Region 2 Lower Red-Sulphur-Cypress Regional Flood Planning Group November 4, 2021 2:00 pm

at

Jeffersonian Institute/Board Room 120 East Austin Street Jefferson, Texas 75657 (See map included)

or

Via teleconference/webinar Use the following information to register for the meeting:

https://us06web.zoom.us/meeting/register/tZMpc-qhpj8pGtWet4iX MF8EOdQlonhXNxR After registering, you will receive a confirmation email containing information about joining the meeting.

If you experience issues while registering or do not have access to a computer, please contact Paul Prange no less than two (2) workdays prior to the meeting at 903.255.3519 or pprange@atcog.org.

Agenda:

- 1. Call to Order
- 2. Welcome
- 3. Confirmation of attendees / determination of quorum
- 4. Public comments limit 3 minutes per person

Action Items

- 5. Consider approval of minutes for the meeting held Thursday, October 7, 2021. (p 4)
- 6. Discuss and Consider recommendation of nominee from the Executive Committee to fill the currently vacant Industries voting position. (p 10)
- 7. Discuss and Consider nominations for the vacant Region 2 Lower Red-Sulphur-Cypress RFPG Executive Committee member (1 voting member-at-large) seat. (p 19)
- 8. Discuss and Consider designating a non-voting member liaison to the Region 1 Canadian-Upper Red RFPG required per Section 361.11(f)(8) of the Texas Administrative Code. (p 20)
- 9. Discuss and Consider approval of administrative billings, certifying the current billing is correct and necessary for the administrative operations of the Region 2 RFPG and Planning Group Sponsor. (p 21)
- 10. Discuss and Consider approval of the Technical Consultant invoices. (p 25)
- 11. Discussion and potential action to authorize the Planning Group Sponsor to negotiate and execute an amendment to the Regional Flood Planning Grant contract with the TWDB, to incorporate additional funding for the first cycle of regional flood planning, including necessary revisions to the contract scope of work and budget. (p 45)
- 12. Discussion and potential action to authorize the Planning Group Sponsor to negotiate and execute an amendment to the Regional Flood Planning Grant subcontract with the technical consultant, Halff Associates, Inc., to incorporate additional funding for the first cycle of regional flood planning, including necessary revisions to the contract scope of work and budget.

Presentations

- 13. Texas Water Development Board Update.
- 14. Region 1 Canadian-Upper Red Regional Flood Planning Group Updates

Technical Consultant Update

- 15. Presentation, Review and Discussion of Technical Memo (p 53)
- 16. Task 2 Flood Risk Analyses
 - a. Data and Maps discussion

Other Business

- 17. Update from Planning Group Sponsor
- 18. Consider date and agenda items for next meeting
- 19. Adjourn

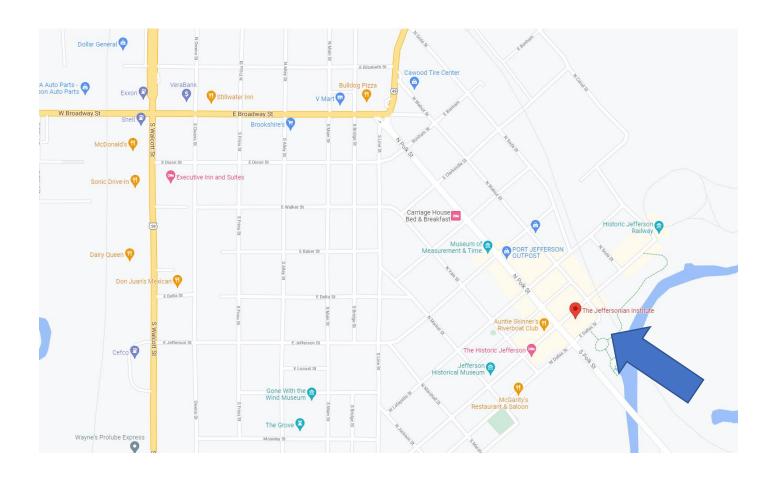
If you wish to provide written comments prior to or after the meeting, please email your comments to pprange@atcog.org and include "Region 2 RFPG Meeting" in the subject line of the email – OR – you may mail your comments to Region 2 RFPG, c/o ATCOG – Paul Prange, 4808 Elizabeth St, Texarkana, TX 75503.

If you wish to provide oral public comments at the meeting, please submit a request via email to pprange@atcog.org, include "Region 2 RFPG Meeting Public Comment Request" at least 2 hours prior to the meeting, and follow the registration instructions at top of page 1 of the Agenda.

Additional information may be obtained from: www.texasfloodregion2.org, or by contacting Paul Prange at pprange@atcog.org, 903-832-8636, -or- Region 2 RFPG, c/o ATCOG, 4808 Elizabeth St, Texarkana, TX 75503

All meeting agendas and notices will be posted on our website at www.texasfloodregion2.org. If you wish to be notified electronically of RFPG activities, please submit a request to pprange@atcog.org, include "Request for notification of Region 2 RFPG activities". This request will be honored via email only unless reasonable accommodations are needed.

Jeffersonian Institute/Board Room 120 East Austin Street, Jefferson, Texas 75657



Meeting Minutes Region 2 Lower Red-Sulphur-Cypress Flood Planning Group Meeting October 7, 2021 2:00 p.m.

Ark-Tex Council of Governments Office, Texarkana, TX and Via Zoom Webinar/Teleconference

Roll Call:

Voting Member	Interest Category	Present (x) / Absent () / Alternate
		Present (*)
Preston Ingram (William)	Agricultural interests	
Andy Endsley	Counties	X
W. Greg Carter	Electric generating utilities	X
Laura-Ashley Overdyke	Environmental interests	X
Clark Crandall	Industries	
Dustin Henslee	Municipalities	X
Kirby Hollingsworth	Public	X
R. Reeves Hayter	River authorities	X
Kelly Mitchell	Small business	X
Joseph W. Weir III	Water districts	X
Susan Whitfield	Water utilities	X

Non-voting Member	Agency	Present(x)/Absent()/ Alternate Present (*)
James (Clay) Shines	Toyos Parks and Wildlife Department	X
James (Clay) Shipes	Texas Parks and Wildlife Department	
Andrea Sanders	Texas Division of Emergency Management	X
Darrell Dean	Texas Department of Agriculture	X
Tony Resendez	Texas State Soil and Water Conservation	
	Board	
Trey Bahm	General Land Office	
Anita Machiavello (Morgan	To a Mala a David a constant David (TM/DD)	Х
White - Alternate)	Texas Water Development Board (TWDB)	
Michelle Havelka	Texas Commission on Environmental	Х
	Quality	
Darlene Prochaska	USACE, Fort Worth District	Х
Travis Wilsey	USACE, Tulsa District	
Randy Whiteman	RFPG 1 Liaison	Х
Richard Brontoli	Red River Valley Association	Х
Jason Dupree	TxDOT – Atlanta District	Х
Dan Perry	TxDOT – Paris District	Х

Quorum:

Quorum: Yes

Number of voting members or alternates representing voting members present: **9** Number required for quorum per current voting membership of **11**: **6**

Other Meeting Attendees: **

Chris Brown - ATCOG
Paul Prange — ATCOG
Joshua McClure — Halff Associates Team
David Rivera — Halff Associates Team
Kimberly Miller - Halff Associates Team
Parker Moore — Halff Associates Team
Tyler Ogle — Halff Associates Team
Jarred Overbey — Halff Associates Team
Chris Hartung

All meeting materials are available for the public at: http://www.twdb.texas.gov/flood/planning/regions/schedule.asp.

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

AGENDA ITEM NO. 1: Call to Order

Reeves Hayter called the meeting to order at 2:08p.m.

AGENDA ITEM NO. 2: Welcome

Reeves Hayter welcomed members and attendees to the Region 2 Lower Red-Sulphur-Cypress Flood Planning Group meeting.

AGENDA ITEM NO. 3: Confirmation of attendees / determination of a quorum

Reeves Hayter asked ATCOG staff member, Paul Prange, to conduct a roll call of attendees. Each present voting and non-voting member of the Region 2 Lower Red-Sulphur-Cypress RFPG introduced themselves, establishing that a quorum had been met. Nine voting members were present and three non-voting members were absent.

AGENDA ITEM NO. 4: Public comments – limit 3 minutes per person

Reeves Hayter opened the floor for public comments. No public comments were given.

ACTION ITEMS

AGENDA ITEM NO. 5: Consider approval of minutes for the meeting held Thursday, September 2, 2021:

Reeves Hayter opened the floor for discussion and approval of the minutes from the previous meeting. A motion was made by Laura-Ashley Overdyke and was seconded by Greg Carter to approve the minutes as presented. The motion carried unanimously.

AGENDA ITEM NO. 6: Discuss and Consider approval of administrative billings, certifying the current billing is correct and necessary for the administrative operations of the Region 2 RFPG and Planning Group Sponsor:

Reeves Hayter handed the floor over to Chris Brown who stated that ATCOG will present this item at the next RFPG2 meeting in November 2021. The item was tabled.

AGENDA ITEM NO. 7: Discuss and Consider approval of the Technical Consultant invoices:

Reeves Hayter handed the floor over to Chris Brown who asked that his item also be revisited at the November 2021 RFPG2 meeting. The item was tabled.

AGENDA ITEM NO. 8: Discussion and potential action to authorize the Planning Group Sponsor to negotiate and execute an amendment to the Regional Flood Planning Grant contract with the TWDB, to incorporate additional funding for the first cycle of regional flood planning, including necessary revisions to the contract scope of work and budget:

Reeves Hayter handed the floor over to Chris Brown, who asked Anita Machiavello with the TWDB to elaborate on this agenda item. Ms. Machiavello announced that the TWDB staff are currently compiling the contract amendment language into a new document which will be provided to the Region 2 Flood Planning Group in mid to late October 2021. Joshua McClure stated that the contract amendment would have to be reviewed and agreed upon by ATCOG and Halff Associates before being implemented. Chris Brown stated that once the amended contract has been agreed upon, the RFPG2 Board of

Directors would vote to officially adopt the new contract at a future meeting. Joshua McClure announced that Region 2 received a larger percentage of supplemental funds from the TWDB due to revisions made to the allocation formula. Reeves Hayter asked the RFPG2 members for a vote to approve this agenda item. A motion was made by Kelly Mitchell and seconded by Dustin Henslee. The motion carried unanimously.

AGENDA ITEM NO. 9: Discussion and potential action to authorize the Planning Group Sponsor to negotiate and execute an amendment to the Regional Flood Planning Grant subcontract with the technical consultant, Halff Associates, Inc., to incorporate additional funding for the first cycle of regional flood planning, including necessary revisions to the contract scope of work and budget: Reeves Hayter opened the floor up for discussion. Dustin Henslee made a motion to approve this agenda item and the motion was seconded by Greg Carter. The motion carried unanimously.

PRESENTATIONS

AGENDA ITEM NO. 10: Texas Water Development Board Update:

Reeves Hayter handed the item over to Anita Machiavello from the TWDB. Ms. Machiavello stated that TWDB met on September 23, 2021 and approved the contract revisions to allow for supplemental funding and the draft amendment will include a new Scope of Work. Ms. Machiavello also stated that an extension was provided for the technical memorandum, relating specifically to Task 2A- Existing Conditions, but that the January 7, 2022 deadline is still in effect for all other deliverables. Brief discussion took place between the RFPG2 board members and the Halff Associates team members regarding the timeframe of these deliverables.

TECHNICAL CONSULTANT UPDATE

AGENDA ITEM NO. 11: Task 1 - Planning Area Description

a. Summary of Findings

Reeves Hayter turned the floor over to Joshua McClure from Halff Associates to conduct the presentation. Mr. McClure introduced fellow team members Parker Moore, David Rivera and Kimberly Miller and then announced that today's presentation will be focusing on Chapter's 1-4 and the associated Tasks. Mr. McClure then called on Kimberly Miller to present information relating to Task/Chapter 1 – Planning Area Description. Ms. Miller conducted a slide presentation focusing on current and projected population, NFIP participation, social vulnerability index, largest industry per county by revenue, USDA National Agricultural Statistics Service (NASS) CropScape Land Cover, data collection website, summary of flood plan and regulations provided via survey, types of resilience measures based on survey, and proposed projects by type. Much discussion took place between the RFPG2 board members and the Halff Associates Team. Reeves Hayter asked Kimberly Miller about the HUC8 legend units of measure and the social vulnerability index. Ms. Miller stated that the HUC8 units of measure referred to people per square mile and that there were about 13 different variables that contributed to determining the social vulnerability index, adding that the more vulnerable a region is, the more likely it is to receive grant funding for projects by the TWDB. Laura-Ashley Overdyke asked Ms. Miller if the types of regulations, resilience measures, and types of projects could be ranked prior to approval by the Region 2 Flood Planning Group. Ms. Miller stated that they could, indeed.

AGENDA ITEM NO. 12: Task 2 - Flood Risk Analyses

b. Status Update

Reeves Hayter handed the floor over to Joshua McClure to present information relating to Task/Chapter 2 – Flood Risk Assessment. Mr. McClure conducted a brief slide presentation focusing on fathom data and schedule impacts, while noting that a partial technical memorandum is still due to TWDB on January 7, 2022 with the remaining portions due on March 7, 2022. No discussion took place among the RFPG2 board members.

AGENDA ITEM NO. 13: Task 3A and 3B - Recommended Floodplain Management Practices and Goals

- c. *RFPG Vote on Recommended Standards
- d. *RFPG Vote on Flood Mitigation and Floodplain Management Goals

Reeves Hayter turned the floor over to David Rivera who conducted a slide presentation focusing of Task/Chapter 3 – Flood Mitigation and Floodplain Management Goals. Mr. Rivera presented information relating to recommended floodplain management standards and floodplain management goals. The floodplain management standards referred to residential and commercial properties, critical facilities, roadways, culverts/bridges, storm drainage systems, detention facilities, and mapping coverage. The floodplain management goals referred to education and outreach, flood warning and readiness, flood studies and analysis, flood prevention, non-structural flood infrastructure, and structural flood infrastructure. Much discussion took place among the Region 2 Flood Planning Group members and the Halff Associates Team relating to making amendments to the standards and goals, such as adopting TXDOT standards relating to culverts/bridges and storm drainage systems, adding another non-structural flood infrastructure goal, and lowering the short term and long term percentages in the flood prevention and structural flood infrastructure goal categories. Reeves Hayter opened the floor up for a vote on agenda item 13 c. Greg Carter made a motion to approve the item with amended recommendations from the board and Dustin Henslee seconded the motion. The motion carried unanimously. Reeves Hayter then opened the floor up for a vote on item 13 d. A motion was made by Dustin Henslee to approve the item as amended by the board and Laura-Ashley Overdyke seconded the motion. The motion carried unanimously.

AGENDA ITEM NO. 14: Task 4A and 4B – Assessment and Identification of Mitigation Needs

Reeves Hayter seconded the motion. The motion carried unanimously.

e. *RFPG Vote on Process for Identification and Evaluation of FMEs, FMPs, and FMSs
Reeves Hayter turned the floor over to David Rivera who conducted a slide presentation focusing on
Task/Chapter 4 – Flood Mitigation Needs Analysis. Mr. Rivera discussed (Task 4A) the process for
identifying areas of greatest need including; greatest flood risk knowledge gaps (FME) and greatest
known flood risk and flood mitigation needs (FMS, FMP) and (Task 4B) the process for identifying FMEs,
FMSs, and FMPs. Discussion took place among the Region 2 board members to consider approval of the
process to identify potential FMEs and potentially feasible FMSs and FMPs. Reeves Hayter opened the
floor up for a vote on agenda item 14 and Greg Carter made a motion to approve this agenda item.

AGENDA ITEM NO. 15: Additional Funding Discussion

Reeves Hayter turned the floor over to Joshua McClure to present information relating to additional flood planning funds. Mr. McClure announced that the 2021 Texas Legislature approved and additional \$10 million in funding for the State Flood Plan (40% increase) and that Region 2 received and additional \$576,600 in funding for FMEs and FMPs.

AGENDA ITEM NO. 16: Schedule Update

Reeves Hayter turned the floor over to Joshua McClure who provided a summary of activities and deliverables due between November 2021 and March 2022.

OTHER BUSINESS

AGENDA ITEM NO. 17: Update from Planning Group Sponsor

Reeves Hayter turned the floor over to Chris Brown who announced that at the November 2021 meeting, the RFPG2 Board of Directors will vote to appoint a new voting member to replace Clark Crandall in the category of "Industries". Mr. Brown also announced that the RFPG2 Board of Directors will need to vote to appoint a new Executive Committee member "At Large". Reeves Hayter asked if ATCOG had received any nominations to date and Chris Brown stated that a nomination was submitted during this meeting via email.

AGENDA ITEM NO. 18: Consider date and agenda items for next meeting

Reeves Hayter opened the floor for discussion. The Region 2 RFPG board members agreed to conduct the next meeting on Thursday, November 4, 2021 at 2:00p.m. at a location to be determined, and via webinar/teleconference.

AGENDA ITEM NO. 19: Adjourn

Reeves Hayter opened the floor to adjourn the meeting.

A motion was made by Dustin Henslee and Seconded by Greg Carter.

The vote to adjourn was passed by unanimous consent.

The meeting was adjourned at 5:10p.m. by Reeves Hayter.

Approved by the Region 2 Lower Red-Sulphur-Cypress RFPG at a meeting held on 11/4/2021.

Reeves Hayter, CHAIR	

ITEM 6:

Consider applications of nominees to fill the currently vacant *Industries* voting positions

BACKGROUND:

The resignation of Clark Crandall created a vacancy of a voting member position.

DISCUSSION:

A solicitation was posted as per Section 4.1 of the Bylaws, and the Executive Committee met on October 25, 2021, to review the nominations and make a recommendation to the full Region 2 RFPG.

RECOMMENDATION:

The Executive Committee voted to recommend Mr. Casey Johnson to fill the *Industries* voting position. (resume attached)

Notice to Public

Region 2 Lower Red-Sulphur-Cypress Regional Flood Planning Group

The **Region 2 Lower Red-Sulphur-Cypress Regional Flood Planning Group (RFPG)** is soliciting nominations to fill one (1) voting positions on the Region 2 Lower Red-Sulphur-Cypress RFPG.

Nominees who either operate in or have interests in the Region 2 Lower Red-Sulphur-Cypress RFPG are being solicited to represent the following interest group:

(1 Seat) Industries

The **Region 2 Lower Red-Sulphur-Cypress RFPG** was established by the Texas Water Development Board (TWDB) on October 1, 2020, through the designation of initial flood planning group members. The Region 2 flood planning region (FPR) is comprised of 20 counties including the entirety of Bowie, Camp, Cass, Delta, Franklin, Lamar, Marion, Morris, Red River, Titus, and partially includes Cooke, Fannin, Grayson, Gregg, Harrison, Hopkins, Hunt, Panola, Upshur, and Wood.

The purpose of the Region 2 Lower Red-Sulphur-Cypress RFPG is to carry out the responsibilities placed on regional flood planning groups as required by Texas Water Code Chapter 16 and TWDB rules, including 31 Texas Administrative Code (TAC) Chapters 361 and 362. Foremost among those responsibilities shall be the development of a regional flood plan for the Region 2 Lower Red-Sulphur-Cypress FPR that identifies flood risks, establishes flood mitigation and floodplain management goals, and recommends evaluations, strategies, and projects to reduce flood risks.

In order to be eligible for voting membership on the Region 2 Lower Red-Sulphur-Cypress RFPG, a person must be capable of adequately representing the interest for which a member is sought, be willing to participate in the regional flood planning process, attend meetings, and abide by RFPG bylaws. The terms of all initial voting members shall expire on July 10, 2023.

Nominations may be made to the Region 2 Lower Red-Sulphur-Cypress RFPG Sponsor, the Ark-Tex Council of Governments (ATCOG), until 5:00 PM, October 20, 2021. Please complete the attached nomination form or contact Paul Prange if you need one sent to you. Please submit nominations to pprange@atcog.org by email, or mail to: Region 2 RFPG, c/o Paul Prange, ATCOG, 4808 Elizabeth St., Texarkana, TX 75503.

Please call 903-832-8636, or email pprange@atcog.org for further information. Or explore www.texasfloodregion2.org for additional Flood Planning Group information.

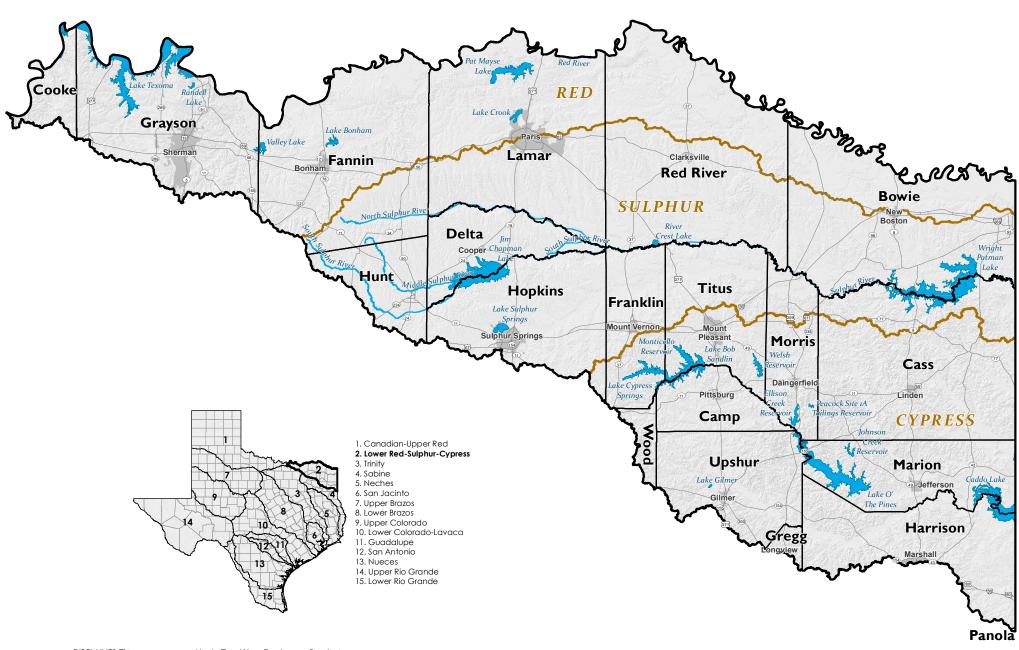
Page 1 of 2 DEADLINE: October 20, 2021

Regional 2 Lower Red-Suphur-Cypress Flood Planning Group Member Nomination Form

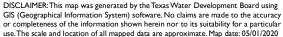
Date:
Name of individual being nominated (nominee):Nominee phone number:Nominee email:
Nominee phone number:Nominee email:
Nominee mailing address:
County in which the individual nominee resides:
Current occupation of nominee:
Professional qualifications of nominee (attach resume or CV, optional):
Brief bio and summary of qualifications of the nominee:
General type of flood-related knowledge, experience, and approximately number of years of being
involved in flood-related issues:
Previous public service and/or leadership experience and roles:
Description of why nominee is interested in membership, how they could contribute most as RFPG member, and how they otherwise meet the Executive Administrator's criteria for selection:
Interest Category
Industries

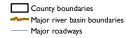
Page 2 of 2		DEADLINE: October 20,20
Does the nominee reside within the region for which they are being nominated?	□ YES	□ NO
If no, does the nominee's professional or other activities occur within the region for which they are being nominated?	□ YES	□ NO
If yes, in what county(s) does this occur:		
Please list any endorsements from individuals and/or orga supporting information.	nization	as for this nominee and attach any
Provide two references (name, title/affiliation, phone numb	oer):	
Does this submission include attachments? YES NO If yes, please email attachments to cbrown@atcog.or	g	
Submission De Total number of attached pages to this submission (including Name & phone number of the person submitting this form	ng these	

Flood Planning Region - 2 - Lower Red-Sulphur-Cypress













Casey Johnson

110 PR 44001 Blossom, TX 75416 (903) 900-6683 cfjohnson1985@gmail.com www.linkedin.com/in/caseyfjohnson

STRATEGY AND OPERATIONS LEADER

Degreed Industrial Engineer (BS) and Management (MS) professional with 12+ years of experience in various levels of Manufacturing Management from Plant Manager to Executive Operational Leadership.

Specific expertise in the following:

Lean Six Sigma Master Black Belt	Lean Deployment
Strategy Planning	Six Sigma Methodologies
Business Operating System Deployment	Supplier Development
Value Stream Transformation	Talent Development
Change Management	Financial Statements

PROFESSIONAL EXPERIENCE

American Spiral Weld Pipe Company, Paris, TX

2020 - Present

ASWP Paris is a leading manufacturer of steel infrastructure water pipe serving the Southwest region of the United States.

Plant Manager

Directly accountable for safety, quality, profitability, productivity, and operational excellence of a \$110M greenfield manufacturing facility with multiple revenue streams and several layers of personnel to include exempt and non-exempt employees.

Amcor Rigid Plastics, Paris, TX

2016 - 2020

Amcor is a global leader in developing and producing responsible packaging for food, beverage, pharmaceutical, medical, home- and personal-care, and other products.

Global Director of Continuous Improvement

2019 - Present

Directly accountable for safety, quality, profitability, productivity, and operational excellence of 62 manufacturing facilities within the Business Group to include North America, Canada, and Latin American facilities. Continuous Improvement Accomplishments include:

- Facilitated Executive Steering Committee consisting of 8 cross functional Executives
- Deployed Toyota Production System principles into 62 manufacturing facilities
- Trained/Deployed 10 Black Belts, 50 Green Belts, 500+ Yellow Belts, and over 1,500+ White Belts
- Generated ROI's greater than \$5.5M annually

Director of Operational Excellence

2018 - 2019

Directly accountable for safety, quality, profitability, productivity, and operational excellence of 37 manufacturing facilities within the US.

Regional CI Manager (LSSMBB)

2017 - 2018

Directly accountable for safety, quality, profitability, productivity, and operational excellence of 21 manufacturing facilities within the US.

Plant Manager

2016 - 2017

Casey Johnson Page 2

Directly accountable for safety, quality, profitability, productivity, and operational excellence of a \$12M manufacturing facility with multiple revenue streams and several layers of personnel to include exempt and non-exempt employees. Plant Manager Accomplishments during tenure include:

- Safety 0 Recordables and 0 Lost times
- Quality Reduced Scrap Rates to less than 1%
- Delivery Met and Sustained OTD of 100% while reducing Merchant Supply to less than 1%
- Productivity Increased and Sustained Manufacturing Efficiency of 96%
- Cost Decreased overall Cost to Produce while Streamlining Headcount Allocations

Paris Generation, LP – North American Energy Services (NAES), Paris, TX 2012 - 2017 NAES is a market leading independent services company dedicated to delivering value to facilities across the power generation, oil & gas, petrochemical, pulp & paper, and manufacturing industries.

Engineering Consultant (NAES Staffing Services) 2016 – 2017

Retained as a Consultant to provide guidance and direction on essential task related to power generation and previous positional responsibilities.

Maintenance Manager

2015 - 2016

Served as Maintenance Manager on interim basis for a period of 9 months; including directly managing the successful completion of a 21-day major Gas Turbine outage.

Plant Engineer 2012 – 2015

Managed and facilitated all engineering requirements of 250MW Combined Cycle Power plant. Engineering Accomplishments include:

- Reduced Plant Noise in high risk exposure areas to less than 85dB
- Completed 3 Annual NERC / TRE / ERCOT Compliance Audits with 0 Non-Conformances
- Coordinated, Scoped, and Planned 8 total plant outages to include 3 majors overhauls

Flowserve Corporation, Sulphur Springs, TX

2011 - 2012

Flowserve is one of the largest suppliers of industrial and environmental machinery such as pumps, valves, end face mechanical seals, automation, and services to the power, oil, gas, chemical and other industries.

Continuous Improvement Engineer (LSSBB)

Enrolled in the Sales and Leadership Development Program for the Flow Control Division-Oil and Gas sector. Directly accountable for the operational excellence of the entire facility to include 3 total value streams.

- Facilitated 15 Kaizen events generating over \$1.0M in annual reoccurring savings
- Deployed Toyota Production System principles into all 3 value streams
- Trained/Deployed 2 Green Belts, 15+ Yellow Belts, and over 100+ White Belts

L-3 Communications, Greenville, TX

2010 - 2011

L-3 Communications is a leading defense contractor supplying command and control, communications, intelligence, surveillance and reconnaissance systems and products, avionics, ocean products, training devices and services, instrumentation, aerospace, and navigation products.

Production Planning Engineer (LSSGB)

Directly accountable for safe, effective, and efficient planning of the reconfiguration of 20+ Defense Surveillance Aircraft, and ensuring operational success of 12 Hanger, Dock, and Line locations within the facility.

Casey Johnson Page 3

Lockheed Martin is an American global aerospace, defense, security, and advanced technologies company with worldwide interests.

Operations Engineer (LSSGB)

Directly accountable for safety, quality, profitability, productivity, and operational excellence of entire fleet of High Mobility Artillery Rocket Systems (HIMARS) vehicles with 100% OTD contractual requirements.

MILITARY EXPERIENCE

United States Air Force, Worldwide

2003 - 2007

The United States Air Force is the aerial warfare service branch of the United States Armed Forces.

Munitions Systems Technician (E-5 / SSgt. Duties)

Directly accountable for safety, security, quality, productivity, supply chain, and operational excellence of entire stockpile of United States Air Force Munitions Systems to include 6+ successful global stockpile movements.

EDUCATION

Master of Science (MS) Technology Management, Operations Focus

Academic: GPA: 3.90 / 4.0 (Summa cum Laude)
Academic Honors & President's List: Fall 2009, Spring 2010
Texas A&M University-Commerce, Hunt County, Commerce, TX

Bachelor of Science (BS), Industrial Engineering

Academic: GPA: 3.85 / 4.0 (Magna cum Laude)
Academic Honors & President's List: Fall 2007, Spring 2009
Texas A&M University-Commerce, Hunt County, Commerce, TX

Associate of Science (AS), Munitions System Technology

Academic: GPA: 4.0 / 4.0 (Summa cum laude)
Community College of the Air Force, Maxwell-Gunter AFB, AL

CERTIFICATIONS / ACCOMPLISHMENTS

- Lean Six Sigma Master Black Belt Certification (2017)
- OSHA General Industry Safety and Health Certification (2012)

PUBLICATIONS

Johnson, C. "The Ultimate Guide to Team Building", 2012

TRAINING

- USAF Technical Academy: Sheppard AFB, Wichita Falls, TX, 76311, October December 2003
- Military Class C Commercial Vehicle Training (All): Kunsan AFB, Republic of Korea
- USAF Leadership Academy: Andersen AFB, Guam, Pacific, February April 2005
- OSHA General Industry Safety and Health: Sulphur Springs, TX April 2012

Casey Johnson Page 4

TECHNICAL SKILLS

Software: Microsoft Office ALL, Lotus Notes, InfoPath, AutoCAD, Solid Works, SAP, ORACLE,

Minitab, Mainsaver, PI, Papervision, and many others.

PROFESSIONAL AFFILIATIONS

American Society for Quality (ASQ)

ITEM 7:

Discuss and Consider nominations for the vacant Region 2 Lower Red-Sulphur-Cypress RFPG Executive Committee member (1 voting member-at-large) seat.

BACKGROUND:

The resignation of Clark Crandall left a vacancy on the Executive Committee. The Region 2 RFPG Bylaws (link) address the Vacancy of Officers and Executive Committee Members in Article VIII, Sections 4.

DISCUSSION:

Voting members of the Region 2 Lower Red-Sulphur-Cypress RFPG shall select a replacement officer from the voting membership.

The Executive Committee shall be composed of five Region 2 Lower Red-Sulphur-Cypress RFPG members, including the Chair, Vice Chair, Secretary, and two voting members-at-large. No two voting members representing the same interest shall serve as members of the Executive Committee at the same time.

RECOMMENDATION:

Nominations shall be made from the floor by voting members. The voting members shall select a replacement officer from among the nominees by a majority vote of the voting members present.

ITEM 8:

Discuss and Consider designating a non-voting member liaison to the Region 1 Canadian-Upper Red RFPG required per §361.11(f)(8) of the Texas Administrative Code.

BACKGROUND:

(8) Non-voting member liaisons designated by each RFPG, as necessary, to represent portions of major river basins that have been split into more than one FPR to coordinate between the upstream and downstream FPRs located within that same river basin. This non-voting member liaison may, at the discretion of the RFPG, be met by a voting member that also meets another position requirement under subsection (e) of this section; and

DISCUSSION:

<u>§361.11(f)(8) of the Texas Administrative Code.</u>

RECOMMENDATION:

Staff recommends approval of a designated representative.

ITEM 9:

Discuss and Consider approval of administrative billings, certifying the current billing is correct and necessary for the administrative operations of the Region 2 RFPG and Planning Group Sponsor.

BACKGROUND:

Title 31 TAC §361.72(b) requires that the RFPG or its Chairperson certifies, during a public meeting, that administrative costs are eligible for reimbursement and are correct and necessary. Please see the rules for a full listing of what types of expenses are considered administrative and need to be certified in a public meeting. Generally, this includes travel expenses for RFPG members or Sponsor staff, a Sponsor's direct costs such as website or postage fees, and Sponsor's personnel costs. This does not include the technical consultant's expenses, it only impacts the Sponsor and voting member travel expenses billed under Task 10.

DISCUSSION:

ATCOG staff has worked with TWDB for the proper format for expense reimbursement. Attached is the breakdown of administrative charges to be billed.

RECOMMENDATION:

Staff requests certification of the administrative costs submitted.

420 - Regional Flood Planning

COSL

		Cost					
Object Code	Object Title	Effective Date Center	Document Number	<u>ID</u>	Name	Debit	Credit
50110	SALARIES	2/1/2021 434	6328	516	Paul M. Prange	207.85	
50110	SALARIES	2/12/2021 434	6433	516	Paul M. Prange	519.65	
50110	SALARIES	3/1/2021 434	6537	516	Paul M. Prange	415.72	
50110	SALARIES	3/15/2021 434	6640	516	Paul M. Prange	519.65	
50110	SALARIES	3/25/2021 434	3742	516	Paul M. Prange	51.96	
50110	SALARIES	4/12/2021 434	6777	516	Paul M. Prange	311.79	
50110	SALARIES	5/10/2021 434	7056	516	Paul M. Prange	259.82	
50110	SALARIES	5/24/2021 434	7198	516	Paul M. Prange	415.72	
50110	SALARIES	6/7/2021 434	7345	516	Paul M. Prange	25.98	
50110	SALARIES	7/2/2021 434	7600	516	Paul M. Prange	207.85	
50110	SALARIES	7/19/2021 434	7709	516	Paul M. Prange	415.72	
50110	SALARIES	8/16/2021 434	7926	516	Paul M. Prange	285.80	
50110	SALARIES	9/13/2021 434	8143	516	Paul M. Prange	207.86	
50110	SALARIES	9/27/2021 434	8249	516	Paul M. Prange	363.75	
50110	SALARIES	9/27/2021 434	8259	586	Paul M. Prange	<u>57.1</u> 5	
Total 50110	SALARIES					4,266.27	0.00
50210	BENEFITS	2/1/2021 434	6328	516	Paul M. Prange	99.46	
50210	BENEFITS	2/12/2021 434	6433	516	Paul M. Prange	248.65	
50210	BENEFITS	3/1/2021 434	6537	516	Paul M. Prange	198.92	
50210	BENEFITS	3/15/2021 434	6640	516	Paul M. Prange	248.65	
50210	BENEFITS	3/25/2021 434	3742	516	Paul M. Prange	24.86	
50210	BENEFITS	4/12/2021 434	6777	516	Paul M. Prange	149.19	

ARK-TEX Council Of Governments Posted General Ledger Transactions

50210	BENEFITS	5/10/2021 434	7056	516	Paul M. Prange	124.32	
50210	BENEFITS	5/24/2021 434	7198	516	Paul M. Prange	198.92	
50210	BENEFITS	6/7/2021 434	7345	516	Paul M. Prange	12.43	
50210	BENEFITS	7/2/2021 434	7600	516	Paul M. Prange	99.46	
50210	BENEFITS	7/19/2021 434	7709	516	Paul M. Prange	198.92	
50210	BENEFITS	8/16/2021 434	7926	516	Paul M. Prange	136.76	
50210	BENEFITS	9/13/2021 434	8143	516	Paul M. Prange	99.46	
50210	BENEFITS	9/27/2021 434	8249	516	Paul M. Prange	174.05	
50210	BENEFITS	9/27/2021 434	8259	516	Paul M. Prange	27.35	
Total 50210	BENEFITS					2,041.41	0.00
50310	TRAVEL	5/14/2021 434	4/1-4/30/21	50019999	PAUL PRANGE	70.00	
50310	TRAVEL	7/16/2021 434	5/27/21-7/8/2021	50019999	PAUL PRANGE	53.20	
50310	TRAVEL	8/13/2021 434	7/22-8/5/21	50019999	PAUL PRANGE	<u>58.24</u>	
Total 50310	TRAVEL					181.44	0.00
50410	OVERHEAD	2/28/2021 434	1168			59.61	
50410	OVERHEAD	3/31/2021 434	1252			72.77	
50410	OVERHEAD	4/30/2021 434	1336			31.05	
50410	OVERHEAD	5/31/2021 434	1395			52.49	
50410	OVERHEAD	6/30/2021 434	1493			2.37	
50410	OVERHEAD	7/31/2021 434	1647			69.25	
50410	OVERHEAD	8/31/2021 434	1730			19.67	
Total 50420	OVERHEAD					307.21	0.00
50516	ADVERTISING	3/31/2021 434	1673358-3/31	79429999	THE MARSHALL NEWS I	278.30	

ARK-TEX Council Of Governments Posted General Ledger Transactions

50516	ADVERTISING	4/9/2021 434	458536-1	3669999	TEXARKANA NEWSPAPE	<u>37.25</u>	
Total 50516	ADVERTISING					315.55	0.00
50910	INDIRECT	2/1/2021 434	6328	516	Paul M. Prange	77.32	
50910	INDIRECT	2/12/2021 434	6433	516	Paul M. Prange	193.30	
50910	INDIRECT	3/1/2021 434	6537	516	Paul M. Prange	154.64	
50910	INDIRECT	3/15/2021 434	6640	516	Paul M. Prange	193.30	
50910	INDIRECT	3/25/2021 434	3742	516	Paul M. Prange	19.33	
50910	INDIRECT	4/12/2021 434	6777	516	Paul M. Prange	115.98	
50910	INDIRECT	5/10/2021 434	7056	516	Paul M. Prange	96.65	
50910	INDIRECT	5/24/2021 434	7198	516	Paul M. Prange	154.64	
50910	INDIRECT	6/7/2021 434	7345	516	Paul M. Prange	9.66	
50910	INDIRECT	7/2/2021 434	7600	516	Paul M. Prange	77.32	
50910	INDIRECT	7/19/2021 434	7709	516	Paul M. Prange	154.64	
50910	INDIRECT	8/16/2021 434	7926	516	Paul M. Prange	106.31	
50910	INDIRECT	9/13/2021 434	8143	516	Paul M. Prange	77.32	
50910	INDIRECT	9/27/2021 434	8249	516	Paul M. Prange	135.31	
50910	INDIRECT	9/27/2021 434	8259	586	Tammy J. Tilley	21.26	
Total 50910	INDIRECT					<u>1,587.01</u>	0.00
		Total 420 - Regional Flood	Planning			8,698.89	0.00

Ark-Tex Council of Governments

Regional Flood Planning

Region 2 - Lower Red, Sulphur, and Cypress Basins

Prime Summary: Halff Associates Inc.

LABOR PER TASK		Budget	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	TOTAL	REMAINING
Task Breakdown																			_						
Task 1 Planning Area Description		\$45,520.00	\$262.50	\$23,490.49	\$7,602.66	\$7,911.48	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$39,267.13	\$6,252.87
Task 2A Existing Condition Flood Risk		\$91,040.00	\$0.00	\$25,211.45	\$9,891.08	\$11,465.66	\$10,156.68	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$56,724.87	\$34,315.13
Task 2B Future Condition Flood Risk		\$91,040.00	\$0.00	\$21,335.67	\$4,582.50	\$3,590.08	\$13,315.66	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$42,823.91	\$48,216.09
Task 3A Floodplain Management Practices		\$18,208.00	\$0.00	\$238.86	\$15,536.75	\$62.80	\$1,114.67	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$16,953.08	\$1,254.92
Task 3B Mitigation & Management Goals		\$9,104.00	\$0.00	\$0.00	\$5,022.75	\$1,543.00	\$342.50	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$6,908.25	\$2,195.75
Task 4A Needs Analysis		\$27,312.00	\$0.00	\$121.51	\$568.97	\$3,100.00	\$4,778.09	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$8,568.57	\$18,743.43
Task 4B Identify FME, FMS, FMP		\$136,560.00	\$0.00	\$1,874.20	\$548.00	\$10,368.28	\$10,329.21	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$23,119.69	\$113,440.31
Task 4C Tech Memo		\$18,208.00	\$0.00	\$0.00	\$0.00	\$4,873.36	\$3,945.76	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$8,819.12	\$9,388.88
Task 5 Evaluate/Recommend FME, FMS, FMP		\$182,080.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$182,080.00
Task 6A Impacts of Regional Plan		\$36,416.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$36,416.00
Task 6B Contribution/Impacts of Water Supply		\$9,104.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$9,104.00
Task 7 Flood Response Information & Activities		\$9,104.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$9,104.00
Task 8 Admin, Regulatory & Leg Recommendations		\$9,104.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$9,104.00
Task 9 Flood Infrastructure Finance		\$18,208.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$18,208.00
Task 10 Public Involvement & Plan Adoption		\$133,392.00	\$0.00	\$33,204.40	\$23,822.53	\$15,869.66	\$8,961.06	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$81,857.65	\$51,534.35
	TOTAL	\$834,400.00	\$262.50	\$105,476.58	\$67,575.24	\$58,784.32	\$52,943.63	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$285,042.27	\$549,357.73
Budget Category Breakdown																									
Salaries & Wages			\$0.00	\$29,109.41	\$6,828.47	\$9,862.58	\$10,330.06	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$56,130.52	-\$56,130.52
Fringe			\$0.00	\$22,181.37	\$5,203.29	\$7,515.29	\$7,871.51	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$42,771.45	-\$42,771.45
Overhead			\$0.00	\$40,025.43	\$9,389.14	\$13,561.05	\$14,203.83	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$77,179.46	-\$77,179.46
Profit			\$0.00	\$9,131.62	\$2,142.09	\$3,093.89	\$3,240.54	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		\$0.00	\$0.00	\$17,608.14	-\$17,608.14
Travel			\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Other Expenses			\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Subcontractor Services			\$262.50	\$5,028.75	\$44,012.25	\$24,751.51	\$17,297.69	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$91,352.70	-\$91,352.70
	TOTAL	\$0.00	\$262.50	\$105,476.58	\$67,575.24	\$58,784.32	\$52,943.63	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$285,042.27	-\$285,042.27
Retainage		0%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	TOTAL	\$0.00	\$262.50	\$105,476.58	\$67,575.24	\$58,784.32	\$52,943.63	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$285,042.27	-\$285,042.27



Ark-Tex Council of Governments 4808 Elizabeth St Texarkana TX 75503 Invoice Date: 10/22/2021 Invoice: 10061033 Project: 043790.001

Attention: Chris Brown, cbrown@atcog.org

Project Name: Ark-Tex/Lower Red-Sulphur-Cypress RFPG/State Flood Plan

For Professional Services Rendered through: September 30, 2021

Hourly Not To Exceed	Fee	Pct. Comp	Earned To Date	Previous Amount	Current Amount
000100 - Planning Area Description	35,342.00	99.52	35,173.38	35,173.38	0.00
000210 - Existing Condition Flood Risk	81,936.00	62.35	51,088.87	41,842.59	9,246.28
000220 - Future Condition Flood Risk	77,384.00	49.53	38,331.91	28,581.75	9,750.16
000310 - Floodplain Management Practices	2,731.00	54.06	1,476.28	361.61	1,114.67
000320 - Mitigation & Management Goals	1,366.00	0.00	0.00	0.00	0.00
000410 - Needs Analysis	6,828.00	67.85	4,632.57	690.48	3,942.09
000420 - Identify FME, FMS, FMP	20,484.00	44.12	9,037.97	4,741.98	4,295.99
000430 - Tech Memo	13,656.00	56.49	7,713.92	3,977.16	3,736.76
000500 - Evaluate/Recommend FME, FMS, FMP	80,115.00	0.00	0.00	0.00	0.00
000610 - Impacts of Regional Plan	30,954.00	0.00	0.00	0.00	0.00
000620 - Contribution/Impacts of Water Supply	910.00	0.00	0.00	0.00	0.00
000700 - Flood Response Information & Activities	1,366.00	0.00	0.00	0.00	0.00
000800 - Admin, Reg & Leg Recommendations	7,738.00	0.00	0.00	0.00	0.00
000900 - Flood Infrastructure Finance	1,821.00	0.00	0.00	0.00	0.00
001000 - Public Involvement & Plan Adoption	60,026.00	77.02	46,234.67	42,674.68	3,559.99
001100 - FNI	339,084.00	20.46	69,385.57	55,750.75	13,634.82
001200 - MTG	36,618.00	25.65	9,392.13	6,843.01	2,549.12
001300 - H2O	36,041.00	34.89	12,575.00	11,461.25	1,113.75
Total Hourly Not To Exceed Services:	834,400.00	34.16	285,042.27	232,098.64	52,943.63

Remaining Fee: 549,357.73 Total Earned to Date: 285,042.27

Less Previous Billed: 232,098.64
Amount Due this Invoice: 52,943.63



Ark-Tex Council of Governments 4808 Elizabeth St Texarkana, TX 75503 Invoice Date: 10/22/2021 Invoice #: 10061033 Project: 43790.001

Invoice: 4

Attention: Chris Brown

Project Name : Ark-Tex/Lower Red-Sulphur-Cypress RFPG/State Flood Plan

For Professional Services Rendered through September 30, 2021

Re: Ark-Tex/Lower Red-Sulphur-Cypress RFPG/State Flood Plan

Description	Hours		Но	urly Rate		 Amoun
Direct Labor						
Engineer (Intern) Level 0	8.00		\$	18.00	\$	144.00
Engineer Level 1	1.00		\$	30.00	\$	30.00
Engineer Level 2	21.00		\$	38.00	\$	798.00
Engineer Level 3	0.25		\$	42.00	\$	10.50
Senior Engineer Level 4	1.50		\$	56.00	\$	84.00
Senior Engineer Level 5	44.50		\$	71.00	\$	3,159.50
Planner Level 1	16.25		\$	24.64	\$	400.36
Planner Level 2	88.00		\$	33.00	\$	2,904.00
Senior Planner Level 4	6.00		\$	50.00	\$	300.00
GIS Level 1	25.00		\$	26.79	\$	669.75
GIS Level 2	26.00		\$	34.00	\$	884.00
Senior GIS Level 3	18.25		\$	42.00	\$	766.5
Specialist IT Level 2	3.75		\$	38.00	\$	142.5
Administrative Senior	1.50		\$	24.63	\$	36.9
Subtotal Direct Labor	261.00				\$	10,330.0
Direct Labor					\$	10,330.0
Overhead on Direct Labor (Fringe)				76.20%	\$	7,871.5
General & Administrative Overhead				137.50%	\$	14,203.8
Subtotal Direct Labor + OH & GA					\$	32,405.3
Profit or Fee				10.00%	\$	3,240.5
Subtotal Total Labor					\$	35,645.9
Delivery	X				\$ \$ \$	-
Other Expenses	Х				\$	-
Mileage	Х	0.560			\$	-
Subtotal Direct Cost					\$	-
Subconsultants	17,297.69 x	1.00			\$	17,297.6
Current Invoice Amount					\$	52,943.6
Amount Due this Invoice						\$ 52,943.6
mounts Billed to Date:						
Contract Amount		\$	8	34 400 00		

Contract Amount	\$ 834,400.00
Prior Billings	\$ 232,098.64
This Invoice	\$ 52,943.63
Total Amount Billed to Date	\$ 285,042.27

Remit payment to P.O. Box 678316, Dallas, TX 75267-8316 Reference Halff Associates Project 043790.001 and Invoice 10061033



PROGRESS REPORT REGION #2 LOWER RED, SULPHUR, AND CYPRESS REGIONAL FLOOD PLAN

TO: Chris Brown **DATE:** 10/19/2021

FROM: Joshua McClure AVO: 43790.001

EMAIL: <u>imcclure@halff.com</u>

BILLING DATE: 10/19/2021

SUBJECT: Region 2 Lower Red, Sulphur, and Cypress Regional

Flood Plan

September 1 through 30, 2021 Effort

PROJECT UPDATES:

Task 1 – Planning Area Description

- Formally completed data collection survey, but have left the survey open
- Obtained and processed existing Hazard Mitigation Plans
- Completed 90% of Chapter 1 content

Task 2A – Existing Condition Flood Risk Analyses

- Collected base data
- Assessed duplicate parcel/building issues with TWDB data
- Development of task approach and execution with multiple meetings

Task 2B - Future Condition Flood Risk Analyses

- Development of task approach and coordination with TWDB
- Multiple meetings and testing of various methods
- Completed review TWDB sedimentation surveys for major reservoirs within the Lower-Red-Sulphur-Cypress Basin.
- Completed review of NRCS watershed work plans for NRCS flood retarding structures.
- Initiated analysis of anticipated sedimentation in flood control structures and major geomorphic changes in riverine, playa, or coastal systems.

Task 3A - Evaluation and Recommendations on Floodplain Management Practices

- Prepared summary of presentation at the September meeting
- Began preparation of Tech Memo

Task 3B – Flood Mitigation and Floodplain Management Goals

- Discussed goals with RFPG at the September meeting
- Submitted Technical Memorandum on Recommended Floodplain Management Practices (Standards) and Goals (Tasks 3A/3B) (Sep/22).

Task 4A - Flood Mitigation Needs Analysis



- Updated technical approach for Task 4A.
- Prepared summary slides outlining Task 4A approach (presented in Sep/2 RFPG meeting).
- Technical coordination meeting with Sep 9

Task 4B – Identification and Evaluation of Potential Flood Management Evaluations and Potentially Feasible Flood Management Strategies and Flood Mitigation Projects

- Continued efforts on developing approach for Task 4B.
- Submitted Draft Technical Memorandum on Task 4A/4B methodology (Sep/16).
- Submitted Final Technical Memorandum on Task 4A/4B methodology (Sep/20).
- Initiated effort to reach out to FNI clients within Region 2 to encourage them to submit FMPs.
- Identified FMS/E/Ps based on survey feedback and discussions with stakeholders

Task 4C - Prepare and Submit Technical Memorandum

Began outline of January and March memo versions based on the TWDB decision on Fathom data

Task 5 – Recommendation of Flood Management Evaluations and Flood Management Strategies and Associated Flood Mitigation Projects

Task not started

Task 6A - Impacts of Regional Flood Plan

Task not started

Task 6B - Contributions to and Impacts on Water Supply Development and the State Water Plan

Task not started

Task 7 - Flood Response Information and Activities

Obtain data from existing Flood Mitigation Plans

Task 8 – Administrative, Regulatory, and Legislative Recommendations

Obtaining existing standards

Task 9 – Flood Infrastructure Financing Analysis

Task not started

Task 10 - Public Participation and Plan Adoption

- Maintenance of website
- Consultant team meetings
- Constant Contact updates to stakeholder list
- Emails announcing upcoming RFPG meetings
- Coordination of and participation in RFPG meeting September 2 and October 7, 2021
 - o RFPG voted to approve the goals and evaluation approach

UPCOMING ACTIVITIES:



- Lead weekly consultant meetings
- Prepare for upcoming RFPG meeting on November 4, 2021
 - Vote on Task 3 Standard, Task 3 Goals, and Task 4 Methodology
 - Finish draft Tech Memo preparation
- Finalize Chapter 1
- Continue to work on 2A and 2B once Fathom data is available
- Continue working on 3A, 3B, 4A, and 4B

PROJECT SCHEDULE:

- Project is currently on schedule.
 - TWDB has announced an extension for parts of the Tech Memo to allow for incorporation of the updated Fathom floodplain data.
 - Halff will proceed as discussed in the last RFPG meeting. An updated schedule will be presented at the November RFPG meeting.
- November 4, 2021 RFPG Meeting to discuss Tech Memo content and Task 1 results
- December 9, 2021 RFPG Meeting to discuss and approve Tech Memo
- January 8, 2022 Initial Tech Memo due to TWDB

SPECIAL SITUATIONS/CONCERNS ENCOUNTERED OR ANTICIPATED:

1. TWDB will be authorizing \$576,600 more funds for the Lower Red-Sulphur-Cypress FPG. Per their memo, the intent is for the money to primarily be spent next year preparing better floodplain mapping and developing FMEs into FMPs, where possible. This additional work will likely not be included in the initial State Flood Plan to be approved in January 2023, but instead will be included in an amended flood plan due in August 2023. The contracting process for the additional funds is unclear per their memo and needs to be resolved by ATCOG and TWDB. In the meantime, we are proceeding with the scope and schedule that we are currently under contract for, which will not be substantively changed by the additional funding.

This concludes the progress report. Halff's goal is to provide items and the current status of relevant subject matter to satisfy the project requirements. Items and/or current status prepared by Halff are believed to be true and accurate at the time this progress report was prepared. Halff cannot be responsible for the accuracy of items and/or current status reports prepared by others.



Ark-Tex Council of Governments 4808 Elizabeth St Texarkana, TX 75503 Invoice Date : 9/15/2021 Invoice # : 10058803 Project : 43790.001

Invoice: 3

67,885.57

232,098.64

Attention: Chris Brown

Project Name: Ark-Tex/Lower Red-Sulphur-Cypress RFPG/State Flood Plan

For Professional Services Rendered through August 31, 2021

Re: Ark-Tex/Lower Red-Sulphur-Cypress RFPG/State Flood Plan

Description		Hours		Hourly Rate			Amount		
Direct Labor									
	Engineer (Intern) Level 0	1.50		\$	18.00	\$	27.00		
	Engineer Level 1	5.50		\$	30.00	\$	165.00		
	Engineer Level 2	27.00		\$	37.00	\$	999.00		
	Engineer Level 3	1.00		\$	42.00	\$	42.00		
	Senior Engineer Level 4	3.00		\$	55.21	\$	165.63		
	Senior Engineer Level 5	39.50		\$	70.25	\$	2,774.88		
	Planner Level 2	71.00		\$	32.25	\$	2,289.75		
	Senior Planner Level 4	9.25		\$	50.00	\$	462.50		
	GIS Level 1	63.00		\$	26.20	\$	1,650.60		
	GIS Level 2	2.25		\$	34.00	\$	76.50		
	Senior GIS Level 3	20.75		\$	42.00	\$	871.50		
	Specialist IT Level 2	5.25		\$	38.00	\$	199.50		
	Administrative Mid Level	2.50		\$	16.07	\$	40.18		
	Administrative Senior	4.00		\$	24.64	\$	98.55		
	Subtotal Direct Labor	255.50				\$	9,862.58		
	Direct Labor					\$	9,862.58		
	Overhead on Direct Labor (Fringe)				76.20%	\$	7,515.29		
	General & Administrative Overhead				137.50%	\$	13,561.05		
	Subtotal Direct Labor + OH & GA					\$	30,938.92		
	Profit or Fee				10.00%	\$	3,093.89		
	Subtotal Total Labor					\$	34,032.81		
	Delivery	X	1.00			\$ \$ \$	-		
	Other Expenses	X	1.00			\$	-		
	Mileage	X	0.560			\$	-		
	Subtotal Direct Cost					\$	-		
	Subconsultants	33,852.76 x	1.00			\$	33,852.76		
	Current Invoice Amount					\$	67,885.57		
	Amount Due this Invoice						\$ 67,885.57		
Amounts Billed to Date:			•						
	Contract Amount		\$		34,400.00				
	Prior Billings		\$	16	64,213.07				

Remit payment to P.O. Box 678316, Dallas, TX 75267-8316 Reference Halff Associates Project 043790.001 and Invoice 10058803

This Invoice

Total Amount Billed to Date



Ark-Tex Council of Governments 4808 Elizabeth St

Texarkana TX 75503

Invoice: 10058803 Project: 043790.001

Attention: Chris Brown, cbrown@atcog.org

Project Name: Ark-Tex/Lower Red-Sulphur-Cypress RFPG/State Flood Plan

For Professional Services Rendered through: August 31, 2021

Hourly Not To Exceed	Fee	Pct. Comp	Earned To Date	Previous Amount	Current Amount	
000100 - Planning Area Description	35,342.00	99.52	35,173.38	27,449.40	7,723.98	
000210 - Existing Condition Flood Risk	81,936.00	51.07	41,842.59	31,742.53	10,100.06	
000220 - Future Condition Flood Risk	77,384.00	36.93	28,581.75	25,918.17	2,663.58	
000310 - Floodplain Management Practices	2,731.00	13.24	361.61	361.61	0.00	
000320 - Mitigation & Management Goals	1,366.00	0.00	0.00	0.00	0.00	
000410 - Needs Analysis	6,828.00	10.11	690.48	690.48	0.00	
000420 - Identify FME, FMS, FMP	20,484.00	23.15	4,741.98	1,874.20	2,867.78	
000430 - Tech Memo	13,656.00	29.12	3,977.16	0.00	3,977.16	
000500 - Evaluate/Recommend FME, FMS, FMP	80,115.00	0.00	0.00	0.00	0.00	
000610 - Impacts of Regional Plan	30,954.00	0.00	0.00	0.00	0.00	
000620 - Contribution/Impacts of Water Supply	910.00	0.00	0.00	0.00	0.00	
000700 - Flood Response Information & Activities	1,366.00	0.00	0.00	0.00	0.00	
000800 - Admin, Reg & Leg Recommendations	7,738.00	0.00	0.00	0.00	0.00	
000900 - Flood Infrastructure Finance	1,821.00	0.00	0.00	0.00	0.00	
001000 - Public Involvement & Plan Adoption	60,026.00	71.09	42,674.68	35,974.43	6,700.25	
001100 - FNI	339,084.00	16.44	55,750.75	37,926.25	17,824.50	
001200 - MTG	36,618.00	18.69	6,843.01	2,276.00	4,567.01	
001300 - H2O	36,041.00	31.80	11,461.25	0.00	11,461.25	
Total Hourly Not To Exceed Services:	834,400.00	27.82	232,098.64	164,213.07	67,885.57	

Remaining Fee: 602,301.36 Total Earned to Date: 232,098.64

Less Previous Billed: 164,213.07

Amount Due this Invoice: 67,885.57

Invoice Date: 09/15/2021

Outstanding Invoices:

 Number
 Date
 Balance

 10057507
 08/20/2021
 63,765.24

 Total
 63,765.24



PROGRESS REPORT REGION #2 LOWER RED, SULPHUR, AND CYPRESS REGIONAL FLOOD PLAN

TO: Chris Brown **DATE:** 9/16/2021

FROM: Joshua McClure AVO: 43790.001

EMAIL: jmcclure@halff.com BILLING DATE: 9/16/2021

SUBJECT: Region 2 Lower Red, Sulphur, and Cypress Regional

Flood Plan

August 1 through August 31, 2021 Effort

PROJECT UPDATES:

Task 1 – Planning Area Description

- Extended data collection survey to allow for additional participation
- Continued addressing issues with login information.
- Developing Chapter 1 content

Task 2A – Existing Condition Flood Risk Analyses

- Collected based data
- Assessed impacts of revisions to Fathom data
- Development of task approach and execution with multiple meetings

Task 2B - Future Condition Flood Risk Analyses

- Development of task approach and coordination with TWDB
- Multiple meetings and testing of various methods

Task 3A - Evaluation and Recommendations on Floodplain Management Practices

- Gathered data of existing management practices in the region
- Prepared summary of presentation at the September meeting

Task 3B - Flood Mitigation and Floodplain Management Goals

- Conducted goals poll of RFPG2 members
- Prepared potential draft goals for discussion at the September meeting
- Goals presentation at the August RFPG meeting

Task 4A – Flood Mitigation Needs Analysis

- Development of task approach and execution
- Began identification of data gaps and needs



Task 4B – Identification and Evaluation of Potential Flood Management Evaluations and Potentially Feasible Flood Management Strategies and Flood Mitigation Projects

- Development of task approach and execution
- Began identifying FMS/E/Ps based on survey feedback and discussions with stakeholders

Task 4C - Prepare and Submit Technical Memorandum

- Developed outline of January memo content based on delay in Fathom data
- Began outline of January and March memo versions based on the TWDB decision on Fathom data

Task 5 – Recommendation of Flood Management Evaluations and Flood Management Strategies and Associated Flood Mitigation Projects

• Task not started

Task 6A - Impacts of Regional Flood Plan

• Task not started

Task 6B - Contributions to and Impacts on Water Supply Development and the State Water Plan

Task not started

Task 7 - Flood Response Information and Activities

Obtain data from existing Flood Mitigation Plans

Task 8 - Administrative, Regulatory, and Legislative Recommendations

Obtaining existing standards

Task 9 – Flood Infrastructure Financing Analysis

Task not started

Task 10 - Public Participation and Plan Adoption

- Maintenance of website
- Consultant team meetings
- Constant Contact updates to stakeholder list
- Emails announcing upcoming RFPG meetings
- Coordination of and participation in RFPG meeting August 5 and September 2, 2021

UPCOMING ACTIVITIES:

- Lead weekly consultant meetings
- Prepare for upcoming RFPG meeting on October 7, 2021
 - Vote on Task 3 Standard, Task 3 Goals, and Task 4 Methodology
 - Begin Tech Memo preparation
- Finalize Task 1
- Continue to work on 2A and 2B once Fathom data is available
- Continue working on 3A, 3B, 4A, and 4B



PROJECT SCHEDULE:

- Project is currently on schedule.
 - TWDB has announced an extension for parts of the Tech Memo to allow for incorporation of the updated Fathom floodplain data.
 - Halff will proceed as discussed in the last RFPG meeting. An updated schedule will be presented at the September RFPG meeting.
 - Half will also propose meeting dates and agenda's through the December RFPG meeting.
- October 7, 2021 –RFPG meeting to vote on Task 3 Standard, Task 3 Goals, and Task 4 Methodology
- November 4, 2021 RFPG Meeting to discuss Tech Memo content and Task 1 results
- December 9, 2021 RFPG Meeting to discuss and approve Tech Memo
- January 8, 2022 Initial Tech Memo due to TWDB

SPECIAL SITUATIONS/CONCERNS ENCOUNTERED OR ANTICIPATED:

1. TWDB will be authorizing \$576,600 more funds for the Lower Red-Sulphur-Cypress FPG. Per their memo, the intent is for the money to primarily be spent next year preparing better floodplain mapping and developing FMEs into FMPs, where possible. This additional work will likely not be included in the initial State Flood Plan to be approved in January 2023, but instead will be included in an amended flood plan due in August 2023. The contracting process for the additional funds is unclear per their memo and needs to be resolved by ATCOG and TWDB. In the meantime, we are proceeding with the scope and schedule that we are currently under contract for, which will not be substantively changed by the additional funding.

This concludes the progress report. Halff's goal is to provide items and the current status of relevant subject matter to satisfy the project requirements. Items and/or current status prepared by Halff are believed to be true and accurate at the time this progress report was prepared. Halff cannot be responsible for the accuracy of items and/or current status reports prepared by others.



Ark-Tex Council of Governments 4808 Elizabeth St Texarkana, TX 75503 Invoice Date: 8/20/2021 Invoice #: 10057507 Project: 43790.001

Invoice: 2

Attention: Chris Brown

Project Name: Ark-Tex/Lower Red-Sulphur-Cypress RFPG/State Flood Plan

For Professional Services Rendered through July 31, 2021

Re: Ark-Tex/Lower Red-Sulphur-Cypress RFPG/State Flood Plan

Description	Hours		Но	urly Rate		Amount
Direct Labor						
Engineer (Intern) Level 0	20.25		\$	18.00	\$	364.50
Engineer Level 1	1.50		\$	30.00	\$	45.00
Engineer Level 2	6.00		\$	34.00	\$	204.00
Engineer Level 3	2.25		\$	40.00	\$	90.00
Senior Engineer Level 4	8.00		\$	55.00	\$	440.00
Senior Engineer Level 5	30.50		\$	69.45	\$	2,118.23
Planner Level 2	41.25		\$	31.98	\$	1,319.18
GIS Level 1	13.00		\$	25.50	\$	331.50
GIS Level 2	40.00		\$	34.00	\$	1,360.00
Senior GIS Level 3	13.50		\$	40.00	\$	540.00
Administrative Mid Level	1.00		\$	16.07	\$	16.07
Subtotal Direct Labor	177.25				\$	6,828.47
Direct Labor					\$	6,828.47
Overhead on Direct Labor (Fringe)				76.20%	\$	5,203.29
General & Administrative Overhead				137.50%	\$ 	9,389.14
Subtotal Direct Labor + OH & GA					\$	21,420.90
Profit or Fee				10.00%	\$	2,142.09
Subtotal Total Labor					\$	23,562.99
Delivery	Х	1.00			\$	-
Other Expenses	Х	1.00			\$	-
Mileage	Х	0.560			\$	-
Subtotal Direct Cost					\$	-
Subconsultants	40,202.25 x	1.00			\$	40,202.25
Current Invoice Amount					\$	63,765.24
Amount Due this Invoice					\$	63,765.24

Amounts Billed to Date:

 Contract Amount
 \$ 834,400.00

 Prior Billings
 \$ 100,447.83

 This Invoice
 \$ 63,765.24

 Total Amount Billed to Date
 \$ 164,213.07

Remit payment to P.O. Box 678316, Dallas, TX 75267-8316 Reference Halff Associates Project 043790.001 and Invoice 10057507

Contact Alison Reigel at areigel@halff.com with any billings questions.



Ark-Tex Council of Governments 4808 Elizabeth St Texarkana TX 75503 Invoice Date: 08/20/2021 Invoice: 10057507 Project: 043790.001

Attention: Chris Brown, cbrown@atcog.org

Project Name: Ark-Tex/Lower Red-Sulphur-Cypress RFPG/State Flood Plan

For Professional Services Rendered through: July 31, 2021

Hourly Not To Exceed	Fee	Pct. Comp	Earned To Date	Previous Amount	Current Amount
000100 - Planning Area Description	35,342.00	77.67	27,449.40	22,349.24	5,100.16
000210 - Existing Condition Flood Risk	81,936.00	38.74	31,742.53	25,211.45	6,531.08
000220 - Future Condition Flood Risk	77,384.00	33.49	25,918.17	21,335.67	4,582.50
000310 - Floodplain Management Practices	2,731.00	13.24	361.61	238.86	122.75
000320 - Mitigation & Management Goals	1,366.00	0.00	0.00	0.00	0.00
000410 - Needs Analysis	6,828.00	10.11	690.48	121.51	568.97
000420 - Identify FME, FMS, FMP	20,484.00	9.15	1,874.20	1,874.20	0.00
000430 - Tech Memo	13,656.00	0.00	0.00	0.00	0.00
000500 - Evaluate/Recommend FME, FMS, FMP	80,115.00	0.00	0.00	0.00	0.00
000610 - Impacts of Regional Plan	30,954.00	0.00	0.00	0.00	0.00
000620 - Contribution/Impacts of Water Supply	910.00	0.00	0.00	0.00	0.00
000700 - Flood Response Information & Activities	1,366.00	0.00	0.00	0.00	0.00
000800 - Admin, Reg & Leg Recommendations	7,738.00	0.00	0.00	0.00	0.00
000900 - Flood Infrastructure Finance	1,821.00	0.00	0.00	0.00	0.00
001000 - Public Involvement & Plan Adoption	60,026.00	59.93	35,974.43	29,316.90	6,657.53
001100 - FNI	339,084.00	11.18	37,926.25	0.00	37,926.25
001200 - MTG	36,618.00	6.22	2,276.00	0.00	2,276.00
001300 - H2O	36,041.00	0.00	0.00	0.00	0.00
Total Hourly Not To Exceed Services:	834,400.00	19.68	164,213.07	100,447.83	63,765.24

 Remaining Fee:
 670,186.93
 Total Earned to Date:
 164,213.07

 Less Previous Billed:
 100,447.83

Amount Due this Invoice: 63,765.24



PROGRESS REPORT REGION #2 LOWER RED, SULPHUR, AND CYPRESS REGIONAL FLOOD PLAN

TO: Chris Brown **DATE:** 8/17/2021

FROM: Joshua McClure AVO: 43790.001

EMAIL: jmcclure@halff.com BILLING DATE: 8/17/2021

SUBJECT: Region 2 Lower Red, Sulphur, and Cypress Regional

Flood Plan

July 1 through July 31, 2021 Effort

PROJECT UPDATES:

Task 1 – Planning Area Description

- Published data collection survey
- Responded to issues with login information.
- Developing Chapter 1 content

Task 2A – Existing Condition Flood Risk Analyses

- Development of task approach and execution with multiple meetings
- Data collection

Task 2B – Future Condition Flood Risk Analyses

- Development of task approach and coordination with TWDB
- Multiple meetings and testing of various methods
- Data collection

Task 3A - Evaluation and Recommendations on Floodplain Management Practices

- Goals presentation at the July RFPG meeting
- Preparation for goals discussion at August RFPG meeting

Task 3B – Flood Mitigation and Floodplain Management Goals

Development of task approach and execution with multiple meetings

Task 4A – Flood Mitigation Needs Analysis

Development of task approach and execution



Task 4B – Identification and Evaluation of Potential Flood Management Evaluations and Potentially Feasible Flood Management Strategies and Flood Mitigation Projects

Development of task approach and execution

Task 4C - Prepare and Submit Technical Memorandum

 Coordination with TWDB on contents of the January Memo considering the delays in processing of the Fathom floodplain data

Task 5 – Recommendation of Flood Management Evaluations and Flood Management Strategies and Associated Flood Mitigation Projects

Task not started

Task 6A - Impacts of Regional Flood Plan

Task not started

Task 6B - Contributions to and Impacts on Water Supply Development and the State Water Plan

Task not started

Task 7 – Flood Response Information and Activities

Obtain data from existing Flood Mitigation Plans

Task 8 - Administrative, Regulatory, and Legislative Recommendations

Obtaining existing standards

Task 9 - Flood Infrastructure Financing Analysis

Task not started

Task 10 - Public Participation and Plan Adoption

- Maintenance of website
- Consultant team meetings
- Constant Contact updates to stakeholder list
- Emails announcing upcoming RFPG meetings
- Coordination of and participation in RFPG meeting July 8 and August 5, 2021

UPCOMING ACTIVITIES:

- Lead weekly consultant meeting
- Prepare for upcoming RFPG meeting on September 2, 2021
- Extend survey window
- Continue to work on Tasks 1, 2A, 2B, 3A, 3B, and 4A

PROJECT SCHEDULE:



- Project is currently on schedule.
 - TWDB has announced an extension for parts of the Tech Memo to allow for incorporation of the updated Fathom floodplain data.
 - Halff will proceed as discussed in the last RFPG meeting. An updated schedule will be presented at the September RFPG meeting.
 - Half will also propose meeting dates and agenda's through the December RFPG meeting.
- September 2, 2021 Next RFPG meeting

SPECIAL SITUATIONS/CONCERNS ENCOUNTERED OR ANTICIPATED:

1. TWDB is having the Fathom floodplain data updated to reflect the TWDB LIDAR data, which will improve its accuracy; however, that update will not be available until October. TWDB has extended the deadline for portions of the Tech Memo that require existing and future floodplains to be completed. Halff will propose an updated schedule at the September RFPG meeting that meets the TWDB revised schedule.

This concludes the progress report. Halff's goal is to provide items and the current status of relevant subject matter to satisfy the project requirements. Items and/or current status prepared by Halff are believed to be true and accurate at the time this progress report was prepared. Halff cannot be responsible for the accuracy of items and/or current status reports prepared by others.



Ark-Tex Council of Governments 4808 Elizabeth St Texarkana, TX 75503 Invoice Date: 7/26/2021 Invoice #: 10056079 Project: 43790.001

Invoice: 1

Attention: Chris Brown

Project Name: Ark-Tex/Lower Red-Sulphur-Cypress RFPG/State Flood Plan

For Professional Services Rendered through June 30, 2021

Re: Ark-Tex/Lower Red-Sulphur-Cypress RFPG/State Flood Plan

Description	Hours		Ho	urly Rate		Amoun
Direct Labor						
Engineer (Intern) Level 0	20.75		\$	22.00	\$	456.50
Engineer Level 1	37.75		\$	32.00	\$	1,208.00
Engineer Level 2	42.00		\$	34.00	\$	1,428.00
Engineer Level 3	37.75		\$	40.00	\$	1,510.00
Senior Engineer Level 4	116.00		\$	67.00	\$	7,772.00
Senior Engineer Level 5	3.50		\$	72.95	\$	255.33
Planner Level 2	38.00		\$	34.00	\$	1,292.00
Senior Planner Level 4	21.75		\$	50.00	\$	1,087.50
GIS Level 1	142.50		\$	28.00	\$	3,990.00
GIS Level 2	55.50		\$	37.50	\$	2,081.25
Senior GIS Level 3	37.00		\$	42.03	\$	1,555.07
Specialist IT Level 1	28.25		\$	27.54	\$	777.90
Specialist IT Level 2	117.25		\$	37.97	\$	4,451.98
Specialist IT Level 3	12.50		\$	45.50	\$	568.75
Specialist IT Level 4	10.00		\$	52.00	\$	520.00
Administrative Mid Level	7.75		\$	20.02	\$	155.14
Subtotal Direct Labor	728.25				\$	29,109.41
Direct Labor					\$	29,109.41
Overhead on Direct Labor (Fringe)				76.20%	\$	22,181.37
General & Administrative Overhead				137.50%	\$	40,025.44
Subtotal Direct Labor + OH & GA					\$	91,316.22
Profit or Fee				10.00%	\$	9,131.62
Subtotal Total Labor					\$	100,447.83
Delivery	X	1.00			\$ \$ \$ \$	-
Other Expenses	X	1.00			\$	-
Mileage	X	0.560			\$	-
Subtotal Direct Cost					\$	-
Subconsultants	X	1.00			\$	-
Current Invoice Amount					\$	100,447.83
Amount Due this Invoice						\$ 100,447.83

Amounts Billed to Date:

 Contract Amount
 \$ 834,400.00

 Prior Billings

 This Invoice
 \$ 100,447.83

 Total Amount Billed to Date
 \$ 100,447.83



PROGRESS REPORT REGION #2 LOWER RED, SULPHUR, AND CYPRESS REGIONAL FLOOD PLAN

TO: Chris Brown **DATE:** 7/28/2021

FROM: Joshua McClure AVO: 43790.001

EMAIL: jmcclure@halff.com BILLING DATE: 7/28/2021

SUBJECT: Region 2 Lower Red, Sulphur, and Cypress Regional

Flood Plan

April 2 through June 30, 2021 Effort

PROJECT UPDATES:

Task 1 - Planning Area Description

- Developed survey questions
- Development of data collection site
- Development of task approach and execution with multiple meetings

Task 2A – Existing Condition Flood Risk Analyses

- Development and refinement of contact list (ongoing)
- Development of task approach and execution with multiple meetings
- Data collection

Task 2B – Future Condition Flood Risk Analyses

- Development of task approach and execution with multiple meetings and testing of various methods
- Data collection

Task 3A - Evaluation and Recommendations on Floodplain Management Practices

Development of task approach and execution with multiple meetings

Task 3B - Flood Mitigation and Floodplain Management Goals

- Development of task approach and execution with multiple meetings
- Prepare for July interactive discussion with Trinity RFPG on goals at June 24 RFPG meeting

Task 4A – Flood Mitigation Needs Analysis

Development of task approach and execution with multiple meetings



Task 4B – Identification and Evaluation of Potential Flood Management Evaluations and Potentially Feasible Flood Management Strategies and Flood Mitigation Projects

• Development of task approach and execution with multiple meetings

Task 4C - Prepare and Submit Technical Memorandum

Preparation of report format

Task 5 – Recommendation of Flood Management Evaluations and Flood Management Strategies and Associated Flood Mitigation Projects

Task not started

Task 6A - Impacts of Regional Flood Plan

Task not started

Task 6B – Contributions to and Impacts on Water Supply Development and the State Water Plan

Task not started

Task 7 – Flood Response Information and Activities

• Obtain data from existing Flood Mitigation Plans

Task 8 – Administrative, Regulatory, and Legislative Recommendations

Obtaining existing standards

Task 9 - Flood Infrastructure Financing Analysis

Task not started

Task 10 - Public Participation and Plan Adoption

- Development of website
- Consultant team meetings
- Constant Contact setup and development of stakeholder list
- Flyers announcing upcoming data collection effort
- Coordination of and participation in RFPG meeting May 6, 2021
- Prepare for June (cancelled by RFPG) and July RFPG meetings
- Public outreach plan

UPCOMING ACTIVITIES:

- Lead weekly consultant meeting
- Prepare for upcoming RFPG meeting on August 5, 2021
- Follow up on data collection tool with survey participants (phone calls, postcards, and emails)
- Continue to work on Tasks 1, 2A, 2B, 3A, and 3B



PROJECT SCHEDULE:

- Project is currently on schedule.
- August 6, 2021 Next RFPG meeting

SPECIAL SITUATIONS/CONCERNS ENCOUNTERED OR ANTICIPATED:

1. TWDB is having the Fathom floodplain data updated to reflect the TWDB LIDAR data, which will improve its accuracy; however, that update will not be available until October. The Fathom data is needed to fill in gaps in the existing floodplain quilt and possibly updated older, approximate FEMA data. Waiting until October for the updated data will not allow us to provide all of the data requested by TWDB in the Tech memo that is due in January 2022. Halff is working with TWDB to determine an approach to optimize the use of the updated Fathom data. An update will be provided at the August region 2 meeting.

This concludes the progress report. Halff's goal is to provide items and the current status of relevant subject matter to satisfy the project requirements. Items and/or current status prepared by Halff are believed to be true and accurate at the time this progress report was prepared. Halff cannot be responsible for the accuracy of items and/or current status reports prepared by others.

DRAFT

TWDB Contract No. 2101792501

STATE OF TEXAS

TEXAS WATER DEVELOPMENT BOARD

TRAVIS COUNTY

and

ARK-TEX COUNCIL OF GOVERNMENTS

AMENDMENT NO. 1

This Contract and Agreement made and entered on April 1, 2021, is hereby amended as follows:

- 1. SECTION I, ARTICLE I, ITEM C, COMMITTED FUNDS amount is increased by \$576,600.00 bringing the total COMMITTED FUNDS amount to \$1,487,000.00.
- 2. SECTION I, ARTICLE I, ITEMs O Q, are replaced as follows:
 - O. FINAL REIMBURSEABLE EXPENSE DATE The last day that work performed under this CONTRACT is eligible for reimbursement will be December 29, 2023.
 - P. CONTRACT EXPIRATION DATE This CONTRACT expires on December 29, 2023. The last day that any budget amendment requests may be submitted under the CONTRACT will be November 1, 2023.
 - Q. FINAL PAYMENT REQUEST DEADLINE The latest day that the final payment request may be submitted for reimbursement will be June 30, 2024.
- 3. SECTION I, ARTICLE I, ITEMs W and X are added as follows:
 - W. AMENDED REGIONAL FLOOD PLAN an amended plan that has been adopted by the REGIONAL FLOOD PLANNING GROUP and that meets the requirements contained in Texas Water Code § 16.062 and 31 Texas Administrative Code Chapters 361 and 362 and is submitted to TWDB for approval.
 - X. AMENDED REGIONAL FLOOD PLAN DEADLINE July 14, 2023
- 4. SECTION I, ARTICLE I, ITEM AA is added as follows:
 - AA. Summary of Deliverable Deadlines:

TECHNICAL MEMORANDUM DEADLINE	January 7, 2022
DRAFT REGIONAL FLOOD PLAN DEADLINE	August 1, 2022
FINAL REGIONAL FLOOD PLAN DEADLINE	January 10, 2023
AMENDED REGIONAL FLOOD PLAN DEADLINE	July 14, 2023

TWDB Contract No. 2101792501 Amendment 1, Page 1 of 5

- 5. SECTION I, ARTICLE II, ITEM B is replaced as follows and ITEM C is added as follows:
 - B. CONTRACTOR must submit the AMENDED REGIONAL FLOOD PLAN on or before the AMENDED REGIONAL FLOOD PLAN DEADLINE. The AMENDED REGIONAL FLOOD PLAN must be completed in accordance with the Scope of Work, Exhibit A, and in accordance with the document and data requirements herein for the FINAL REGIONAL FLOOD PLAN. The EXECUTIVE ADMINISTRATOR will either accept or reject the AMENDED REGIONAL FLOOD PLAN. To ensure that information can be incorporated into the first adopted state flood plan, CONTRACTOR must make any TWDB-requested corrections, updates, or modifications to the AMENDED REGIONAL FLOOD PLAN within 14 calendar days of receipt of TWDB's request for corrections, updates, or modifications.
 - C. The last day that work performed under Tasks 1 11 in Exhibit A, Scope of Work, is eligible for reimbursement is the FINAL REGIONAL FLOOD PLAN DEADLINE, which is January 10, 2023. Work performed under Task 12 and 13 in Exhibit A, Scope of Work, is eligible for reimbursement until the FINAL REIMBURSEABLE EXPENSE DATE, which is December 29, 2023.
- 6. SECTION II, ARTICLE III, ITEMs I and J, are replaced as follows:
 - I. TWDB acceptance of an AMENDED REGIONAL FLOOD PLAN that meets statutory and rule requirements as determined by the EXECUTIVE ADMINISTRATOR constitutes completion of the terms of this CONTRACT by CONTRACTOR.
 - J. After a 90-day review period, the EXECUTIVE ADMINISTRATOR will either accept or reject the REGIONAL FLOOD PLAN. If the final plan is rejected, the rejection letter sent to CONTRACTOR will state the reasons for rejection and the steps CONTRACTOR must take to have the REGIONAL FLOOD PLAN accepted.
- 7. SECTION II, ARTICLE IV, ITEM K is replaced as follows:
 - K. TWDB will reimburse CONTRACTOR up to 95 percent of the COMMITTED FUNDS available for costs incurred and paid by CONTRACTOR pursuant to performance of this CONTRACT. Once 95 percent of the COMMITTED FUNDS have been dispersed, including the initial advance amount and subsequent reimbursements, CONTRACTOR may submit reimbursement requests that will apply to reconciling the initial advance amount. The five percent retainage will be withheld until TWDB accepts the AMENDED REGIONAL FLOOD PLAN. If the EXECUTIVE ADMINISTRATOR determines that CONTRACTOR has utilized its best efforts to have an AMENDED REGIONAL FLOOD PLAN adopted by the REGIONAL FLOOD PLANNING GROUP for submittal to TWDB, but has been unable, despite those best efforts, to do so, the EXECUTIVE ADMINISTRATOR may release the five percent retainage solely within the EXECUTIVE ADMINISTRATOR's discretion.

TWDB Contract No. 2101792501 Amendment 1, Page 2 of 5 8. EXHIBIT A, SCOPE OF WORK, is revised to include Tasks 11 – 13 as follows:

Task 11 - Outreach and Data Collection to Support Tasks 1 - 9

The objective of this task is to conduct outreach and/or data collection necessary to enhance Chapters 1 – 9 of the draft and final Regional Flood Plan, due August 1,2022, and January 10,2023, respectively. RFPGs must conduct outreach to gather data, models, and other relevant technical information from stakeholders in the flood planning region to support the technical work required in Tasks 1 – 9. The data and information gathered in this task must be incorporated into the deliverables and regional flood plan chapter documents required for Tasks 1 – 9 and must adhere to the requirements therein as well as applicable requirements in the TWDB Flood Planning guidance documents.

The RFPG may also request to use the funding under this task to enhance any of the outcomes of Tasks 1 - 9 unrelated to additional outreach and data collection upon email or written approval from TWDB.

Task 12 - Perform Identified Flood Management Evaluations, Identify, Evaluate, and Recommend Additional Flood Mitigation Projects

The objective of this task is to perform identified potential FMEs to, for example, evaluate flood risks in areas with currently limited flood risk data, and to evaluate flood risk reduction solutions, including feasibility studies and preliminary engineering needed to identify, evaluate, and recommend additional potentially feasible FMPs. RFPGs must approve the list of FMEs to be performed and additional FMPs to be identified, evaluated, and recommended under this task.

RFPGs must adhere to the requirements for identification, evaluation, and recommendation of FMEs and FMPs in Tasks 4B and 5 as well as applicable requirements in the TWDB Flood Planning guidance documents.

RFPGs must revise and re-submit all data deliverables, related regional flood plan chapters, and related documents previously submitted for Tasks 4B and 5 in the FINAL REGIONAL FLOOD PLAN, including required GIS files, maps, and project details worksheet, to reflect additional work performed under this task for inclusion in the AMENDED REGIONAL FLOOD PLAN in accordance with the requirements in Tasks 4B and 5 and the TWDB Flood Planning guidance documents.

Task 13 - Preparation and Adoption of the Amended Regional Flood Plan

RFPGs must submit an AMENDED REIGONAL FLOOD PLAN in accordance with the requirements in the CONTRACT which incorporates the data and information gathered and generated under Task 12, including but not limited to work to:

- 1. Revise planning area description, if applicable, to include new information from FMEs performed in accordance with the requirements in Task 1.
- Revise existing and/or future condition flood risk analyses, if applicable, to include new information from FMEs performed in accordance with the requirements in Tasks 2A and 2B.
- 3. Revise flood mitigation and floodplain management goals, if applicable, in accordance with the requirements in Task 3B.
- Revise the flood mitigation needs analysis, if applicable, based on new information from FMEs performed in accordance with the requirements in Task ΔΔ
- 5. Evaluate and include information relating to impacts of the additional recommended FMPs on the plan and on water supply in accordance with the requirements in Tasks 6A and 6B.
- Evaluate and include information relating to the flood infrastructure financing of the additional recommended FMPs in accordance with the requirements in Task 9.
- 7. Hold additional RFPG meetings, conduct outreach and data collection to support Task 12, revise and adopt an AMENDED REIGONAL FLOOD PLAN, and other administrative activities in accordance with the requirements in Task 10.

The RFPG may also request to use the funding under this task to enhance the AMENDED REGIONAL FLOOD PLAN, primarily based on new information, unrelated to the data and information gathered and generated under Task 12, upon email or written approval from TWDB.

The AMENDED REGIONAL FLOOD PLAN must meet all requirements related to development of a regional flood plan herein and in the TWDB Flood Planning guidance documents.

RFPGs must revise and re-submit all data deliverables, related regional flood plan chapters, and related documents previously submitted for Tasks 1, 2A, 2B, 3B, 4A, 6A, 6B, 9, and 10, as applicable, in the FINAL REGIONAL FLOOD PLAN, including required GIS files, maps, etc., to reflect additional work performed under this task for inclusion in the AMENDED REIGIONAL FLOOD PLAN in accordance with the requirements in Tasks 1, 2A, 2B, 3B, 4A, 6A, 6B, 9, and 10 and the TWDB Flood Planning guidance documents. Data must be organized and summarized in the Regional Flood Plan in accordance with TWDB Flood Planning guidance documents.

- 9. EXHIBIT B, TASK AND EXPENSE BUDGETS, are replaced as shown in Attachment 1 of this amendment and denoted as AMENDED TASK AND EXPENSE BUDGETS.
- 10. All other terms and conditions of TWDB Contract No. 2101792501 remain the same in full force.

TWDB Contract No. 2101792501 Amendment 1, Page 4 of 5

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IN WITNESS WHEREOF the parties hereto cause executed.	e this Contract and Agreement to be duly
TEXAS WATER DEVELOPMENT BOARD	ARK-TEX COUNCIL OF GOVERNMENTS
By: Jeff Walker Executive Administrator	By: Chris Brown Executive Director
Date:	Date:

Attachment 1: Task and Expense Budgets

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Contractor Task Budget

TASK	TASK DESCRIPTION	ORIGINAL BUDGET	REVISED BUDGET	AMOUNT CHANGED
1	Planning Area Description	\$45,520.00	\$45,520.00	\$0.00
2A	Existing Condition Flood Risk Analysis	\$91,040.00	\$91,040.00	\$0.00
2B	Future Condition Flood Risk Analysis	\$91,040.00	\$91,040.00	\$0.00
3A	Evaluation and Recommendations on Floodplain Management Practices	\$18,208.00	\$18,208.00	\$0.00
3B	Flood Mitigation and Floodplain Management Goals	\$9,104.00	\$9,104.00	\$0.00
4A	Flood Mitigation Needs Analysis	\$27,312.00	\$27,312.00	\$0.00
4B	Identification and Evaluation of Potential Flood Management Evaluations and Potentially Feasible Flood Management Strategies and Flood Mitigations Projects	\$136,560.00	\$136,560.00	\$0.00
4C	Prepare and Submit Technical	\$18,208.00	\$18,208.00	\$0.00
5	Recommendation of Flood Management Evaluations and Flood Management Strategies and Associated Flood Mitigation Projects	\$182,080.00	\$182,080.00	\$0.00
6A	Impacts of Regional Flood Plan	\$36,416.00	\$36,416.00	\$0.00
6B	Contributions to and Impacts on Water Supply Development and the State Water Plan	\$9,104.00	\$9,104.00	\$0.00
7	Flood Response Information and Activities	\$9,104.00	\$9,104.00	\$0.00
8	Administrative, Regulatory, and Legislative Recommendations	\$9,104.00	\$9,104.00	\$0.00
9	Flood Infrastructure Financing Analysis	\$18,208.00	\$18,208.00	\$0.00
10	Public Participation and Plan Adoption	\$209,392.00	\$209,392.00	\$0.00
11	Outreach and Data Collection to Support Tasks 1 – 9	\$0.00	\$86,490.00	\$86,490.00
12	Perform Identified Flood Management Evaluations, Identify, Evaluate, and Recommend Additional Flood Mitigation Projects	\$0.00	\$345,960.00	\$345,960.00
13	Preparation and Adoption of the Amended Regional Flood Plan	\$0.00	\$144,150.00	\$144,156 Combetwee

TOTAL: \$910,400.00 \$1,487,000.00 \$576,600.00

Attachment 1: Task and Expense Budgets

DRAFT

Contractor Expense Budget

EXPENSE BUDGET CATEGORY	ORIGINAL BUDGET	REVISED BUDGET	AMOUNT CHANGED	
Contractor Other Expenses ¹	\$70,000.00	\$0.00	\$0.00	
Contractor Salaries and Wages ²	category did not previously exist		<mark>\$0.00</mark>	
Subcontract Services	834,400.00	\$0.00	\$0.00	
Voting Planning Member Travel ³	\$6,000.00	\$0.00	<mark>\$</mark> Com	mented [MW2]: Contractor to add.
TOTAL	\$910,400.00	\$1,487,000.00	\$576,600.00	

¹Contractor Other Expenses as described in 31 TAC § 361.72(b) include the following administrative costs if the RFPG or its chairperson certifies, during a public meeting, that the expenses are eligible for reimbursement and are correct and necessary:

- Travel expenses as authorized by the General Appropriations Act are available only for attendance at a posted meeting of the RFPG, unless the travel is specifically authorized by the RFPG and EA;
- b) Costs associated with providing translators and accommodations for persons with disabilities for public meetings when required by law or deemed necessary by the RFPGs and certified by the chairperson;
- c) Direct costs, excluding personnel-related costs of the Planning Group Sponsor, for placing public notices for the legally required public meetings and of providing copies of information for the public and for members of the RFPGs as needed for the efficient performance of planning work such as:
 - 1. expendable supplies actually consumed in direct support of the planning process;
 - 2. direct communication charges;
 - limited direct costs/fees of maintaining RFPG website domain, website hosting, and/or website:
 - reproduction of materials directly associated with notification or planning activities (the actual non-labor direct costs as documented by the Contractor);
 - direct postage (e.g., postage for mailed notification of funding applications or meetings);
 - 6. other direct costs of public meetings, all of which must be directly related to planning (e.g., newspaper and other public notice posting costs).; and
- d) The cost of public notice postings including a website and for postage for mailing notices of public meetings.

<u>2Contractor Salaries and Wages</u> as described in 31 TAC § 361.72(b) include the following administrative costs if the RFPG or its chairperson certifies, during a public meeting, that the expenses are eligible for reimbursement and are correct and necessary: the Planning Group Sponsor's personnel costs for the staff hours that are directly spent providing, preparing for, and posting public notice for RFPG meetings, including labor, fringe, overhead, and other expenses for their support of and attendance at such RFPG meetings, in accordance with, and as specifically

Attachment 1: Task and Expense Budgets

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limited by, the flood planning grant contract with the Board. This may not exceed: \$5,000 per regular RFPG meeting nor a total of \$85,000 over the first planning cycle.

³ <u>Voting Planning Member Travel Expenses</u> is defined as eligible mileage expenses incurred by regional flood planning members that cannot be reimbursed by any other entity, planning group sponsor, etc. as certified by the voting member. Travel expenses are available only for attendance at a posted meeting of the RFPG unless the travel is specifically authorized by the RFPG and EA. The reimbursed amount is limited to the maximum amounts authorized for state employees by the General Appropriations Act, Tex. Leg. Regular Session, 2019, Article IX, Part 5, as amended or superseded.

<u>Ineligible Expenses as described in 31 TAC § 361.72(a)</u> include, but are not limited to:

- a) Activities for which the Board determines existing information, data, or analyses are sufficient for the planning effort
- Activities directly related to the preparation of applications for state or federal permits or other approvals, activities associated with administrative or legal proceedings by regulatory agencies, and preparation of engineering plans and specifications;
- c) Compensation for the time or expenses of RFPGs members' service on or for the RFPG
- d) Costs of administering the RFPG, other than those explicitly allowed under 31 TAC § 361.72(b)
- e) Staff or overhead costs for time spent providing public notice and meetings, including time and expenses for attendance at such meetings;
- f) Costs for training;
- g) Costs of developing an application for funding or reviewing materials developed due to this grant:
- h) Costs of administering the regional flood planning grant and associated contracts;
- Analysis or other activities related to planning for disaster response or recovery activities; and
- j) Analyses of benefits and costs of FMSs beyond the scope of such analyses that is specifically allowed or required by regional flood planning guidance to be provided by the EA unless the RFPG demonstrates to the satisfaction of the EA that these analyses are needed to determine the selection of the FMS or FMP.
- k) Labor, reproduction, or distribution of newsletters:
-) Food, drink, or lodging for Regional Flood Planning Group members (including tips and alcoholic beverages);
- m) Purchase, rental, or depreciation of equipment (e.g., computers, copiers, fax machines);
- n) General purchases of office supplies not documented as consumed directly for the planning process; and
- o) Costs associated with social events or tours.



Regional Flood Planning Group 2 Meeting Lower Red-Sulphur-Cypress

November 3, 2021







Outline/Agenda

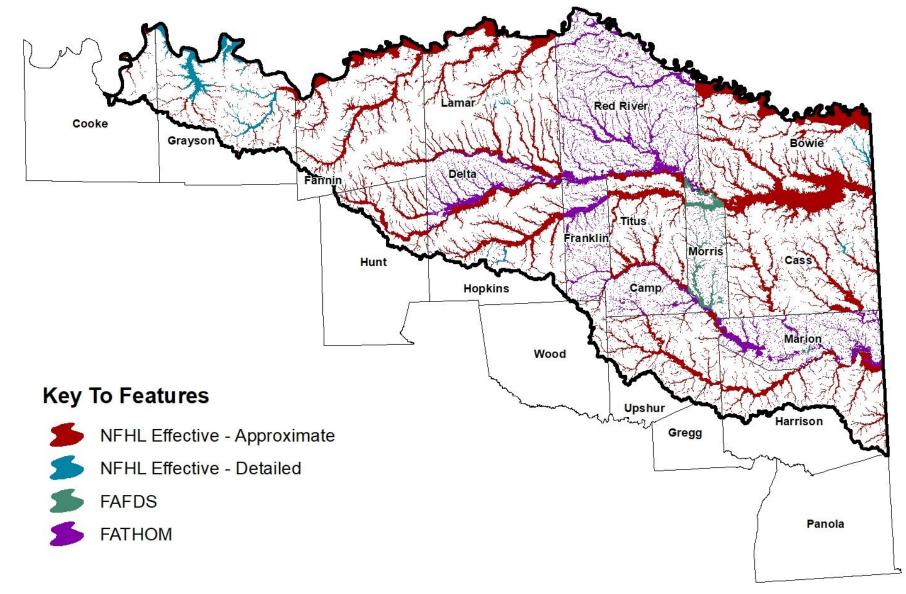
- Status Update
 - Fathom Data
 - Additional Funding
- Task 4 Tech Memo
 - Outline
 - Schedule
 - Key Tables
- Schedule

Status Updates

Fathom Data

- TWDB Released Data on 10/29
- We have started processing, but will not incorporate into Tech Memo until March 7, 2022

Task 2 – Fathom Schedule Impacts



Additional Flood Planning Funding

- 2021 Legislature approved an additional \$10M in funding for the State Flood Plan (40% increase)
- Additional \$576,600 for Region 2, which brings the total to \$1,487,000
- Initial Flood Plan is still due in January 2023, but additional analysis will be included in an addendum due in August 2023
- New Tasks:

Task No	Task Description	Estimated Budget
11	Outreach and Data Collection to Support Tasks 1 – 9	\$86,490.00
12	Perform Identified Flood Management Evaluations, Identify, Evaluate, and Recommend Additional Flood Mitigation Projects	\$345,960.00
13	Preparation and Adoption of the Amended Regional Flood Plan	\$144,150.00

Ch. 4 - Technical Memo

Tech Memo Data and Outline Additional details in Attachment D

File #	Item Name	Polygon /Line/ Point/ GDB Table	SOW Task	Submittal Milestone	Feature Class Name	Submittal Deadline
1	Entities	Polygon	1.1.d	Technical Memo	Entities	Submit on January 7, 2022.
2	Watersheds	Polygon	1	Technical Memo	Watersheds	Submit initial on January 7, 2022. (Limited fields) Will advance as FMEs, FMSs, and FMPs are advanced.
2 a	Previous Flood Studies	Table	1	Technical Memo		Submit draft on January 7, 2022.
2b	Where Models are Available	Polygon	1	Technical Memo		Submit draft on January 7, 2022.
2 c	Most Useful Flood Models	Table	1/4	Technical Memo		Submit draft on January 7, 2022.

File #	Item Name	Polygon /Line/ Point/ GDB Table	SOW Task	Submittal Milestone	Feature Class Name	Submittal Deadline
3		Polygon	1.3.3	Technical Memo	ExFldInfraPol	Submit on January 7, 2022.
4	Existing Infrastructure	Line	1.3.3	Technical Memo	ExFldInfraLn	Submit on January 7, 2022.
5		Point	1.3.3	Technical Memo	ExFldInfraPt	Submit on January 7, 2022.
6	Proposed or Ongoing Flood Mitigation Projects	Polygon	1.6	Technical Memo	ExFldProjs	Submit on January 7, 2022.
7	Existing Flood Hazard	Polygon	2A.1	Technical Memo	ExFldHazard	No submittal on January 7, 2022 Extended to March 7, 2022 and should be complete.

File #	Item Name	Polygon /Line/ Point/ GDB Table	SOW Task	Submittal Milestone	Feature Class Name	Submittal Deadline
8	Flood Mapping Gaps	Polygon	2A.1.e	Technical Memo	Fld_Map_Gaps	No submittal on January 7, 2022 Extended to March 7, 2022 and should be complete.
9		Polygon	2A.2	Technical Memo	ExFldExpPol	No submittal on January 7, 2022 Extended to March 7, 2022 and should be complete.
10	Existing	Line	2A.2	Technical Memo	ExFldExpLn	No submittal on January 7, 2022 Extended to March 7, 2022 and should be complete.
11	Exposure	Point	2A.2	Technical Memo	ExFldExpPt	No submittal on January 7, 2022 Extended to March 7, 2022 and should be complete.
12		Point	2A.2	Technical Memo	ExFldExpAll	No submittal on January 7, 2022 Extended to March 7, 2022 and should be complete.

File #	Item Name	Polygon /Line/ Point/ GDB Table	SOW Task	Submittal Milestone	Feature Class Name	Submittal Deadline
13	Future Flood Hazard	Polygon	2B.1	Technical Memo	FutFldHazard	No submittal on January 7, 2022 Extended to March 7, 2022 and should be complete.
14		Polygon	2B.2	Technical Memo	FutFldExpPol	No submittal on January 7, 2022 Extended to March 7, 2022 and should be complete.
15	Future	Line	2B.2	Technical Memo	FutFldExpLn	No submittal on January 7, 2022 Extended to March 7, 2022 and should be complete.
16	Exposure	Point	2B.2	Technical Memo	FutFldExpPt	No submittal on January 7, 2022 Extended to March 7, 2022 and should be complete.
17		Point	2B.2	Technical Memo	FutFldExpAll	No submittal on January 7, 2022 Extended to March 7, 2022 and should be complete.

File #	Item Name	Polygon /Line/ Point/ GDB Table	SOW Task	Submittal Milestone	Feature Class Name	Submittal Deadline
18	Existing Floodplain Management Practices	Point	3A	Technical Memo	ExFpMP	Submit on January 7, 2022.
19	Goals	GDB Table	3B	Technical Memo	Goals	Submit on January 7, 2022.
20	Streams	Line	4B	Technical Memo	Streams	Submit on January 7, 2022.
21	Flood Management Evaluations	Polygon	4B	Technical Memo (Limited fields)	FME	Submit initial FMEs on January 7, 2022. Several will be identified without the Fathom dataset, but they will be advanced through the planning process.

File #	Item Name	Polygon /Line/ Point/ GDB Table	SOW Task	Submittal Milestone	Feature Class Name	Submittal Deadline
22	Flood Mitigation Projects	Polygon	4B	Technical Memo (Limited fields)	FMP	Submit initial FMPs on January 7, 2022. Several will be identified without the Fathom dataset, but they will be advanced through the planning process.
23	Post-project Hazard	Polygon	5.2	Draft Plan	FMP_HazPost	Not required in Tech Memo. Will be a final deliverable only.
24	Project Details	.xls template, GDB Table	5.2	Draft Plan	FMP_Details	Not required in Tech Memo. Will be a final deliverable only.
25	Flood Management Strategies	Polygon	4B	Technical Memo (Limited fields)	FMS	Submit initial FMSs on January 7, 2022. Several will be identified without the Fathom dataset, but they will be advanced through the planning process.

Key Draft Tables

- See attached Excel file: RFPG Presentation DRAFT Tables 20211101.xlsx
- Tabs highlighted in orange will be submitted in March 2022
- Some tables and cells are blank because they have not been, or cannot be, developed yet
- Source of Studies, FMEs, and FMPs
 - FEMA Flood Insurance Studies
 - Website Data Collection
 - Provided by Team members (MTG, FNI, and Halff)

Tech Memo Discussion

- Other data sources?
- Deminimis size for FMEs, FMPs, or FMSs?
- Confidence level in existing studies, FMPs, and costs

LOOK-AHEAD

November

- Halff to prepare Tech Memo and submit to RFPG before Thanksgiving
- Halff to develop Task 2 data and maps

December

- Partial Tech Memo formal approval Dec 9
- Halff to develop Task 2 data and maps

January

- Jan 7 Submit partial Tech Memo to TWDB
- Present completed Tech Memo contents
- Prepare revised Tech Memo

February

- Final Tech Memo formal approval
- Task 5 Recommendation of FMS/E/Ps

March

Submit final Tech Memo to TWDB – Mar 7, 2022

OPEN DISCUSSION

Exhibit D Required Spatial Data and Deadlines Polygon/ **Feature Class** Line/ Submittal **SOW Task** File# **Item Name** Description **Submittal Deadline** Point/ Milestone* Name **GDB Table** Entities with flood-related authority and whether they are actively engaged in flood Technical Memo **Entities Entities** January 7, 2022 Polygon 1.1.d planning, floodplain management, and flood (limited fields) mitigation activities The spatial layer for watersheds with 2 Watersheds Watersheds Technical Memo January 7, 2022 Polygon associated FME, FMS, and FMPs A general description of the location, condition, and functionality of existing ExFldInfraPol 3 natural flood mitigation features and Polygon 1.3.3 Technical Memo January 7, 2022 constructed major flood infrastructure within the FPR. A general description of the location, condition, and functionality of existing Existing **ExFldInfraLn Technical Memo** 4 natural flood mitigation features and Line 1.3.3 January 7, 2022 Infrastructure constructed major flood infrastructure within the FPR. A general description of the location, condition, and functionality of existing 5 natural flood mitigation features and **ExFldInfraPt** Point 1.3.3 Technical Memo January 7, 2022 constructed major flood infrastructure within the FPR. Proposed or ongoing flood mitigation Proposed or projects currently under construction, being 6 **Ongoing Flood** implemented; and with dedicated funding **ExFldProjs** Polygon 1.6 Technical Memo January 7, 2022 **Mitigation Projects** to construct and the expected year of completion. Perform existing condition flood hazard **Existing Flood** analyses to determine the location and (extended)

ExFldHazard

Fld_Map_Gaps

magnitude of both 1.0% annual chance and 0.2% annual chance flood events

Gaps in inundation boundary mapping

Develop high-level, region-wide, and largely GIS-based existing condition flood Polygon

Polygon

2A.1

2A.1.e

Technical Memo

Technical Memo

March 7, 2022

(extended)

March 7, 2022

7

8

Hazard

Flood Mapping

Gaps

exposure analyses using the information identified in the flood hazard analysis to (extended) 9 ExFldExpPol Polygon 2A.2 **Technical Memo** identify who and what might be harmed March 7, 2022 within the region for, at a minimum, both 1.0% annual chance and 0.2% annual chance flood events Develop high-level, region-wide, and largely GIS-based existing condition flood exposure analyses using the information identified in the flood hazard analysis to (extended) 10 ExFldExpLn Line 2A.2 Technical Memo March 7, 2022 identify who and what might be harmed **Existing Exposure** within the region for, at a minimum, both 1.0% annual chance and 0.2% annual chance flood events Develop high-level, region-wide, and largely GIS-based existing condition flood exposure analyses using the information (extended) identified in the flood hazard analysis to 11 ExFldExpPt Point 2A.2 **Technical Memo** March 7, 2022 identify who and what might be harmed within the region for, at a minimum, both 1.0% annual chance and 0.2% annual chance flood events Page 1 of 2 **Updated October 2021**

	1	Combines the Exposure Poly, Line, and Point					
12		data into a single master layer, also includes Vulnerability data	ExFldExpAll	Point	2A.2	Technical Memo	(extended) March 7, 2022
13	Future Flood Hazard	Perform future condition flood hazard analyses to determine the location and magnitude of both 1.0% annual chance and 0.2% annual chance flood events	FutFldHazard	Polygon	2B.1	Technical Memo	(extended) March 7, 2022
14		Perform future condition flood exposure analyses using the information identified in the flood hazard analysis to identify who and what might be harmed within the region for, at a minimum, both 1.0% annual chance and 0.2% annual chance flood events	FutFldExpPol	Polygon	2B.2	Technical Memo	(extended) March 7, 2022
15	Future Exposure	Perform future condition flood exposure analyses using the information identified in the flood hazard analysis to identify who and what might be harmed within the region for, at a minimum, both 1.0% annual chance and 0.2% annual chance flood events	FutFldExpLn	Line	2B.2	Technical Memo	(extended) March 7, 2022
16		Perform future condition flood exposure analyses using the information identified in the flood hazard analysis to identify who and what might be harmed within the region for, at a minimum, both 1.0% annual chance and 0.2% annual chance flood events	FutFldExpPt	Point	2B.2	Technical Memo	(extended) March 7, 2022
17		Combines the Exposure Poly, Line, and Point data into a single master layer, also includes Vulnerability data	FutFldExpAll	Point	2B.2	Technical Memo	(extended) March 7, 2022
18	Existing Floodplain Management Practices	Identify areas with existing floodplain management practices, identify common and compare contrasting practices within the region, and acknowledge locations that may lack floodplain management.	ExFpMP	Table	ЗА	Technical Memo	January 7, 2022
19	Goals	Identify specific and achievable flood mitigation and floodplain management goals along with target years by which to meet those goals	Goals	GDB Table	3В	Technical Memo (limited fields)	January 7, 2022
20	Streams	Shows the streams to be studied by FMEs, and those relevant to FMS and FMPs, when applicable.	Streams	Line	4B	Technical Memo	January 7, 2022
21	Flood Management Evaluations	Flood Management Evaluations will identify areas requiring flood risk evaluation.	FME	Polygon	4B	Technical Memo (limited fields)	January 7, 2022
22	Flood Mitigation Projects	Flood Mitigation Projects reduce flood risk through a variety of approaches. The service area is the region impacted by the project.	FMP	Polygon	4B	Technical Memo (limited fields)	January 7, 2022
23	Post-project Hazard	Project specific features showing an updated hazard area that accounts for the impact of the project	FMP_HazPost	Polygon	5.2	Draft Plan	August 1, 2022
24	Project Details	A table included in the .gdb but built using the Project Details excel template. The table includes more detailed analysis of the project.	FMP_Details	.xls template, GDB Table	5.2	Draft Plan	August 1, 2022
25	Flood Management Strategies	Flood Management Strategies can be a broad array of policy or other strategies that aid in flood management.	FMS	Polygon	4B	Technical Memo (limited fields)	January 7, 2022

^{*}Note: Items listed in this table as due with the technical memo are also required to be submitted with the draft and final regional flood plans.

Page 2 of 2 Updated October 2021

Regional Flood Plan Tech Memo Key DRAFT Tables

Region 2 - Lower Red-Sulphur-Cypress Flood Flood Planning Group

Date: 11/1/2021

Prepared by:

Joshua McClure, PhD, PE, CFM, PMP Halff Associates, Inc.

Entities with Existing Floodplain Management Practices

Entities with Existing Floodpl				T	1			I	
Entity ¹	Floodplain	Adopted	NFIP	Higher	Floodplain	Level of	Existing	Web Link to entity	
	management	minimum	Participant	Standards	Management	enforcement	Stormwater	regulations ²	
	regulations	regulations	(Yes/ No) ¹	Adopted (Yes/	Practices	of practices	or Drainage		
	(Yes/ No/	pursuant to		No)2	(Strong/Mode		Fee (Yes/No)2		
	Unknown) ¹	Texas Water			rate/Low/Non	Moderate/			
		Code Section			e) ²	Low/ None) ²			
		16.3145? (Yes/							
		No) ¹							
Counties				T	ı			T	
Bowie	Yes	Yes	Yes		None			<u>HMP</u>	
Camp	Unknown	Unknown	No		None				
Cass	Yes	Yes	Yes		None			<u>HMP</u>	
Cooke*	Yes	Yes	Yes		Low			<u>FDP</u>	
Delta	Yes	Unknown	No		None			<u>HMP</u>	
annin*	Yes	Yes	Yes	Yes	Strong		No	<u>FDP</u>	
ranklin*	Yes	Yes	Yes		None			<u>HMP</u>	
Grayson*	Yes	Yes	Yes	Yes	Strong		No	<u>FDP</u>	
Gregg*	Yes	Yes	Yes		None			<u>HMP</u>	
Harrison*	Yes	Yes	Yes		Low			<u>FDP</u>	
Hopkins*	Yes	Yes	Yes	Yes	Moderate		No	<u>FDP</u>	
Hunt*	Yes	Yes	Yes	Yes	Moderate		No	https://www.huntco	unty.net/page/hunt.cour
₋amar	Unknown	Unknown	No		None				
Marion	Yes	Yes	Yes		None			HMP	
Morris	Yes	Yes	Yes		None			HMP	
Panola*	Yes	Yes	Yes		None				
Red River	Yes	Unknown	No	Yes	Strong		No	HMP	
Titus	Yes	Yes	Yes		None				
Upshur*	Yes	Yes	Yes	Yes	Strong			FDP	
·· Wood*	Yes	Yes	Yes		None			Wood County Texas	(mywoodcounty.com)
Cities/Towns	•						•		
Annona	Unknown	Unknown	No						
Atlanta	Yes	Yes	Yes	Yes	Moderate		No	CO (Art. 3.6)	
Avery	Yes	Yes	Yes						
Avinger	Unknown	Unknown	No	Yes	Moderate		No		
Bailey	Yes	Yes	Yes						
Bells	Yes	Unknown	No					CO	
Bloomburg	Yes	Yes	Yes						
Blossom	Yes	Yes	Yes						
Bogota	Yes	Yes	Yes						
Bonham	Yes	Yes	Yes		Strong		1	CO (Art. 3.12)	
Callisburg*	Yes	Yes	Yes	Yes	Strong	1	No	A STATE OF THE PARTY OF THE PAR	
Campbell	Unknown	Unknown	No		- 3. 50	1	1		
Clarksville	Yes	Yes	Yes		Strong	1	<u> </u>	SM	
Commerce	Yes	Yes	Yes		None			SM	
7011111CTCC	103	103		1	110110	I	I	<u> </u>	

		_	Г	1	T	Т	Т		1
Como	Yes	Yes	Yes	Yes			No		
Cooper	Unknown	Unknown	No	Yes			No		
Daingerfield	Yes	Yes	Yes					CO (Ch. 18)	
De Kalb	Yes	Unknown	No	Yes			No	https://dekalbtx.org	<u>g/code-enforcement</u>
Denison	Yes	Yes	Yes		Strong			CO (Ch. 8)	
Deport	Yes	Yes	Yes						
Detroit	Yes	Yes	Yes	Yes			No		
Dodd City	Unknown	Unknown	No						
Domino	Yes	Yes	Yes						
Dorchester	Unknown	Unknown	No						
Douglassville	Unknown	Unknown	No						
East Mountain	Unknown	Unknown	No						
Ector	Yes	Yes	Yes						
Gilmer	Yes	Yes	Yes		Low			CO (Ch. 42)	
Honey Grove	Yes	Yes	Yes						1
Hooks	Yes	Yes	Yes	Yes			No		1
Howe	Yes	Yes	Yes	<u> </u>					1
Hughes Springs	Yes	Yes	Yes						
Jefferson	Yes	Yes	Yes		Low			CO (Ch. 46)	
Knollwood	Unknown	Unknown	No		2011			<u>co (cm. 10)</u>	
Ladonia	Yes	Yes	Yes						
Leary	Yes	Yes	Yes						
Leonard	Yes	Yes	Yes						
Linden	Yes	Yes	Yes		Low			CO (Ch. 11)	
Lone Star	Yes	Yes	Yes		LOW			CO (CII. 11)	
Longview	Yes	Yes	Yes					Eloodalain Administ	I :rator Longview, TX (longviewtexas.gov
Marietta	Unknown	Unknown	No	Yes			No	1100upiain Auminist	Tator Longview, 1x (longviewtexas.gov
Marshall	Yes	Yes	Yes	Yes			No	CO (Ch. 7.4)	
Maud	Yes	Yes	Yes	163			INO	CO (CII. 7.4)	
Miller's Cove	Yes	Yes	Yes						
				Vaa	1		N	CO (Ch. 152)	
Mount Pleasant	Yes Yes	Yes	Yes	Yes	Low		No Yes		
Mount Vernon		Yes	Yes	Yes	Low			CO (Ch. 5.3)	
Naples	Yes	Yes	Yes	Yes			No		
Nash	Yes	Yes	Yes					60 (6) 0)	
New Boston	Yes	Yes	Yes		Low			CO (Ch. 8)	
Neylandville	Unknown	Unknown	No						
Omaha	Yes	Yes	Yes	1		-		00 (0) (0)	-
Ore City	Yes	Yes	Yes		Strong	-		CO (Ch. 10)	-
Paris	Yes	Yes	Yes	Yes	Strong	-	No	CO (Art. 4.0.7)	
Pecan Gap	Unknown	Unknown	No	-				00 (1) (5 5 5)	
Pittsburg	Yes	Yes	Yes		Low			CO (Art. 3.0.5)	
Pottsboro	Yes	Yes	Yes	ļ					1
Queen City	Yes	Yes	Yes	Yes			No		
Ravenna	Unknown	Unknown	No						
Red Lick	Unknown	Unknown	No				No		
Redwater	Yes	Yes	Yes						
Reno (Lamar)	Yes	Yes	Yes						

Rocky Mound	Unknown	Unknown	No					
Roxton	Yes	Yes	Yes	Yes		No		
Sadler	Unknown	Unknown	No					
Savoy	Yes	Yes	Yes					
Scottsville	Unknown	Unknown	No					
Sherman	Yes	Yes	Yes		Strong	Yes	CO (Art. 3.12)	
Southmayd	Yes	Yes	Yes					
Sulphur Springs	Yes	Yes	Yes	Yes	Strong	No	Engineering (sulphu	rspringstx.
Sun Valley	Unknown	Unknown	No					
Talco	Unknown	Unknown	No					
Texarkana	Yes	Yes	Yes	Yes	Moderate	No	CO (Ch. 110)	
Tira	Yes	Yes	Yes					
Тосо	Unknown	Unknown	No					
Tom Bean	Yes	Unknown	No				CO (Zoning Sec. 21)	
Trenton	Yes	Yes	Yes					
Uncertain	Yes	Yes	Yes					
Wake Village	Yes	Yes	Yes	Yes	Strong	No	CO (Ch. 153)	
Waskom	Yes	Yes	Yes					
Whitesboro	Yes	Unknown	No				CO (Ch. 151)	
Whitewright	Yes	Yes	Yes		Strong		CO (Ch. 14.2)	
Windom	Yes	Yes	Yes					
Winfield	Unknown	Unknown	No					
Winnsboro	Yes	Yes	Yes					
Wolfe City	Unknown	Unknown	No					

At a minimum, the RFPGs must list all counties, cities and communities in the region with flood related authority in the region and identify whether entity they have any established floodplain management practices.

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.

^B This field may be left blank during the 1st planning cycle. However, RFPGs are strongly encouraged to provide this information when applicable and available.

^c The following may serve as a guide for evaluating enforcement:

^{*} Indicates this county is partially within this RFPG and is also represented by at least one other RFPG

Previous Flood Studies Considered Relevant to Development of the Regional Flood Plan

Previous Flood Studies	Considered Relevant to Development	opment of	the Regior	ial Flood Plan									
Study Name	Description	Counties	Cities	Study Sponsor ¹	Study Date	Study	Frequencies	Hydrology	Hydraulic	How Was	FEMA Status ⁶	Can study be	Can study be
						Conditions ²	Studied ³	Models Available ⁴	Models	Study Used in		used in	used in
									Available ⁴	RFP ⁵		evaluating	evaluating
												FMPs?	FMSs?
Cooke County FIS		Cooke		FEMA	1/16/2008		1% AC, 0.2% AC		Presumed Yes	Mapping	Included in FIS	Minimally	Possibly
Grayson County FIS		Grayson		FEMA	6/7/2017			Presumed Yes	Presumed Yes	Mapping	Included in FIS	Minimally	Possibly
Grayson County FIS		Grayson		FEMA	6/7/2017		1% AC, 0.2% AC		Presumed Yes	Mapping	Included in FIS	Minimally	Possibly
Grayson County FIS		Grayson		FEMA	6/7/2017			Presumed Yes	Presumed Yes	Mapping	Included in FIS	Minimally	Possibly
Grayson County FIS		Grayson		FEMA	6/7/2017		1% AC, 0.2% AC		Presumed Yes	Mapping	Included in FIS	Minimally	Possibly
Grayson County FIS		Grayson		FEMA	2/18/2011		1% AC, 0.2% AC		Presumed Yes	Mapping	Included in FIS	Minimally	Possibly
Grayson County FIS		Grayson		FEMA	9/29/2010		1% AC, 0.2% AC		Presumed Yes	Mapping	Included in FIS	Minimally	Possibly
Fannin County FIS		Fannin		FEMA	2/18/2011		1% AC, 0.2% AC		Presumed Yes	Mapping	Included in FIS	Minimally	Possibly
Fannin County FIS		Fannin		FEMA	9/29/2010	-	1% AC, 0.2% AC		Presumed Yes	Mapping	Included in FIS	Minimally	Possibly
Hunt County FIS		Hunt		FEMA	6/7/2017		1% AC, 0.2% AC		Presumed Yes	Mapping	Included in FIS	Minimally	Possibly
Hunt County FIS		Hunt		FEMA	6/7/2017		1% AC, 0.2% AC	Presumed Yes	Presumed Yes	Mapping	Included in FIS	Minimally	Possibly
Hunt County FIS		Hunt		FEMA	6/7/2017	-	1% AC, 0.2% AC		Presumed Yes	Mapping	Included in FIS	Minimally	Possibly
Hunt County FIS		Hunt		FEMA	6/7/2017		1% AC, 0.2% AC	Presumed Yes	Presumed Yes	Mapping	Included in FIS	Minimally	Possibly
Hunt County FIS		Hunt		FEMA	1/6/2012		1% AC, 0.2% AC		Presumed Yes	Mapping	Included in FIS	Minimally	Possibly
Hunt County FIS		Hunt		FEMA	9/26/2008		1% AC, 0.2% AC		Presumed Yes	Mapping	Included in FIS	Minimally	Possibly
Lamar County FIS		Lamar		FEMA	8/16/2011		1% AC, 0.2% AC	Presumed Yes	Presumed Yes	Mapping	Included in FIS	Minimally	Possibly
Hopkins County FIS		Hopkins		FEMA	3/17/2011	Existing	1% AC, 0.2% AC	Presumed Yes	Presumed Yes	Mapping	Included in FIS	Minimally	Possibly
Hopkins County FIS		Hopkins		FEMA	9/3/2010	Existing	1% AC, 0.2% AC	Presumed Yes	Presumed Yes	Mapping	Included in FIS	Minimally	Possibly
Wood County FIS		Wood		FEMA	3/17/2011		1% AC, 0.2% AC		Presumed Yes	Mapping	Included in FIS	Minimally	Possibly
Wood County FIS		Wood		FEMA	4/17/2012		1% AC, 0.2% AC	Presumed Yes	Presumed Yes	Mapping	Included in FIS	Minimally	Possibly
Wood County FIS		Wood		FEMA	9/3/2010	Existing	1% AC, 0.2% AC	Presumed Yes	Presumed Yes	Mapping	Included in FIS	Minimally	Possibly
Titus County FIS		Titus		FEMA	9/29/2010	Existing	1% AC, 0.2% AC	Presumed Yes	Presumed Yes	Mapping	Included in FIS	Minimally	Possibly
Upshur County FIS		Upshur		FEMA	9/3/2014	Existing	1% AC, 0.2% AC	Presumed Yes	Presumed Yes	Mapping	Included in FIS	Minimally	Possibly
Upshur County FIS		Upshur		FEMA	9/3/2014	Existing	1% AC, 0.2% AC	Presumed Yes	Presumed Yes	Mapping	Included in FIS	Minimally	Possibly
Upshur County FIS		Upshur		FEMA	10/19/2010	Existing	1% AC, 0.2% AC	Presumed Yes	Presumed Yes	Mapping	Included in FIS	Minimally	Possibly
Gregg County FIS		Gregg		FEMA	8/16/1996	Existing	1% AC, 0.2% AC	Presumed Yes	Presumed Yes	Mapping	Included in FIS	Minimally	Possibly
Gregg County FIS		Gregg		FEMA	9/3/2014		1% AC, 0.2% AC		Presumed Yes	Mapping	Included in FIS	Minimally	Possibly
Gregg County FIS		Gregg		FEMA	9/3/2014	Existing	1% AC, 0.2% AC	Presumed Yes	Presumed Yes	Mapping	Included in FIS	Minimally	Possibly
Gregg County FIS		Gregg		FEMA	9/3/2014	Existing	1% AC, 0.2% AC	Presumed Yes	Presumed Yes	Mapping	Included in FIS	Minimally	Possibly
Gregg County FIS		Gregg		FEMA	9/29/2010	Existing	1% AC, 0.2% AC	Presumed Yes	Presumed Yes	Mapping	Included in FIS	Minimally	Possibly
Gregg County FIS		Gregg		FEMA	10/19/2010		1% AC, 0.2% AC		Presumed Yes	Mapping	Included in FIS	Minimally	Possibly
Bowie County FIS		Bowie		FEMA	12/21/2017	Existing	1% AC, 0.2% AC	Presumed Yes	Presumed Yes	Mapping	Included in FIS	Minimally	Possibly
Cass County FIS		Cass		FEMA	4/3/2012	Existing	1% AC, 0.2% AC	Presumed Yes	Presumed Yes	Mapping	Included in FIS	Minimally	Possibly
Harrison County FIS		Harrison		FEMA	9/3/2014		1% AC, 0.2% AC		Presumed Yes	Mapping	Included in FIS	Minimally	Possibly
Harrison County FIS		Harrison		FEMA	9/3/2014			Presumed Yes	Presumed Yes	Mapping	Included in FIS	Minimally	Possibly
Harrison County FIS		Harrison		FEMA	9/3/2014			Presumed Yes	Presumed Yes	Mapping	Included in FIS	Minimally	Possibly
Harrison County FIS		Harrison		FEMA	10/19/2010	Existing	1% AC, 0.2% AC	Presumed Yes	Presumed Yes	Mapping	Included in FIS	Minimally	Possibly
	Existing conditions flood												
Johnson Woods	study performed by Hayter												
Drainage	Engineering, Inc. for City of												
Improviements	Paris	Lamar	Paris	City of Paris	10/27/2016	Existing	1% AC, 0.2% AC	Yes	Yes			Yes	Yes
							1		1	1			
Big Sandy Creek	Flood study performed by									ĺ			
Tributary 4 & 6	Cobb Fendley for City of Paris	Lamar	Paris	City of Paris	3/24/2017	Existing	1% AC	Yes	Yes	Projects		Yes	Yes
										ĺ			
	Section IV Drainage Study						1	1	1	1			
City of Paris	based on Drainage Manster						1	1	1	1			
Comprehensive Plan	Plan prepared in 1993	Lamar	Paris	City of Paris	2/26/2014	Existing	1% AC	No	No	Projects		Minimally	Minimally
										ĺ			
City of Paris Drainage	Prepared by Hayter						1	1	1	1			
Master Plan	Engineering, Inc.	Lamar	Paris	City of Paris	1/1/1993	Existing	1% AC	No	No	Projects		Minimally	Minimally

	1					1		ı	1				
	Prepared by Hayter												
City of Cooper Storm	Engineering, Inc. to establish												
Drainage Study	storm drain needs.	Delta	Cooper	City of Cooper	9/1/2017	Both	10% AC	No	NO	Projects		Minimally	Minimally
City of Texarkana City-	D 11 11 155 A												
wide Flood Protection	Prepared by Halff Associates,	Di-	T	City of Taylor	1/21/2012	D-4h	10/ 10 0 20/ 10		V	Manualus Busi	to almala dia EIC	V	V
Planning Study	Inc. udner a TWDB Contract	Bowie	rexarkana	City of Texarkan	1/31/2012	Both	1% AC, 0.2% AC	res	Yes	iviapping, Proj	Included in FIS	res	Yes
City of Sherman Drainage Master		Grayson	Sherman									Yes	Yes
USACE Lower Red	CWMS forecasting and dam												
Studies	safety			USACE		Both		Yes	Yes	Possible Evalu	Not included in	Possibly	Possibly
	CWMS forecasting and dam												
USACE Sulphur River	safety, Wright Patman												
Studies	reallocation study			USACE		Both		Yes	Yes	Possible Evalu	Not included in	Possibly	Possibly
USACE Cypress River	CWMS forecasting and dam												
Studies	safety			USACE		Both		Yes	Yes	Possible Evalu	Not included in	Possibly	Possibly
SRBA Sulphur River Basin Instream Flow													
Study				SRBA				Presumed Yes	Presumed Yes	Possible Evalu	Not included in	Possibly	Possibly

Existing Condition Flood Risk Summary Table

			Area in					1% Annual Cha	nce Flood Risk	(0.29	6 Annual Chan	ce Flood Risk						Poss	ible Flood Pro	one Areas			
RFPG No.	RFPG Name	County	Flood Planning Region (sqmi)	Area in Floodplai n (sqmi)	Structures	Residential Structures in Floodplain	Population (daytime)	Population (nightime)	Population	Roadway Stream Crossings (#)	Roadways Segments (miles)	Agricultural Areas (sqmi)	Critical Facilities (#)	Area in Floodplain (sqmi)		Residential Structures in Floodplain	-	Roadway Stream Crossings (#)	Roadways Segments (miles)	al Areas	Critical Facilities (#)	Area (sqmi)	Number of Structures in Flood Prone Area	Residential Structures in in Flood Prone Area	Population	Roadway Stream Crossings (#)	Roadways Segments (miles)	Agricultu ral Areas (sqmi)	
1			` ' '																							` '			
2																													
3																													
4																													
5																													
	_																												
Total			0	0	0		0	0	0	0	0	0	0	0	0		0	0	(0	0	(0)	0	0	0	0	(

Future Condition Flood Risk Summary Table (NOT INCLUDED IN JAN TECH MEMO)

			Area in			1	L% Annual Cha	nce Flood Risl	(0.2	% Annual Chan	ce Flood Risk						Pos	sible Flood Pro	one Areas			
RFPG No.	RFPG Name	County	Flood Planning Region (sqmi)	Floodplain		Residential Structures in Floodplain	Population	Roadway Stream Crossings (#)	Roadways Segments (miles)	Agricultural Areas (sqmi)	Critical Facilities (#)	Area in Floodplain (sqmi)	Structures in	Residential Structures in Floodplain		Roadway Stream Crossings (#)	Roadways Segments (miles)	I Δreas	Critical	Area (sami)	Number of Structures in Flood Prone Area	Structures	Population	Roadway Stream Crossings (#)	Segments	_	s Facilities
1																											
2																											
3																											
4																											
5																											
Total			0	0	0		0	0	0	0	0	0	0		0	0	0	0	0	0	0		0	0	0	0	ა 0

Are Models Available for Evaluating FMPs and FMSs. [I THINK WHAT I HAVE HERE IS OVERKILL FOR WHAT WE WILL BE PROVIDING]

Flood	RFPG No.	RFPG	Name	Description	Counties	Cities	HUC8s	HUC12s	Watersheds	Data Provider ¹	Date	Exist vs Future	Frequency of	Hydrology	Hydraulic	How Was Data	FEMA Status ⁶
Prone		Name										Conditions ²	Flooding ³	Models	Models	Used in RFP ⁵	
Area ID														Available ⁴	Available ⁴		
										·	•		·				
											•		·				

This table is similar to 4C.1.b, except that it will only include less formal data soources than FEMA, TWDB, etc. May include data as simple as a dot on a map showing a house that floods.

- 1: Sponsors could include FEMA, TWDB, City, County, Developer, etc.
- 2: Study Conditions would be Exisitng, Future, or Both
- 3: Frequencies could be 50% AC, 1%AC, 0.2% AC, Unknown, etc.
- 4: Options include: Yes, Presumed Yes, Presumed No, No, Unkown
- 5: Options could include: Mapping, Validation, Considered, but not used; FMP, FMS, or FME Development and Eval; etc.
- 6: Options could include: Included in FIS, FIS in Progress, Completed LOMC, LOMC in Progress, LOMC to be Pursued, Local Study Only

Models Available for Evaluating FMPs and FMSs.

Model ID	RFPG No.	RFPG	Model	Corresponding	Description	Counties	Cities	HUC8s	HUC12s	Watersheds	Study Sponsor ¹	Study Date	Study	Frequencies	Hydrology	Hydraulic	How Was Study	FEMA Status ⁶
		Name	Name	Study ID									Conditions ²	Studied ³	Models	Models	Used in RFP ⁵	
															Available ⁴	Available ⁴		

This table is the same as 4C.1.b, except that it will only include studies that are cross referenced with the list of FMSs and FMPs. Could instead add attributes to the FMSs and FMEs themseleves

- 1: Sponsors could include FEMA, TWDB, City, County, Developer, etc.
- 2: Study Conditions would be Exisitng, Future, or Both
- 3: Frequencies could be 50% AC, 1%AC, 0.2% AC, etc.
- 4: Options include: Yes, Presumed Yes, Presumed No, No, Unkown
- 5: Options could include: Mapping, Validation, Considered, but not used; FMP, FMS, or FME Development and Eval; etc.
- 6: Options could include: Included in FIS, FIS in Progress, Completed LOMC, LOMC in Progress, LOMC to be Pursued, Local Study Only

Table 11: Regional flood plan flood mitigation and floodplain management goals

Goal ID	Goal	Term of Goal	Targe t Year	Applicable To	Residual Risk	How will the Goal be Measured	Overarching Goal(s)	Associated Goal IDs
1001	For each planning cycle, hold 3 public outreach and education activities (in multiple locations within the region) to improve awareness of flood hazards and benefits of flood planning.	Short Term (10 year)	2033	Entire RFPG		Document number of meetings per planning cycle. Keep records of sign in sheets and meeting minutes.	Educate public on risk	1002
1002	For each planning cycle, hold 3 public outreach and education activities (in multiple locations within the region) to improve awareness of flood hazards and benefits of flood planning.	Long Term (30 year)	2053	Entire RFPG		Document number of meetings per planning cycle. Keep records of sign in sheets and meeting minutes.	Educate public on risk	1001
2001	Support the development of a community coordinated warning and emergency response program (including flood gauges) that can detect the flood threat and provide timely warning of impending flood danger - Identify potential areas where flood warning systems would be beneficial.	Short Term (10 year)	2033	Entire RFPG	Areas without flood warning systems would still be at risk of inadequate warning until implemented. Warning is effective only to the extent that people take effective action. Uncertainties associated with human behavior remain as residual risk.	Complete study and provide report with identified areas.	Protect against loss of life and property.	2002
2002	Support the development of a community coordinated warning and emergency response program (including flood gauges) that can detect the flood threat and provide timely warning of impending flood danger - Implement a minimum of 1 flood warning system.	Long Term (30 year)	2053	Entire RFPG	Areas without flood warning systems would still be at risk of inadequate warning until implemented. Warning is effective only to the extent that people take effective action. Uncertainties associated with human behavior remain as residual risk.	Number of implemented flood warning system.	Protect against loss of life and property.	2001
3001	Increase the coverage of flood hazard data by completing studies to reduce areas identified as having current gaps in flood mapping by 25%.	Short Term (10 year)	2033	Entire RFPG	in flood manning	Updates to flood mapping and compare to mapping coverage per HUC-8 shown on 2023 Regional Flood Plan.	Protect against loss of life and property.	3002
3002	Increase the coverage of flood hazard data by completing studies to reduce areas identified as having current gaps in flood mapping by 90%.	Long Term (30 year)	2053	Entire RFPG	Flood risk uncertainty remains for 10% of current areas with gaps in flood mapping.	Updates to flood mapping and compare to mapping coverage per HUC-8 shown on 2023 Regional Flood Plan.	Protect against loss of life and property.	3001
4001	Reduce the percentage of communities that do not have floodplain standards that meet or exceed the NFIP minimum standards by 25%.	Short Term (10 year)	2033	Entire RFPG	Risk to existing structures is not reduced; Risk to new construction in non-participants is not reduced.	Number of entities participating in NFIP; number of entities with equivalent standards.	Protect against loss of life and property.	4002
4002	Reduce the percentage of communities that do not have floodplain standards that meet or exceed the NFIP minimum standards by 90%.	Long Term (30 year)	2053	Entire RFPG	Risk to existing structures is not reduced; Risk to new construction in non-participants is not reduced.	Number of entities participating in NFIP; number of entities with equivalent standards.	Protect against loss of life and property.	4001
4003	Support the development of minimum stormwater infrastructure design standards applicable across the FPR by the creation of an integrated stormwater management manual to serve as a guide/foundation for local	Short Term (10 year)	2033	Entire RFPG	Risk to existing structures is not reduced; Risk to new construction in non-participants is not reduced.	Completion of stormwater infrastructure design standards document.	Protect against loss of life and property.	4004
4004	Support the development of minimum stormwater infrastructure design standards applicable across the FPR by helping local governments to adopt and implement the stormwater management manual.	Long Term (30 year)	2053	Entire RFPG	,	Document efforts and the number of communities assisted by RFPG.	Protect against loss of life and property.	4003
5001	Reduce the number of NFIP repetitive-loss properties by 10%.	Short Term (10 year)	2033	Entire RFPG	90% of repetitive loss structures would remain at risk	Number of NFIP repetitive loss properties.	Protect against loss of life and property.	5002
5002	Reduce the number of NFIP repetitive-loss properties by 50%.	Long Term (30 year)	2053	Entire RFPG	50% of repetitive loss structures would remain at risk	Number of NFIP repetitive loss properties.	Protect against loss of life and property.	5001
5003	Identify at least one (1) non-structural flood mitigation project in the Region.	Short Term (10 year)	2033	Entire RFPG	No change in flood risk until a project is implemented	Number of non-structural flood mitigation projects identified in the Regional Flood Plan.	Protect against loss of life and property.	5004
5004	Identify at least three (3) non-structural flood mitigation projects in the	Long Term	2053	Entire RFPG	No change in flood rick lintil a project is implemented	Number of non-structural flood mitigation	Protect against loss of life	5003

	negion.	(30 year)				projects identined in the negional Flood Flan.	anu property.	
6001	Improve the level of service for 10% of vulnerable roadway segments and low water crossings located within the existing and future 1% annual chance floodplain.	Short Term (10 year)	2033	Entire RFPG	,	Take inventory of existing structures and report number of improved structures.	Protect against loss of life and property.	6002
6002	Improve the level of service for 50% of vulnerable roadway segments and low water crossings located within the existing and future 1% annual chance floodplain.	Long Term (30 year)	2053	Entire RFPG	,	Take inventory of existing structures and report number of improved structures.	Protect against loss of life and property.	6001
6003	Repair, rehabilitate, or replace 10% of aged stormwater infrastructure that is at high risk of failure and where failure would increase flood risks.	Short Term (10 year)	2033	Entire REPG		Take inventory of existing structures and report number of improved structures.	Protect against loss of life and property.	6004
	Repair, rehabilitate, or replace 50% of aged stormwater infrastructure that is at high risk of failure and where failure would increase flood risks.	Long Term (30 year)	2053	Entire REPG	_	Take inventory of existing structures and report number of improved structures.	Protect against loss of life and property.	6003

Potential Flood Management Evaluations Identified by RFPG

FME Name	Description	Associated	Counties	HUC8s	HUC12s	Watershed	Study Type	FME Area	Flood Risk	Sponsor	Entities with	Emergency	Estimated	Potential	Estimated	Habitable	Estimated	Critical	Number of	Estimated	Estimated	Estimated	Existing or	Existing or	RFPG	Reason for
		Goals				Name		(sqmi)	Type		Oversight	Need	Study Cost	Funding	number of	structures	Populatio	facilities at	low water	number of	length of	active farm &	Anticipated	Anticipated	Recommend	Recommendation
														Sources	structures at	at flood	n at flood	flood risk (#)	crossings at	road closures	roads at	ranch land at	Models	Maps (year)	ation (Y/N)	1
														and	flood risk	risk	risk		flood risk (#)	(#)	flood risk	flood risk	(year)			1
														Amount							(Miles)	(acres)				l
Cooke County FIS		3001. 3002	Cooke				FIS		Riverine		FEMA, TWDB															l
Grayson County FIS	Update remainder of county to Zone	3001. 3003	Grayson				FIS		Riverine	Grayson County	FEMA, TWDB															l
Fannin County FIS	Update County maps to Zone AE	3001. 3004	Fannin				FIS		Riverine	Fannin County	FEMA, TWDB															l
Hunt County FIS	Update County maps to Zone AE	3001. 3005	Hunt				FIS		Riverine	Hunt County	FEMA, TWDB															l
Lamar County FIS	Update County maps to Zone AE	3001. 3006	Lamar				FIS		Riverine	Lamar County	FEMA, TWDB															l
Delta County FIS			Delta				FIS		Riverine	Delta County	FEMA, TWDB															L
Hopkins County FIS	Update County maps to Zone AE	3001. 3008	Hopkins				FIS		Riverine	Hopkins County	FEMA, TWDB															l
Red River County FIS			Red				FIS		Riverine	Red County	FEMA, TWDB															l
Fraklin County FIS	Develop FIS for the County	3001. 3010	Fraklin				FIS		Riverine	Fraklin County	FEMA, TWDB															l
Titus County FIS	Update County maps to Zone AE	3001. 3011	Titus				FIS		Riverine	Titus County	FEMA, TWDB															l
Camp County FIS	Develop FIS for the County	3001. 3012	Camp				FIS		Riverine	Camp County	FEMA, TWDB															l
Wood County FIS	Update County maps to Zone AE	3001. 3013	Wood				FIS		Riverine	Wood County	FEMA, TWDB															l
Upshur County FIS	Update County maps to Zone AE	3001. 3014	Upshur				FIS		Riverine	Upshur County	FEMA, TWDB															l
Gregg County FIS	Update County maps to Zone AE	3001. 3015	Gregg				FIS		Riverine	Gregg County	FEMA, TWDB															l
Harrison County FIS			Harrison				FIS		Riverine	Harrison County																l
Marion County FIS	Develop FIS for the County	3001. 3017	Marion				FIS		Riverine	Marion County	FEMA, TWDB															l
Cass County FIS			Cass				FIS		Riverine	Cass County	FEMA, TWDB															l
Bowie County FIS	Update County maps to Zone AE	3001. 3019	Bowie				FIS		Riverine	Bowie County	FEMA, TWDB															l
Morris County FIS	Update County maps to Zone AE	3001. 3020	Morris				FIS		Riverine	Morris County	FEMA, TWDB															l
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Potentially Feasible Flood Mitigation Projects Identified by RFPG Flood Risk Type (Riverine, Coastal, Entitities with Need (Y/N) Project Cost (5) Potential Funding Sources and Amount Area in Literature Residential Estimated Chicical Number of Estimated Estimated 100yr (15% 500yr number of structures in Spoulation (Escilistes at low water number of structures) annual (2.5% structures at 100year) at 100year at 100year of 100year or 10 Reduction is flood fisk.

Number of | Section Traffic Benefit-Count for Cost Ratio R Low Water Crossings RFPG Project Type Project Area (sqmi) n (Y/N) Jrban, Playa Other) City of Atlanta High School Lane 950,000.00 channel will be regraded to a 25-foot wide grasslined channel with 4:1 side slopes at the existing depth The channel upstream of Clarksville Avenue up to and cluding the confluence with Tributary 6 will be replaced with a 15-foot wide concrete channel with City of Paris Big Sandy CT Titols. 4 with a 15-foot wide concrete channel with mand 8 improvements. *Phase 1 verified a walks, cut there to both feet [F - 4] designer. red. The channel will be improved from the confuners etc. The channel will be improved from the confuners partners with vertical walks, with a cut ranging from one to four feet [1". 4,635,825.3 City of Paris Big Sandy Cr Tribs 4 4'). Upstream of Lamar, no channel improvements nee and 6 Improvements - Phase 2 to be made.

Phase 3: Tributary 6 will be improved. The existing trape \$ 3,778,199,22 risas 5. I risulary 0 war un jarouet. The scaling is age
oldid channel will be replaced with a 25-foot wide, verif
ad wall concrete channel. The culverts along Tributary 6
and 6 improvements - Phase 3
unless additional right-of-way is acquired. 1,823,405.6 City of Paris Compr. Plan Project 1 ity of Paris 2,207,653.00 City of Paris Compr. Plan Project 2 City of Paris 1,042,537.00 Lamar 337,325.00 City of Paris Compr. Plan Project 3 City of Paris 439,457.0 City of Paris Compr. Plan Project 4 ity of Pari City of Paris Compr. Plan Project 5 ity of Paris 526,137.00 City of Paris Compr. Plan Project 6 ity of Paris \$ 1,036,026.00 City of Paris Compr. Plan Project 7 City of Paris 581,191.00 327,179.00 City of Paris Compr. Plan Project 8 City of Paris City of Paris Compr. Plan Project 9
Wagner - Channel/Overbank
Clearing
Wagner - 10-year Buyout
Swampoodle Creek - Channel
Blenching
Swampoodle Creek - 7th Street
Bridge Insprovement
Swampoodle Creek - 10-year
Swampoodle Creek - 10-year
Swampoodle Creek - 10-year
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Swampoodle Creek - 10-year ity of Paris 489.733.00 1.325.277.53 From Texarkana Flood Protection Planning Study ity of Texarkana 1,484,842.7 From Texarkana Flood Protection Planning Study ity of Texarkana From Texarkana Flood Protection Planning Study 2,550,088.10 ity of Texarkana From Texarkana Flood Protection Planning Study 186,159.39 ity of Texarkana Swampoole Creek East - Chamel
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From Tearkana Flood Protection Planning Study
From Tearkana Flood Protection Planning Study City of Texarkana 5,343,956.34 4,535,788.2 2.358.018.89 1,168,667.26 Channel Improvements
Cowhorn Creek - College Drive
Bridge Improvement & US/DS om Texarkana Flood Protection Planning Study ity of Texarkana Channel Improvements Cowhorn Creek - College Drive om Texarkana Flood Protection Planning Study ty of Texarkana 1,382,898.3 1,019,444.26 Bridge Improvement Only From Texarkana Flood Protection Planning Study City of Texarkana Cowhorn Creek - 10-year Buyou Cowhorn Creek - Kennedy Lane Culvert Improvements & Channel/Overbank Clearing 3,758,646.65 Cowhorn Creek -Channel/Overbank Clearing Only From Texarkana Flood Protection Planning Study ity of Texarkana 226,050.6 Cowhorn Creek - 10-year Buyout From Texarkana Flood Protection Planning Study
Cowhorn Creek East - Low-water
Crossing Removal & Channel \$ 3.842.861.61 City of Texarkana 658,945. Improvements From Texarkana Flood Protection Planning Study
Stream WC-2 - 10-year Buyout From Texarkana Flood Protection Planning Study Bowie Stream WC-3 City of Texarkana \$ 2,551,565.55 Proward Creek - 100-year Buyout From Teaarkara Food Protection Planning Study From Teaarkara Food Protection Planning Study From Teaarkara Food Protection Planning Study City of Clarksville Deleware Creek Sea Show VecETATION REMOVAL, CHANNEL MAPROVEMENTS SEA ON VECETATION REMOVAL, CHANNEL RESINATING SEA ON VECETATION REMOVAL, CHANNEL SEA ON VECETATION REMOVAL. CHANNEL SEA ON VECETATION REMOVAL CHANNEL SEA ON VECETATION REMOVAL CHANNEL SEA ON VECETATION REMOVED. 1.267.656.7 ity of Texarkana Red River ity of Texarkana ity of Texarkana DEBIS AND VEGTATION BEMOVAL, CHANNE.

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Potentially Feasible Flood Management Strategies Identified by RFPG

Potentially Feasible I																Potentially Feasible Flood Management Strategies Identified by RFPG																												
FMS ID RFPG No	 RFPG Nam 	tame FMS Name Description Associated Counties HUC8s HUC12s Watershed Project Type Strategy Flood Risk Sponsor Entities with Emergency Estimated Potential Flood Risk													FMS ID	ID Reduction in Flood Risk												Cost/ Co	nsider N	legative N	egative Wate	er RFP/	G Reason											
				Goals (ID)				Nar	me	Project A	ea Type		Oversight	Need (Y/N)	Project Cost	Funding	Area in	Area in	Estimate	Residenti	Estimate	Critical N	umber Es	stimate E	stimate Estima	te	Numb	ber of Num	nber of Nur	nber of Re	esidenti E	stimate Crit	cal Numb	er Estim	mate Estimat	e Estimate	Estimate	Estimate	Structure at	ion of	Impact I	mpact Supp	ly Recon	ım for
										(sqmi)	(Riverine,				(\$)	Sources	100yr	500yr	d	al	d f	facilities	of low	d d	d length d activ	e	struct	tures stru	ctures stru	uctures	al	d facil	ies of lov	w d	d d lengti	h d active	d	d	removed N	ature-	(Y/N) N	litigatio Benef	.fit endati	on Recomm
											Coastal,					and	(1%	(0.2%	number	structure	Populati	at flood	water nu	number	of roads farm 8	k.	wit		noved ren		ructure F	opulati remo	ved wate	r redu	uctio of road	s farm &	reductio	reductio	ь	ased		n (Y/N) (Y/N)	1) (Y/N	l) endation
											Urban, Playa	1				Amount	annual	annual	of	s at flood	on at	risk (#) cr	ossings	of road a	at flood ranch		redu	uced from	100yr from	n 500yr	s	on fro	n crossin	ngs n in r	road remove	d ranch	n in	n in	Sc	lution				
											Other)						chance)	chance)	structure	risk	flood risk	a	flood cl	losures	risk land a	t	100yr	r (1% (1%	annual (0.2% re	emoved re	emoved 100	yr remov	red closu	sure from	land	fatalities	injuries	((Y/N)				
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