

**NOTICE OF OPEN MEETING OF THE SAN ANTONIO REGIONAL FLOOD PLANNING  
GROUP**

*Region 12 San Antonio RFPG*

*11/16/2021*

*4:00 PM*

*TAKE NOTICE that a meeting of the San Antonio Regional Flood Planning Group as established by the Texas Water Development Board will be held on Tuesday November 16, 2021, at 4:00 PM, in-person at the San Antonio River Authority Board room, located at 201 W. Sheridan St. and virtually on GotoMeeting at <https://global.gotomeeting.com/join/875885725> You may also dial into the meeting on your phone at +1 (571) 317-3112, access code: 875-885-725.*

- Agenda:**
1. (4:00 PM) Roll-Call
  2. Public comments – limit 3 minutes per person
  3. Approval of the Minutes from the September 21, 2021, San Antonio Regional Flood Planning Group Meeting (Region 12)
  4. Approval of the Minutes from the Previous San Antonio Regional Flood Planning Group Meeting (Region 12)
  5. Communications from the Texas Water Development Board (TWDB)
  6. Chair Report
  7. Updates from Region 12 Subcommittees
  8. Discussion and Appropriate Action Regarding the Consultant's Work and Schedule
    - a. Task 3A and 3B - Recommended Floodplain Management Practices and Goals
      - i. RFPG Action on Recommended Standards
      - ii. RFPG Vote on Flood Mitigation and Floodplain Management Goals
  9. Negotiate and Execute RFP Contract Amendments
    - a. Discussion and Appropriate Action Authorizing 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 Regional Flood Planning, Including Necessary Revisions to the Contract Scope of Work and Budget.
    - b. Discussion and Appropriate Action to Authorize the Planning Group Sponsor to Negotiate and Execute and Amendment to the Regional Flood Planning Grant Subcontract with the Technical Consultant to Incorporate Additional Funding for the First Cycle of Regional Flood Planning, Including Necessary Revisions to the Contract Scope of Work and Budget.

10. Presentation by Planning Group Sponsor on Current Budget Expenses to Date
11. Regional Liaison Updates
12. Public comments – limit 3 minutes per person
13. Date and Potential Agenda Items for Next Meeting
14. Adjourn

If you wish to provide written comments prior to or after the meeting, please email your comments to [khayes@sariverauthority.org](mailto:khayes@sariverauthority.org) or physically mail them to the attention of Kendall Hayes at San Antonio River Authority, 201 W. Sheridan, San Antonio, TX, 78204 and include “Region 12 San Antonio Flood Planning Group Meeting” in the subject line of the email.

Additional information may be obtained from: Kendall Hayes (210) 302-3641, [khayes@sariverauthority.org](mailto:khayes@sariverauthority.org), San Antonio River Authority, 201 W. Sheridan, San Antonio, TX.

**Meeting Minutes**  
**Region 12 San Antonio Regional Flood Planning Group Meeting**  
**Tuesday, September 21, 2021**  
**9:00 AM**  
**San Antonio River Authority**

**Roll Call:**

<u>Voting Member</u>	<u>Interest Category</u>	<u>Present (x) /Absent ( ) / Alternate Present (*)</u>
Brian Yanta	<i>Agricultural interests</i>	
David Wegmann	<i>Counties</i>	X
Doris Cooksey	<i>Electric generating utilities</i>	
Deborah (Debbie) Reid	<i>Environmental interests</i>	X
Nefi M. Garza	<i>Flood districts</i>	X
Cara C. Tackett	<i>Industries</i>	X
Jeffrey Carroll	<i>Municipalities</i>	X
John Paul Beasley	<i>Public</i>	X
Suzanne B. Scott	<i>River authorities</i>	X
Steve Gonzales	<i>Small business</i>	X
David Mauk	<i>Water districts</i>	X
Steve Clouse	<i>Water utilities</i>	X

<u>Non-voting Member</u>	<u>Agency</u>	<u>Present(x)/Absent( )/ Alternate Present (*)</u>
Marty Kelly	Texas Parks and Wildlife Department	X
James Guin	Texas Division of Emergency Management	X
Jami McCool	Texas Department of Agriculture	X
Jarod Bowen	Texas State Soil and Water Conservation Board	X
Kris Robles	General Land Office	X
Anita Machiavello	Texas Water Development Board (TWDB)	X
Susan Roberts	Texas Commission on Environmental Quality	X

**Quorum:**

Quorum: **Yes**

Number of voting members or alternates representing voting members present: **10**

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

*All meeting materials are available for the public at: <http://www.region12texas.org>.*

### **AGENDA ITEM NO.1: ROLL CALL**

Caitlin Heller, San Antonio River Authority, called the role and confirmed a quorum.

### **AGENDA ITEM NO.2: PUBLIC COMMENT – LIMIT 3 MINUTES PER PERSON**

No public comment given.

### **AGENDA ITEM NO.3: APPROVAL OF THE MINUTES FROM THE PREVIOUS SAN ANTONIO REGIONAL FLOOD PLANNING GROUP MEETING (REGION 12)**

Ms. Scott motioned to approve. Ms. Reid seconded the motion, motion passed.

### **AGENDA ITEM NO.4: COMMUNICATIONS FROM THE TEXAS WATER DEVELOPMENT BOARD (TWDB)**

Ms. Machiavello reminded the planning group of upcoming webinars and the importance of uploading past RFPG documents to SARFPG's website.

### **AGENDA ITEM NO.5: CHAIR REPORT**

Chair Garza informed the SARFPG that the technical memo has been extended to March. He also spoke about the additional funding received by the TWDB to assist in the planning process.

Chair Garza explained to the planning group that nomination forms would be posted for the positions of Nonprofit and River Authorities as discussed at the last meeting.

### **AGENDA ITEM NO.6: DISCUSSION AND APPROPRIATE ACTION REGARDING THE CREATION OF REGION 12 SUBCOMMITTEES**

Chair Garza explained that the SARFPG would create two subcommittees, one focusing on outreach and the other on technical matters. SARFPG members volunteered to serve on these committees and Ms. Heller announced that a Doodle Poll would go out to schedule these meetings.

### **AGENDA ITEM NO.7: DISCUSSION REGARDING THE CONSULTANT'S WORK AND SCHEDULE**

Mr. Branyon, HDR, provided an update on the current efforts of the consulting team, with a focus on Task 10, 1, 2A, 2B, 3A, and 3B . HDR's presentation and recording for this meeting can be found on the Region 12 website at <http://www.region12texas.org>.

### **AGENDA ITEM NO.8: REGIONAL LIAISON UPDATES**

Ms. Scott, Region 11 liaison, spoke to Region 11's updates.

Ms. Tackett, Region 10 liaison, spoke to Region 10's updates.

Mr. Mauk, Region 13 liaison, spoke to Region 13's updates.

**AGENDA ITEM NO.10: DISCUSSION AND APPROPRIATE ACTION REGARDING  
REGION 12 MEETING SCHEDULE**

The meeting schedule for FY21 was revised to: October 26, 2021, at 2:00 pm, November 16, 2021, at 4:00 pm, and December 21, 2021, at 9:00 am.

**AGENDA ITEM NO. 11: PUBLIC COMMENTS:**

No public comment given.

**AGENDA ITEM NO. 12: POTENTIAL DATE AND AGENDA ITEMS FOR NEXT  
MEETING**

Next meeting date is October 26, 2021, at 2:00 PM.

**AGENDA ITEM NO. 13: ADJOURN**

Meeting adjourned at 11:06 AM.

**Meeting Minutes**  
**Region 12 San Antonio Regional Flood Planning Group Meeting**  
**Tuesday, October 26, 2021**  
**2:00 PM**  
**San Antonio River Authority**

**Roll Call:**

<b><u>Voting Member</u></b>	<b><u>Interest Category</u></b>	<b><u>Present (x) /Absent ( ) / Alternate Present (*)</u></b>
Brian Yanta	<i>Agricultural interests</i>	
David Wegmann	<i>Counties</i>	X
Doris Cooksey	<i>Electric generating utilities</i>	
Deborah (Debbie) Reid	<i>Environmental interests</i>	X
Nefi M. Garza	<i>Flood districts</i>	X
Cara C. Tackett	<i>Industries</i>	X
Jeffrey Carroll	<i>Municipalities</i>	X
John Paul Beasley	<i>Public</i>	
Suzanne B. Scott	<i>River authorities</i>	X
Steve Gonzales	<i>Small business</i>	X
David Mauk	<i>Water districts</i>	X
Steve Clouse	<i>Water utilities</i>	X

<b><u>Non-voting Member</u></b>	<b><u>Agency</u></b>	<b><u>Present(x)/Absent( )/ Alternate Present (*)</u></b>
Marty Kelly	Texas Parks and Wildlife Department	X
James Guin	Texas Division of Emergency Management	
Jami McCool	Texas Department of Agriculture	X
Jarod Bowen	Texas State Soil and Water Conservation Board	
Kris Robles	General Land Office	X
Anita Machiavello	Texas Water Development Board (TWDB)	*Morgan White
Susan Roberts	Texas Commission on Environmental Quality	X

**Quorum:**

Quorum: **Yes**

Number of voting members or alternates representing voting members present: **9**

Number required for quorum per current voting positions of 12: **7**

*All meeting materials are available for the public at: <http://www.region12texas.org>.*

## **AGENDA ITEM NO.1: ROLL CALL**

Caitlin Heller, San Antonio River Authority, called the role and confirmed a quorum.

## **AGENDA ITEM NO.2: PUBLIC COMMENT – LIMIT 3 MINUTES PER PERSON**

Mr. Alan Montemayor works in sustainable environmental policy. He requested that green infrastructure and nature-based solutions be a priority of the regional flood plan.

Ms. Karen Wheeler spoke to a specific neighborhood metal structure. She shared concerns with the safety and efficacy of this flood mitigation solution. She suggested nature-based solutions instead of the metal infrastructure.

## **AGENDA ITEM NO.3: APPROVAL OF THE MINUTES FROM THE PREVIOUS SAN ANTONIO REGIONAL FLOOD PLANNING GROUP MEETING (REGION 12)**

Ms. Reid motioned to approve. Ms. White brought to the group's attention that the Agenda Packet is not available online. Chair Garza decided that the matter will be tabled until the next meeting to provide the opportunity for the public to review relevant materials.

## **AGENDA ITEM NO.4: COMMUNICATIONS FROM THE TEXAS WATER DEVELOPMENT BOARD (TWDB)**

Ms. White provided an update on the execution of RFP Contract Amendments. She mentioned that this is included in Agenda Item #9.

## **AGENDA ITEM NO.5: CHAIR REPORT**

Chair Garza asked members of the Technical Subcommittee to focus on the deliverables during the subcommittee meeting and less on other items. He informed the SARFPG that he expects members of each committee to attend the subcommittee meetings. Discussion ensued regarding the best way to encourage attendance. They arrived at the solution to put all committees on the calendar and assign alternates to each committee member. Chair Garza requested spokespersons for each committee. Ms. White encouraged the planning group to assign officer positions to each subcommittee.

Chair Garza introduced the logo options. The planning group selected a logo.

Chair Garza introduced Ms. Kendall Hayes to the planning group. Ms. Heller announced that she will no longer serve as the administrator and Ms. Hayes will take over the responsibilities.

## **AGENDA ITEM NO.6: UPDATES FROM REGION 12 SUBCOMMITTEES**

Ms. Clouse provided an update from the Technical Committee. They reviewed high-level issues from Tasks 1-3 with the technical consultants. The committee discussed the merits of 500-year and 100-year ultimate projections. Discussion ensued regarding the purpose of the regional flood plan and what strategies go into creating the plan.

Ms. Reid provided an update from the Outreach Committee. The committee reviewed outreach strategies to reach communities that are unaware of the SARFPG's ongoing efforts.

#### **AGENDA ITEM NO.7: DISCUSSION REGARDING THE CONSULTANT'S WORK AND SCHEDULE**

Mr. Branyon, HDR, provided an update on the current efforts of the consulting team, with a focus on Tasks 3A and 3B. HDR's presentation and the recording for this meeting can be found on the Region 12 website at <http://www.region12texas.org>.

#### **AGENDA ITEM NO.8: DISCUSSION AND APPROPRIATE ACTION REGARDING MEMBERSHIP OF THE SAN ANTONIO REGIONAL FLOOD PLANNING GROUP**

The Executive Committee recommended the addition of Mr. Derek Boese and Ms. Suzanne Scott to voting membership. The planning group adopted the recommendation of the Executive Committee by consensus.

#### **AGENDA ITEM NO.9: NEGOTIATE AND EXECUTE RFP CONTRACT AMENDMENTS**

Item has been tabled.

#### **AGENDA ITEM NO.10: REGIONAL LIAISON UPDATES**

No updates from regional liaisons.

#### **AGENDA ITEM NO. 11: PUBLIC COMMENTS:**

No public comment given.

#### **AGENDA ITEM NO. 12: POTENTIAL DATE AND AGENDA ITEMS FOR NEXT MEETING**

Next planning group meeting date is November 16, 2021 at 4:00 PM

Technical Committee – November 4, 2021 in the 9:30 AM

Outreach Committee – November 3, 2021 at 8:00 AM

Hold December 7, 2021 at 9:00 AM as a provisional meeting.

#### **AGENDA ITEM NO. 13: ADJOURN**

Meeting adjourned at 4:10 PM.





# SARFPG Meeting

November 16, 2021



# Agenda

- Schedule
- Outreach Update
- Task 4 Discussion
- Discussion of Task 3B (Goal Setting)

# Critical Path Schedule

Task 3B – Goals Approval – November Meeting - **11/16/2021**

Task 4B – Approve Methodology – **December Meeting**

Review Draft Memo – **Provide to RFPG by e-mail Dec 17<sup>th</sup>**

Approve Draft Memo – **Proposed January 4<sup>th</sup> or 5<sup>th</sup> Meeting**

Technical Memo Due to TWDB – **January 7, 2022**

## Outreach Update

- November 30<sup>th</sup> Public Meeting – St Hedwig, TX
- December 9<sup>th</sup> Public and Stakeholder Meeting – Bandera, TX

Toolbox of potential higher standards developed for Task 3A (Evaluation and recommendations on floodplain management practices). Recommendation is to use this information as part of a training tool for regional floodplain managers as a part of an effort to educate through organizations and agencies. Standards included can be implemented and adopted in regional flood damage prevention ordinances.					
Ordinance Higher Standards					
Ordinance Section	Higher Standard Location	Standard	Quick Summary	Technical or Regulatory	NFIP Connection
Duties of floodplain admin.	Boerne: Section 9-42	The floodplain administrator may obtain, review and reasonably utilize any base flood elevation data, hydrology and floodway data available from a federal, state or other source, in order to administer the provisions of article III.	Best available data	Regulatory	Statement of Purpose(1,3,6)
General Standards	Boerne: Section 9-66	New construction and substantial improvements, when located in multiple flood zones with varying base flood elevations or in same flood zone with multiple base flood elevations must meet the requirements for the flood zone with the most stringent requirements and the highest base flood elevation;	If in multiple flood zones, must meet most stringent requirements	Regulatory	Statement of Purpose(1,2,3,7)
	Boerne: Section 9-66	For all construction (residential and non-residential) and substantial improvements within, where allowed, or adjacent to the one (1) percent annual chance (100-year) local or FEMA floodplain limits, the lowest floor (including basements), shall be elevated as follows: (Basis of Study: Minimum building slab elevation, Atlas 14 Rainfall: 1.0 foot above BFE, Rainfall other than Atlas 14: 2.0 feet above BFE)	Elevation above BFE requirements	Technical/Regulatory	Statement of Purpose(1,2,3,7) Methods of reducing flood losses(2)
	Boerne: Section 9-66	Filling or the disposal of any materials which will diminish the water flow capacity of any waterway or floodplain defined by this chapter must be compensated with remedial action. An equal amount of storage volume must be created in another location of the same local watershed to compensate for the storage capacity lost.	Fill/disposal of materials in waterways/floodplain	Technical/Regulatory	Statement of Purpose(2,5,6) Methods of reducing flood losses(4,5)
Specific standards for A and AE zones	Boerne: Section 9-67	Residential: New construction on existing undeveloped lots. New construction of a habitable structure on existing platted lots, platted prior to the effective date of the ordinance from which this section is derived, is allowed if the proposed structure is outside the one (1) percent annual chance (100-year) local or FEMA floodplain.	Residential new construction	Technical/Regulatory	Statement of Purpose(1,2,3,7) Methods of reducing flood losses(2)
	Boerne: Section 9-67	Residential: Redevelopment of existing structures. Redevelopment of existing habitable structure, other than rebuilding activity, within the one (1) percent annual chance (100-year) local or FEMA floodplain limits is not allowed. Rebuilding activity shall raise the finished floor above the Base Flood elevation as described in General Standards.	Residential redevelopment	Regulatory	Statement of Purpose(1,2,3,7) losses(1)
	Boerne: Section 9-67	Nonresidential: New construction and substantial improvements of any commercial, industrial or other nonresidential structure shall either have the lowest floor (including basement) elevated, as required in General Standards, above the base flood level or together with attendant utility and sanitary facilities.	Nonresidential construction, new/improvements	Regulatory	Statement of Purpose(1,2,3,4,5,7) Methods of reducing flood losses(2)
	Boerne: Section 9-67	Encroachments are prohibited, including fill, new construction, substantial improvements and other development within the adopted local floodplain and regulatory floodway, except for activities allowed within drainageway protection zones as described in the subdivision ordinance, current version. Can apply to areas of shallow flooding, local floodplains, and floodways.	Floodway Encroachments prohibited	Regulatory	Statement of Purpose(1,2,7) Methods of reducing flood losses(3,4)
Standards for Subdivision proposals	Boerne: Section 9-68	All subdivision proposals shall show the locations of all special flood hazard and local floodplains within the subject property. Should local floodplains not already be identified by the city, the developer shall develop and identify these, including base flood elevations, with the subdivision proposal	Subdivision proposals to show special flood hazard areas	Technical/Regulatory	Statement of Purpose(1,2,7)
	Boerne: Section 9-68	All proposed subdivisions shall have unflooded access, the area is accessible to high ground by a street elevated above the one (1) percent annual chance (100-year) flood the base flood, i.e., no "island" will be considered for platting, unless adequate connecting structures, capable of passing the base flood, are provided to high ground (not subject to the controlling flood of the same floodplain).	Proposed subdivision to have unflooded access	Technical/Regulatory	Statement of Purpose(1,3,6,7) Methods of reducing flood losses(2)
	Boerne: Section 9-68	Unflooded access shall be accessible to an arterial street that is not adjacent to the development or to a distance of one-quarter (¼) mile, whichever is less, during a four (4) percent annual chance (twenty-five year) flood event.	Unflooded access	Regulatory	Statement of Purpose(1,3,4,7)
	Boerne: Section 9-68	All proposed residential subdivisions shall layout the lots as follows: (a)Lot size less than 1.0 acres. All residential lots, with an acreage of less than 1.0 acres, shall be designed such that no portion of the lot is located within the one (1) percent annual chance (100-year) local or FEMA floodplain limits.	Lots < 1 acre no portion in floodplain	Regulatory	Statement of Purpose(1,2,3,7) Methods of reducing flood losses(1)
	Boerne: Section 9-68	All proposed residential subdivisions shall layout the lots as follows: (b)Lot size of 1.0 acres or greater. All residential lots, with an acreage of 1.0 acres or greater, may allow the construction of habitable structures outside the one (1) percent annual chance (100-year) local or FEMA floodplain. Any lot traversed by an area of local or special flood hazard where the "buildable" portion of the subdivision is severed by the floodplain shall be provided with adequate access. Adequate access shall be a structure that will pass the one (1) percent annual chance (100-year) storm without overtopping the structure. Upstream property must not be affected by backwater, and velocities in the vicinity of the structure must be controlled to prevent scour, erosion or structural damage.	Lots > 1 acre conditions for portion in floodplain	Technical/Regulatory	Statement of Purpose(1,3,7) Methods of reducing flood losses(2)
General Standard	San Antonio: Section 35 F141	All new construction or substantial improvements shall be constructed with electrical and mechanical equipment at a minimum of one (1) foot above the regulatory floodplain elevation.	Placement of electrical/mechanical systems	Regulatory	Statement of Purpose(1,4,5)
Specific Standards	San Antonio: Section 35 F142	In floodways, the placement of any manufactured home is prohibited except in an existing manufactured home park or subdivision.	Manufactured home placement	Regulatory	Statement of Purpose(1,3) Methods of reducing flood losses(1)
Subdivision Proposals	San Antonio: Section 35 F144	All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed so that they will not affect the existing water surface elevations of the base flood, the ultimate development 100-year or 25-year ultimate development flood (whichever is greater) in the area of special flood hazard.	Specific placement of public utilities	Regulatory	Statement of Purpose(2) Methods of reducing flood losses (5)
	Additional Higher Standard	The 100-year future conditions flood must be considered for any new projects or developments.	Future conditions design	Technical	Statement of Purpose(2,6) Methods of reducing flood losses(1,2)
Technical Higher Standards					
Adopt Atlas 14 rainfall flows.					
For future conditions adopt use of regionalized lag time adjustment based on watershed changes.					
Adopt Federal Highway Administration use of Hec 14 for scour analysis.					
Adopt National Engineering Handbook (NEH) Part 630 hydrology standards					
Adopt permissible shear stress calculation and Tables from TxDOT Hydraulic Design Manual					
Establish and require technical criteria for no adverse impacts for floodplain development.					
Policy Recommendations					
Recommend each entity adopt a dedicated funding mechanism for floodplain management purposes such as: a dedicated drainage utility rate, drainage district fee, or other continuous funding mechanism.					
Develop partnerships with TxDOT and other agencies to ensure that flood mitigation infrastructure that meets NFIP standards is incorporated with new projects/developments.					

### Purpose and Intent

The purpose of this task is to identify flood mitigation and floodplain management goals for the San Antonio River region. The overarching intent of the goals is “to protect against the loss of life and property” set out in the Guidance Principles in 31 TAC §362.3 to:

1. identify and reduce the risk and impact to life and property that already exists, and
2. avoid increasing or creating new flood risk by addressing future development within the areas known to have existing or future flood risk.

### Specific Goal Statements

#### Category 1. Education and Outreach

Increase the amount of flood education and outreach opportunities to improve awareness of flood hazards and future participation throughout the flood planning region (FPR).

Specific Goal Statements	Short Term (2033)	Long Term (2053)	Potential Measurement
Increase the number of public outreach and education activities to improve awareness of flood hazards and benefits of flood planning in the FPR by X occurrences.	TBD	TBD	Number of public service announcements (emails, social media, news blasts)
Increase the opportunities for citizens to receive watershed and nature base solution training and receive certificate enabling greater participation in flood risk/mitigation decisions	TBD	TBD	Number of entities delivering citizen watershed training and number of citizens trained
Increase the proficiency of floodplain managers across the region through training from TFMA, ASFPM and FEMA. Improve FPM knowledge of nature based solutions, floodplain preservation, and cost/benefit of traditional structural solutions.	TBD	TBD	Number of Public Agency Certified Floodplain Managers

#### Category 2. Flood Warning and Readiness

Improve the dissemination of information regarding early flood recognition and danger, emergency response procedures, and post-flood recovery actions.

Specific Goal Statements	Short Term (2033)	Long Term (2053)	Potential Measurement
Support the development of a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger to reduce flood deaths and high water rescues across the region.	Initiated	Maintained	Reduction in number of deaths and high water rescues.
Increase the number of flood gauges (rainfall, stream, reservoir, etc.) in the region by X gauges to provide localized information to emergency responders.	TBD	TBD	Number of gauges in the region
Increase the number of entities that use TV, radio, social media, and billboards to communicate real time flood warnings. Leverage mobile phone navigation apps to provide real time rerouting for the public.	TBD	TBD	Number of entities



#### Category 3. Flood Studies and Analysis

Increase the number and extent of regional flood planning studies (FMEs) and analyses to identify flood risk and better prepare entities for implementing flood mitigation projects.

Specific Goal Statements	Short Term (2033)	Long Term (2053)	Potential Measurement
Increase the number of entities which utilize/adopt Atlas 14 (Volume 11) revised rainfall data as part of revisions to design criteria and flood prevention regulations by <b>X</b> percent. (region specific)	TBD%	TBD%	Number of entities that require use of Atlas 14 rainfall
Increase the number of entities that conduct detailed studies to update their local flood risk by <b>X</b> .	TBD	TBD	Number of entities that have detailed study of local flood risk.
Decrease the average age of FEMA Flood Insurance Rate Maps (NFHL/FIRMs/FIS) by <b>X</b> years.	TBD	TBD	Regional average age of FEMA mapping
Increase the number of entities which have completed an analysis for using existing Natural Flood Mitigation Features (NFMF)	TBD	TBD	Number of entities that have completed an analysis of potential for existing NFMF

#### Category 4. Flood Prevention

Increase the number and extent of protective regulatory measures and programs to limit future risk and reduce flood damage in the flood planning region.

Specific Goal Statements	Short Term (2033)	Long Term (2053)	Potential Measurement
Increase the number of participating Community Rating System (CRS) entities in the FPR by <b>X</b> .	TBD	TBD	Number of entities who are CRS participants
Increase the rating of participating entities within Community Rating System (CRS) in the FPR by <b>X</b> .	TBD	TBD	Number of entities who have increased their CRS rating
Increase the number of entities which regulate to the 1% annual chance future conditions floodplains as part of new development and redevelopment by <b>X</b> .	TBD	TBD	Number of entities that require use of future condition flood risk
Increase the number of entities that have adopted a watershed approach to flood risk reduction as a basis for comprehensive subdivision regulations.	TBD	TBD	Number of entities that employ a holistic watershed based approach.

#### Category 5. Non-Structural Flood infrastructure Projects

Reduce the amount of existing and future vulnerable properties within the FPR through property/easement acquisition, improved elevation and other flood proofing programs and initiatives.

Specific Goal Statements	Short Term (2033)	Long Term (2053)	Potential Measurement
Increase the number of acres of publicly protected open space by <b>X</b> as part of land conservation and acquisitions to reduce future impacts of flooding.	TBD	TBD	Acreage of high ecological functioning preserved land in the region.

Reduce the number of NFIP repetitive-loss properties in the FPR by <b>X</b> .	<b>TBD</b>	<b>TBD</b>	Number of NFIP repetitive-loss / severe repetitive-loss properties in region
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### Category 6. Structural Flood Infrastructure Projects

Reduce flood risk and mitigate flood hazards to life and property through the implementation of structural flood infrastructure projects.

Specific Goal Statements	Short Term (2033)	Long Term (2053)	Potential Measurement
Reduce the number of vulnerable critical facilities located within the existing and future 1% annual chance (100-year) floodplain by <b>X</b> .	<b>TBD</b>	<b>TBD</b>	Number of critical facilities located in the floodplain
Reduce the number of vulnerable roadway segments and low water crossings located within the existing and future 1% annual chance (100-year) floodplain by <b>X</b> .	<b>TBD</b>	<b>TBD</b>	Miles of roadway segments located in the floodplain
Increase the number of structural projects that include a NBS or Green Infrastructure (GI) component	<b>TBD (establish baseline)</b>	<b>TBD (improve numbers)</b>	Number of projects constructed with GI



# Regional Flood Planning Guidance Principles

The TWDB rules provide 39 guidance principals for the regional flood planning process. The goals were organized into 6 categories that loosely follow the outline of the regional flood plan. The intent was to provide some type of structure to the 39 guidelines to help the reader look at broad categories when connecting the guidance principles to goals and outcomes for the flood planning process in Region 12.

**Policy (1, 6, 15, 23, 25, 26, 34)**

**Flood Planning (2, 6, 7, 13, 30, 31, 33, 38)**

**Flood Risk Analysis and Reduction (3, 4, 5, 8, 9, 10, 11, 12, 14, 17, 22)**

**Social (20, 21, 29, 35, 39)**

**Environmental (10, 17, 24, 27, 28, 36, 37)**

**Water Supply (18, 19, 32)**

<a href="#">TITLE 31</a>	NATURAL RESOURCES AND CONSERVATION
<a href="#">PART 10</a>	TEXAS WATER DEVELOPMENT BOARD
<a href="#">CHAPTER 362</a>	STATE FLOOD PLANNING GUIDELINES
<a href="#">SUBCHAPTER A</a>	STATE FLOOD PLAN DEVELOPMENT
RULE §362.3	Guidance Principles

(a) Regional flood planning guidance principles shall be the same as the state flood planning guidance principles and will be revisited every five years.

(b) Development of the regional and state flood plans shall be guided by the following principles. The regional and state flood plans:

- (1) shall be a guide to state, regional, and local flood risk management policy;
- (2) shall be based on the best available science, data, models, and flood risk mapping;
- (3) shall focus on identifying both current and future flood risks, including hazard, exposure, vulnerability and residual risks; selecting achievable flood mitigation goals, as determined by each RFPG for their region; and incorporating strategies and projects to reduce the identified risks accordingly;
- (4) shall, at a minimum, evaluate flood hazard exposure to life and property associated with 0.2 percent annual chance flood event (the 500-year flood) and, in these efforts, shall not be limited to consideration of historic flood events;

(5) shall, when possible and at a minimum, evaluate flood risk to life and property associated with 1.0 percent annual chance flood event (the 100-year flood) and address, through recommended strategies and projects, the flood mitigation goals of the RFPG (per item 2 above) to address flood events associated with a 1.0 percent annual chance flood event (the 100-year flood); and, in these efforts, shall not be limited to consideration of historic flood events;

(6) shall consider the extent to which current floodplain management, land use regulations, and economic development practices increase future flood risks to life and property and consider recommending adoption of floodplain management, land use regulations, and economic development practices to reduce future flood risk;

(7) shall consider future development within the planning region and its potential to impact the benefits of flood management strategies (and associated projects) recommended in the plan;

(8) shall consider various types of flooding risks that pose a threat to life and property, including, but not limited to, riverine flooding, urban flooding, engineered structure failures, slow rise flooding, ponding, flash flooding, and coastal flooding, including relative sea level change and storm surge;

(9) shall focus primarily on flood management strategies and projects with a contributing drainage area greater than or equal to 1.0 (one) square miles except in instances of flooding of critical facilities or transportation routes or for other reasons, including levels of risk or project size, determined by the RFPG;

(10) shall consider the potential upstream and downstream effects, including environmental, of potential flood management strategies (and associated projects) on neighboring areas. In recommending strategies, RFPGs shall ensure that no neighboring area is negatively affected by the regional flood plan;

(11) shall include an assessment of existing, major flood mitigation infrastructure and will recommend both new strategies and projects that will further reduce risk, beyond what existing flood strategies and projects were designed to provide, and make recommendations regarding required expenditures to address deferred maintenance on or repairs to existing flood infrastructure;

(12) shall include the estimate of costs and benefits at a level of detail sufficient for RFPGs and sponsors of flood mitigation projects to understand project benefits and, when applicable, compare the relative benefits and costs, including environmental and social benefits and costs, between feasible options;

(13) shall provide for the orderly preparation for and response to flood conditions to protect against the loss of life and property and reduce injuries and other flood-related human suffering;

(14) shall provide for an achievable reduction in flood risk at a reasonable cost to protect against the loss of life and property from flooding;

(15) shall be supported by state agencies, including the TWDB, General Land Office, Texas Commission on Environmental Quality, Texas State Soil and Water Conservation Board, Texas Parks and Wildlife Department, and the Texas Department of Agriculture, working cooperatively to avoid duplication of effort and to make the best and most efficient use of state and federal resources;

(16) shall include recommended strategies and projects that minimize residual flood risk and provide effective and economical management of flood risk to people, properties, and communities, and associated environmental benefits;

(17) shall include strategies and projects that provide for a balance of structural and nonstructural flood mitigation measures, including projects that use nature-based features, that lead to long-term mitigation of flood risk;

(18) shall contribute to water supply development where possible;

(19) shall also follow all regional and state water planning guidance principles (31 TAC 358.3) in instances where recommended flood projects also include a water supply component;

(20) shall be based on decision-making that is open to, understandable for, and accountable to the public with full dissemination of planning results except for those matters made confidential by law;

(21) shall be based on established terms of participation that shall be equitable and shall not unduly hinder participation;

(22) shall include flood management strategies and projects recommended by the RFPGs that are based upon identification, analysis, and comparison of all flood management strategies the RFPGs determine to be potentially feasible to meet flood mitigation and floodplain management goals;

(23) shall consider land-use and floodplain management policies and approaches that support short- and long-term flood mitigation and floodplain management goals;

(24) shall consider natural systems and beneficial functions of floodplains, including flood peak attenuation and ecosystem services;

(25) shall be consistent with the National Flood Insurance Program (NFIP) and shall not undermine participation in nor the incentives or benefits associated with the NFIP;

(26) shall emphasize the fundamental importance of floodplain management policies that reduce flood risk;

(27) shall encourage flood mitigation design approaches that work with, rather than against, natural patterns and conditions of floodplains;

(28) shall not cause long-term impairment to the designated water quality as shown in the state water quality management plan as a result of a recommended flood management strategy or project;

(29) shall be based on identifying common needs, issues, and challenges; achieving efficiencies; fostering cooperative planning with local, state, and federal partners; and resolving conflicts in a fair, equitable, and efficient manner;

(30) shall include recommended strategies and projects that are described in sufficient detail to allow a state agency making a financial or regulatory decision to determine if a proposed action before the state agency is consistent with an approved regional flood plan;

(31) shall include ongoing flood projects that are in the planning stage, have been permitted, or are under construction;

(32) shall include legislative recommendations that are considered necessary and desirable to facilitate flood management planning and implementation to protect life and property;

(33) shall be based on coordination of flood management planning, strategies, and mitigation projects with local, regional, state, and federal agencies projects and goals;

(34) shall be in accordance with all existing water rights laws, including but not limited to, Texas statutes and rules, federal statutes and rules, interstate compacts, and international treaties;

(35) shall consider protection of vulnerable populations;

(36) shall consider benefits of flood management strategies to water quality, fish and wildlife, ecosystem function, and recreation, as appropriate;

(37) shall minimize adverse environmental impacts and be in accordance with adopted environmental flow standards;

(38) shall consider how long-term maintenance and operation of flood strategies will be conducted and funded; and

(39) shall consider multi-use opportunities such as green space, parks, water quality, or recreation, portions of which could be funded, constructed, and or maintained by additional, third-party project participants.