

Lower Colorado-Lavaca
**REGIONAL FLOOD
PLANNING GROUP**

REGION 10

April 7, 2022

Region 10 Lower Colorado-Lavaca RFPG

- 1. Call to Order**
- 2. Welcome**
- 3. Approval of minutes from the previous meeting**

Region 10 Lower Colorado-Lavaca Flood Planning Group Meeting
February 17, 2022
9:30 AM
Hybrid Meeting

Roll call:

Voting Member	Interest Category	Present (x) / Absent () Alternate Present (*)
Terry Been	<i>Agricultural interests</i>	X
Phillip Spenrath	<i>Counties</i>	X
Jason Ludwig	<i>Electric generating utilities</i>	
Kirby Brown	<i>Environmental interests</i>	X
G. Nicholas "Nick" Textor	<i>Flood districts</i>	X
Brandon Klenzendorf	<i>Industries</i>	X
Matt Hollon	<i>Municipalities</i>	X
Frances Acuna	<i>Public</i>	X
Patrick Brzozowski	<i>River authorities</i>	X *Scott Hartl @ 10:34am
Kelly Payne	<i>River authorities</i>	X
Ann Yakimovicz	<i>Small business</i>	X
Kacey Cubine Paul	<i>Water districts</i>	X (exited @ 10:34am)
Hank Smith	<i>Water utilities</i>	X

Non-voting Member	Agency	Present (x) / Absent () Alternate Present (*)
Charles "CW" Schneider	<i>Texas Commission on Environmental Quality</i>	X
Lauren Mayes	<i>Texas Department of Agriculture</i>	X
James Guin	<i>Texas Division of Emergency Management</i>	
Shonda Mace	<i>Texas General Land Office</i>	X
Beth Bendik	<i>Texas Parks and Wildlife Department</i>	X
Allen Nash	<i>Texas State Soil and Water Conservation Board</i>	X
Tressa Olsen	<i>Texas Water Development Board</i>	X
Mark Vogler	<i>Region 8 – Lower Brazos Liaison</i>	*Brian Fambrough
Chuck Brown	<i>Region 9 – Upper Colorado Liaison</i>	
Ronald G. Fieseler	<i>Region 11 – Guadalupe Liaison</i>	X (joined @ 9:41am)
Cara Tackett	<i>Region 12 – San Antonio Liaison</i>	X

Quorum:

Quorum: **Yes**

Number of voting members or alternates representing voting members present: **12 at start of meeting**

Number required for quorum per current voting membership of 13: **7**

Other Meeting Attendees: **

**Meeting attendee names were gathered from those who entered information for joining the Zoom meeting.

Reem Zoun - TWDB
 James Bronikowski - TWDB
 Matt Nelson – TWDB

Cindy Englehardt – Halff Associates, Inc.
 Mike Personett – Halff Associates, Inc.
 Gennadii Prykhodko – Halff Associates, Inc.

Cris Parker – HDR, Inc.

Karen Ford – WaterPR

Lauren Graber – LCRA
Annette Keaveny - LCRA
Jennifer Bassett – LCRA
Marcin Tyszka – LCRA
Bill Barker – Great Springs Project
Anthony Groves – Mayor, Brady, TX

Nick Kincaid, City of Austin
Mieko Mahi
Lisa McCracken Mairs – USACE
Sanjay Negi
Stephen Rockwood
CBS Austin

All meeting materials are available for the public at:
www.lowercoloradolavacaflood.org/meetings

Agenda:

1) Call to Order

Chair Phillip Spenrath called the meeting to order at 9:32 CST. A roll call of the planning group members was taken to record attendance and a quorum was established prior to calling the meeting to order.

2) Welcome

Chair Phillip Spenrath welcomed members and other attendees to the meeting.

3) Approval of minutes from the previous meeting

The draft meeting minutes were reviewed.

Kirby Brown moved to approve the minutes, seconded by Patrick Brzozowski. The motion passed by a vote of 12-0.

4) Public comments– limit 3 minutes per person

Chair Phillip Spenrath called for public comments.
No public comments were given.

5) TWDB Update

Tressa Olsen gave an update on TWDB items:

- TWDB internal review underway of Technical Memo #1.
- Continuing to work through the contract amendments for final approval for all 15 planning regions.
- TWDB sending out invitations to another RFPG chair conference call on March 2nd.

6) Update from RFPG liaisons

Patrick Brzozowski reported that Region 11 meeting will be held March 2nd to review Technical Memo #2.
Ann Yakimovicz reported that Region 9 meeting will be held March 3rd to review Technical Memo #2.

Kirby Brown reported that Region 12 will be meeting on February 24th to review Technical Memo #2.

7) Update from the Planning Group Sponsor

No updates were given.

8) Discussion and potential action to approve mileage expenses for reimbursement

Lauren Graber presented the latest voting member mileage expenses for reimbursement. Kelly Payne moved to approve the mileage expenses, seconded by Kirby Brown. The motion passed by a vote of 12-0.

9) Technical Consultant presentations and discussions related to regional flood planning

Mike Personett and Cindy Englehardt (both Halff Associates, Inc.), and Karen Ford (Water PR) provided updates, briefings, and discussion on the following:

a) Project status

- Review Workflow Chart
- Public and Stakeholder Engagement
- Task 4B – Potential FMEs, FMSs, and FMPs
- Task 4C – Review draft Technical Memorandum No. 2
- Task 2A/B – Existing and Future Condition Flood Risk
- Task 4A – Flood Mitigation Needs

b) Look-ahead

Planning group members asked questions and made comments during the presentation. No action was taken.

Note: Kacey Paul and Patrick Brzozowski exited the meeting at 10:34am. Patrick's designated alternate, Scott Hartl, is in attendance.

10) Accept public input on an initial flood hazard map(s) to identify additional flood hazards in the Lower Colorado-Lavaca Flood Planning Region that may not have been identified on the initial map(s)

Chair Phillip Spenrath explained that an interactive map is linked on the RFPG website for the public to comment on additional flood hazards. The RFPG is required to hold at least one public meeting where comments are accepted. The public may give verbal comments at today's public meeting or submit comments online until February 25th.

Chair Phillip Spenrath called for public comments. No public comments were given.

11) Discussion and potential action to approve submittal of Technical Memorandum No. 2 to the Texas Water Development Board on or before March 7, 2022

Chair Phillip Spenrath and the technical consultant staff discussed the draft Technical Memorandum no. 2 as posted publicly prior to the meeting.

After discussion, Kirby Brown moved to approve submittal of the draft technical memorandum no. 2 to the Texas Water Development Board subject to non-substantive changes and refinements, seconded by Ann Yakimovicz. A roll-call vote was taken, and all members present voted "yes". The motion was approved 11-0, with members Ludwig and Paul absent.

12) Public comments – limit 3 minutes per person

Chair Phillip Spenrath called for public comments.

No public comments were given.

13) Consider date and agenda items for next meeting

After general discussion, Chair Phillip Spenrath concluded that the next meeting will be held on Thursday, April 7th, 2022 @ 9:00 AM CST.

The next Technical Committee Meeting will be held Wednesday, March 9th, 2022 @ 9:00 AM CST.

14) Adjourn

Kelly Payne made a motion to adjourn, seconded by Kirby Brown. The motion passed 11-0 and the meeting was adjourned at 10:56 AM CST by Chair Phillip Spenrath.

*Approved by the Lower Colorado-Lavaca RFPG at a meeting held on **DATE**.*

Kelly Payne, SECRETARY

Phillip Spenrath, CHAIR

Region 10 Lower Colorado-Lavaca RFPG

- 4. Public comments – limit 3 minutes per person**
- 5. TWDB Update**
- 6. Update from RFPG liaisons**
- 7. Update from Planning Group Sponsor**

Region 10 Lower Colorado-Lavaca RFPG

- 8. Discussion and potential action regarding administrative expenses to be submitted to the Texas Water Development Board for reimbursement**

Administrative Costs from December 27, 2021 - March 20, 2022

Vendor	Amount
LCRA Labor & Fringe	\$6,225.12
TOTAL	\$6,225.12

Approved Budget	Project Cost Previous Report	Project Cost This Report	Cumulative Project Cost	Balance
\$60,000.00	\$4,249.26	\$6,225.12	\$10,474.38	\$49,525.62

Project Cost Previous Reports	
Administrative Costs from Jan 1, 2021 - Jun 30, 2021	
LCRA Labor & Fringe	\$1,473.09
Administrative Costs from Sept 1, 2021 - Dec 31, 2021	
LCRA Labor & Fringe	\$2,776.17

Other Expenses from December 21, 2021 - March 24, 2022

Vendor	Amount
Squarespace (Website Account)	\$253.82
TOTAL	\$253.82

Approved Budget	Project Cost Previous Report	Project Cost This Report	Cumulative Project Cost	Balance
\$15,000.00	\$207.06	\$253.82	\$460.88	\$14,539.12

Project Cost Previous Reports	
Other Expenses from Jan 1, 2021 - Jun 30, 2021	
Squarespace (Website Account)	\$207.06

Voting Planning Member Travel Costs from January 31, 2022

Vendor	Amount
Phillip Spenrath	\$170.24
TOTAL	\$170.24

Approved Budget	Travel Cost Previously Approved	Travel cost this month	Cumulative Travel Cost	Balance
\$16,000.00	\$0.00	\$170.24	\$170.24	\$15,829.76

Region 10 Lower Colorado-Lavaca RFPG

9. Discussion and potential action to approve mileage expenses for reimbursement

Date of Meeting	Description	Total Mileage	Per Mile Rate	Total
February 17, 2022	Region 10 RFPG Meeting – Spennrath	290	\$.585	\$169.65

Region 10 Lower Colorado-Lavaca RFPG

- 10. Update from the Technical Committee**
- 11. Technical Consultant presentations and discussions related to regional flood planning**
 - a. Project status**
 - b. Look-ahead**



LOWER COLORADO – LAVACA
REGIONAL FLOOD PLAN
A TEXAS INITIATIVE

REGIONAL FLOOD PLANNING GROUP MEETING | APRIL 7, 2022



AGENDA

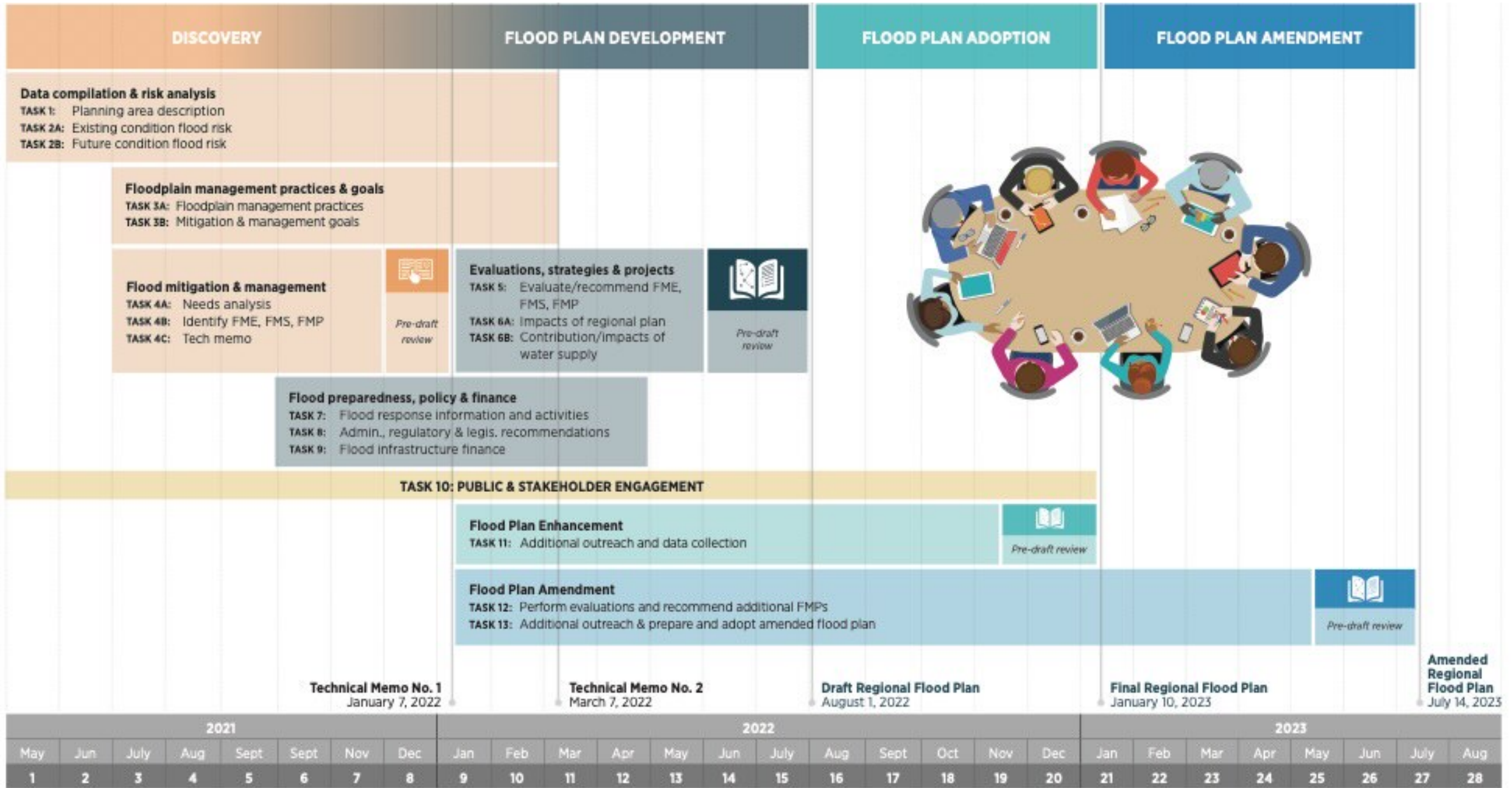
Project Status

- Review Workflow Chart
- Task 10 – Public and Stakeholder Engagement
- Task 3A – Floodplain Management Practices
- Task 3B – Floodplain Mitigation and Management Goals
- Task 4A – Flood Mitigation Needs Analysis
- Task 4B – Potential FMEs, FMSs and FMPs
- Task 5 – Recommended FMEs, FMSs and FMPs
- Task 7 – Flood Response Information and Activities
- Task 9 – Flood Infrastructure Financing Analysis

Look-ahead Calendar



Project Status



TASK 10 – PUBLIC OUTREACH AND ENGAGEMENT

Karen Ford – WaterPR



Ongoing Strategies to Reach Audiences

Email Blasts to Community & Public Stakeholders (492)

- Flood risk map input (3)
- RFPG meeting 4/7/22 (2)

Website


- Flood Risk Map interactive page

Media

- Media Alert: March 31, 2022
- Social media posts re meeting, flood risk map

Public Comments

- Receiving via Email, Web, Direct
- Tracking Matrix (date/name/comment/response)



NEXT MEETING
Thursday
April 7, 2022
9:30am to Noon

Lower Colorado-Lavaca
**REGIONAL FLOOD
PLANNING GROUP**
REGION 10

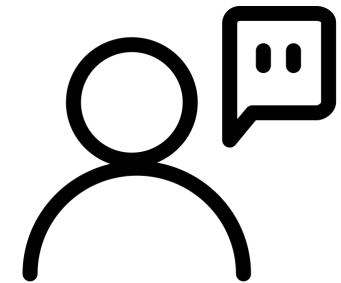
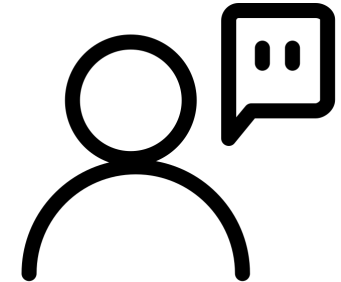
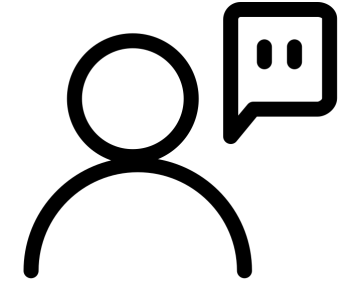
HYBRID
MEETING | Agenda & Link at:
LowerColoradoLavacaFlood.org

TASK 10 – PUBLIC OUTREACH AND ENGAGEMENT

For discussion

Public Review of DRAFT Regional Flood Plan (RFP)

- August 1, 2022: Draft Regional Flood Plan due to TWDB
- January 10, 2023: Final adopted plan due to TWDB
- **Minimum** requirements for DRAFT RFP
 - Sixty-day comment period
 - DRAFT RFP available online 30-days prior to public meeting — and 30 days after (30:30)
 - One public meeting with RGPG quorum (**Wed, August 31, 2022?; location?**)
 - Posting of meeting 30-days prior to
 - Receive written comments 30:30
 - Receive oral comments at public meeting
 - Hard copy DRAFT plan available for public inspection at 3 publicly accessible locations (30:30)
- **Beyond the minimum**
 - Multiple public meetings within the region (upper/middle/lower basin locations)
 - Hosted by LCRA with technical consultant support
 - No quorum; not subject to open-meetings requirements
 - In-person/virtual/hybrid
 - Promote via email blast, news media, social media, web, RFPG members





Task 3A

Evaluation and Recommendations on Floodplain Management Practices

TASK 3A – FLOODPLAIN MANAGEMENT PRACTICES

Matt Bucchin – HALFF



TWDB Requirements:

- *“...make recommendations regarding forward-looking floodplain management and land use recommendations, and economic development practices and strategies, that should be implemented by entities within the FPR.”*
- *“...may also choose to adopt region-specific, minimum floodplain management or land use or other standards that impact flood-risk”*
 - Necessitates that each entity must adopt prior to including/sponsoring any Flood Management Evaluations (FMEs), Flood Management Strategies (FMSs), or Flood Mitigation Projects (FMPs) in the RFP
 - Could vary geographically
 - Could apply to next planning cycle

TASK 3A – FLOODPLAIN MANAGEMENT PRACTICES






Region 10

Potential Recommendations:

- Encourage all cities and counties participate in National Flood Insurance Program (NFIP)
- Encourage cities and counties in high-risk and/or high-growth areas to adopt enhanced floodplain and land development requirements and standards
- Encourage cities and counties to consider participation in the FEMA Community Rating System (CRS)

A strategy will be proposed to support these floodplain management goals and recommendations

Figure 4: Natural hazard mitigation saves: 2019 (report summary)

	ADOPT CODE	ABOVE CODE	BUILDING RETROFIT	LIFELINE RETROFIT	FEDERAL GRANTS
Overall Benefit-Cost Ratio	11:1	4:1	4:1	4:1	6:1
Cost (\$ billion)	\$1/year	\$4/year	\$520	\$0.6	\$27
Benefit (\$ billion)	\$13/year	\$16/year	\$2200	\$2.5	\$160
 Riverine Flood	6:1	5:1	6:1	8:1	7:1
 Hurricane Surge	not applicable	7:1	not applicable	not applicable	not applicable
 Wind	10:1	5:1	6:1	7:1	5:1
 Earthquake	12:1	4:1	13:1	3:1	3:1
 Wildland-Urban Interface Fire	not applicable	4:1	2:1	not applicable	3:1

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Task 3B

Flood Mitigation and Floodplain Management Goals

TASK 3B – MITIGATION & MANAGEMENT GOALS

Define Goal Metrics

Overarching Goal	RFPG Goal	Short-term (2033)	Long-term (2053)	Measurement Method
Education and Outreach	1.1 – Increase the number of public outreach and educational communications and activities conducted by the RFPG to improve awareness of flood hazards and benefits of flood planning in the flood planning region.	Baseline: 175 260 public coms (over next 2 cycles)	Maintain	Number of public communications (emails, social media, news blasts, public service announcements, educational packets, etc.)
Flood Warning and Readiness	2.1 – Increase the number of communities cities and counties with warning and emergency response capabilities, or which participate in regional flood warning systems (e.g., LCRA Hydromet, City of Austin Early Warning System) that can detect flood threats in real time and provide timely warning of impending flood danger.	TBD	TBD	Number of communities cities and counties with warning and emergency response capabilities (e.g., real time flood-gauge monitoring)
Flood Studies and Analysis	3.1 – Increase the number of entities cities and counties that have updated watershed models and floodplain maps to reflect current conditions, including as applicable Atlas 14 (Volume 11) revised rainfall data.	Baseline: 7 of 135 Additional 75	Baseline: 84 of 135 Total 135 which is 100%	Number of entities cities and counties that have updated watershed models and floodplain maps
Flood Studies and Analysis	3.2 – Increase the number of entities cities and counties that have evaluated priority flood risk areas and flood risk reduction measures (e.g., alternatives analysis and preliminary engineering).	Baseline = 49 of 135 Additional 26	Baseline = 75 Additional 40	Number of entities cities and counties that identify risk reduction measures
Flood Studies and Analysis	3.3 – Increase the number of entities counties that have digital flood insurance rate maps (DFIRMS) that reflect current conditions.	Baseline = 19 of 43 Additional 5	Baseline = 24 of 43 Additional 10	Number of entities counties that have digital flood insurance rate maps (DFIRMS)

TASK 3B – MITIGATION & MANAGEMENT GOALS

Define Goal Metrics

Overarching Goal	RFPG Goal	Short-term (2033)	Long-term (2053)	Measurement Method
Flood Prevention	4.1 – Increase the number of eligible entities <u>cities and counties</u> that are participating in the National Flood Insurance Program (NFIP).	Baseline: 127 of 135 100% NFIP participation	Maintain	Number of eligible entities <u>cities and counties</u> that are participating in the NFIP
Flood Prevention	4.2 – Increase the number of entities <u>cities and counties</u> that have adopted higher standards over and above NFIP minimum standards, including regulating to one or more feet above the Base Flood Elevation (BFE) for existing 1% annual change event (100-year) conditions.	Baseline: 40 of 135 Additional 20	Baseline: 60 of 135 Additional 20	Number of entities <u>cities and counties</u> that regulate with higher standards (e.g., regulating to Base Flood Elevation (BFE) + 1 as part of regulatory framework)
Flood Prevention	4.3 – Increase the number of entities <u>cities and counties</u> that have adopted regulations to reduce the risk from localized flooding.	Establish baseline	Increase	Number of entities <u>cities and counties</u> that have local drainage protection requirements in their development code
Flood Prevention	4.4 – Increase the number of entities <u>cities and counties</u> which provide alternate compliance options that allow or incentivize nature-based solutions to reduce future flood risk.	Establish baseline	Increase	Number of entities <u>cities and counties</u> that allow/incentivize nature-based solutions as part of alternate compliance
Flood Prevention	4.5 – Increase the number of entities <u>cities and counties</u> in the flood planning region that consider the 1% annual chance (100-year) floodplain on the entity’s future land use plans and development regulations.	Establish baseline	Increase	Number of entities <u>cities and counties</u> that consider 100-year floodplains on land use maps and development regulations

TASK 3B – MITIGATION & MANAGEMENT GOALS

Define Goal Metrics

Overarching Goal	RFPG Goal	Short-term (2033)	Long-term (2053)	Measurement Method
Non-Structural Flood Infrastructure Projects	5.1 – Reduce the number of structures and critical infrastructure that are at high risk of repetitive loss <u>flooding</u> through property/easement acquisitions, relocations, floodproofing and/or elevation.	Baseline: 68,000 structures in 100-year Reduce by 10%	Reduce by additional 15%	Number of NFIP repetitive loss/ severe repetitive loss properties at <u>risk structures</u> mitigated by acquisitions, relocations, floodproofing and/or elevation
Non-Structural Flood Infrastructure Projects	5.12 – Increase the acreage of publicly protected open space to reduce future impacts of flooding through property buyouts, land conservation easements, acquisitions, or other comparable means.	Baseline: 133,000 acres Increase by 15%	Increase by additional 25%	Acreage of preserved land in region
Structural Flood Infrastructure Projects	6.1 – Reduce the number of structures and critical facilities that are at high risk of repetitive loss through the implementation of structural flood mitigation projects.	Baseline: 68,000 structures & 118 critical facilities in 100-year Reduce by 10%	Reduce by additional 15%	Number of NFIP repetitive loss/ severe repetitive loss properties at <u>risk structures</u> mitigated by structural flood mitigation projects
Structural Flood Infrastructure Projects	6.2 – Increase the number of entities that mitigate flood risk at vulnerable roadways or waterways (e.g., low-water crossings, irrigation canals).	Establish baseline	Increase	Number of entities that mitigate flood risk at low-water crossings or vulnerable roadways or waterways



Task 4A

Flood Mitigation Needs Analysis

TASK 4A – FLOOD MITIGATION NEEDS ANALYSIS

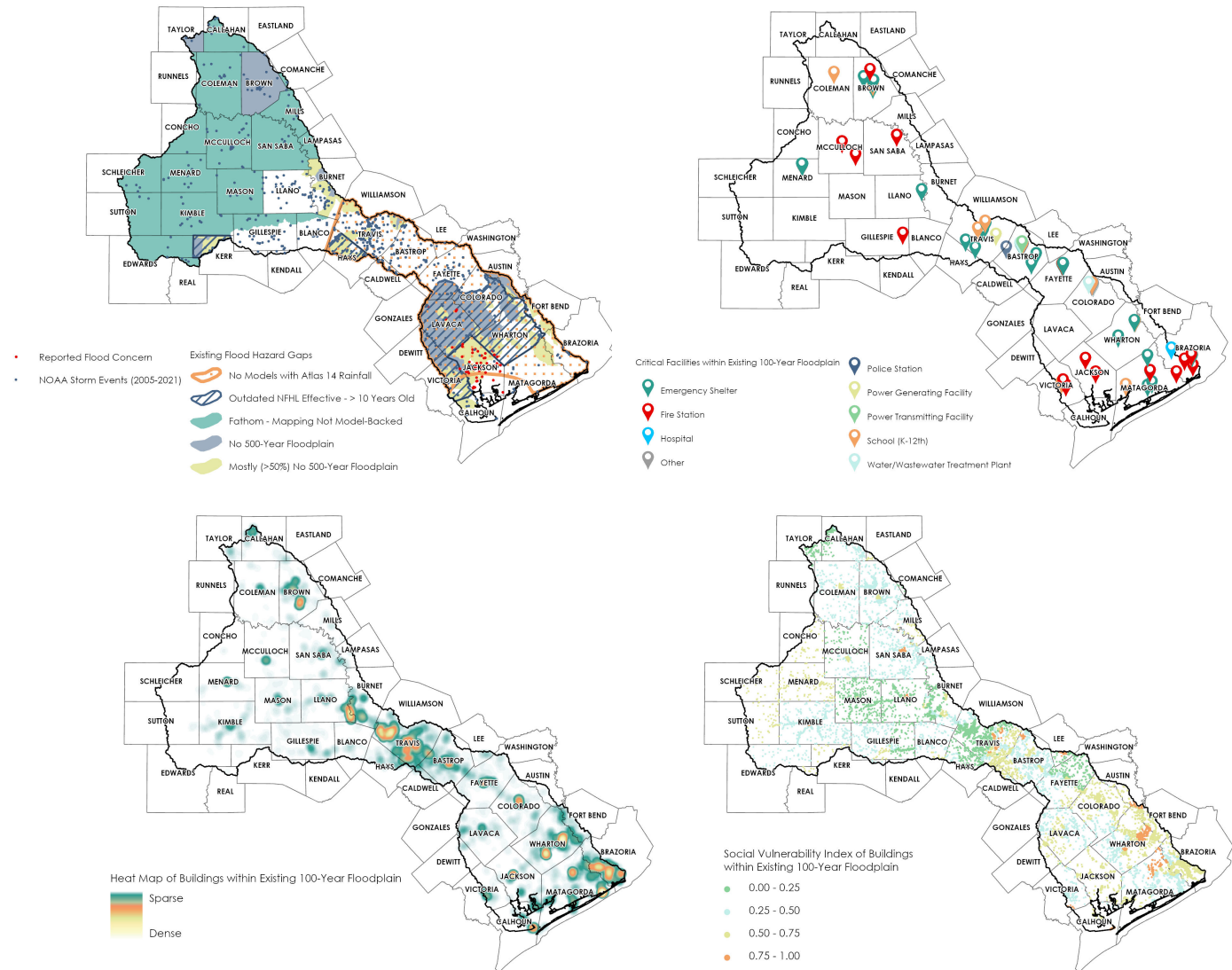
Status and Outlook

Preliminary Greatest Risk and Need

- Exposure – What is at Risk?
 - Flood Hazard Gaps
 - Infrastructure Hotspots
 - Land Cover Types

- Vulnerability – Who is at Risk?
 - Populations

- What is the Impact?
 - Critical Infrastructure
 - Resilience Factors (SVI)



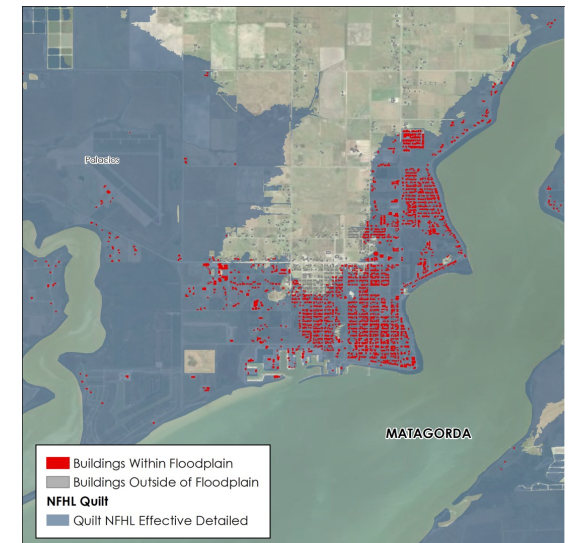
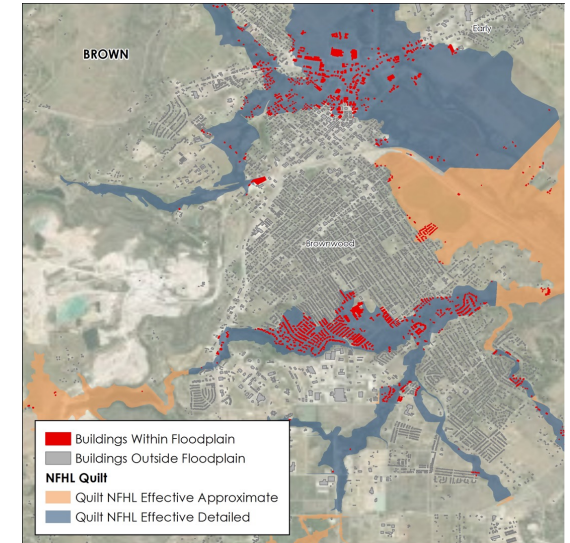
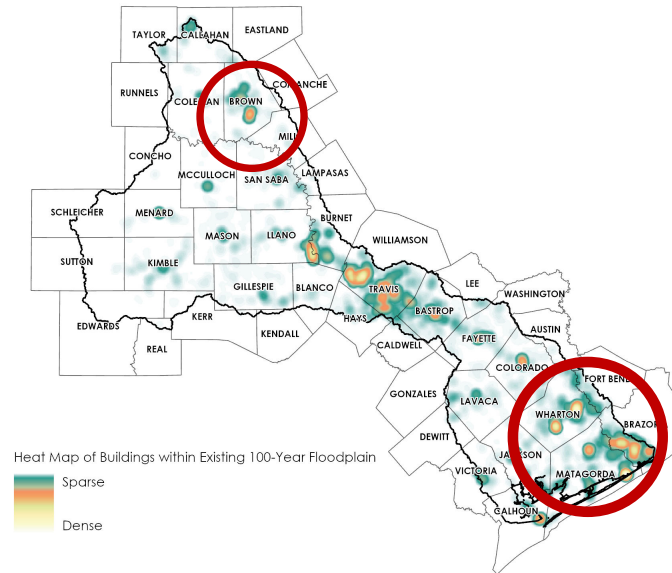
TASK 4A – FLOOD MITIGATION NEEDS ANALYSIS

Potential Flood Management Evaluations (FME)

Possible Study Gaps

- Matagorda County
 - Significant number of buildings and population at risk
- Wharton County
 - Significant number of buildings, population and ag land at risk with high social vulnerability
 - Study in progress may better define risk
- Colorado, Fayette, Bastrop Counties
 - 10+ critical facilities at risk
- Llano County
 - Significant number of building and low water crossings at risk

- Brown County / Brownwood
 - Significant number of buildings and at risk





Task 4B

Identification/Evaluation of Potential Studies (FME) and Potentially Feasible Strategies (FMS) and Projects (FMP)

TASK 4B – POTENTIAL FMEs, FMSs AND FMPs

Additional Screening



Screening Objectives

- Refine list of potentially feasible (and infeasible) STUDIES (FME), STRATEGIES (FMS), and PROJECTS (FMP)
- Transition into Task 5 – detailed evaluations and final recommendations
- Identify STUDIES to be advanced under Task 12

Potential Sponsor Verification

- Entity's interest in sponsorship of potential PROJECTS and STUDIES
- Accuracy of preliminary list of actions
 - Flood problems to add and evaluate (new STUDIES)
 - Additional PROJECTS to add
 - STUDIES, PROJECTS, or STRATEGIES to delete (e.g., already implemented, feasibility/viability, not "actionable", not a priority, lack willing sponsor, etc.)

TASK 4B – POTENTIAL PROJECTS, STUDIES, STRATEGIES

Overview

5

FLOOD MANAGEMENT STRATEGIES (FMS)

- Area-wide Low Water Crossing Improvement Programs
- Property Acquisition Programs
- Education and Outreach Initiatives
- Area-wide Flood Warning Measures
- Strengthen Regulations

665

SCREENED OUT

Do not meet minimum screening requirements or already complete

172

FLOOD MANAGEMENT STUDIES (FME)

10

Flood Preparedness Study

6

Floodplain Modeling and Mapping / Risk Identification

23

Flood Mitigation Alternatives Analysis / Feasibility Assessment

133

Flood Mitigation Project Preliminary Engineering (30% design)

30

FLOOD MITIGATION PROJECTS (FMP)

18

Structural

Advanced Analysis / Design (30–100% design)

- Bridge/culvert
- Channel modifications
- Storm drain
- Flood diversion

12

Non-Structural

Project Implementation

- Property/Easement Acquisition
- Floodproofing/Elevation of Structures
- Flood Warning Systems, Gauges
- Flood Readiness and Resilience

TASK 4B – POTENTIAL FMEs, FMSs AND FMPs

Status and Outlook

Structural Flood Mitigation Projects (FMP)

- 4- Bastrop County – Low water crossing improvements
- 1- City of Bastrop – Channel and crossing improvements
- 2- Pflugerville – Channel and crossing improvements
- 7- Travis County – Subdivision and crossing improvements
- 4- City of Austin – Channel, low water crossing, storm drain, flood diversion improvements

FLOOD MITIGATION PROJECTS (FMPs)

18 Structural

Advanced Analysis /
Design (30–100% design)

- Bridge/culvert
- Channel modifications
- Storm drain
- Flood diversion

12 Non-Structural

Project Implementation

- Property/Easement Acquisition
- Floodproofing/Elevation of Structures
- Flood Warning Systems, Gauges
- Flood Readiness and Resilience

TASK 4B – POTENTIAL FMEs, FMSs AND FMPs

Status and Outlook

Non-Structural Flood Mitigation Projects (FMP)

- 2- City of Jonestown – Property Acquisitions
- 1- Hays County – Property Acquisitions
- 4- Jackson County – Property Acquisitions
- 5- Travis County – Property Acquisitions and Floodproofing (elevations)

FLOOD MITIGATION PROJECTS (FMPs)

18 Structural

Advanced Analysis /
Design (30–100% design)

- Bridge/culvert
- Channel modifications
- Storm drain
- Flood diversion

12 Non-Structural

Project Implementation

- Property/Easement Acquisition
- Floodproofing/Elevation of Structures
- Flood Warning Systems, Gauges
- Flood Readiness and Resilience

TASK 4B – POTENTIAL FMEs, FMSs AND FMPs

Status and Outlook

Flood Management Evaluations (Studies) (FME)

- Over 50 communities have at least 1 qualified FME
- 26- Bastrop County
- 22- Fredericksburg
- 15- City of Marble Falls
- Many communities have 5-10 FMEs
- Over 130 FMPs that need additional study

172

FLOOD MANAGEMENT STUDIES (FMEs)

10

Flood
Preparedness
Study

6

Floodplain
Modeling and
Mapping /
Risk
Identification

23

Flood
Mitigation
Alternatives
Analysis /
Feasibility
Assessment

133

Flood
Mitigation
Project
Preliminary
Engineering
(30% design)

TASK 4B – POTENTIAL FMEs, FMSs AND FMPs

Status and Outlook

Flood Management Strategies (FMS) – TWDB Definitions

- “A proposed plan to reduce flood risk or mitigate flood hazards to life or property.”
- “Any proposed action that doesn’t qualify as an FME or FMP”
- “RFPG has flexibility with Strategies” (not required to include in RFP)
- “Strategy must quantify the estimated flood risk being addressed and potential level of flood risk reduction”

Additional TWDB Guidance

- Can be regional in nature
- Do not have to have sponsor
- Do not have to have cost

5

FLOOD MANAGEMENT STRATEGIES (FMSs)

- Area-wide Low Water Crossing Improvement Programs
- Property Acquisition Programs
- Education and Outreach Initiatives
- Area-wide Flood Warning Measures
- Strengthen Regulations

TASK 4B – POTENTIAL FMEs, FMSs AND FMPs

Flood Management Strategies (FMS)

Screening Step 2-3

- 290 Potentially Feasible Strategies “parked” in FMS bucket
- Most were thoughts and ideas from Community Hazard Mitigation Plans
- All are important elements of a comprehensive approach to flood risk reduction
- Broad and vague
 - Not a Project or Study
 - Difficult, if not impossible, to quantify flood risk/risk reduction (e.g., location, exposure, etc.)
 - Many do relate to an approved RFPG goal
 - Not “actionable” (i.e., what, who, when, cost, etc.)
- RFPG is NOT required to recommend or include strategies
- RFPG could consider making general thematic recommendations
- Screened these “strategies” out

TASK 4B – POTENTIAL FMEs, FMSs AND FMPs

Flood Management Strategies (FMS)

Strategy “Themes” and Alternative Approaches

- Flood Mitigation Education and Outreach (addresses RFPG Goal 1.1)
 - Address thematically in Chapter 5 including general region-wide recommendations
 - Address in Chapter 8 policy recommendation (statewide flood awareness/preparedness campaign, school education curricula, etc.)
- Strengthen Flood Management Regulations (addresses RFPG Goal 4)
 - Address thematically in Chapter 5 including regional strategy for outreach and technical assistance to entities
 - Address in Chapter 3 floodplain management practices
 - Address in Chapter 8 policy recommendations
- Develop Regional Flood Warning Measures (Addresses RFPG Goal 2.1)
 - Address thematically in Chapter 5 including regional strategy for expansion of existing and proposed FEWS
 - Address in Chapter 7 flood response information and activities
 - Possibly address in Chapter 8 policy recommendations (state funding)

TASK 4B – POTENTIAL FMEs, FMSs AND FMPs

Flood Management Strategies (FMS)

Strategy “Themes” and Alternative Approaches *(continued)*

- County / City Property Buyouts and/or Flood-Proofing
 - Address thematically in Chapter 5 including examples and review of community Hazard Mitigation Plans that speak to buyouts
 - Address in Chapter 8 policy recommendation (state funding and legal impediments to flood-proofing private property)
 - Address in Chapter 9 including the role of the State in flood infrastructure finance
- Area-wide Low Water Crossing Flood Mitigation Studies and Projects (addresses multiple RFPG goals)
 - Address thematically in Chapter 5 including regional strategy for systematic assessment and prioritization of low water crossings for mitigation measures
 - Address in Chapter 8 policy recommendation (funding for competitive grants through the existing TxDOT Off-System Road and Bridge Program)



Task 5

Recommendation of Studies (FME), Strategies (FMS)
and Associated Projects (FMP)

TASK 5 – RECOMMEND FMEs, FMSs AND FMPs

Jay Scanlon – Freese & Nichols



Objective

- Evaluate and recommend flood management evaluations and strategies and flood mitigation projects for inclusion in the 2023 regional flood plan

Requirements

- Continuation of Task 4B evaluation process
- Mitigate to 1.0% annual chance flood (100-year) where feasible
- Mitigation of more frequent events may be recommended
- No adverse impact (e.g., downstream flooding, water supply)
- Continue coordination with sponsors and other entities

**TECHNICAL
COMMITTEE
April - June**

**RFPG REVIEW /
APPROVAL
May - July**

**DUE TO TWDB
August 1, 2022**

TASK 5 – RECOMMEND FMEs, FMSs AND FMPs

Sample Flood Mitigation Project (FMP)

- Travis County
 - Subdivision Drainage Improvements
 - Additional information will be advanced under Task 5

Flood Mitigation Project (FMP)

Title Arroyo Doble/Twin Creeks Drainage Phases 3-7
ID# 103000025

Technical committee recommend Yes No RFPG recommend Yes No

Project Type (Descriptive title of FMP)

Subdivision Drainage Improvements City N/A
County Travis County

Problem Area

Watershed name Onion Creek
HUC# (if known) 120902050407
Tributary(ies) N/A
Stream miles (est.) N/A
Drainage area: square miles, est. or acreage, est 400
Other Arroyo Doble, Arroyo Doble Estates, Twin Creek Park Subdivisions, and the Wirth and Polk Road areas Adjacent to FM 1626.



Problem Description (Describe risk factors and other problem attributes – frequency, exposure, vulnerability, history, recurring losses, property, population, etc.)

Subdivisions generally lack defined drainage systems. Roadside ditches and culvert crossings are systematically undersized or not provided. Lack of existing drainage infrastructure, extremely flat terrain, long history of flooding in the area with wide spread flood damage occurring as recently as the October 31, 2015 flood event where it was reported that 336 properties were impacted, with 161 of them experiencing major flood damage

Scope of Project (list below)

STRUCTURAL

- Detention
- Channel modification
- Bridge/culvert
- Storm drain
- Levee/floodwall
- Other

NON-STRUCTURAL

- Property buyouts
- Floodproofing
- Flood readiness/resilience
- Flood warning system/gauges
- Other

DESCRIPTION OF PROJECT

XX,XXX LF of new channels or channel enlargement,
X,XXX LF of new storm drain system, X new roadway culverts, new drainage easements
New and upsized roadside channels and culvert upgrades. Easement acquisitions, utility relocations, and contingency.

Related Goals (List goal ID number and goal statement per RFPG adopted goals)

- 6.1 - Reduce the number of structures and critical facilities that are at high risk of flooding
- 6.2 - Increase the number of entities that mitigate flood risk at vulnerable

Estimated Cost

Cost \$5,626,000 (Year 2019) Ongoing O&M Costs -
Potential funding source(s) Future Bond Program, Grants, or Loans

Sponsoring Entity

Sponsor (name of entity) Travis County Commitment Yes No

TASK 5 – RECOMMEND FMEs, FMSs AND FMPs

Sample Flood Management Evaluation (FME)

- City of Fredericksburg
 - Storm Drainage Improvements

Flood Management Evaluation (FME) STUDY

Lower Colorado-Lavaca
**REGIONAL FLOOD
PLANNING GROUP**

REGION 10

Title
ID#

Technical committee recommend Yes No RFPG recommend Yes No

Study Type

Emergency preparedness Floodplain modeling, mapping and risk assessment Feasibility study Preliminary project engineering
 Other

Problem Area

City
County
Watershed
HUC# (if known)
Tributary(ies)
Stream miles (est.)
Drainage area: Square miles, est. or acreage, est.
Other



Flood Risk Description (narrative on frequency, exposure, vulnerability, history, recurring losses, property, population, etc.)

Lack of storm drain in area, streets used for conveyance, excessive flow depth and velocities, level of service less than 2-yr storm, structures at risk, historical flood damages, channel erosion.

Population at risk Structures at risk Critical facilities at risk
Farm/Ranch land impacted (acres) Roadway(s) impacted (length)

Scope of Study (Describe key tasks)

Update H&H Analysis with Atlas 14 Rainfall	Develop benefit-cost ratio
Update proposed storm drain design	Environmental permitting and constraints evaluation
Update flood risk reduction benefits	ROW, utility conflicts, constructability constraints evaluation
Update cost	negative impacts analysis

Related Goal(s) (List goal ID number and goal statement per RFPG adopted goals)

6.1 - Reduce the number of structures and critical facilities that are at high

Estimated Cost

Cost Potential funding source(s)

Sponsoring Entity

Sponsor (name of entity) Commitment Yes No

TASK 5 – RECOMMEND FMEs, FMSs AND FMPs

Sample Flood Mitigation Strategy (FMS)

- Strengthen Flood Management Regulations
 - Thematic region-wide strategy

Flood Management Strategy (FMS)

Lower Colorado-Lavaca
**REGIONAL FLOOD
PLANNING GROUP**

REGION 10

Title Floodplain Management

ID#

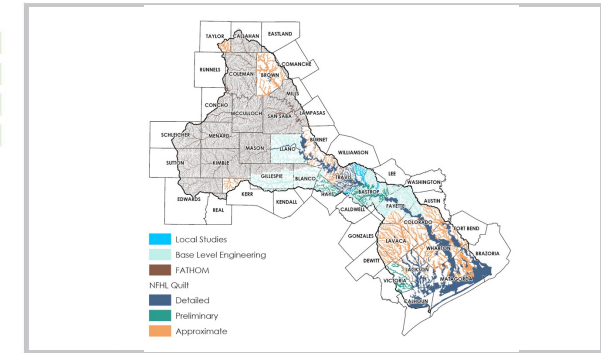
Technical committee recommend Yes No RFPG recommend Yes No

Strategy Type (Descriptive title of FMS)

- Flood mitigation education & outreach
- Area-wide low water crossing flood mitigation studies and projects
- Identify and fund buy-out programs
- Develop regional flood warning measures
- Strengthen flood management regulations
- Other

Problem Area

- Sub-regional
- Regional
- Counties
- City



Need for Strategy

Flood risk reduction begins with prevention—preventing new problems from developing and preventing existing problems from becoming worse. One key to prevention is effective regulation of development and re-development in and near floodplains. Overall, the LC-LV Region is in an enviable position in terms of floodplain management and regulation, with only eight (8) of 135 eligible entities in the region not currently participating in the National Flood Insurance Program (NFIP). Keyed to goals adopted by the RFPG (see below) there is a need to assist these communities in becoming NFIP participants and there is a need to also assist cities and counties with the adoption and implementation of enhanced floodplain, land development, and land use regulations.

Description of Strategy

This proposed regional flood management strategy will consist of education, outreach and technical assistance directed to cities and counties throughout the flood planning region. Priorities are: 1) provide assistance to cities that are eligible but not currently participating in the NFIP; and 2) provide assistance to other cities with the identification, evaluation, adoption, and implementation of enhanced floodplain, land development, and land use regulations. This will consultation regarding FEMA requirements, drafting of ordinances and regulations required for NFIP participation or for adoption of enhanced floodplain, land development, and land use requirements and standards. Implementation of this strategy by the RFPG will require TWDB grant funding early in the second flood planning cycle. Actual delivery of services will be by the RFPG's Technical Consultants wit

Related Goals (List goal ID number and goal statement per RFPG adopted goals)

- 4.1 – Increase the number of cities and counties that are participating in NFIP
- 4.2 – Increase the number of cities and counties that have adopted higher standards
- 4.3 – Increase the number of cities and counties that have adopted regulations to redu
- 4.4 – Increase the number of cities and counties which provide alternate compliance o
- 4.5 – Increase the number of cities and counties in the flood planning region that consi

Estimated Cost and Time to Implement Recommended Strategy (Note: Cost not required for FMS)

Cost TBD Potential funding source(s) TWDB grant

Sponsoring Entity

Sponsor (name of entity) Lower Colorado-Lavaca Regional Flood Planning Group Commitment Yes No



Task 7

Flood Response Information and Activities

TASK 7 – FLOOD RESPONSE INFORMATION AND ACTIVITIES

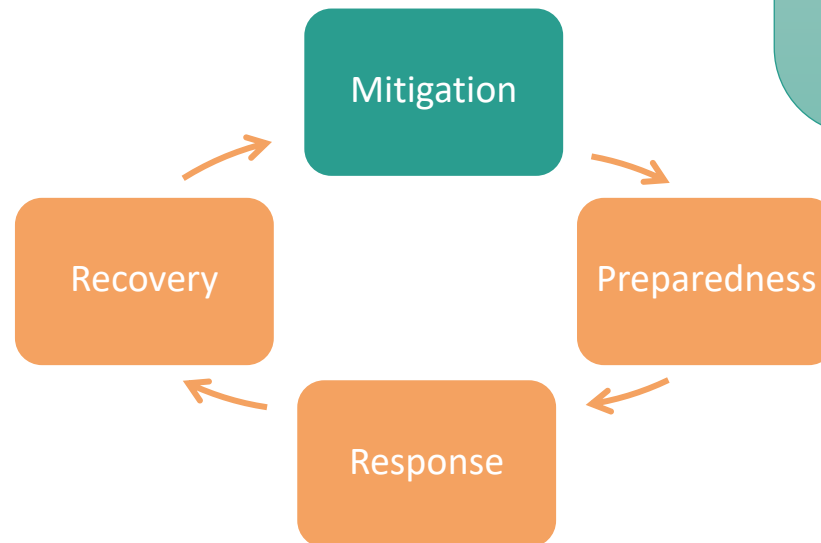
Status and Outlook

Objective

- Document flood response information and efforts
 - “RFPGs must not perform analyses or other activities related to planning for disaster response or recovery activities”

Requirements

- Summarize the nature and types of:
 - Preparedness
 - Response
 - Recovery



FEMA's Four Phases of Emergency Management

DRAFT RESULTS
May 2022

DUE TO TWDB
August 1, 2022



Task 9

Flood Infrastructure Financing Analysis

TASK 9 – FLOOD INFRASTRUCTURE FINANCING ANALYSIS

Status and Outlook

Objective

- Report on how sponsors of recommended FMPs propose to finance project

Requirements

- Coordinate and communicate with individual local governments, regional authorities, and other political subdivisions.
- Survey FME and FMP sponsors (in progress)
- Develop recommendations regarding the State's role in financing flood infrastructure projects
- Other Content
 - Overview of infrastructure finance methods

DRAFT SURVEY RESULTS
May 2022

DRAFT CHAPTER 9
June 2022

DUE TO TWDB
August 1, 2022



Look-Ahead

2022 RFPG MEETINGS – THROUGH JULY 2022

April

- 4/7/22 RFPG Meeting - TODAY
- 4/13/22 Technical Committee Meeting
- 4/28/22 Technical Committee Meeting

May

- 5/2/22 RFPG Meeting
 - Present and discuss Task 5 preliminary recommendations of potential STUDIES, STRATEGIES and PROJECTS
 - Present and discuss draft results and/or recommendations re: approval of Task 3B goals, Task 7 flood response information and activities, Task 8 flood management and mitigation policies, and Task 9 flood infrastructure finance
 - Present and discuss preliminary results of Task 6A impacts of Regional Flood Plan and Task 6B contribution to and impacts on water supply development
 - Present and discuss Task 10 planning for public outreach/comment period following August 1, 2022
- 5/11/22 Technical Committee Meeting
- 5/25/22 Technical Committee Meeting

2022 RFPG MEETINGS – THROUGH JULY 2022

June

- 6/9/22 RFPG Meeting
 - Approve recommendations - Task 5, Task 8, and Task 9
 - Present and review preliminary draft of Regional Flood Plan
- 6/16/22 Technical Committee Meeting
- 6/30/22 Technical Committee Meeting

July

- 7/7/22 RFPG Meeting
 - Present and review draft Regional Flood Plan
- 7/11/22 Technical Committee Meeting
- 7/18/22 RFPG Meeting
 - Adopt and approve submittal of final draft Regional Flood Plan (due to TWDB August 1, 2022)
 - Discuss and provide guidance re: next steps of Regional Flood Plan adoption and Regional Flood Plan amendment



Wrap Up

Region 10 Lower Colorado-Lavaca RFPG

12. Public comments – limit 3 minutes per person

13. Consider date and agenda items for next meeting

14. Adjourn