100% of counties in the planning region.	Long Term (30-year)	2053	Entire RFPG	Risk to existing structures does not increase due to better floodplain management practices; Annual flood risk to new construction across the region will be <1%	Number of entities participating in NFIP; number of entities with equivalent standards	Protect against loss of life and property (362.3.b.13-14)	01000009
01000011	Increase percentage of communities in the planning region with dedicated funding sources for operations and maintenance of storm drainage system to 25% of municipalities and 10% of counties.	Short Term (10-year)	2033	Entire RFPG	Entities without dedicated funding have no change in flood risk; entities with new funding sources have reduced risk as stormwater O&M and capital projects are implemented	Number of entities with dedicated funding sources for stormwater operations and maintenance	Protect against loss of life and property (362.3.b.13-14)	01000012
01000012	Increase percentage of communities in the planning region with dedicated funding sources for operations and maintenance of storm drainage system to 50% of municipalities and 30% of counties.	Long Term (30-year)	2053	Entire RFPG	Entities without dedicated funding have no change in flood risk; entities with new funding sources have reduced risk as stormwater O&M and capital projects are implemented	Number of entities with dedicated funding sources for stormwater operations and maintenance	Protect against loss of life and property (362.3.b.13-14)	01000011
01000013	Consider and incorporate nature-based practices in 50% of FMPs and FMSs recommended in the Regional Flood Plan.	Short Term (10-year)	2033	Entire RFPG	No change in flood risk; reduces impacts on the environment	Number of FMPs and FMSs implementing nature-based practices	Include strategies and projects that use nature-based features (362.3.b.17)	N/A

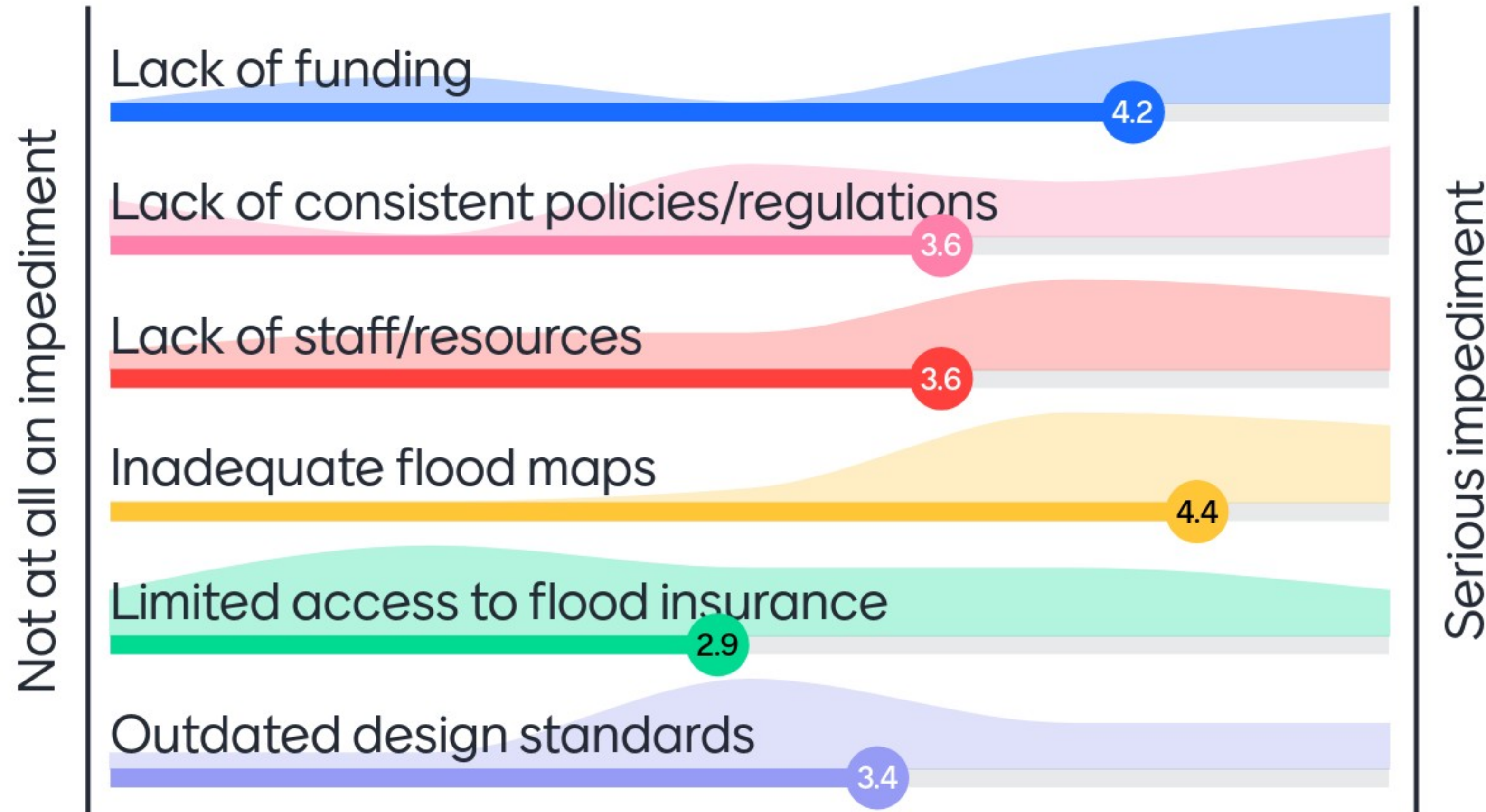
## Appendix C-3 | C-3.1

### Menti Polling Results

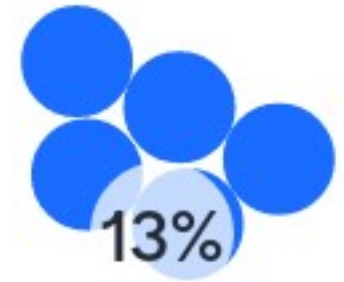
# Express with one word your top priority for the Regional Flood Planning effort



# Does your interest category consider these issues an impediment to effective floodplain management?



# Select the top 3 flooding concerns for your interest category in Region 1:



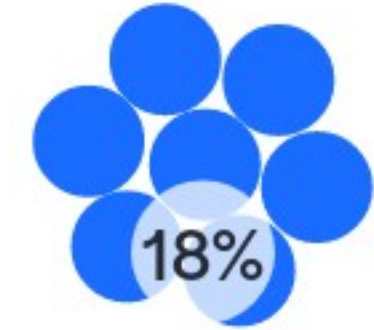
Flooded roadways



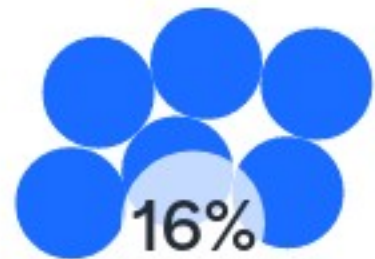
Flooding of critical facilities



Impacts to economic & agricultural production



Damages to private property



Potential for loss of human lives



Unregulated development



Inadequate Infrastructure



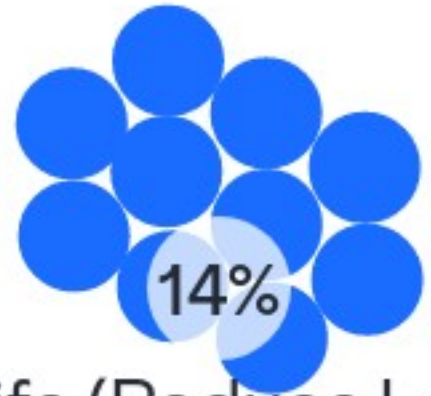
Lack of flood risk data

# How important are the following outcomes for a successful Regional Flood Plan?



# Return to Main Presentation

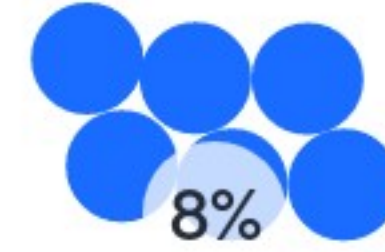
# Potential Goal Categories



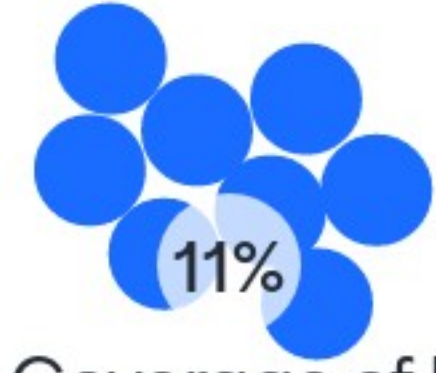
Loss of Life (Reduce Low Water Crossings/Add Warning Systems)



Property Protection (Reduce Number of Properties in Floodplain)



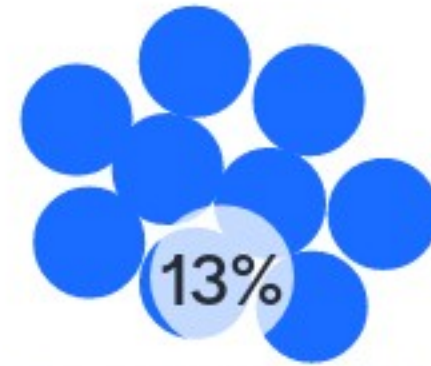
Reduced Agricultural Flood Losses



Improved Coverage of Flood Risk Data



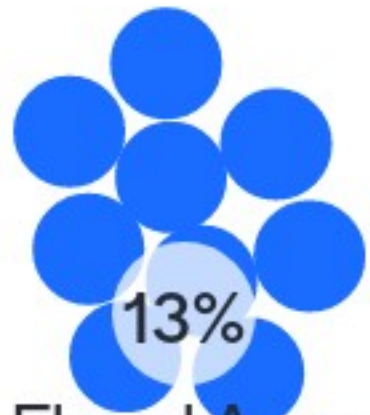
Increased NFIP Participation



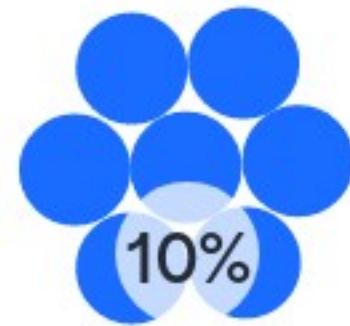
Enhanced Floodplain Management (Local Standards/Policies)

0%

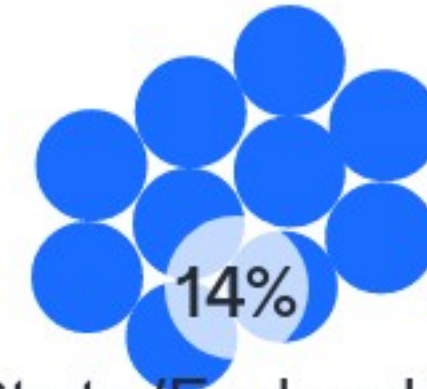
More Flood Insurance Policies



Enhanced Flood Awareness and Public Outreach



More Local Funding Programs Established



More State/Federal Funding Allocated to Region

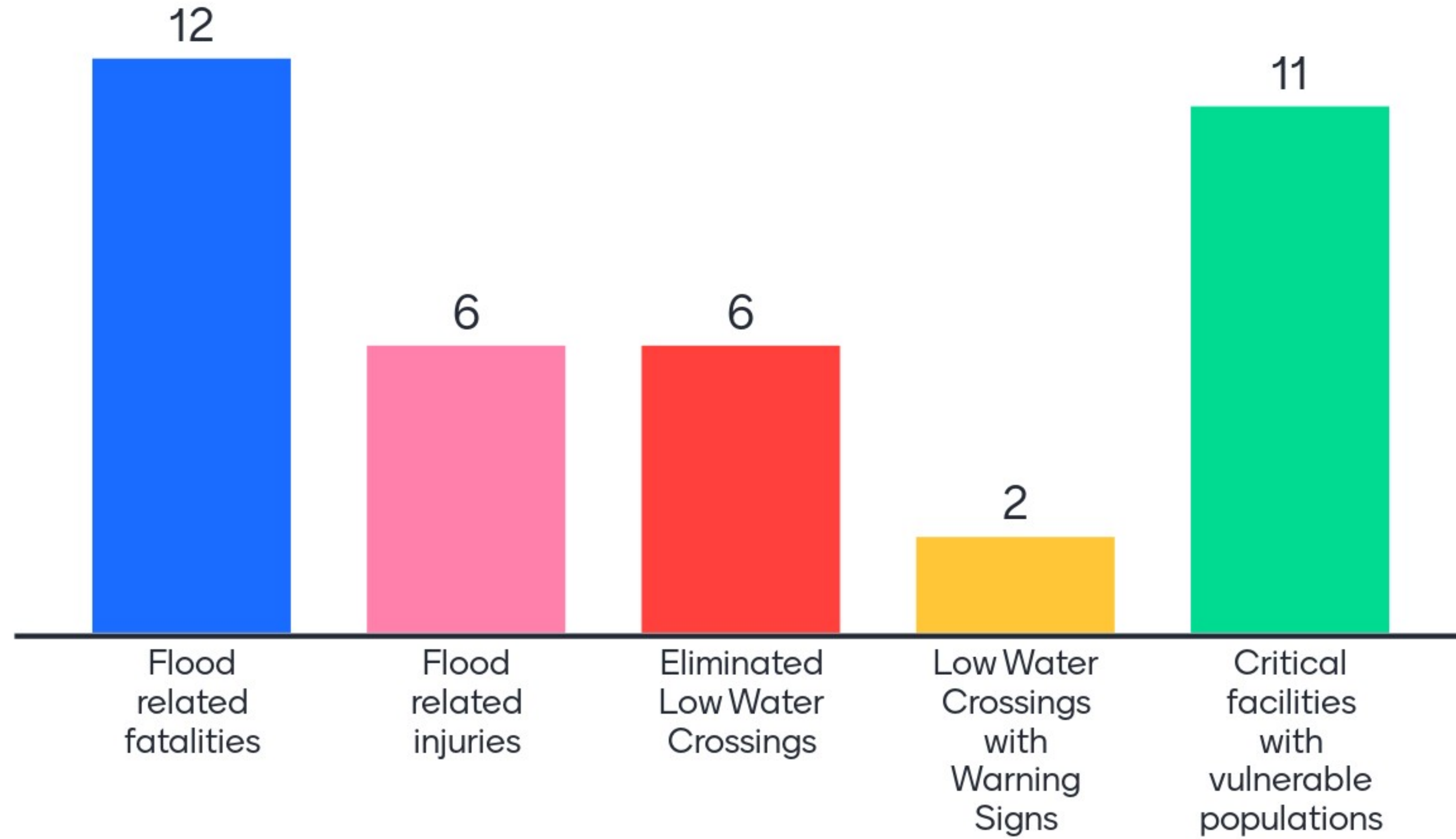


Other



# Return to Main Presentation

# Loss of Life Potential Metrics



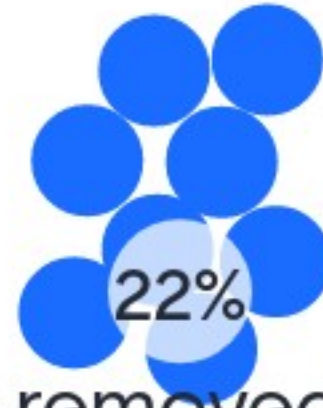
# Return to Main Presentation



# Property Damage Potential Metrics



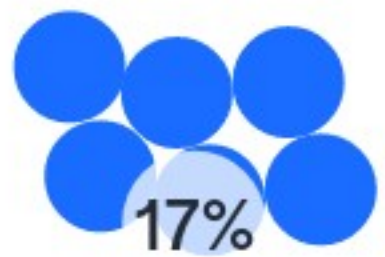
Structures removed from 1% (100-year)



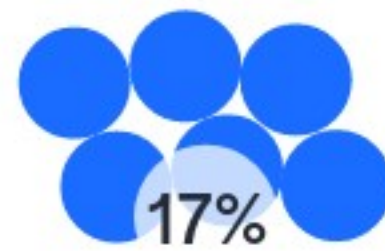
Critical facilities removed 0.2% (500-year)

0%

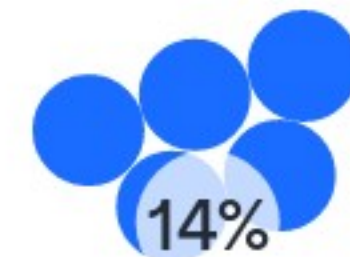
Structures removed from 10% (10-year)



Structures acquired (bought & demolished)



Structures elevated

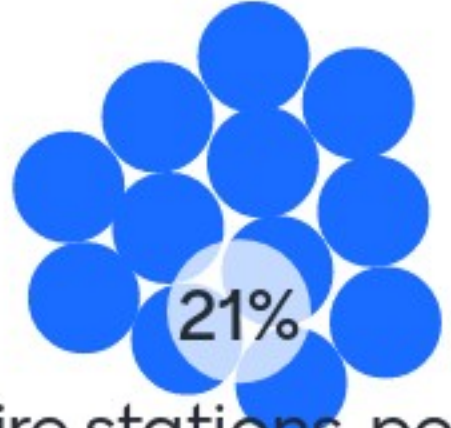


Structures flood proofed

# Return to Main Presentation



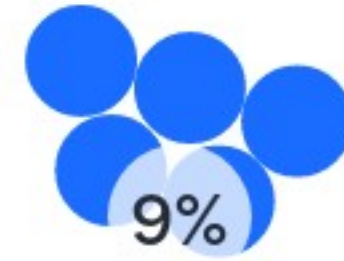
# What are Critical Facilities?



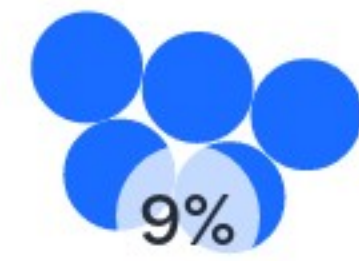
Hospitals, fire stations, police stations



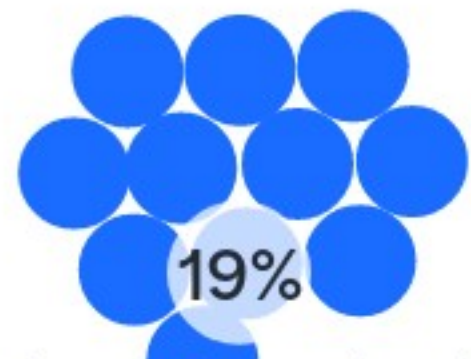
Assisted living facilities, nursing homes



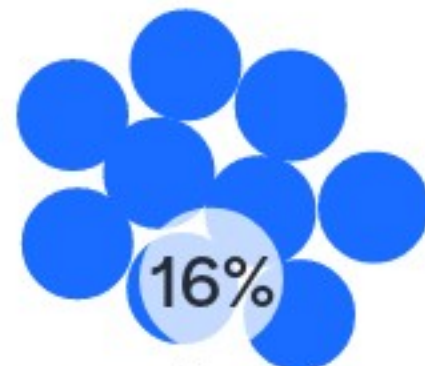
Schools (K through 12th)



Schools for children with special needs



Water and wastewater treatment plants



Power generating/transmitting facilities



Storage of critical records and similar facilities



Agricultural facilities (feed lot meat packing plants, etc)

# Return to Main Presentation



# Indicate your initial preference with regard to regional floodplain management standards:

