Region 10 Lower Colorado-Lavaca Regional Flood Planning Group

February 11, 2021

Region 10 Lower Colorado-Lavaca RFPG

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

Meeting Minutes Region 10 Lower Colorado-Lavaca Regional Flood Planning Group Meeting December 7, 2020 9:00 am Zoom Virtual Meeting

Roll Call:

Voting Member	Interest Category	Present(x)/Absent()/ Alternate Present (*)
Terry Been	Agricultural interests	Х
Phillip Spenrath	Counties	X
Jason Ludwig	Electric generating utilities	X
Kirby Brown	Environmental interests	X
G. Nicholas Textor	Flood districts	X
Brandon Klenzendorf	Industries	X
Matt Hollon	Municipalities	X
Frances Acuna	Public	X
Patrick Brzozowski	River authorities	Scott HartI*
Ann Yakimovicz	Small business	X
Kacey Cubine Paul	Water districts	X
Hank Smith	Water utilities	X

Non-voting Member	Agency	Present(x)/Absent()/
		Alternate Present (*)
Shonda Mace	General Land Office	X
David Galindo	Texas Commission on Environmental	Joined after roll call
	Quality	
Lauren Mayes	Texas Department of Agriculture	Joined after roll call
Natalie Johnson	Texas Division of Emergency Management	Х
Beth Bendik	Texas Parks and Wildlife Department	Х
Allen Nash	Texas State Soil and Water Conservation	Х
	Board	
Hayley Gillespie	Texas Water Development Board (TWDB)	Х

Quorum:

Quorum: Yes

Number of voting members or alternates representing voting members present: 12

Number required for quorum per current voting membership of 12: 7

Other Meeting Attendees: **

Stacy Barna James Bronikowski

Stephanie CastilloJim CarrilloStephanie GriffinLauren GraberCindy EngelhardtKelly PayneCory ShockleyMatt Nelson

Michael Reedy Mike Personett Morgan White Nick Panyard Richard Hoffpauir Marcin Tyszka Reem Zoun Eric Scheibe

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

1. AGENDA ITEM NO. 1: Call to Order

Chair Phillip Spenrath called the meeting to order at 9:03 am CST. A roll call of the planning group members was taken to record attendance and a quorum was established prior to calling the meeting to order.

2. AGENDA ITEM NO. 2: Welcome

Chair Phillip Spenrath welcomed members to the meeting.

3. AGENDA ITEM NO. 3: Approval of minutes from the previous meeting

Chair Phillip Spenrath referenced the minutes and asked for any modifications from the members. Kirby Brown asked that the minutes be corrected to show that he made the motion to adjourn the meeting.

A motion was made by Hank Smith to approve the minutes from the previous meeting, as amended. Kacey Paul seconded the motion.

The vote to approve the minutes from the previous meeting, as amended, passed by unanimous consent.

4. AGENDA ITEM NO. 4: TWDB Update and Presentation

Hayley Gillespie gave an update on TWDB and presented an overview of the regional flood planning grant application process and funding.

This agenda item was revisited later in the meeting to include a Flooding 101 presentation by Hayley Gillespie.

5. AGENDA ITEM NO. 5: Consider nominating and electing RFPG Vice Chair and Secretary

Chair Phillip Spenrath asked for nominations for Vice Chair by the members.

Ann Yakimovicz nominated Kacey Paul for consideration.

Chair Phillip Spenrath opened the floor to discussion of the nominees by the members.

Kacey Paul spoke on her qualifications for the position.

A motion to elect Kacey Paul as Vice Chair was made by Ann Yakimovicz.

Brandon Klenzendorf seconded the motion.

The vote to elect Kacey Paul Vice Chair passed by a vote of 12 Ayes and 0 Nays.

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

Chair Phillip Spenrath asked for nominations for Secretary by the members.

Hank Smith nominated Matt Hollon for consideration.

Chair Phillip Spenrath opened the floor to discussion of the nominees by the members.

Matt Hollon spoke on his qualifications for the position.

A motion to elect Matt Hollon as Secretary was made by Hank Smith.

Kacey Paul seconded the motion.

The vote to elect Matt Hollon Secretary passed by a vote of 12 Ayes and 0 Nays.

6. AGENDA ITEM NO. 6: Discuss and consider action to add an additional voting position to the RFPG representing river authorities

Chair Phillip Spenrath opened this item by recounting the discussion at the previous meeting regarding potential new positions

Lauren Graber confirmed that no written public comments had been received for this item. Chair Phillip Spenrath then asked if any members of the public wished to verbally comment on this item. No members of the public commented.

Chair Phillip Spenrath opened the floor for discussion from members on this item.

The members discussed potential conflicts of interest and potential nominees for the new position.

A motion was made by Ann Yakimovicz to add an additional voting position to the RFPG representing river authorities.

Kacey Paul seconded the motion.

The vote to add an additional voting position to the RFPG representing river authorities passed by a roll call vote of 12 Ayes and 0 Nays.

7. AGENDA ITEM NO. 7: Discuss and consider action to initiate RFPG solicitation process for an individual to fill the new voting position representing river authorities

Chair Phillip Spenrath opened this item by describing the process to fill the position.

Lauren Graber confirmed that no written public comments had been received for this item. Chair Phillip Spenrath then asked if any members of the public wished to verbally comment on this item. No members of the public commented.

Chair Phillip Spenrath opened the floor for discussion from members on this item.

A motion was made by Kirby Brown to initiate the RFPG solicitation process to fill the new voting position representing river authorities.

Hank Smith seconded the motion.

The vote to initiate the RFPG solicitation process to fill the new voting position representing river authorities passed by a vote of 12 Ayes and 0 Nays.

8. AGENDA ITEM NO. 8: Public comments (Public comments limited to 3 minutes per speaker) Chair Phillip Spenrath opened the floor to public comments.

No comments were received.

9. AGENDA ITEM NO. 9: Consider date and agenda items for next meeting

Chair Phillip Spenrath opened discussion to consider the date and agenda items for the next meeting. After general discussion, Chair Spenrath announced the next meeting will be held on Thursday, February 11, 2021 at 9:00 AM, subject to the call of the Chair.

Potential agenda items will include the selection of a nominee to fill new the voting position; selection of at-large members for the executive committee; an update from the sponsor on several items, including the TWDB grant application process, website, public comment, and consultant procurement process; and other items.

10. Adjourn

Kirby Brown made a motion to adjourn, Brandon Klenzendorf seconded. The motion passed by unanimous consent and the meeting was adjourned at 9:51 AM CST by Chair Phillip Spenrath

Approved by the Lower Colorado-Lavaca RFPG at a meeting held on DATE.		
Matt Hollon, SECRETARY		
Phillip Spenrath, CHAIR		

Region 10 Lower Colorado-Lavaca RFPG

- 4. Public comments limit 3 minutes per person
- 5. TWDB Update and Presentation
 - Scope of Work Summary

Texas Water Development Board Flood Planning Presentation Regional Flood Planning Group 2nd Meeting

TABLE OF CONTENTS:

- Flooding 101 (20 minutes)
- RFA Process & Funding Summary (10 minutes)
 - Scope of Work Summary (20 minutes)

Flooding 101 (20-25 minutes)



Flooding 101: Watersheds

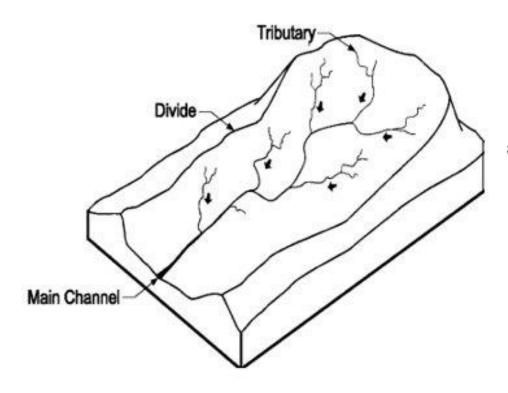
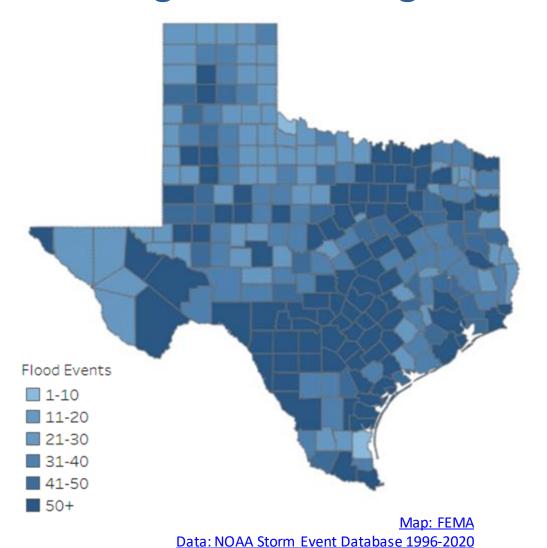
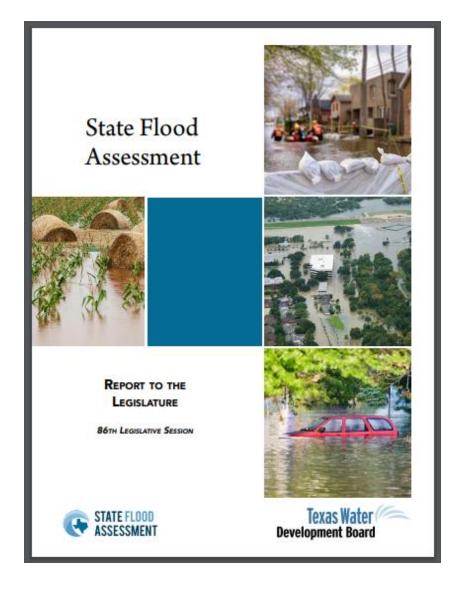


Figure 1-2. Riverine Watershed and Floodplain
Image by FEMA



Flooding 101: Flooding in Texas







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www.twdb.texas.gov

Flooding 101: What is a Flood?

A general and temporary condition of partial or complete inundation of normally dry land area from overflow of inland or tidal waters or from the unusual and rapid accumulation or runoff of surface waters from any source.



Agricultural flooding damaging crops and hay.

Flooding 101: Floodplains

The area of land subject to periodic inundation by floodwaters.

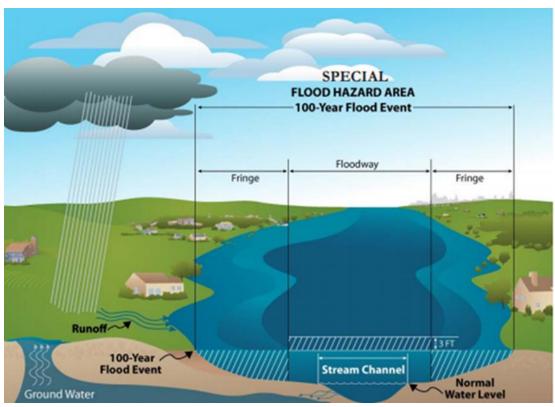






Image: FEMA

Flooding 101: Benefits of Floods

When floodplains are preserved in their natural state, they provide many benefits:

- Reduce severity of floods by storing floodwaters, reducing flood velocities, and curbing sedimentation and erosion
- Contribute to groundwater recharge
- Provide recreation and quality of life
- Create habitats for many plants and animals.



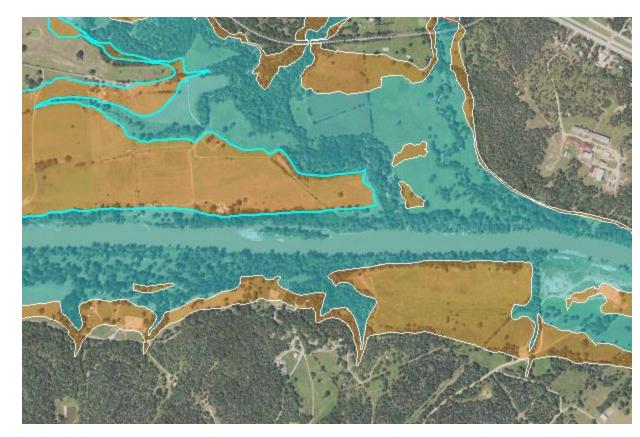
Wetlands at Galveston Island State Park provide natural ecosystem services.

Image: Yinan Chen CC-PD

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Flooding 101: Quantifying Flood Events

- 1.0% annual chance flood event
 - flood event having a 1.0% chance of happening in any given year = every year
 - also referred to as the "base flood" or "100-year flood"
- 0.2% annual chance flood event
 - flood event having a 0.2% chance of happening in any given year
 - also referred to as the "500-year flood"

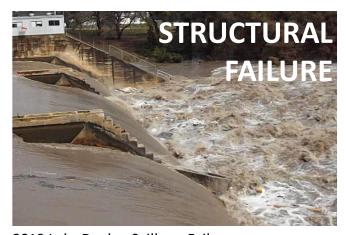


The 1% annual chance floodplain is shown in blue. The 0.2% annual chance floodplain is shown in orange. Image by FEMA





Flooding 101: Types of Flooding



2019 Lake Dunlap Spillway Failure. Guadalupe-Blanco River Authority

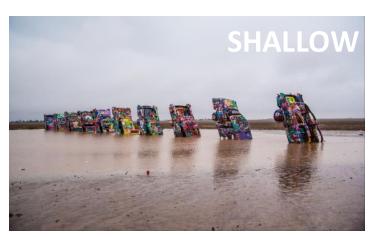


Flash flooding in San Marcos, TX.

CC-BY-SA-3.0



Texas National Guard, Houston, TX
Texas National Guard CC-BY-2.0



Cadillac Ranch sculpture near Amarillo, TX. © Rachel Goad, used by permission.



Blue Hole Park, South San Gabriel River, Georgetown, TX. FEMA



Coastal flooding in Galveston, TX pixabay, no attrib. req.



Flooding 101: Flood Mitigation

The implementation of actions, including both structural and non-structural solutions, to reduce flood risk to protect against the loss of life and property.



Mangroves on the Texas Coast stabilize shorelines and help absorb storm surge; an example of a non-structural flood mitigation solution. Photo by Univ. Of Texas Marine Science Institute

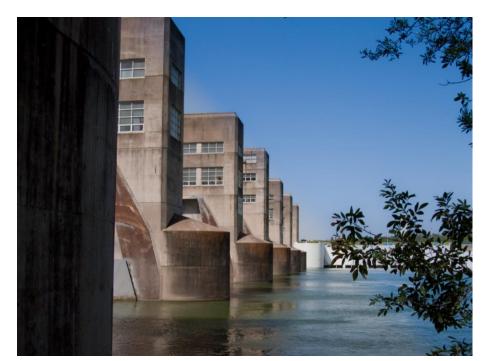


Galveston Seawall, a structural flood mitigation solution.

Image by Yinan Chen CC-PD

Flooding 101: Structural Solutions to Flooding

Examples include the construction of levees, dikes, floodwalls/seawalls, dams, channel alterations, culverts, flood gates, and detention and retention basins.



Anzelduas Dam on the Rio Grande near Mission, TX.

Image: TWDB



Storm Drains



Streambank Stabilization in Austin, TX.
Image by City of Austin Watershed Protection





Flooding 101: Non-Structural Solutions to Flooding

Examples include open space preservation, property buyouts and relocation, zoning and building codes, wetland restoration, elevated structures, flood warning systems, educational campaigns, and participation in the National Flood Insurance Program.



Homes that survived the ~20-foot-high storm surge of Hurricane Ike in Bolivar Peninsula, near the community of Caplen.



Turn Around, Don't Drown educational campaign. Image: Weather.gov



Engineered Wetlands in in the Houston Audubon Society's The Oaks Nature Preserve . Image: TWDB

Development Board

Image: TWDB

Flooding 101: National Flood Insurance Program

Based on an agreement between local communities and the federal government.

- Local communities agree to adopt floodplain management regulations to reduce flood risks
- The federal government makes flood insurance and disaster assistance available to the community



Image by FEMA / National Flood Insurance Program









Image: Brent Hanson, U.S. Geological Survey. Public domain.

Questions? Comments?

Request for Applications Process & Contract Details (5 minutes)

Flood Planning Timeline

First RFPG Meetings Oct/Nov

2020

RFPG sponsors will solicit technical consultants

Early 2021

Draft regional flood plans due to TWDB

Aug 1, 2022

First state flood plan due to legislature

Sept 1, 2024



www.twdb.texas.gov





Jan 7, 2022

Technical memorandum due to TWDB





Jan 10, 2023

First regional flood plans due to TWDB

Development Board

Feb/March 2021

Contract execution with the RFPG sponsors





Regional Flood Planning Grant RFA

- \$19.5 million in available funds to be allocated between 15 regions.
- Sponsors may submit applications November 20, 2020 -January 21, 2021
- Applications will be processed as received
- Contract execution (TWDB & sponsor) by March 31, 2020



Texas Water Development Board approved posting the Regional Flood Planning Grant Request for Applications on November 19th!

The Request for Applications and associated documents ae now available on our website:

https://www.twdb.texas.gov/flood/planning/documents/2023/index.asp



Regional Flood Planning Grant Application Documents:

- Request for Applications Posting
- **Application Instructions**
- **Application Checklist**
- Draft Scope of Work
- Draft Contractor (Planning Group Sponsor) Task Budget
- Board item document

These documents are available on our website at: http://www.twdb.texas.gov/flood/planning/planningdocu/2023/index.asp

Funding the Planning Process Total \$19,500,000

Region	RFPG Name	Allocated Funds
1	Canadian-Upper Red	\$1,008,200.00
2	Lower Red-Sulphur-Cypress	\$910,400.00
3	Trinity	\$2,520,200.00
4	Sabine	\$947,600.00
5	Neches	\$1,148,900.00
6	San Jacinto	\$2,446,000.00
7	Upper Brazos	\$961,500.00
8	Lower Brazos	\$1,485,500.00
9	Upper Colorado	\$946,200.00
10	Lower Colorado-Lavaca	\$1,373,700.00
11	Guadalupe	\$961,300.00
12	San Antonio	\$1,295,000.00
13	Nueces	\$1,143,700.00
14	Upper Rio Grande	\$1,081,800.00
15	Lower Rio Grande	\$1,270,000.00



Image: Brent Hanson, U.S. Geological Survey. Public domain.

Questions? Comments?

RFPG Responsibilities Scope Of Work Overview

(20-25 minutes)

General Document Cross-Reference

Cont	nal Flood Pla tract Docun References	nent	2023 Regional Flood Plan Chapter, Associated TAC Sections, and Content		
TWDB Contract Reimbursement Accounting Number ('CAS')	Exhibit A - Contract SOW Task	Exhibit C - General Guidelines for Regional Flood Plan Development	Regional Flood Plan Chapter Number	Primary TAC Section	General Content
1	1	1	1	§361.30; §361.31; §361.32	Planning Area Description
2	2A	2	,	361.33	Existing Condition Flood Risk Analyses
3	2B	2	2	361.34	Future Condition Flood Risk Analyses

Task 1 – Planning Area Description



Llano dam on the Llano river sits on the banks of the county seat.

Image: TWDB

A general description of the region, including:

- social & economic character
- flood-prone areas, types of major flood risks, and key historical flood events
- political subdivisions with flood related authority
- the extent of local regulation and development codes relevant to flooding
- existing or proposed natural flood mitigation features and constructed major flood infrastructure





Task 2A & 2B – Existing & Future Condition Flood Risk Analyses

Perform existing and future condition flood hazard analyses to determine the location and magnitude of both 1.0% and 0.2% annual chance flood events

www.twdb.texas.gov



Pevelop existing & future condition flood exposure analyses to identify who and what might be harmed for both 1.0% and 0.2% annual chance flood events.

Perform existing & future condition vulnerability analyses to identify vulnerabilities of communities and critical facilities

Task 3A – Evaluation & Recommendations on Floodplain Management Practices

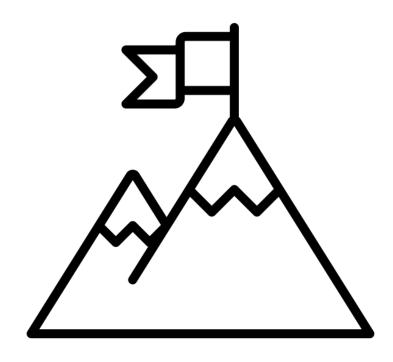
- Consider how current floodplain management practices or regulations increase flood risks.
- Consider how the 1.0% annual chance floodplain and associated flood risks may change over time.
- Consider adopting minimum floodplain management/land use standards that an entity must adopt prior to including any evaluations, projects, or strategies in the regional flood plan.



West Fork San Jacinto River near Humble, Texas after Hurricane Harvey Image: Steve Fitzgerald, Harris County Flood Control District



Task 3B – Flood Mitigation & Floodplain Management Goals

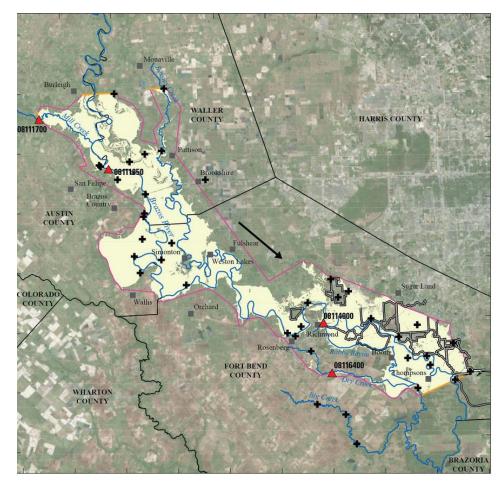


Created by Birckhead Creative from Noun Project

- Identify specific and achievable flood mitigation and floodplain management goals
 - Short (10 year) & Long-Term (30 year)
- State the levels of residual flood risk after goals are fully met.

Task 4A – Flood Mitigation Needs Analysis

- Identify locations within the region that have the greatest flood mitigation and flood risk study needs.
- Based on the analyses and goals developed by the RFPG under Tasks 2A through 3B



Map of inundated areas (yellow areas) on the lower Brazos River after Hurricane Harvey





Key Terms for Tasks 4 & 5: FME, FMP, FMS

Flood Management Evaluation (FME)

 A proposed flood study of a specific, flood-prone area that is needed in order to assess flood risk and/or determine whether there are potentially feasible FMSs or FMPs.



Cottonwood Creek Flood Study, San Marcos, TX.

Image: City of San Marcos

Flood Management Strategy (FMS)

 A proposed plan to reduce flood risk or mitigate flood hazards to life or property (may or may not require associated FMPs to be implemented).



Exploration Green project, Clear Lake City, TX Image: Texas Water Resources Institute

Flood Mitigation Project (FMP)

 A proposed project (structural and non-structural) that when implemented will reduce flood risk, mitigate flood hazards to life or property.



El Paso storm water project, El Paso, TX Image: El Paso Water

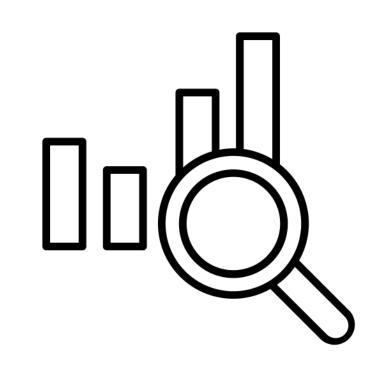






Task 4B – Identification and Evaluation of Potential FMEs & Potentially Feasible FMSs and FMPs

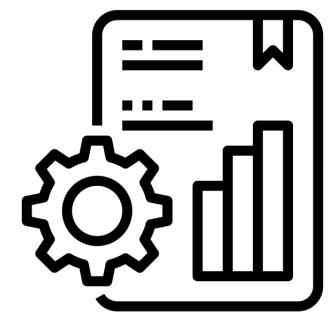
- Identify potential FMEs and potentially feasible FMSs and FMPs based on process developed with public input
- Evaluate potential FMEs and potentially feasible FMSs and FMPs based on a variety of factors described in rules and guidance.
- The FMPs should be permittable, constructible and implementable



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Task 4C – Prepare and Submit Technical Memorandum

- Include all deliverables from Tasks 1 to 4B detailed in the Scope of Work
- TWDB Guidance Document will provide more information.
- Tentative Due Date: January 2022



Created by Komkrit Noenpoempisut from Noun Project

Task 5 – Recommendation of FMEs, FMSs & FMPs

- Recommend FMEs that are most likely to identify potentially feasible FMSs and FMPs based on evaluations under Task 4B
- Recommend FMSs and FMPs to reduce the impacts of flood based on evaluations under Task 4B
- Recommendations should be based on comparison of alternatives

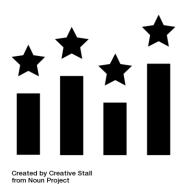


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Regional & State Flood Planning Long-Range Planning Process



Regional Flood Plans will identify flood risk and recommend FMEs, FMSs, and FMPs within regions.



State Flood Plan will rank recommended FMEs, FMSs, and FMPs statewide.



Future state financial assistance may be allocated using a to-be-determined prioritization criteria.*

^{*}Funding to implement projects can also come from local, federal, or other sources.



Task 6A – Impacts of Regional Flood Plan

- Summarize the relative reduction in flood risk that implementation of the plan would achieve.
- Describe impacts of recommended FMSs and FMPs on environment, agriculture, recreation, water quality, erosion, sedimentation, and navigation.
- State that FMPs will not negatively affect neighboring areas.



Recreational boating.

Image: TWDB



Development Board

Crops in the lower Rio Grande Valley

Image: TWDB

Task 6B – Impacts on Water Supply

- Summarize how Regional Flood Plan will affect water supply.
- How would FMSs and FMPs contribute to water supply?
- How would FMSs and FMPs impact water supply, availability, or projects in the State Water Plan?



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Task 7 – Flood Response Information and Activities

- Summarize existing flood response preparations.
- Coordinate with entities in the region to gather information
- RFPGs do not perform analyses or other activities related to disaster response or recovery.



Texas State Guard Hurricane Harvey emergency response.

Image: Texas State Guard



Task 8 – Administrative, Regulatory, and Legislative Recommendations

- Develop policy recommendations to implement and achieve the RFPG's stated goals and plans.
- Consider potential new revenueraising opportunities to fund flood activities in the region.



Image: TWDB



Task 9 – Flood Infrastructure Financing Analysis

- Survey and report on how sponsors propose to finance recommended FMEs and FMPs
- Include recommendations on the proposed role of the State in financing FMEs and FMPs



Dam on the Llano River under Hwy 16 in Llano, Texas.

Image: TWDB



Task 10 – Public Participation & Plan Adoption

Administrative activities not included in other tasks, including:

- Meeting preparations, notices, agendas, materials, minutes, presentations, public meetings, and public comments
- Website creation and maintenance
- Intraregional and interregional coordination and communication to develop the regional flood plan.



TWDB flood outreach meeting in Bastrop, TX.

Image: TWDB



Image: Brent Hanson, U.S. Geological Survey. Public domain.

Questions? Comments?

- 6. Discuss and Consider action to fill the vacant voting RFPG member seat representing river authorities
 - a) Public Comments (Public comments limited to 3 minutes per speaker)
 - b) Consider Executive Committee's recommendation, discussion and consider taking action to fill the river authority interest category position for a term commensurate with the initial voting members

Region 10 Lower Colorado-Lavaca Regional Flood Planning Group Member Nomination Form

Nomination for member representing river authorities

Date: 1/11/21

Nominee Name: Kelly D. Payne, PE

Nominee Phone: 512-578-3251 Nominee Email: kelly.payne@lcra.org

Nominee Mailing Address: LCRA, PO Box 220, Austin, Texas 78767

County in which the nominee resides: Travis

Nominee Occupation: Vice President, Water Operations, LCRA

Brief bio and summary of qualifications of the nominee:

Mr. Payne's more than twenty years' experience as a registered Professional Engineer, combined with a specific and deep understanding of LCRA's current and historical water-related activities, make him an ideal candidate for the Regional Flood Planning group. In his current role as the VP of Water Operations at LCRA, Kelly leads a talented team of hydrologists and engineers who manage floods in the lower Colorado River basin. Other relevant experience includes: project manager for the consultant preparing the first Regional Water Plan for the Coastal Bend Region (Region N); experience leading and performing numerous hydraulic and hydrologic system analyses and modeling efforts; and stormwater management program development.

General type of flood-related knowledge, experience, and approximate number of years being involved in flood-related issues:

Throughout Mr. Payne's over 25 years of work in engineering, he has worked on multiple flood mitigation projects and flood studies. Please see his attached resume for a sampling of these projects. Additionally, in his current role as LCRA's VP of Water Operations, he led the team that managed the Highland Lakes during historic flooding in October 2018 as well as other smaller floods during his tenure.

OPTIONAL: Please list any additional attachments (resume, CV, etc.): resume attached

Name and Email of person submitting this form (Nominator may be the same as nominee): John B. Hofmann; Executive VP Water, LCRA john.hofmann@lcra.org

Nominations due by 5:00 PM, Thursday, January 14, 2021
Submit nominations by email to the Region 10 Lower Colorado-Lavaca RFPG Executive
Committee, c/o Lauren Graber at lauren.graber@lcra.org

Region 10 Lower Colorado-Lavaca Regional Flood Planning Group Member Nomination Form

Nomination for member representing river authorities

Date: 1/12/21

Nominee Name: Kelly Payne, P.E.

Nominee Phone: 512-578-3251 Nominee Email: kelly.payne@lcra.org

Nominee Mailing Address: LCRA, PO Box 220, Austin, Texas 78767

County in which the nominee resides: Travis

Nominee Occupation: VP, Water Operations, Lower Colorado River Authority

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OPTIONAL: Please list any additional attachments (resume, CV, etc.): Resume, Kelly Payne, P.E

Name and Email of person submitting this form (Nominator may be the same as nominee): Patrick Brzozowski, P.E., GM Lavaca-Navidad River Authority

Nominations due by 5:00 PM, Thursday, January 14, 2021
Submit nominations by email to the Region 10 Lower Colorado-Lavaca RFPG Executive
Committee, c/o Lauren Graber at lauren.graber@lcra.org

Kelly D. Payne, P.E.

As the Vice President of Water Operations for the Lower Colorado River Authority (LCRA), Kelly Payne is responsible for leading the teams at LCRA who: operate six dams (known as the Highland Lakes) for water supply, hydroelectric power generation, and flood operations; mange LCRA's water supplies; operate agricultural water delivery systems in the lower basin (the primary crop is rice); and maintain lake safety, marina permitting and private dock standards on the Highland Lakes. Our basin covers roughly 18,300 square-miles (about the size of Maryland and Massachusetts combined) and 600 river miles from the Texas Hill Country to the Texas Gulf Coast. We provide water for more than 1.4 million users, including communities, businesses, industries, agriculture and the environment.

LCRA is a quasi-governmental agency of the state of Texas. Quasi-governmental means that we were created by the state, but we receive no revenue from the state. We operate from the revenue from the services we provide: water, power generation, and power transmission.

This broad scope of responsibility is a direct reflection of Kelly's twenty plus years' experience as a registered Professional Engineer combined with a specific and deep understanding of LCRA's current and historical water-related activities. Kelly's technical expertise includes computer modeling and analysis of large river and reservoir systems; water rights evaluation; computer modeling of groundwater/surface water interaction; hydraulic and hydrologic systems modeling; stormwater management; analysis of raw water transmission facilities; financial planning and project development; water/wastewater system analysis, planning, permitting and design; and water distribution system analysis.

In addition to his engineering expertise, Kelly is skilled at leading teams to assess current state and future needs as they relate to the LCRA mission and objectives followed by achieving consensus with detailed action plans for execution. Kelly has developed strong personal and professional relationships within LCRA's CFO, Water, and Engineering organizations that allow him to tackle difficult issues with respect and an understanding for multiple perspectives. Outside of LCRA, Kelly has maintained strong ties to local and national water and engineering associations and has served in staff and committee supervisory roles as well as mentoring younger colleagues.

Significant Achievements

- Leads a team of over one hundred water operations staff that provide water supply, hydroelectricity, flood management, and lake safety to the customers and populous living in the LCRA basin
- Manages a 16 to 18 million dollar operations budget to ensure efficient delivery of the services LCRA Water Operations provides
- Led the development of an annual average capital budget of \$66.9 million (average of combined capital budgets of Raw Water, Water/Wastewater Utility, Irrigation, and Hydro) – FY13 through FY18
- Led the development and execution of an annual average capital budget of \$14.7 million (average capital budget for WTC) – FY08 through FY12
- Provided engineering support to LCRA Water Resources for high-visibility projects:
 - o Brushy Creek Reclaimed Water Pipeline Routing Study

- o Off-Channel Reservoir Evaluation White Stallion
- o Supplemental Water Supply Analyses, 2011-15 Drought
- New Regional Water Supply Projects
- Facilitated the transfer of engineering documents, records, and studies during the divestiture of the West Travis County Regional Water and Wastewater System
- As a project manager and engineer of record for LCRA Water/Wastewater, managed the design of numerous waterline extension projects, elevated storage improvements, and a water treatment plant project designed by LCRA Water and Wastewater engineering staff
- As an acknowledged LCRA water systems expert, provided strategic evaluations and guidance for long-range master plans for specific utility systems and to develop and update impact fee studies per Chapter 395 of the Texas Local Government Code

Work Experience

Lower Colorado River Authority

Austin, Texas 2006 – present

- Vice President, Water Operations, 2018 to present
- Asset Manager, Principal; 2017 2018
- Asset Manager, 2011 2017
 - Technical responsibilities included:
 - Maintained 10-year Capital Improvement Plans for all business units under the purview of the Executive Vice President, Water
 - In coordination with Capital Budgeting and other subject matter experts, led the development of LCRA's annual business and capital plan for an assigned portfolio of assets (primarily water and hydroelectric)
 - Conducted detailed financial evaluations of initiatives and projects primarily related to Water and provided strategic guidance based on understanding the costs and benefits of proposed work as it related to the LCRA mission and objectives
 - Led teams to determine fiscal viability and define desired outcomes for proposed work, including providing expertise regarding budget and schedule estimates
 - Performed complex business case and/or feasibility analysis on a multitude of utility assets. Assisted with research for, and development of, cost benefit analysis for various maintenance, rehabilitation, and/or replacement options for specific utility assets or groups of assets
 - Led risk management analysis with facility subject matter experts to determine appropriate timing and prioritization of facility equipment overhauls and inspections, including responsibility for quantifying the business risk exposure associated with specific facilities based on both the likelihood and consequence of asset failure
 - Led teams in condition assessment activities to determine remaining useful life estimates for capital and larger O&M assets, including recommendations for appropriate future actions, e.g. timing and scope of replacement or repair
- Senior Engineer, Water/Wastewater Planning and Engineering; 2006 2011

West Travis County (WTC) Regional Water and Wastewater System, Regional Engineer Technical responsibilities included:

Oversight of all development activities in the region

- Support of LCRA water and wastewater operations staff in troubleshooting system performance issues
- Support of the LCRA WTC Regional Manager in long- and short-term planning and development, including development of the annual LCRA business and capital plan for the region
- Engineering support to the LCRA Project Management Office for capital construction projects in the region
- o Liaison with West Travis County customers
- Mentoring and directing work of junior staff engineers

LCRA Capital Improvements Planning, Regional Engineer

Planning activities that support the long-term operation of the WTC Regional Water and Wastewater Systems include:

- Review and update of predicted future service needs within the WTC water and wastewater systems.
- Evaluation of existing system component capacities (i.e. wastewater lift stations, wastewater collection systems, wastewater treatment plants, water transmission mains, water storage, water treatment plants, and water booster pump stations) and comparison of capacities to expected growth projections. These evaluations forecast the need for expansion of existing facilities and/or needs for additional facilities. These evaluations are performed using water modeling programs and other analysis tools.
- Development of future projects needed to ensure reliable water and wastewater service for the existing and future customers of the WTC Regional System.

LCRA Capital Improvements Projects, Project Engineer

Provided engineering support on behalf of LCRA for the following:

- o Uplands Water Treatment Plant Expansion
- o County Line Pump Station (CLPS) Expansion
- WTC Wastewater System, 12-inch Force Main Extension
- o WTC Wastewater System, Regional Lift Station Expansion
- Southwest Parkway Pump Station Expansion
- Highway 71 1280 Elevated Storage Tank
- West Travis County 20-inch Transmission Main from the Uplands Water Treatment Plant to the Southwest Parkway Pump Station
- o West Travis County Wastewater System Master Plan
- West Travis County, Regional Wastewater System Impact Fee Study

Alan Plummer Associates, Inc.

Austin, Texas

Senior Engineer, 2004 to 2006

Technical responsibilities included planning, design, and oversight of water and wastewater infrastructure construction; analysis of water transmission facilities; and activities related to planning, design, and permitting for effluent reuse systems. Clients included municipalities and river authorities.

HDR Engineering, Inc.

Austin, Texas

- Management Team Member, 2000 2004
- Project Manager, 1997 2004
- Assistant Project Manager, 1995 1997
- Graduate Engineer, 1992 1995

General responsibilities included staff supervision and department-level budget preparation. Technical responsibilities included computer modeling and analysis; water rights evaluation; computer modeling of groundwater/surface water interaction; hydraulic and hydrologic systems modeling; stormwater management; financial planning and project development; and permitting and design of raw water systems. Clients included municipalities, water districts, river authorities, independent electric power producers, railroad companies, regional water planning groups, and the Texas Water Development Board. A list of relevant projects is attached to the end of this resume.

Cornell University

Ithaca, New York

Graduate Assistant, 1989 - 1991

E20 Consultants

College Station, Texas

Drafter, 1988 to 1989

Kimley-Horn and Associates, Inc. (formerly PAWA-Winkelman and Associates, Inc.)

Dallas, Texas

- Summer Intern Drafting, 1988
- Summer Intern Surveying, 1985 1987

Education and Certifications

eCornell Change Management Certificate, 2020 LCRA Edge Leadership Program, 2018 LCRA Management and Leadership Certificate Program, 2015

Professional Engineer (Texas), 1997

Master of Science, Civil and Environmental Engineering Cornell University, 1995

Bachelor of Science, Civil Engineering

Texas A&M University, 1989

Magna cum Laude

- Tau Beta Pi, national engineering honor society, 1988
- Chi Epsilon, national civil engineering honor society, 1987

Publications and Presentations

Central Texas Section of the Water Environment Association of Texas; 2008 "Membrane Bioreactor Wastewater Treatment Plants in Texas; Lessons Learned"

Master's Thesis

Cornell University, 1995

"Characterization of Emergency Response Times to Highway Accidents for Use in Hazardous Materials Routing Analysis"

The investigation and results of the thesis were used by a PhD student who developed a routing model for trucks transporting nuclear waste from power plants in the east to the federal depository in the west.

American Society of Civil Engineers – Water Resources Planning and Management Proceedings of the 21st Annual Conference, 1994
"Regional Wastewater Reuse in the Nueces Estuary"

Professional Activities

American Society of Civil Engineers

Austin Branch

- Vice President 1993 1995
- President 1996 1997
- Co-Chair Hosting Committee for Spring 2000 Texas Section Meeting
- Honors Committee Chair, 1997 to 1998
- Practitioner Advisor, Student Chapter, University of Texas, 1995 2000

Texas Section

- Board of Directors
 - o Vice President Education, 2003 2005
 - o Director-at-Large, 1998 2000
- Committee for Governmental Affairs, Chair/Co-Chair, 2001/2002
- Civil Engineering Brochure Committee, Chair, 1997
- Austin Branch CE Brochure Insert Committee Chair, 1998

National ASCE

- Committee on Student Activities, 1997 2002 and 2004 2007
- ASCE 150th Anniversary National Student Conference (2002), Conference Co-Chair
- Educational Activities Committee (EdAC), Chair, 2004 2008
- Committee on Global Principals for Professional Conduct, 2007 2009

Water Environment Federation

Water Environment Association of Texas, Central Texas Section

- Vice President, 2007 to 2008
- President-Elect. 2008 to 2009
- President, 2009 to 2010

American Water Works Association, member

AACE International, member

Honors and Awards

American Society of Civil Engineers

- 2002 National ASCE Educational Activities, ExCEEd Leadership Award
- 2002 Austin Branch, Civil Engineer of the Year
- 2001 Texas Section, ASCE, Professional Service to Students Award
- 2000 National ASCE Edmund Friedman Young Engineer Award for Professional Achievement

Texas Society of Professional Engineers

1998 Young Engineer of the Year, Travis Chapter

Relevant Project Experience

Water Supply Planning

Coastal Bend Regional Water Planning Group. Project Manager. As part of the state-wide regional water planning effort established by the Texas Legislature, sixteen regional water planning groups were established. Mr. Payne served as the Project Manager for the Coastal Bend (Region N) Regional Water Planning Group technical consultant team. Region N, as defined during the SB 1 Regional Water Planning administrated by the Texas Water Development Board, included an 11-county region around the City of Corpus Christi, the major demand and population center for the region. As Project Manager, Mr. Payne managed the efforts of the HDR Austin staff as well as two technical subconsultants and one public relations subconsultant. As part of the planning process, the technical consultants evaluated over 20 water management supply options, developed a groundwater model of the Texas Gulf Coast Aquifer (panning multiple regions), and produced a siting and costing evaluation procedure for analyzing brackish groundwater and seawater desalination along the Texas Coast. The study was a two and one-half year process that resulted in a two volume Regional Water Management Plan that was submitted to the Texas Water Development Board on January 5, 2001.

Lavaca-Navidad River Authority and City of Corpus Christi, Texas. Project Engineer. Modified existing computer model of the Lower Nueces River Basin to evaluate six water supply alternatives as part of the Trans-Texas Water Program. Modifications included the modeling of diversions from the Nueces River, pipelines between reservoirs, the purchase of existing water rights, changes in operating policies of the existing Choke Canyon Reservoir/Lake Corpus Christi System, and the operation of a proposed reservoir (R&M Reservoir). Additional endeavors included modeling the proposed McFaddin Reservoir in the Guadalupe/San Antonio River Basins involving diversions from the Guadalupe and San Antonio Rivers and calculation of firm yields at the reservoir.

Lavaca-Navidad River Authority and City of Corpus Christi, Texas. Project Engineer. Modified existing computer model of the Lower Nueces River Basin and Estuary to evaluate eleven water supply alternatives as part of the South Central Trans-Texas Water Program Study, Phase II. Modifications in Phase II included modeling groundwater recharge and recovery options, operation of new reservoirs and evaluation of alternative operation policies for the existing Choke Canyon Reservoir/Lake Corpus Christi System. Evaluation included the computation of summary bay and estuary flow statistics and Nueces Bay salinity statistics.

Edwards Underground Water District. Project Engineer. Developed recharge rate relationships for four dam sites in the Guadalupe-San Antonio River Basins over the Edwards Aquifer Recharge Zone. Made modifications to the existing Guadalupe-San Antonio River Basin model to operate these potential recharge structures simultaneously on a daily time step. Daily recharge reservoir operations

included simultaneous solutions for reservoir recharge, spills and releases, and evaporation. Daily simulations were used to refine estimates of recharge enhancement to the Edwards Aquifer due to the proposed projects.

Edwards Underground Water District. Project Engineer. Developed recharge rate relationships for six potential recharge dam sites in the Nueces River Basin over the Edwards Aquifer Recharge Zone. Existing structures in the watersheds for Salado, Parkers, San Geronimo, and Middle Verde creeks were analyzed and used to refine methodologies applied in computing recharge rates for the proposed sites. In addition, modifications were made to the existing Nueces River Basin Model to operate five potential recharge sites on a daily time-step. Daily reservoir operations included simultaneous daily solutions for reservoir recharge, spills and releases, and evaporation. Daily simulations were used to refine estimates of recharge enhancement to the Edwards Aquifer due to the proposed projects.

Edwards Underground Water District. Project Engineer. Updated the existing Nueces River Basin Model to operate multiple recharge reservoirs simultaneously on a daily time-step. Results were used to refine estimates of the impact of the proposed recharge reservoir program to the city of Corpus Christi's water supply lake system downstream.

Edwards Underground Water District. Project Engineer. Performed statistical analysis on streamflow, precipitation, and well level data to investigate correlations between streamflows in the Nueces and Frio Rivers and Edwards Aquifer levels. Results helped to better define the volumes of recharge that the Aquifer can accept.

City of Corpus Christi. Project Engineer. Modified existing computer model of the Lower Nueces River Basin to evaluate the impacts of various alternative operating policies for the Choke Canyon/Lake Corpus Christi System. Comparison of bay and estuary flows were made to find a policy that meets bay and estuary inflow needs while increasing firm yield of the system. Work ultimately lead to new bay and estuary releases agreement between the City of Corpus Christi and the governing state agencies.

San Patricio Municipal Water Supply District. Project Engineer. Developed hydrology, e-a-c tables for existing and proposed water supply ponds, net pond evaporation sets, and demand distributions for the analysis of water supply alternatives for the Northshore Country Club (NSCC) in San Patricio County, Texas. Daily reservoir operations were simulated for several alternatives involving the system operations of Green Lake, existing NSCC water supply ponds, and proposed ponds under a variety of flow scenarios. In addition, the effects to the Choke Canyon/Lake Corpus Christi System of diverting wastewater from Nueces Bay were evaluated. (See summary in Hydraulics and Hydrology section for additional work performed in this project.)

Hydrology and Hydraulics

City of Austin. Project Manager. Evaluated the impacts of providing additional capacity at the Joe Tanner Lane Low Water Crossing at Williamson Creek. The analyses included coordination with TxDOT and their planned improvements to Williamson Creek in conjunction with the U.S. 290 expansion.

City of Jacksboro. Project Engineer. Developed a reservoir operations model of Johnson Lake, near Jacksboro, Texas. Developed e-a-c tables, evaporation sets, streamflow sets, and spillway rating tables for the existing lake. Analyzed several scenarios to provide a basis for determining the impacts

of a new wastewater treatment plant discharge permit on the lake. Developed stage frequency curves for each of the scenarios.

Atchison, Topeka, and Santa Fe Railway Company. Site manager. Performed hydrologic and hydraulic studies of 21 railroad bridges in Texas and 7 sites outside Texas scheduled to be replaced as part of the 1994, 1996, and 1997 Bridge Renewal Programs. Studies included site reconnaissance, survey coordination, flood frequency analysis, ungaged watershed hydrologic analysis, and the computation of water surface profiles using HEC-2, WSPRO, or HEC-RAS. Also, provided surveying support operating a data collector and total station on 18 ATSF sites to provide information necessary to perform hydraulic analysis and produce top-of-rail drawing.

Texas Department of Transportation, District 15. Site manager. Performed bridge scour studies of four sites (including 17 bridges) on Leon Creek around the San Antonio, Texas, area. Studies included site reconnaissance, survey coordination, hydrologic analysis, computation of water surface profiles and hydraulic properties using WSPRO, and calculation of contraction, pier, and abutment scour at each bridge.

Union Pacific Railroad Company. Site manager. Performed hydrologic and hydraulic studies for eight railroad bridges in Texas. Analysis included computing 50-year and 100-year flood flows and evaluating the existing hydraulic conditions at the site. A replacement structure was recommended which would provide an economical design and satisfy Union Pacific Railroad (UPRR) hydraulic criteria. The hydraulic analyses were performed using HEC-2 and WSPRO. In addition, initial permitting contacts were made on behalf of the UPRR to the appropriate agencies. Provided surveying support operating a data collector and total station on more than 20 UPPR sites to provide information necessary to perform hydraulic analysis and produce top-of-rail drawing.

Edwards Underground Water District. Project Engineer. Developed the areal precipitation data sets for the Guadalupe-San Antonio River Basin model. Performed a literature review and compiled the data on low-flow studies and miscellaneous measurements made in the basins by the U.S.G.S.

Stormwater Management

Tenaska Gateway Generating Station, Texas. Project Manager. Prepared a 100-year flood plain delineation of Billy Ditch and a major tributary on the proposed site of a new 840MW power generating station in East Texas for Tenaska, Inc. The project involved the development hydrology and a hydraulic model as well as preparation of 100-year flood plain boundary delineations on electronic aerial topographic maps.

City of Temple, Texas. Assistant Project Manager for a drainage basin study for the City of Temple, Texas. The project involved the development of a Drainage Criteria and Design Manual for the City of Temple and a study of existing and future drainage problems associated with stream flooding in the Temple area. Provided coordination of hydrology development for nine watersheds in the study area. Evaluated historical rainfall data and runoff patterns to calibrate the hydrologic models to the historical rainfall temporal distribution patterns for the Temple Area.

South Texas Water Authority. Project Engineer. Developed areal daily precipitation data sets for the Lower Nueces River Basin and used these data to develop runoff using the Texas Water Development Board's rainfall/runoff model, TxRR. This simulated runoff was used to evaluate the potential effects of storm water diversion into the Nueces Delta area on the firm yield of the Choke Canyon Reservoir/Lake Corpus Christi System.

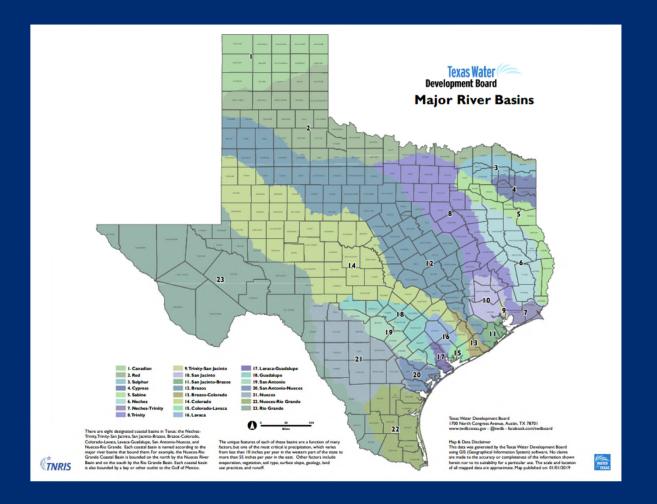
San Patricio Municipal Water Supply District. Project Engineer. Developed a hydrologic model of the Green Lake drainage area near Portland, Texas, in San Patricio County using HEC-1. Evaluated the rainfall/runoff characteristics of the Green Lake watershed under current and future development conditions. Developed e-a-c tables for Green Lake and used them to evaluate flood control and water supply options. Performed flood frequency analysis on the Green Lake spillway modification options and provided support in the computation of alternative spillway ratings. (See summary in Water Supply section for additional work performed in this project.)

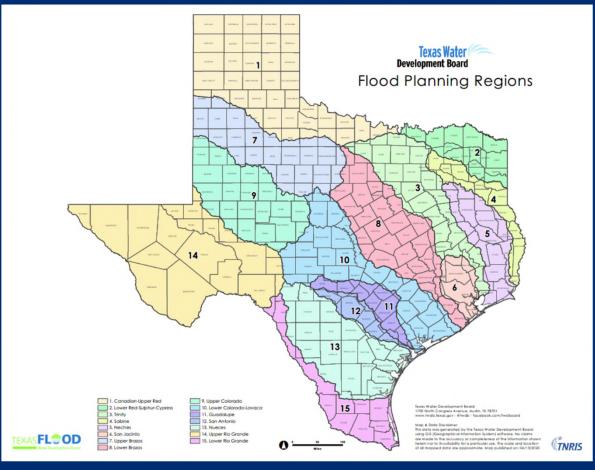
Lake Leon Flood Control Group. Project Engineer. Performed hydrologic and hydraulic study on Leon Reservoir in Eastland County, Texas. Developed historical inflow hydrographs to the reservoir, performed frequency analyses on reservoir storage, and routed the historical inflow hydrographs through the reservoir to evaluate the impact of several spillway capacity improvement scenarios on reservoir peak stage.

- 7. Consider nominating and electing two members-at-large to serve on the Executive Committee
 - a) Nominations for two Executive Committee members-at-large by members
 - b) Discussion and consider taking action to elect Executive Committee membersat-large.

- 8. Consider designating a non-voting member liaison to coordinate between the upstream and downstream Flood Planning Regions located within the same major river basin (required per 31 TAC §361.11(f)(8))
 - a. Nominations for Region 9 Upper Colorado RFPG liaison by members
 - b. Discussion and consider taking action to designate Region 9 RFPG liaison

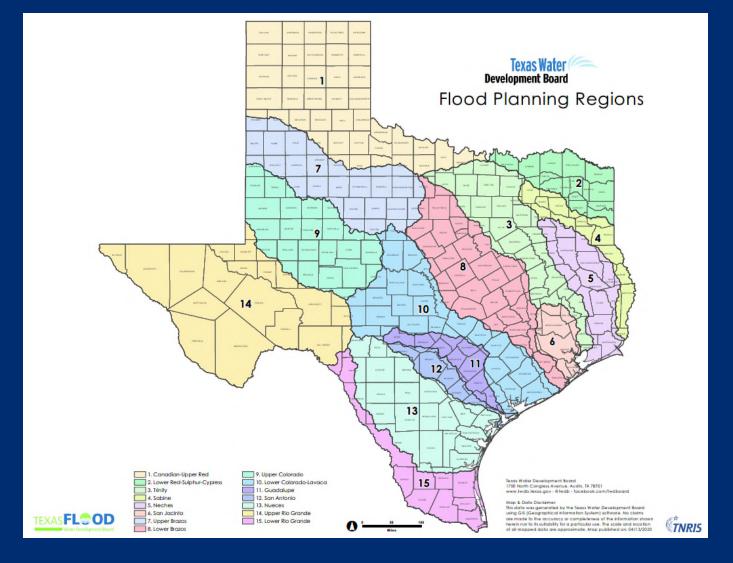
31 TAC §361.11(f)(8) Non-voting member liaisons designated by each RFPG, as necessary, to represent portions of major river basins that have been split into more than one FPR to coordinate between the upstream and downstream FPRs located within that same river basin. This non-voting member liaison may, at the discretion of the RFPG, be met by a voting member that also meets another position requirement under subsection (e) of this section





- 9. Consider designating non-voting member liaisons to coordinate with neighboring Flood Planning Regions along the Gulf Coast (required per 31 TAC §361.11(f)(9))
 - a. Nominations for Region 8 Lower Brazos RFPG liaison by members
 - b. Discussion and consider taking action to designate Region 8 RFPG liaison
 - c. Nominations for Region 11 Guadalupe RFPG liaison by members
 - d. Discussion and consider taking action to designate Region 11 RFPG liaison
 - e. Nominations for Region 12 San Antonio RFPG liaison by members
 - f. Discussion and consider taking action to designate Region 12 RFPG liaison

31 TAC §361.11(f)(9) For FPRs that touch the Gulf Coast, member liaisons designated by each RFPG representing coastal portions of FPRs to coordinate with neighboring FPRs along the Gulf Coast. This non-voting position 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.





- 10. Update from Planning Group Sponsor regarding status of Regional Flood Planning Grant contract with the TWDB
 - a. Discussion on status of application for Regional Flood Planning Grant funds
 - b. Discussion of technical consultant procurement process and RFQ
- 11.Discuss and Consider selecting a committee to review responses to the Request for Qualifications for the RFPG technical consultant

- 12. Discuss a means by which the RFPG will develop and host a public website (required per 31 TAC §361.21(b))
- 13. Discuss a means by which the RFPG will accept written public comment prior to and after meetings (required per 31 TAC §361.21(c))
- 14. Discussion of the required solicitation for persons or entities who request to be notified of RFPG activities (required per 31 TAC §361.21(e))

15. Discuss the requirement for Flood Planning Members to obtain Public Information Act and Open Meetings Certification to fulfill Texas Government Code 551.005

- a. Discussion for members to fulfill the requirements of Texas Government Code 551.005
- b. Discussion and consideration of a nomination for a Public Information Act Coordinator

- 16.Pre-Planning Public Input Public input regarding suggestions and recommendations as to issues, provisions, projects, and strategies that should be considered during the flood planning cycle and/or input on the development of the regional flood plan (as required per Texas Water Code §16.062(d) and 31 Texas Administrative Code §361.12(a)(4))
 - a. TWDB Presentation
 - b. Public Comments (Public comments limited to 3 minutes per speaker)

Regional Flood Planning Pre-Planning Public Meeting Requirements

@twdb

www.twdb.texas.gov

Pre-Planning Meeting Background

- Provide background on formation of RFPGs and the Regional Flood Planning process.
- Gather suggestions and recommendations as to issues, provisions, projects, and strategies that should be considered in development of regional flood plan.



TWDB flood outreach meeting in Bastrop, TX.

Image: TWDB



About Regional Flood Planning

- First-of-its-kind statewide flood plan
- Watershed-based planning regions
- Bottom-up approach to flood planning
- Transparent process with public input
- Volunteer members representing interest categories

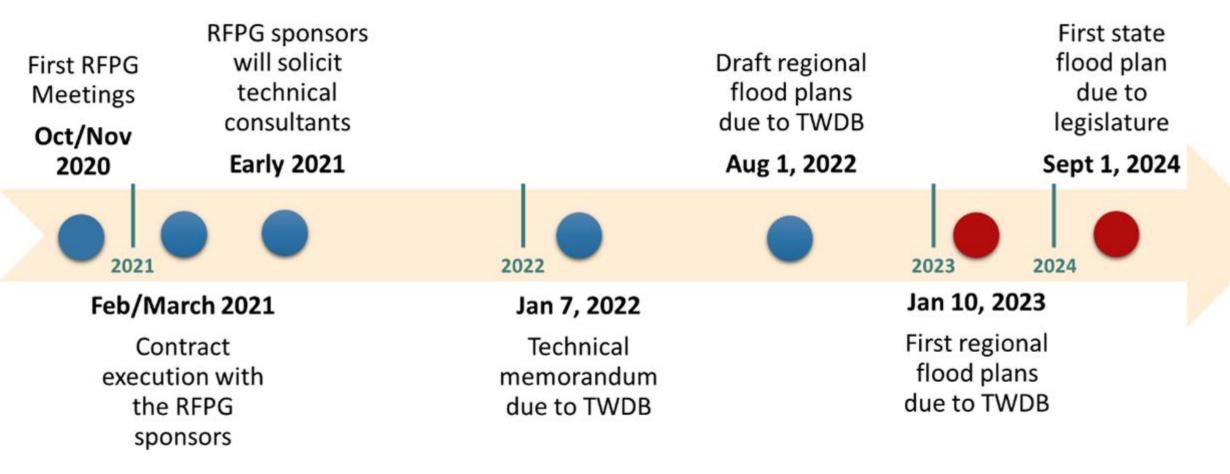


Find your RFPG Information, Meeting Schedules & Important Documents here: https://www.twdb.texas.gov/flood/planning/index.asp



Flood Planning Timeline

SB 8 passed in 2019 requiring a statewide flood plan based on regional flood plans

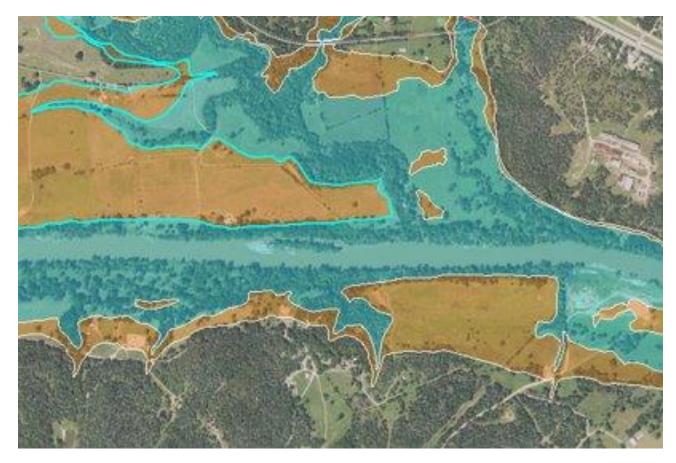


@twdb



Key Tasks of the RFPGs

- Gather & analyze data
- Identify existing and future flood risks
- Evaluate floodplain management practices
- Recommend evaluations, strategies, and projects to reduce flood risks
- Develop a regional flood plan



The 1% annual chance floodplain is shown in blue. The 0.2% annual chance floodplain is shown in orange. Image by FEMA

Flood Mitigation

The implementation of actions, including both **structural** and **non-structural solutions**, to reduce flood risk to protect against the loss of life and property.



Mangroves on the Texas Coast stabilize shorelines and help absorb storm surge; an example of a non-structural flood mitigation solution.

Photo by Univ. Of Texas Marine Science Institute



Galveston Seawall, a structural flood mitigation solution.

Image by Yinan Chen CC-PD

Additional Opportunities for Public Input

There will be many opportunities public involvement:

- public comments are received at every RFPG meeting
- there will be at least one meeting for the public to comment on a flood risk summary map to identify any flood risk not captured
- there will be at least two public pre-planning meetings to receive feedback and gather general suggestions
- the public will get to comment on the draft regional flood plan, once developed



TWDB flood outreach meeting in Bastrop, TX.

Image: TWDB

Find your RFPG Information, Meeting Schedules & Important Documents here: https://www.twdb.texas.gov/flood/planning/index.asp

@twdb

www.twdb.texas.gov



Image: Brent Hanson, U.S. Geological Survey. Public domain.

Questions? Comments?

@twdb

17. Public comments – limit 3 minutes per person

18. Consider date and agenda items for next meeting

19. Adjourn