

LOWER RIO GRANDE REGIONAL FLOOD PLANNING GROUP MEETING

Agenda Item 7 – Technical Consultant Update

November 16, 2022



AGENDA

Discussion and Update on:

- Approval of FMEs to be studied further for possible inclusion as an FMP (Task 12)**
- Review of comments received on Draft Regional Flood Plan**
- Update to Chapter 7**



TASK 12
PERFORM IDENTIFIED
FMES, IDENTIFY,
EVALUATE, AND
RECOMMEND
ADDITIONAL FMPS



TASK 12 – PERFORM FMEs FOR ADDITIONAL FMPs

TWDB Requirements

Objective:

- “Perform” identified FMEs to recommended additional FMPs
 - Evaluate flood risks in areas with limited data
 - Evaluate flood risk reduction solutions
 - Preliminary engineering

Requirement:

- RFPG must approve list of FMEs to be performed
 - Additional FMPs to be evaluated and recommended
- Must adhere to Task 4B/5 requirements
- Revise and re-submit relevant data deliverables and RFP chapters
- Results/recommendations to be included in the Amended Regional Flood Plan
 - due July 14, 2023



TASK 12 – PERFORM FMEs FOR ADDITIONAL FMPs

Considerations for FME Selection

Criteria for considering FME for further analysis

- H&H models available
 - analysis of potential adverse impact
- Structures and population at risk
- Low-water-crossings on thoroughfare or near critical facility
- Critical facilities at risk
- Level-of-effort to perform FME possible with available budget and time
- Sponsor concurrence



TASK 12 – PERFORM FMEs FOR ADDITIONAL FMPs

Scope of Work for FMEs Selected

Potential Scope of Work

- Data Collection
 - Site visits
 - Survey
- Update hydrologic and hydraulic modeling
 - Atlas 14 rainfall, LiDAR
- Update alternatives analysis
- Verify no adverse impacts
- Evaluate potential constraints
- Update cost estimates
- Conduct cost-benefit analysis
- Perform FMP evaluation with RFPG
 - Financial Survey
- Prepare documentation for inclusion in Amended RFP

TASK 12 - FMES FOR ADDITIONAL FMPS

Preliminary List of FMEs Approved by RFPG

FME ID Number	FME Title	County	Sponsor	BCA	Effort
151000064	Weslaco Stormwater Improvement Plan - Pleasantview Drive and 11th Street	Hidalgo	City of Weslaco	0.5	Need BCR for 1% ACE; no negative impacts
151000065	Weslaco Stormwater Improvement Plan - Mile 10 N and Mile 5 ½ W	Hidalgo	City of Weslaco	0.4	no negative impacts
151000066	Weslaco Stormwater Improvement Plan - South International Boulevard and Business 83	Hidalgo	City of Weslaco	15.7	Need BCR for 1% ACE; no negative impacts
151000067	Weslaco Stormwater Improvement Plan - Texas Boulevard to Airport Drive, South of Business 83	Hidalgo	City of Weslaco	0.3	no negative impacts
151000068	Weslaco Stormwater Improvement Plan - West Weslaco	Hidalgo	City of Weslaco	1.0	Need BCR for 1% ACE
151000069	Weslaco Stormwater Improvement Plan - Westgate Drive and Sugar Cane Drive	Hidalgo	City of Weslaco	0.3	no negative impacts

TASK 12 - FMES FOR ADDITIONAL FMPS

Preliminary List of FMEs Approved by RFPG

FME ID Number	FME Title	County	Sponsor	BCA	Effort
151000071	Precinct 4 MDP - Risk Area A at Mile 8.5 Rd. & Ware Rd.	Hidalgo	Hidalgo County Precinct 4	1.74	no negative impacts
151000072	Precinct 4 MDP - Risk Area B at Mile 6 & North Ware Rd.	Hidalgo	Hidalgo County Precinct 4	1.3	no negative impacts
151000073	Precinct 4 MDP - Risk Area C at FM 2812 & FM 493	Hidalgo	Hidalgo County Precinct 4	0.4	no negative impacts
151000074	Precinct 4 MDP - Risk Area D at S. McColl & Canton Rd.	Hidalgo	Hidalgo County Precinct 4	1.4	no negative impacts
151000076	Precinct 4 MDP - Risk Area F at Texas Rd. & Cesar Chavez Rd.	Hidalgo	Hidalgo County Precinct 4	2.54	no negative impacts
151000077	Precinct 4 MDP - Risk Area G at Hoehn Rd. & Mile 11 Rd.	Hidalgo	Hidalgo County Precinct 4	0.5	no negative impacts
151000078	Precinct 4 MDP - Risk Area I at Sharp Rd. & E Monte Cristo Rd	Hidalgo	Hidalgo County Precinct 4	0.63	no negative impacts
151000079	Precinct 4 MDP - Risk Area J at SH107 & FM 907	Hidalgo	Hidalgo County Precinct 4	1.07	no negative impacts

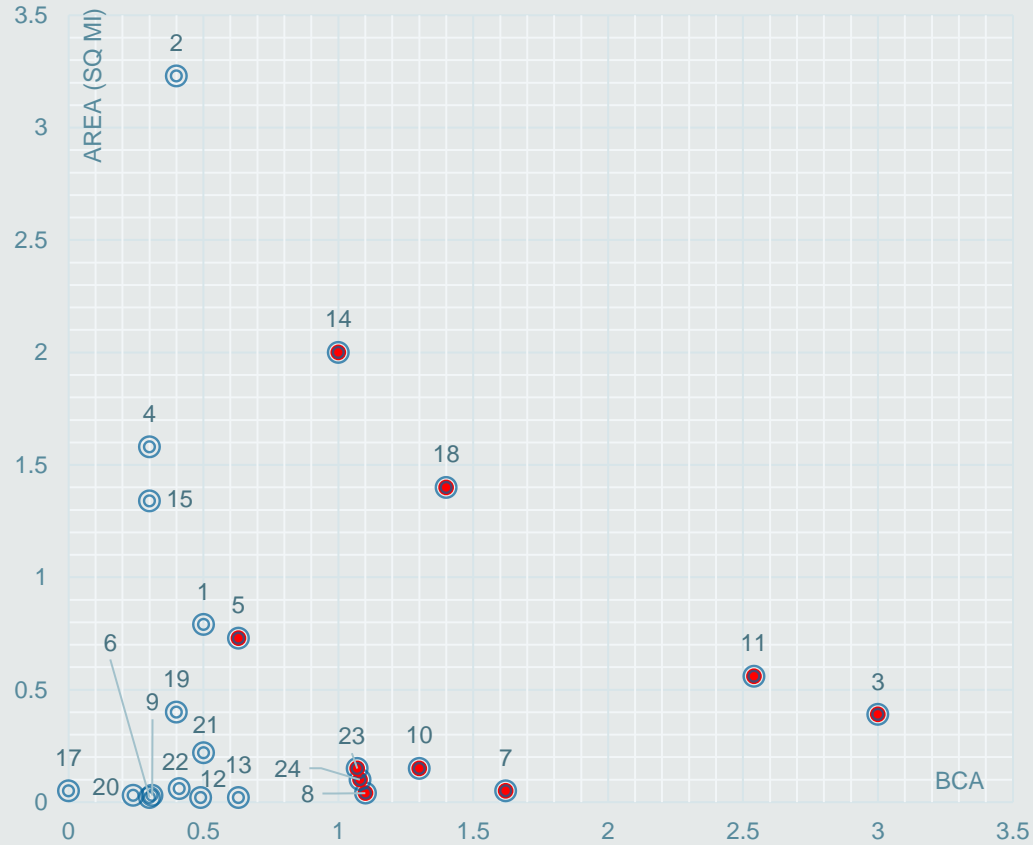
TASK 12 - FMES FOR ADDITIONAL FMPS

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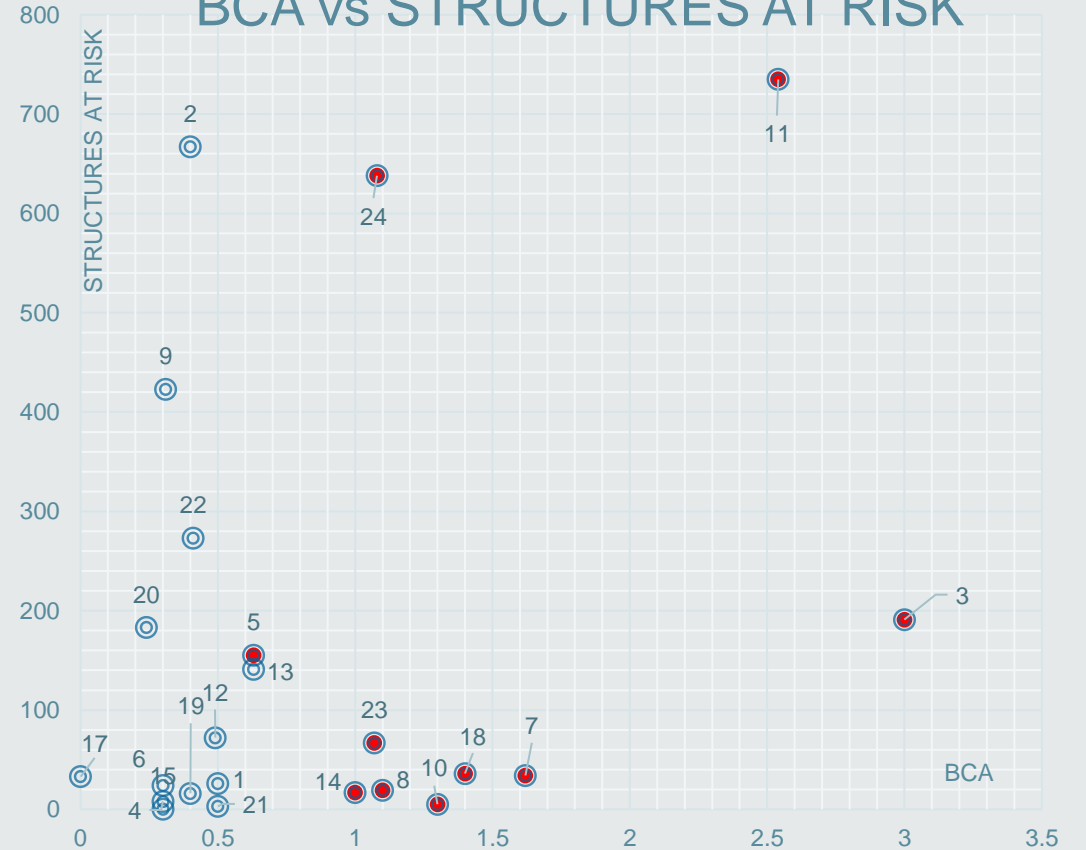
FME ID Number	FME Title	County	Sponsor	BCA	Effort
151000086	Risk Area 11 Rancho Escondido	Maverick	City of Eagle Pass	0.31	no negative impacts
151000087	Risk Area 12 Fox Borough Drive	Maverick	City of Eagle Pass	0	no negative impacts
151000088	Risk Area 13 Celle De Los Santos neighborhood. Additional culvert under irrigation canal.	Maverick	City of Eagle Pass	0.24	no negative impacts
151000089	Risk Area 15 Trib 3 Detention at Main Street	Maverick	City of Eagle Pass	1.62	no negative impacts
151000090	Risk Area 2 Treasure Hills	Maverick	City of Eagle Pass	0.41	no negative impacts
151000091	Risk Area 3 Arrow Point Boulevard	Maverick	City of Eagle Pass	0.3	no negative impacts
151000092	Risk Area 4 Bibb & Misty Willow storm drain	Maverick	City of Eagle Pass	0.63	no negative impacts
151000093	Risk Area 5 Debona Drive	Maverick	City of Eagle Pass	0.49	no negative impacts
151000094	Risk Area 6 Trib 2 bypass & detention at Eagle Pass High School fields	Maverick	City of Eagle Pass	1.08	no negative impacts
151000095	Risk Area 8 Tributary 2 channel widening near Alexander Drive	Maverick	City of Eagle Pass	1.1	no negative impacts

TASK 12 - FMES FOR ADDITIONAL FMPS

BCA vs AREA



BCA vs STRUCTURES AT RISK



TASK 12 - FMES FOR ADDITIONAL FMPS

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TASK 12 - FMES FOR ADDITIONAL FMPS

Recommended List of FMEs for further study for possible FMPS

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COMMENTS ON THE DRAFT REGIONAL FLOOD PLAN



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TWDB Comments

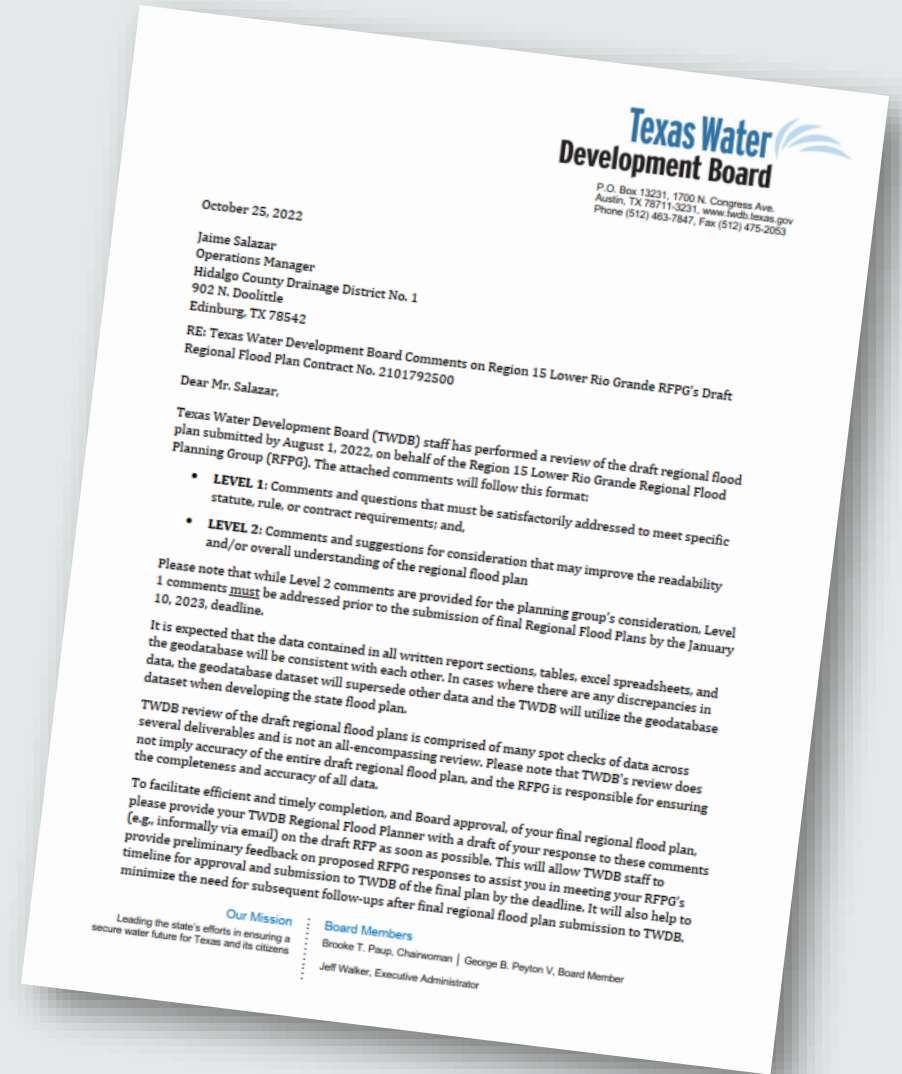
Comments received October 26, 2022

Level 1 Comments

- 12 received
- Must be addressed to meet specific statute, rule, or contract requirement
- Must be addressed by January 10, 2023

Level 2 Comments

- 12 received
- Suggestions for consideration to improve readability and/or overall understanding of the regional flood plan





COMMENTS ON THE DRAFT REGIONAL FLOOD PLAN

Sierra Club- Lone Star Chapter Comments

Comments received September 26, 2022

From:

Sonia Sams

Project Coordinator

Water Resources Branch

U.S. Army Corps of Engineers

Fort Worth, TX District

817-886-1920

Excel Table

Comments Regarding Legislative Recommendations, Regulatory and Administrative Recommendations and State Flood Planning Recommendations		
Name	Flood Plan Recommendations	Comments
Jerry Cott Table 8.1 Legislative		
	Non regulatory regional flood control or drainage districts should be established and funded for rapidly growing urban areas such as DFW, Houston, San Antonio, etc. Responsibility would be to provide consistency, technical resources, funding and reviews in support of FME's, FMS's. These organizations would also implement or support implementation of FMP's. These organizations would augment communities and counties that just don't have the resources and expertise to manage flooding.	Rapidly developing areas surrounding larger urban centers are at greater risk of having runoff patterns increasing because of development. These urban areas are comprised of many communities and unincorporated county areas. Many of the smaller communities are not funded or resourced to deal with the complexities of floodplain management and therefore there is a lack of or inconsistencies in floodplain management practices.
	Clarify the early 2000's state legislation that provide counties the authority to regulate floodplains to explicitly allow and encourage activities associated with floodplain management such as development of land use plans, regulatory authorities, e.g. permitting.	Although state legislation was passed in the early 2000's which gave counties the ability to regulate floodplains, interpretation of these regulations varies widely from county to county. The legislature bill lacks implementation guidance in the form of administrative rules. If development is occurring in unincorporated areas, this development can dynamically impact flood risk.
Jerry Cott Table 8.2 Regulatory		
	Require the use of n-values and channel conditions which would likely result if the channel or project were not maintained. Exceptions would be golf courses or other areas where an organization exists which would maintain the channel in perpetuity. Disallow maintenance by marginal organizations such as home owners associations to justify acceptance of lower n-values as this is an unrealistic expectation.	When channels are constructed, most often channel bed, banks and overbanks are cleared; however, with many miles of these channels, it is often difficult for communities to maintain those beds, banks and overbanks at their design conditions. Generally, there is a lack of channel maintenance to ensure flood conveyance areas, established as part of a development or improvement projects, to retain their design level n-values. This results in unexpected changes in channel conveyance and increased flooding. Channel maintenance is very expensive activity that can trigger environmental permitting
	No loss of valley storage to the 500-year level. Communities could allow redistribution of valley storage to allow interactions with natural areas but no loss of storage.	Land development in upstream areas increases runoff in downstream areas. This happens because of increased impervious cover and decreased tree cover, and therefore less ability to absorb rainfall. Additionally, development, in most communities, encroaches into riparian areas and decreases the amount of storage available to accommodate flood waters. Just the main thread of the Trinity River though DFW stores more flood waters during of flood than any three of the USACE reservoirs that provide flood protection for DFW. The many other streams provide even more storage than the main stem. There is limited capacity in rivers and streams to convey floodwaters. This means that all areas above any given conveyance point have to store flood water until sufficient time has lapsed to pass the water away from the impacted area. The streams are where this water is stored and depleting these storage areas will impact DS areas.
	Establish future land use plans for unincorporated areas associated with rapidly growing urban areas.	"
	Use of ultimate development land use conditions in the development of future flows. Require use of future flows for regulation of floodplains and development of FMP's.	"
Jerry Cott Table 8.3 State Flood Planning Recommendations		
	None	
	Potential FMS	
	Encourage storm shifting to validate 100-yr estimates and to provide a broader understanding of communities actual flood risk Storms identified and cataloged as part of the GLO funded USACE led Texas Storm Study could be the primary source of storms to be shifted.	Notes: Great deal of uncertainty in 100-yr estimates. Use of observed storms that approximately match depth duration data from NDAA Atlas 14 or other precipitation frequency sources validates 100-yr estimates. Additionally wet, dry and average conditions as well as conditions at the time the storm occurred can be presented. Additionally, communities have and can experience storms that exceed the 100-yr. While not regulatory, this information will provide additional hazard mitigation data so communities can address critical infrastructure impacts and be better prepared.
	Add detail to Watershed Hydrology Assessments (WHA) for communities within basins with completed WHA's. The WHA for the Trinity has been completed.	The WHA's, funded by FEMA, are considered the best available flood flow frequency estimates, e.g. 100-yr. These estimates consider the latest precipitation frequencies, the variations in watershed response and determine critical flood drivers by employing a wide range of sensitivity analysis for each computation point.
	Update WHA's when future precipitation frequency estimates become available. Efforts to develop future precipitation frequency estimates for Texas are starting.	
	Establish regional efforts, for large urban centers to develop future land use data for all developing areas, not just incorporated areas, for use in developing future flood flow frequency estimates and future 100-yr (and other recurrence interval) hazard boundaries.	



COMMENTS ON THE DRAFT REGIONAL FLOOD PLAN

Sierra Club- Lone Star Chapter Comments

Comments received October 27, 2022

- From:
 - Marty Kelly
Water Resources Program Coordinator
Office (512) 389 – 8214
Marty.Kelly@tpwd.texas.gov
- 6 pages





COMMENTS ON THE DRAFT REGIONAL FLOOD PLAN

Sierra Club- Lone Star Chapter Comments

Comments received October 31, 2022

☐ From:

☐ Alex Ortiz

Water Resources Specialist

Sierra Club Lone Star Chapter

alex.ortiz@sierraclub.org

☐ Cyrus Reed

Conservation Director

Sierra Club Lone Star Chapter

cyrus.reed@sierraclub.org

☐ 9 pages





TASK 7

FLOOD RESPONSE

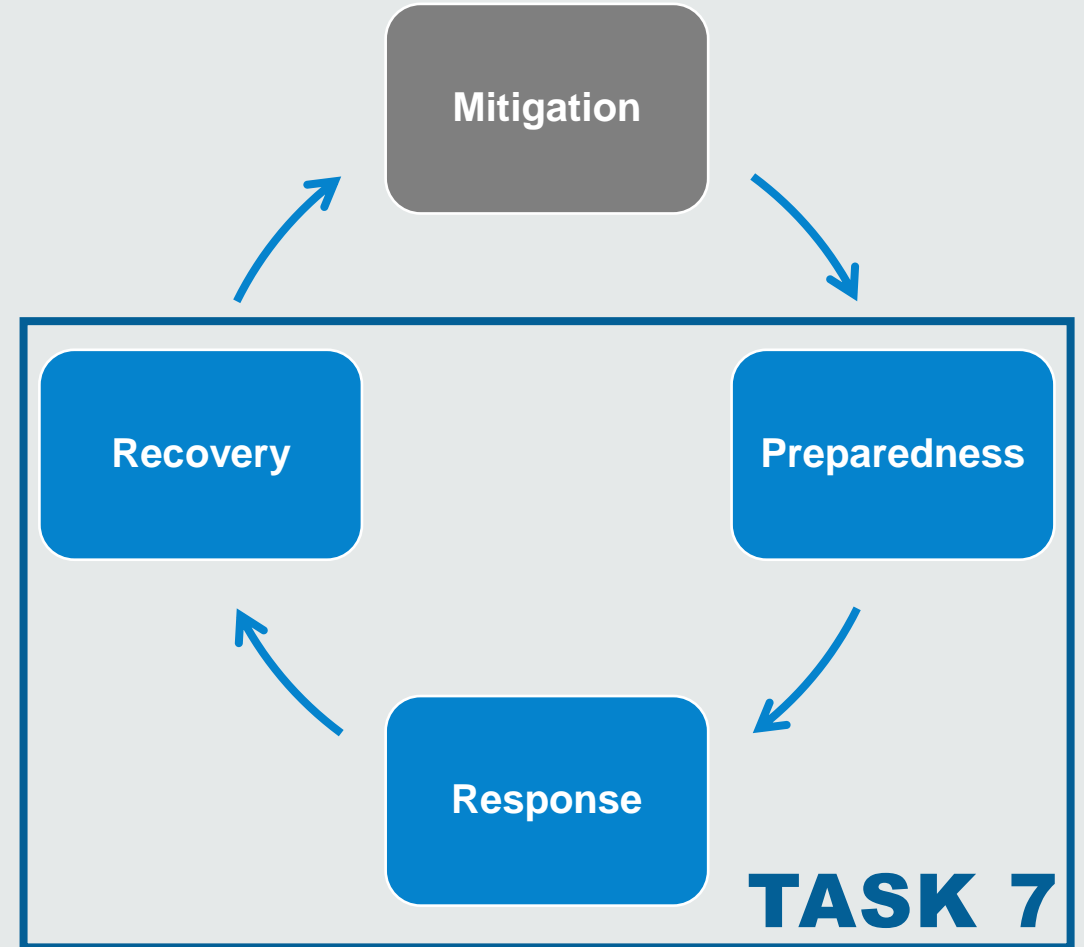
INFORMATION AND

ACTIVITIES



TASK 7 – FLOOD RESPONSE INFORMATION AND ACTIVITIES

- ❑ The focus of Task 7 is on the preparedness, response and recovery aspects of Flood Hazard Management.
 - ❑ What communities do immediately before, during, and after a storm to resume daily lives
- ❑ **Format**
 - ❑ Summary of Flood Hazard Planning in the region
 - ❑ Summary of the three categories of activities that are common to multiple jurisdictions





TASK 7 – PREPAREDNESS ACTIVITIES

From Hazard Mitigation Action Plans (HMAPs)

☐ Preparedness Activities

- ☐ Early Warning Systems
- ☐ Education on Suggested Response Activities
- ☐ Procurement of Emergency Response Equipment



<p>WARNING</p> <p>A warning is issued when a hazardous weather or hydrologic event is occurring, imminent or likely. A warning means weather conditions pose a threat to life or property. People in the path of the storm need to take protective action.</p>
<p>WATCH</p> <p>A watch is used when the risk of a hazardous weather or hydrologic event has increased significantly, but its occurrence, location or timing is still uncertain. A watch means that hazardous weather is possible. People should have a plan of action in case a storm threatens and they should listen for later information and possible warnings especially when planning travel or outdoor activities.</p>
<p>ADVISORY</p> <p>An advisory is issued when a hazardous weather or hydrologic event is occurring, imminent or likely. Advisories are for less serious conditions than warnings, that cause significant inconvenience and if caution is not exercised, could lead to situations that may threaten life or property.</p>
<p>OUTLOOK</p> <p>An outlook is issued when a hazardous weather or hydrologic event is possible in the next week. Outlooks are intended to raise awareness of the potential for significant weather that could lead to situations that may threaten life or property.</p>



TASK 7 – RESPONSE ACTIVITIES

From Hazard Mitigation Action Plans (HMAPs)

Response Activities

Distribution of Emergency Supplies

Sandbags

Deployment of Emergency Response Equipment and Activities

Rescue

Debris Removal

Mobile Pumps





TASK 7 – RECOVERY ACTIVITIES

From Hazard Mitigation Action Plans (HMAPs)

Recovery Activities

- Restoration of Utilities
- Removal of Excess Debris
- Continued use of Response Equipment
- Documentation of activities for future mitigation efforts





TASK 7 – RECOVERY ACTIVITIES

Received Comment

- ❑ “The plan does not mention non-governmental organizations involved in Disaster Response and Recovery, such as the American Red Cross”
 - ❑ The American Red Cross, and others, offers its assistance to assist communities during the preparedness, response and recovery stages of flood disasters
 - ❑ Trainings are offered to help prepare personnel for disaster response and recovery
 - ❑ Response and Recovery activities can be requested through the local Red Cross Chapter located in Houston, TX
 - ❑ Many of the HMAPs reviewed mentioned the Red Cross as an important partner for planning for Response and Recovery Activities



**American
Red Cross**



GOALS FOR UPCOMING MEETINGS

Regional Flood Plan Due January 10, 2023

October

- Public Meeting(s) to accept comments on the Draft RFP
- Intake comments on RFP
- Continue with Task 11, 12 & 13

November

- Review Comments
- Review changes to Draft
- Continue with Task 11, 12 & 13

December

- Approve Revised Draft Regional Flood Plan
- Continue with Task 11, 12 & 13

January 2023

- Submit Final RFP
- Continue with Task 11, 12 & 13

**Regional Flood Plan Amendment
due July 14, 2023**



LOOK AHEAD



SUPPLEMENTAL WORK AUTHORIZATION

Move funding to allow for expenses for Public Meetings

Original Contract

- \$1,195,005
- All labor

Amended Contract

- \$1,937,105.00
- All labor

Supplemental

- Reallocate \$800.00 from Task 10
 - From services to expenses
- \$9,062.20 from Task 4C to Task 10
- Reallocate \$1,500.00 from Task 13
 - From services to expenses

No budget increase



**WRITTEN
COMMENTS
WELCOMED.**