

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

*Region 12 San Antonio RFPG*

*06/27/2022*

*1:30 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 Monday, June 27, 2022, at 1:30 PM, in-person at the San Antonio River Authority Board room, located at 201 W. Sheridan St. and virtually on GotoMeeting at <https://meet.goto.com/277229789>.*

- Agenda:**
1. (1:30 PM) Roll-Call
  2. Public Comments – limit 3 minutes per person
  3. Approval of the Minutes from the Previous San Antonio Regional Flood Planning Group Meeting (Region 12)
  4. Communications from the Texas Water Development Board (TWDB)
  5. Chair Report
  6. Updates from Region 12 Subcommittees
  7. Presentation from Dave Mauk Regarding Low Water Crossings
  8. Discussion and Appropriate Action on Task 5
    - a. Recommendation of Flood Management Evaluations, Flood Management Strategies, and Associated Flood Mitigation Projects
  9. Discussion and Appropriate Action Regarding Proposed Changes per TWDB Informal Comments
  10. Discussion Regarding Allocation of Additional Funding
  11. Regional Liaison Update
  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**  
**Thursday, April 7, 2022**  
**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>	X
David Wegmann	<i>Counties</i>	
Derek Boese	<i>River authorities</i>	X
Doris Cooksey	<i>Electric generating utilities</i>	X
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>Nonprofit</i>	X
Steve Gonzales	<i>Small business</i>	X
David Mauk	<i>Water districts</i>	X
Steve Clouse	<i>Water utilities</i>	

<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	
Jarod Bowen	Texas State Soil and Water Conservation Board	
Kris Robles	General Land Office	X
Anita Machiavello	Texas Water Development Board (TWDB)	X
Susan Roberts	Texas Commission on Environmental Quality	

**Quorum:**

Quorum: **Yes**

Number of voting members or alternates representing voting members present: **11**

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

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

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

Ms. Kendall Hayes, San Antonio River Authority, called the role and confirmed a quorum.

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

No public comments.

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

Mr. Boese motioned to approve the minutes. Ms. Cooksey seconded the motion, motion passed.

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

Ms. Anita Machiavello provided an update on contract amendments and ensured that the RFPG is all receiving the TWDB newsletters.

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

Chair Garza provided an update on the City of San Antonio's bond. Proposition 2 (Drainage piece) received the highest voter approval. The city will organize a committee and four subcommittees to represent the multiple watersheds in the city and surrounding area.

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

Mr. Boese provided an update on the Technical Committee's last meeting. The committee is currently reviewing the submitted FMX's and will submit a recommendation to the planning group at the June meeting. Discussion ensued regarding the criteria and timeline for submissions.

Ms. Scott provided an update on the Outreach Committee's last meeting. The region will host three outreach meeting in June. The purpose of these meetings is to discuss the goals and mission of the RFPG and educating the public on the process. Direct outreach was conducted to county and city elected officials.

**AGENDA ITEM NO.7: DISCUSSION ON TASKS 6, 7, 8, 9 METHODOLOGIES**

Mr. Ron Branyon provided a preview of Chapters 6-9. His presentation and recording of this meeting can be found on the Region 12 website at <http://www.region12texas.org>.

## **AGENDA ITEM NO.8: DISCUSSION AND APPROPRIATE ACTION REGARDING REGIONAL LIAISON REPRESENTATION**

Chair Garza thanked the current liaisons for representing the RFPG at other regions' meetings. He opened the floor to a discussion on changing the liaisons. Ms. Scott noted that she asked Ms. Cooksey to serve as the new liaison for Region 11. Ms. Tackett asked that a different member serve as the liaison for Region 10. No alternate was selected. The RFPG asked Ms. Machiavello to inquire about the need for liaisons to attend meetings in person. More information to follow at a subsequent meeting.

## **AGENDA ITEM NO.9: REGIONAL LIAISON UPDATE**

Analissa Peace, GEAA, provided an update on Region 11. Region 10 incorporated responses to TWDB's informal comments into their draft plan.

Kirby Brown provided an update on Region 10. They will meet next on June 9<sup>th</sup> and review the proposed FMX's and review Chapter 8.

Ms. Mauk provided an update on Region 13. At their next meeting, they will review Chapter 8.

## **AGENDA ITEM NO.10: PUBLIC COMMENTS**

No public comments.

## **AGENDA ITEM NO.11: DATE AND POTENTIAL AGENDA ITEMS FOR NEXT MEETING**

The Outreach Subcommittee will meet June 22 at 2:00 PM. The Technical Subcommittee will meet on June 23 at 2:00 PM. The Planning Group will meet next on June 27 at 1:30 PM.

## **AGENDA ITEM NO.12: ADJOURN**

Ms. Reid motioned to adjourn. Ms. Tackett seconded the motion, motion passed.

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

TWDB requirements for Task 4B state that each RFPG is to develop and receive public comment on a “...proposed process to be used by the RFPG to identify and select flood management evaluations, flood mitigation strategies, and flood mitigation projects”. This process, once adopted by the RFPG, is to be documented and such documentation is to be included in the Technical Memorandum, the Initial Draft Regional Flood Plan, and the adopted Regional Flood Plan.

The following describes the proposed process being considered by the RFPG and on which public comment will be taken, both during the December RFPG meeting and via written comments submitted through the RFPG’s website. The process, as described below, was designed to conform with TWDB requirements as expressed in the rules, the scope-of-work for the regional flood planning process, and technical guidelines.

### **Step 1: Conduct an initial screening of Projects, Evaluations, and Strategies that were received by or developed in conjunction with floodplain management communities/project sponsors:**

In this first step, screening is conducted based on minimum TWDB requirements. The screening criteria applied in this step are:

- The evaluation/strategy/project is related to a flood mitigation or floodplain management goal.
- The evaluation /strategy/project meets an emergency need.
- The evaluation /strategy/project addresses a flood problem with drainage area of 1 square mile or greater.
- The evaluation /strategy/project reduces flood risk for the 100-year (1% annual chance) flood.
- Exceptions for level of flood risk reduction or problem area size include instances of flooding of critical facilities, transportation routes, or other factors as determined by the RFPG.

### **Step 2-1: Screening of Projects (FMPs):**

In the second step, potential Flood Mitigation Projects

(FMPs) are subjected to a screening-level evaluation based on the TWDB Technical Guidelines for Regional Flood Planning (April 2021) and specifically Figure 5 FMP flowchart (Attachment A). If a potential FMP does not satisfy the screening criteria in this step, it will then become a potential Flood Management Evaluation. There are three criteria that are applied in this step are: “sufficient data”, “no negative effect”, and “project details”.

- Sufficient data - The data upon which an assessment of no negative effect has been made must be reliable and have minimal uncertainty. H&H modeling, mapping, and basis for mitigation analysis must generally meet Section 3.5 of TWDB technical guidelines.
- No negative effect - The potential Project must not have negative impact on the 100-year (1% annual chance) flood event. It must not raise the flood elevation or increase discharge of the

100-year flood event. Any of the following will disqualify the potential project in this screening step:

- Potential project increases inundation on homes, commercial buildings, critical facilities, and other structures.
  - Potential project increases inundation beyond existing or proposed ROW or easements.
  - Potential project increases inundation beyond existing drainage infrastructure capacity.
- Project details – Data used to define the potential project must include sufficient project details as described in Section 3.9 of TWDB technical guidelines, including but not limited to the following:
  - Flood severity level metrics
  - Flood risk/damage reduction metrics
  - Estimated capital and O&M costs
  - Benefit/Cost ratios
  - Environmental benefits/impacts
  - Potential for natural flood mitigation components
  - Implementation constraints
  - Water supply benefits

Step 2-2: Screening of Evaluations (FMEs):

Flood Management evaluations may fall into one of three general categories:

1. Potential projects (FMPs) that did not meet screening criteria Step 2-1.
2. Planned flood studies or flood risk reduction alternatives analyses provided by or developed in conjunction with floodplain management communities/project sponsors.
3. Potential flood studies or flood risk reduction alternatives analysis needs identified by the technical consultant in Task 4A.

In this step potential studies are screened based on the following criteria from TWDB technical guidelines and illustrated in the flowchart in Attachment B:

- Potential evaluation must identify structures, population, and critical facilities at risk within the flood problem area being studied.
- Potential evaluation must identify roadways impacted by flooding within the flood problem area being studied, if applicable.
- Potential evaluation must quantify area of agricultural land at risk within the flood problem area being studied, if applicable.
- Potential evaluation must have willing sponsor(s) identified that are willing to commit resources and some level of potential cost sharing.
- Potential evaluation must have reasonable planning-level cost estimate.

If there is sufficiently detailed H&H analysis and flood mitigation alternatives analysis, then the Evaluation may be considered as Project (FMP) or Strategy (FMS)

Step 2-3: Screening of Strategies (FMSs):

Strategies are proposed plans or actions that reduce flood risk or mitigate flood hazards to life or property. Any proposed action that doesn't meet the criteria to qualify as an evaluation or as a project can potentially be considered as a strategy. Strategies can also be flood studies or flood risk reduction alternatives analysis needs that are identified in Task 4A. In general, RFPG has flexibility with what qualifies as Strategies.

In this step, Strategies are screened based on the following criteria from the TWDB technical guidelines:

- Potential strategies must include a planning-level cost estimate.
- Potential strategies must have an identified sponsor(s) that are willing to commit resources and some level of potential cost sharing.
- Potential strategies must quantify the estimated flood risk being addressed and potential level of flood risk reduction.

*Step 3: Sorting of Projects, Evaluations and Strategies by Flood Mitigation and Floodplain Management Goals:*

In the third step, the projects, evaluations, and strategies identified will be assigned to one of more of the goals defined in Task 3B.

*Step 4: Detailed assessment of selected Projects, Evaluations, and Strategies:*

In the fourth step, potential evaluations, strategies, and projects that meet the criteria in the initial screening processes described in Steps 1 and 2 are to be evaluated further for potential feasibility and must meet the following:

- Potential projects are preferred to have an estimated benefit-cost ratio greater than 1.0. If less than 1.0 projects may still be considered with additional justification from the RFPG.
- Potential evaluations, strategies, and projects must have a willing sponsor(s) that has been verified.
- There must be no known insurmountable implementation constraints or hurdles, such as ROW acquisitions, utility conflicts, and/or permitting issues.
- Potential evaluations, strategies, and projects will be evaluated to identify maintenance requirements and their costs.
- Potential strategies and projects must include a description of residual, post-project, and future risks.
- Potential strategies and projects must indicate potential use of federal funds, or other sources of funding, as a component of the total funding mechanism.

*Step 5: Final recommendation of Projects, Evaluations, and Strategies:*

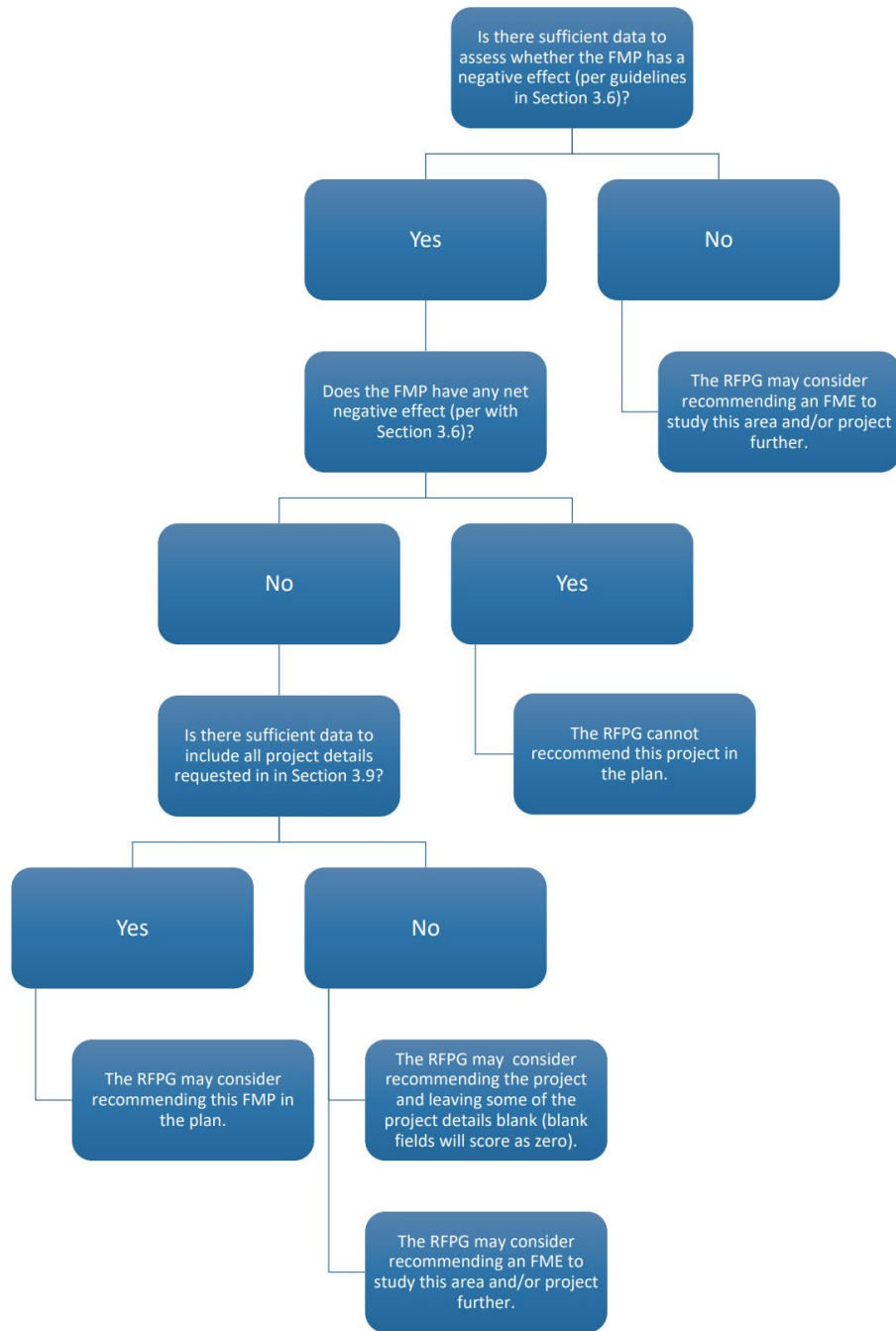
In this final step recommended studies, strategies, and projects are to be incorporated in the initial draft and final regional flood plan. The regional flood plan must also include:

- Public comments and RFPG response on the recommended FMPs, FMEs and FMSS
- Initial and final adoption



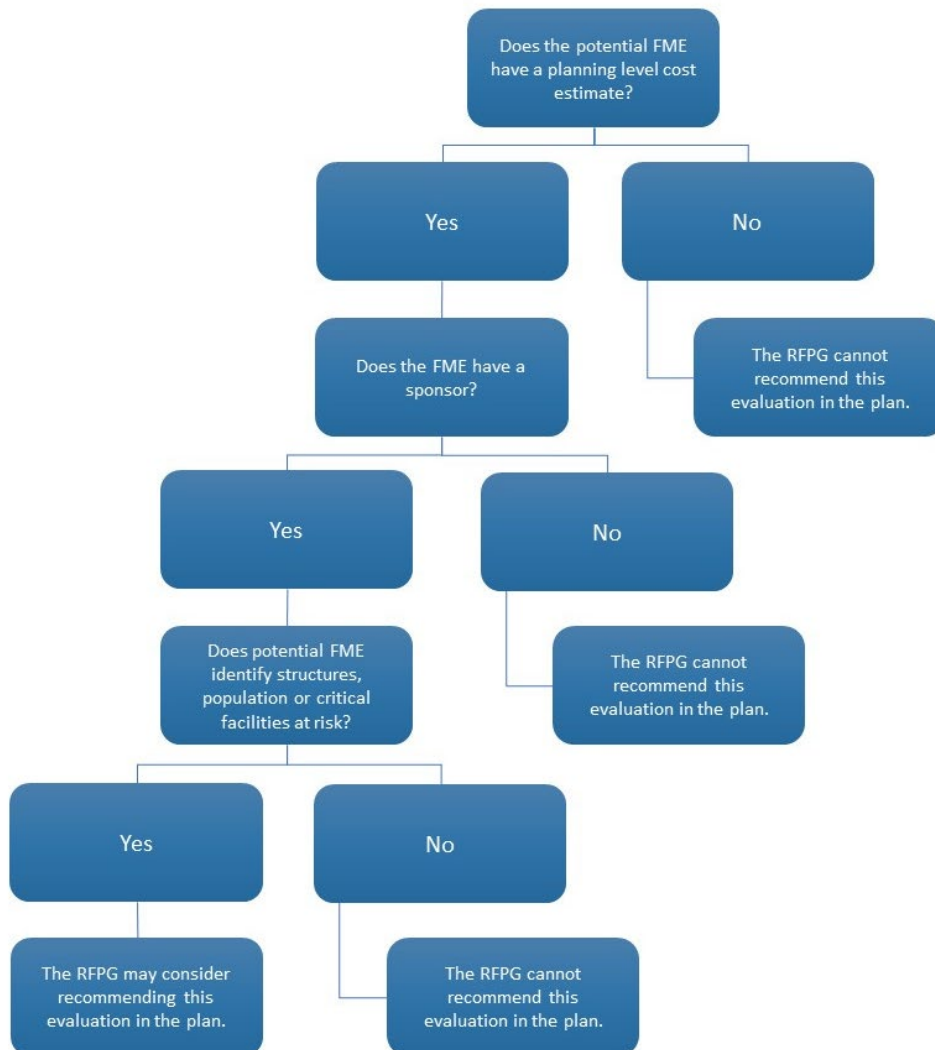


Attachment A – FMP Flowchart



\*From TWDB Technical Guidelines Figure 5: FMP Flowchart

Attachment B – FME Flowchart



**Exhibit C, Table 11**  
**Regional Flood Plan, Flood Mitigation, and Floodplain Management Goals**

Goal ID	RFPG No.	RFPG Name	Goal	Term of Goal	Target Year	Applicable To	Residual Risk	How will the Goal be Measured	Overarching Goal(s)	Associated Goal IDs
12000001	12	San Antonio	Track and document existing public outreach and education activities that improve awareness of flood hazards and benefits of flood planning, including nature based solutions, in the region and ensure there are at least 6 additional occurrences per year.	Short Term (10 year)	2033	Entire RFPG		Establishing a baseline and ensure a minimum number of occurrences.	Education and Outreach	
12000002	12	San Antonio	Increase to 12 per year and maintain and increase public outreach and education activities to improve awareness of flood hazards and benefits of flood planning including nature based solutions in the region.	Long Term (30 year)	2053	Entire RFPG		Number of activities.	Education and Outreach	
12000003	12	San Antonio	Increase the proficiency of stakeholders and floodplain managers across the region through training from Region 12 entities, TFMA, ASFPM and FEMA and provide certificates of completion. Improve 50% of FPM knowledge of nature based solutions, floodplain preservation, and cost/benefit of traditional structural solutions including providing certificates.	Short Term (10 year)	2033	Entire RFPG		Number of trainings reaching FPMs.	Education and Outreach	
12000004	12	San Antonio	Increase the proficiency of stakeholders and floodplain managers across the region through training from Region 12 entities, TFMA, ASFPM and FEMA and provide certificates of completion. Improve 100% of FPM knowledge of nature based solutions, floodplain preservation, and cost/benefit of traditional structural solutions including providing certificates.	Long Term (30 year)	2053	Entire RFPG		Number of trainings reaching FPMs.	Education and Outreach	
12000005	12	San Antonio	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.	Short Term (10 year)	2033	Entire RFPG		Increase the number of NFIP communities by 25%.	Flood Warning and Readiness	12000009
12000006	12	San Antonio	Expand 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.	Long Term (30 year)	2053	Entire RFPG		Increase the number of NFIP communities too 100%.	Flood Warning and Readiness	12000010
12000007	12	San Antonio	Increase the number of flood gauges (rainfall, stream, reservoir, etc.) in the region to provide localized information to emergency responders, and storage and accessibility of data to agencies by 25% of existing or at minimum 10.	Short Term (10 year)	2033	Entire RFPG		Establish a baseline and increase the number of gages by 25% over 2022.	Flood Warning and Readiness	12000009
12000008	12	San Antonio	Increase the number of flood gauges (rainfall, stream, reservoir, etc.) in the region to provide localized information to emergency responders, and storage and accessibility of data to agencies by 50% of existing.	Long Term (30 year)	2053	Entire RFPG		Increase the number of gages by 50% over 2022.	Flood Warning and Readiness	12000010
12000009	12	San Antonio	Increase the number of entities that communicate real time flood warnings to the public. Leverage mobile phone navigation apps to provide real time rerouting for the public.	Short Term (10 year)	2033	Entire RFPG		Increase by 40% of the NFIP communities.	Flood Warning and Readiness	12000007
12000010	12	San Antonio	Increase the number of entities that communicate real time flood warnings to the public. Leverage mobile phone navigation apps to provide real time rerouting for the public.	Long Term (30 year)	2053	Entire RFPG		Increase to 100% of the NFIP communities.	Flood Warning and Readiness	12000008
12000011	12	San Antonio	Establish a baseline and increase the number of NFIP communities which utilize Atlas 14 (Volume 11) or best available data from NOAA revised rainfall data as part of revisions to design criteria and flood prevention regulations by 50% percent. (region specific)	Short Term (10 year)	2033	Entire RFPG		Percentage of entities in the region.	Flood Studies and Analysis	
12000012	12	San Antonio	Increase the number of NFIP communities which utilize/adopt Atlas 14 (Volume 11) or best available data from NOAA revised rainfall data as part of revisions to design criteria and flood prevention regulations by 100%. (region specific)	Long Term (30 year)	2053	Entire RFPG		Percentage of entities in the region.	Flood Studies and Analysis	
12000013	12	San Antonio	Decrease the number of Zone X by 30% and increase the number of entities that conduct detailed studies to update their local flood risk by 25%.	Short Term (10 year)	2033	Entire RFPG		Percentage of entities in the region.	Flood Studies and Analysis	
12000014	12	San Antonio	Increase the number of entities that conduct detailed studies to update their local flood risk to 100%.	Long Term (30 year)	2053	Entire RFPG		Percentage of entities in the region.	Flood Studies and Analysis	
12000015	12	San Antonio	Decrease the average age of FEMA Flood Insurance Rate Maps (NFHL/FIRMs/FIS) to less than 10 years.	Short Term (10 year)	2033	Entire RFPG		100% of maps.	Flood Studies and Analysis	
12000016	12	San Antonio	Establish a baseline number of existing studies and process for analyzing watersheds to identify existing Natural Flood Mitigation Features (NFMF) such as headwaters, buffers, and conservation easements.	Short Term (10 year)	2033	Entire RFPG		Establishing a baseline/ process and increasing the number of entities that use the process.	Flood Studies and Analysis	
12000017	12	San Antonio	Increase the number of participating Community Rating System (CRS) entities in the FPR by 5.	Short Term (10 year)	2033	Entire RFPG		Number of entities in the region.	Flood Prevention	12000018
12000018	12	San Antonio	Increase the number of participating entities within Community Rating System (CRS) in the FPR by 100% or improve their rating.	Long Term (30 year)	2053	Entire RFPG		Percentage of entities in the region.	Flood Prevention	12000017
12000019	12	San Antonio	Increase the number of entities which regulate to the 1% annual chance future conditions floodplains as part of new development and redevelopment by 10%.	Short Term (10 year)	2033	Entire RFPG		Percentage of entities in the region.	Flood Prevention	
12000020	12	San Antonio	Increase the number of entities which regulate to the 1% annual chance future conditions floodplains as part of new development and redevelopment by 50%.	Long Term (30 year)	2053	Entire RFPG		Percentage of entities in the region.	Flood Prevention	
12000021	12	San Antonio	Increase the number of entities above the established baseline that have adopted a holistic watershed approach using existing Natural Flood Mitigation Features (NFMF) such as headwaters, buffers, and conservation easements for flood risk reduction as a basis for comprehensive subdivision regulations.	Short Term (10 year)	2033	Entire RFPG		Number of entities in the region.	Flood Prevention	12000016
12000022	12	San Antonio	Establish a baseline and increase the number of acres of publicly protected open space by 10 % as part of land conservation and acquisitions to reduce future impacts of flooding.	Short Term (10 year)	2033	Entire RFPG		Establish a baseline and increase the number of protected acres.	Non-Structural Flood Infrastructure Projects	12000016

**Exhibit C, Table 11**  
**Regional Flood Plan, Flood Mitigation, and Floodplain Management Goals**

Goal ID	RFPG No.	RFPG Name	Goal	Term of Goal	Target Year	Applicable To	Residual Risk	How will the Goal be Measured	Overarching Goal(s)	Associated Goal IDs
12000023	12	San Antonio	Increase the number of restored acres of publicly protected open space land in the region.	Long Term (30 year)	2053	Entire RFPG		Number of restored acres.	Non-Structural Flood Infrastructure Projects	12000016
12000024	12	San Antonio	Reduce the number of NFIP repetitive-loss properties in the FPR by 25%.	Short Term (10 year)	2033	Entire RFPG		Percentage of entities in the region.	Non-Structural Flood Infrastructure Projects	
12000025	12	San Antonio	Reduce the number of NFIP repetitive-loss properties in the FPR by 75%.	Long Term (30 year)	2053	Entire RFPG		Percentage of entities in the region.	Non-Structural Flood Infrastructure Projects	
12000026	12	San Antonio	Reduce the number of existing (2022) residential properties in the future 1% annual chance floodplain by 10%.	Short Term (10 year)	2033	Entire RFPG		Number of residential properties.	Structural and Non-structural Flood Infrastructure Projects	
12000027	12	San Antonio	Reduce the number of existing (2022) residential properties in the future 1% annual chance floodplain by 50%.	Long Term (30 year)	2053	Entire RFPG		Number of residential properties.	Structural and Non-structural Flood Infrastructure Projects	
12000028	12	San Antonio	Reduce the number of vulnerable critical facilities located within the existing and future 1% annual chance (100-year) floodplain by 50%.	Short Term (10 year)	2033	Entire RFPG		Number of vulnerable critical facilities.	Structural Flood Infrastructure Projects	
12000029	12	San Antonio	Reduce the number of vulnerable critical facilities located within the existing and future 1% annual chance (100-year) floodplain by 100%.	Long Term (30 year)	2053	Entire RFPG		Number of vulnerable critical facilities.	Structural Flood Infrastructure Projects	
12000030	12	San Antonio	Identify the eligible top 50 vulnerable roadway segments and low water crossings located within the existing and future 1% annual chance (100-year) floodplain.	Short Term (10 year)	2033	Entire RFPG		Number of entities in the region.	Structural Flood Infrastructure Projects	
12000031	12	San Antonio	Eliminate or mitigate the eligible top 50 vulnerable roadway segments and low water crossings located within the existing and future 1% annual chance (100-year) floodplain.	Long Term (30 year)	2053	Entire RFPG		Number of entities in the region.	Structural Flood Infrastructure Projects	
12000032	12	San Antonio	Increase the number of structural projects by 10% that include a NBS or Green Infrastructure (GI) component.	Short Term (10 year)	2033	Entire RFPG		Number of structural projects with NBS component.	Structural Flood Infrastructure Projects	
12000033	12	San Antonio	Increase the number of structural projects by 50% that include a NBS or Green Infrastructure (GI) component.	Long Term (30 year)	2053	Entire RFPG		Number of structural projects with NBS components.	Structural Flood Infrastructure Projects	

SARFP: FMP/FME/FMS Identification Process Table

JARP: FMP/FME/FMS Identification Process Table											Step 0	Step 1					Step 2-1: FMP					Step 2-2: FME			Step 2-3: FMS		Step 3	Step 4: Project Details/Feasibility					Step 4-1: Additional Project Details			Step 5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
General ID	Community /Sponsor	County	Source Name	Source Type	Source Date	Project Title	Phase/ Damage Area	Project Location	Project Type	Project Description	Screening: Already completed?	Related to Flood Mitigation/ Management Goal (Y/N)	Meets Emergency Need (FPE to define) (Y/N)	Addresses flood problem with DA + 1 or+2 (Y/N)	Reduces 100-year flood risk (Y/N)	RFPG Allows Exemption for not meeting: - Problem Area Size - Flood Risk Reduction (Y/N)	Type of Exemption	STRUCTURAL Sufficient Data (Y/N)	NONSTRUCTURAL Sufficient Data (Y/N)	No Negative Effect (Y/N)	Sufficient Project Details (BCA, Cost Estimate, Struct/Pop/Crit Facilities at Risk) (Y/N)	ADDITIONAL INFO FMP Identifies Need for Engineering Evaluation (Y/N/D)	STUDIES Will Identify Structures, Population, and Critical Facilities at Risk (Y/N)	Has a Planning Level Cost Estimate (Y/N/C)	Has a Planning Level Cost Estimate (Y/N)	Estimated Flood Risk or Flood Reduction (Y/N)	Associated Goal Types	Associated Goal IDs	Project Cost	Project Cost Date	Operations and Maintenance Cost	Benefits Cost Ratio	Sponsor Verified	Atlas 14 (Y/N/U)	FMP ONLY Pre-Project Level of Service	FMP ONLY Post-Project Level of Service	Public Comment/NFPG Response	Notes	FMP_ID	FME_ID	FMS_ID																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
							(Y/N)											(Y/N)	(Y/N)	(Y/N)	(Y/N/C)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)								(Y/N)	(Y/N)	(Y/N)						(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N

SARFP: FMP/FME/FMS Identification Process Table

ARFP: FMP/FME/FMS Identification Process Table										Step 0										Step 1					Step 2-1: FMP					Step 2-2: FME					Step 2-3: FMS			Step 3			Step 4: Project Details/Feasibility					Step 4-1: Additional Project Details				Step 5	
General ID	Community /Sponsor	County	Source Name	Source Type	Source Date	Project Title	Phased/ Damage Area	Project Location	Project Type	Project Description	Screening: Already completed?	Related to Flood Mitigation/ Management Goal (Y/N)	Meets Emergency Need (FPE to define) (Y/N)	Addresses flood problem with DA - 1 or/2 (Y/N)	Reduces 100-year flood risk (Y/N)	RFPG Allows Exemption for not meeting: - Problem Area Size - Flood Risk Reduction (Y/N)	Type of Exemption	STRUCTURAL Sufficient Data (Y/N)	NONSTRUCTURAL Sufficient Data (Y/N)	No Negative Effect (Y/N)	Sufficient Project Details (BCA, Cost Estimate, Struct/Pop/Crit Facilities at Risk) (Y/N)	ADDITIONAL INFO FMP Identifies Need for Engineering Evaluation (Y/N/C)	STUDIES Will Identify Structures, Population, and Critical Facilities at Risk (Y/N)	Has a Planning Level Cost Estimate (Y/N/C)	Has a Planning Level Cost Estimate (Y/N)	Estimated Flood Risk or Flood Reduction (Y/N)	Associated Goal Types	Associated Goal IDs	Project Cost	Project Cost Date	Operations and Maintenance Cost	FMP ONLY Benefits Cost Ratio	Sponsor Verified	Atlas 14 (Y/N/A)	FMP ONLY Pre-Project Level of Service	FMP ONLY Post-Project Level of Service	Public Comment/RFPG Response	Notes	FMP_ID	FME_ID	FMS_ID										
							(Y/N)																																			If "No" consider additional FME for update									
24	City of Bulverde	Comal	City of Bulverde Mapping Improvements Lewis Creek Watershed Phase 2 Alternative Analysis Drainage Report	Drainage Report	2016	Lewis Creek Alternative 1 Phase 1 & 2	Y	Lewis Creek Main at Smithson Valley Road and Scenic Oak Drive	Regional Channel Improvements	Channel improvement, roadway improvement	Y	Y	Y	Y	-	-	Y	Y	-	Y	-	-	-	-	-	-	Structural Flood Infrastructure Projects	12000029, 12000030, 12000031	\$5,468,350	2016	-	-	0.11	-	-	-	-	-	-	Includes full benefit of stream, project combines Alternative 1 Phase 1 & 2	1	-	-	-							
25	City of Bulverde	Comal	City of Bulverde Mapping Improvements Lewis Creek Watershed Phase 2 Alternative Analysis Drainage Report	Drainage Report	2016	Lewis Creek Alt 1	Y	Lewis Creek Main at Smithson Valley Road and Scenic Oak Drive	Flood Early Warning Systems	High water detection system. System includes warning signs, with flashers and automatic alarm barricade.	Y	-	-	Y	N	-	-	Y	Y	Y	-	-	-	-	-	-	-	Flood Warning and Readiness	12000005, 12000006	\$150,000	2016	-	-	-	-	-	-	-	-	-	Benefit Criteria Scores were calculated. May be able to use as BCR (0.29FT Negative effect)	1	-	-	-						
26	City of Bulverde	Comal	Cibolo Creek Watershed Holistic Master Plan	Watershed Master Plan	2018	FM 1363 at Cibolo Creek LWC Replacements (2 crossings)	N	FM 1363 Bulverde	Low water crossing improvements	Replace low water crossings at two locations where FM1363 crossing Cibolo Creek with bridges.	Y	-	U	Y	-	-	Y	-	Y	Y	-	-	-	-	-	-	-	Structural Flood Infrastructure Projects	12000033	58,000,000	2018	-	-	-	-	-	-	-	-	-	-	1	1	-	-						
27	City of Castroville	Medina	Castroville Drainage Master Plan	Drainage Master Plan	2022	LC 3 – Athens Street Storm Drainage Improvements, LC-4 – Hughes Street Storm Drainage Improvements	Y	City of Castroville, Area LC	Engineering Project Planning	2D Detailed Model Needed. LC-3: There is no existing drainage system drains the area. Regular rainfall causes widespread flooding, affecting roads, yards, and structures. This project proposes to analyze plan and construct a storm drain system. The project will also provide collection improvements and minor roadway drainage-scale improvements. LC-4: An existing drainage system drains the area, however the level of service is far below standard, causing widespread flooding of roads, yards, and structures. This project proposes to analyze plan and construct either a replacement system or supplemental conveyance. The project will also provide collection improvements and minor roadway drainage-scale improvements. Study of Flat Creek and downstream connectivity to Medina River. This proposed project will provide an updated detailed study including both current and expected ultimate watershed build-out conditions. Furthermore this project will identify at-risk infrastructure and detail opportunities for flood risk reduction.	Y	Y	-	U	Y	-	-	N	-	-	-	Y	C	-	-	-	-	-	-	Flood Studies and Analysis	LC 3: 5000000	-	-	-	-	-	-	-	-	-	-	-	More Information Needed - Drainage Area	1	-	-	-				
28	City of Castroville	Medina	Castroville Wish List	Wish List	2022	Flat Creek Study	N	City of Castroville	Hydrologic and Hydraulic Modeling	The project will provide mitigation plans and guidance to local government with regard to risks due to development and outline watershed-wide solutions for planning purposes.	Y	Y	Y	Y	N	-	-	-	N	-	-	-	-	-	-	-	-	-	Flood Studies and Analysis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-				
29	City of Castroville	Medina	Castroville Wish List	Wish List	2022	New Development Study	N	City of Castroville	Hydrologic and Hydraulic Modeling	The project will provide mitigation plans and guidance to local government with regard to risks due to development and outline watershed-wide solutions for planning purposes.	Y	-	Y	N	-	-	-	-	N	-	-	-	-	-	-	-	-	-	Flood Studies and Analysis	-	-	-	-	-	-	-	-	-	-	-	-	-	More Information Needed on specific location	1	-	-	-				
30	City of Fair Oaks Ranch	Bejar	City of Fair Oaks Ranch Master Drainage Plan	Master Drainage Plan	2018	7820 Rolling Acres Trail	N	7820 Rolling Acres Trail	Low Water Crossing Improvements	Low water crossing. Road closure gate is deployed at this crossing during large storm events.	Y	-	-	U	Y	-	Y	Y	-	U	N	D	-	-	-	-	-	Structural Flood Infrastructure Projects	12000033	\$685,000	2018	-	-	-	-	-	-	-	-	-	-	Preliminary BCR calculated for specific site location. Needs to Develop BCR. Calculate study cost	1	-	-	-					
31	City of Fair Oaks Ranch	Bejar	City of Fair Oaks Ranch Master Drainage Plan	Master Drainage Plan	2018	7840 Silver Spur Trail	N	7840 Silver Spur Trail	Low Water Crossing Improvements	Runoff collects from the northside of the city and passes this point before passing under Keeneland then to the Cibolo Creek Post Oak Creek low water crossing.	Y	-	-	U	Y	-	Y	-	U	N	D	-	-	-	-	-	-	Structural Flood Infrastructure Projects	12000033	\$690,000	2018	-	-	-	-	-	-	-	-	-	-	Preliminary BCR calculated for specific site location. Needs to Develop BCR. Calculate study cost	1	-	-	-					
32	City of Fair Oaks Ranch	Bejar	City of Fair Oaks Ranch Master Drainage Plan	Master Drainage Plan	2018	29010 Twoli Way	N	29010 Twoli Way	Storm drain improvements, infrastructure	Utilize existing stormwater infrastructure by regarding the roadway to slope towards existing inlets and open channels on the north and south side of Wilderness Dr on the east side of Fair Oaks Parkway. New curb installed along the west side of Fair Oaks Parkway to convey water towards stormwater inlet would also improve collection.	Y	-	-	U	Y	-	Y	Y	Y	-	-	-	-	-	-	-	-	Structural Flood Infrastructure Projects	12000029, 12000030	\$500,000	2018	-	-	-	-	-	-	-	-	-	-	1	-	-	-						
33	City of Fair Oaks Ranch	Bejar	City of Fair Oaks Ranch Master Drainage Plan	Master Drainage Plan	2018	8410 Noble Lark Dr	N	8410 Noble Lark Dr	Regional Channel Improvements	Regrade channel and install erosion control measures, repair the eroded foundation of the culvert headwall	N	-	-	U	U	-	Y	-	U	N	D	-	-	-	-	-	-	Structural Flood Infrastructure Projects	12000029, 12000030	\$223,066	2018	-	-	-	-	-	-	-	-	-	-	1	-	-	-						
34	City of Fair Oaks Ranch	Bejar	City of Fair Oaks Ranch Master Drainage Plan	Master Drainage Plan	2018	7900 Fair Oaks Parkway	N	7900 Fair Oaks Parkway	Regional Channel Improvements	Analysis needed to confirm no adverse impacts on the solution that was implemented.	Y	-	-	U	U	-	Y	-	U	N	D	-	-	-	-	-	-	-	Flood Studies and Analysis	12000011, 12000013, 12000014	\$10,000	2018	-	-	-	-	-	-	-	-	-	-	1	-	-	-					
35	City of Fair Oaks Ranch	Bejar	City of Fair Oaks Ranch Master Drainage Plan	Wish List	2018	Ammann Road Low Water Crossing	N	341 Ammann Road Low Water Crossing	Low Water Crossing Improvements	Low water crossing runs over the street due to insufficient culverts that pass under Ammann Road. Replacing the current road with an elevated concrete bridge above the flood stage.	Y	-	-	U	U	-	Y	-	U	N	D	-	-	-	-	-	-	Structural Flood Infrastructure Projects	12000033	\$1,124,334	2018	-	-	-	-	-	-	-	-	-	-	Need to Calculate Study Cost and Develop BCA	1	-	-	-					
36	City of Fair Oaks Ranch	Bejar	City of Fair Oaks Ranch Master Drainage Plan	Master Drainage Plan	2018	7420 Rolling Acres Trail	N	7420 Rolling Acres Trail	Low Water Crossing Improvements	Low Water crossing moves toward home on Meadow Creek Trail. Road Closure gate is deployed at this crossing during large storm events.	Y	-	-	U	U	-	Y	-	U	N	D	-	-	-	-	-	-	Structural Flood Infrastructure Projects	12000033	\$739,566	2018	-	-	-	-	-	-	-	-	-	-	Need to Calculate Study Cost and Develop BCA	1	-	-	-					
37	City of Fair Oaks Ranch	Bejar	City of Fair Oaks Ranch Master Drainage Plan	Master Drainage Plan	2018	8402 Battle Intense	N	8402 Battle Intense	Low Water Crossing Improvements	Battle intense is often shut down in large rain events. Debris collects and damages this low water crossing.	Y	-	-	U	U	-	Y	-	Y	N	D	-	-	-	-	-	-	-	Flood Studies and Analysis	12000011, 12000013, 12000014	\$3,421,454	2018	-	-	-	-	-	-	-	-	-	-	Need to Calculate Study Cost and Develop BCA	1	-	-	-				
38	City of Fair Oaks Ranch	Bejar	City of Fair Oaks Ranch Master Drainage Plan	Master Drainage Plan	2018	Rolling Acres Trail LWC Flow-activated Sensors	N	Rolling Acres Trail LWC	Low Water Crossing Improvements	Add flow-activated sensors and automated drop-down arms to close off a road when the water has surpassed the road.	N	-	-	U	U	-	N	-	N	N	D	-	-	-	-	-	-	-	Flood Warning and Readiness	12000005	\$400,000	2022	-	-	-	-	-	-	-	-	-	-	Need to Calculate Study Cost and Develop BCA	1	-	-	-				
39	City of Fair Oaks Ranch	Bejar	City of Fair Oaks Ranch Master Drainage Plan	Master Drainage Plan	2018	Battle Intense LWC Flow-activated Sensors	N	Battle Intense LWC	Low Water Crossing Improvements	Add flow-activated sensors and automated drop-down arms to close off a road when the water has surpassed the road.	N	-	-	U	U	-	N	-	N	N	D	-	-	-	-	-	-	-	Flood Warning and Readiness	12000005	\$200,000	2022	-	-	-	-	-	-	-	-	-	-	Need to Calculate Study Cost and Develop BCA	1	-	-	-				
40	City of Falls City	Karnes	Karnes and Wilson Counties Hazard Mitigation Plan	Hazard Mitigation Plan	2020	Inventory of residences in floodplain	N	City of Falls City	Education and Outreach; Regulatory and Guidance	Identify residential structures that are located in flood zones or high hazard areas and develop plan and implement a program for floodproofing or acquisition.	N	-	-	U	N	-	-	N	-	-	-	Y	C	-	-	-	-	-	Flood Studies and Analysis	12000011, 12000013, 12000014	\$50,000	2020	-	-	-	-	-	-	-	-	-	-	Buyout and/or Floodproofing Program (Need to Calculate Study Cost)	1	-	-	-				
41	City of Falls City	Karnes	Karnes and Wilson Counties Hazard Mitigation Plan	Hazard Mitigation Plan	2020	Update flood information and policies	N	City of Falls City	Education and Outreach; Regulatory and Guidance	Identify and compile information on flood hazard areas and residential property in flood zones, establish and implement a volunteer acquisition / elevation program based on FEMA protocol in association with SARA studies, and review permitting process based on the 100-year flood event.	N	-	-	U	N	-	-	N	-	-	-	Y	C	-	-	-	-	-	Flood Prevention	12000021, 12000022	\$100,000	2020	-	-	-	-	-	-	-	-	-	-	Same Study as Above (Need to Calculate Cost). Master Drainage Plan could encompass this	1	-	-	-				
42	City of Falls City	Karnes	Karnes and Wilson Counties Hazard Mitigation Plan	Hazard Mitigation Plan	2020	Study the San Antonio River and its tributaries	N	City of Falls City	Education and Outreach; Regulatory and Guidance	When the San Antonio River floods, the city is cutoff from the rest of the county (hospital and EMS) with islands lasting over a week. Install stream gauges and develop a study to identify solutions to flooding. SARA completed a study but County officials wary due to lack of coordination and results.	N	-	-	U	N	-	-	-	N	-	-	-	N	N	Y	Y	N	-	-	Flood Warning and Readiness	12000007	\$250,000	2020	-	-	-	-	-	-	-	-	-	-	Similar to Studies Above. Can be FME or FMS	1	1	-	-			
43	City of Falls City	Karnes	Karnes and Wilson Counties Hazard Mitigation Plan	Hazard Mitigation Plan	2020	San Antonio River drainage ownership study	N	City of Falls City	Education and Outreach, Natural Based Projects	Develop ownership and access understanding parcels fronting the San Antonio River and major tributaries to have better agreements and access to areas that need flood control mitigation and erosion control	N	-	-	U	N																																				

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[illegible]

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General ID	Community Sponsor	County	Source Name	Source Type	Source Date	Project Title	Phased/ Damage Area	Project Location	Project Type	Project Description	Screening: Already completed?	Related to Flood Mitigation/Management Goal (Y/N)	Meets Emergency Need (FPE to define) (Y/N)	Addresses flood problem with DA + 1 or+2 (Y/N)	Reduces 100-year flood risk (Y/N)	RFPG Allows Exemption for not meeting: - Problem Area Size Flood Risk Reduction (Y/N)	Type of Exemption	STRUCTURAL Sufficient Data (Y/N)	NONSTRUCTURAL Sufficient Data (Y/N)	No Negative Effect (Y/N)	Sufficient Project Details (BCA, Cost Estimate, Struct/Pop/Crit.Facilities at Risk) (Y/N)	ADDITIONAL INFO FMP Identifies Need for Engineering Evaluation (Y/N/D)	STUDIES Will Identify Structures, Population, and Critical Facilities at Risk (Y/N)	Has a Planning Level Cost Estimate (Y/N/C)	Has a Planning Level Cost Estimate (Y/N)	Estimated Flood Risk or Flood Reduction (Y/N)	Associated Goal Types	Associated Goal IDs	Project Cost	Project Cost Date	Operations and Maintenance Cost	FMP ONLY Benefit-Cost Ratio	Sponsor Verified	Atlas 14 (Y/N/U)	FMP ONLY Pre-Project Level of Service	FMP ONLY Post-Project Level of Service	Public Comment/RFPG Response	Notes	FMP_ID	FME_ID	FMS_ID																																																										
																		If "No" consider FME	If "No" consider FME	If "No" consider FME	If "No" consider FMS If "D" develop	If "No" consider FMS	If "No" consider FMS If "C" calculate cost	If "No" consider FMS																																																																											
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94	City of San Antonio	Bexar	Seeling	Preliminary Engineering Report	2021	Seeling Drainage Improvements	Y	North John Page Dr - South Seeling Dr / Flacid Dr - at Alazan Crk - East St. Cloud - West: Beginning of channel at Donaldson Dr. between Colleen Dr. & E. Cheryl Dr.; Seeling Blvd from Lowery Dr to Donaldson Ave; Flacid Dr from Pardo Cr to Orville Dr; Palm Dr from Orville Ln to E Cheryl Dr.	Storm drain improvements, infrastructure	Install box culverts, grass lined channel construction		Y	-	Y	Y	-	-	Y	-	Y	Y	-	-	-	-	-	Structural Flood Infrastructure Projects	12000029, 12000030	\$30,790,000	2021	-	0.62	City of San Antonio	Y	-	-	-	Reduction in 100 year flooding	1																																																												
95	City of San Antonio	Bexar	Barbara Drive Drainage Study	CoSA Project List	2021	Barbara Drive Drainage Improvements	Y	Dellwood Drive and Shadywood Lane to Oblate Drive and Barbara Drive, Dellwood Dr from Springwood Lane to Shadywood Lane.	Storm drain improvements, infrastructure	Upsizing the boxes underneath Dellwood Drive and Oblate Drive, Upsizing the boxes underneath Dellwood Drive, Enlarging the open channel, upsizing the boxes underneath portions of El Montan Avenue, Pinewood Lane and Dellwood Drive. The improvements will also include reconstruction of the street and curb for the portion of Dellwood Drive and Oblate Drive within the project boundary	Y	-	Y	Y	Y	-	-	Y	-	Y	Y	-	-	-	-	-	Structural Flood Infrastructure Projects	12000029, 12000030	\$29,362,000	2021	-	0.04	City of San Antonio	Y	-	-	Convey the 25 year and reduce the 100 year	1																																																													
96	City of San Antonio	Bexar	Thames Drainage Channel Improvements	CoSA Project List	2016	Thames Drainage Channel Replacement - Alt 1	N	Thames Dr Channel from Blanco Rd to Langdon Dr (NOM)	Storm drain improvements	Replace the existing culverts at Blanco Rd, San Pedro Ave, Thames Dr, Private Dr and Dorcas.	Y	-	Y	Y	Y	-	-	Y	-	Y	Y	-	-	-	-	-	Structural Flood Infrastructure Projects	12000029, 12000030	\$30,590,000	2016	-	0.03	City of San Antonio	N	-	-	Less than the 100 year	At least the 100 year	1																																																												
97	City of San Antonio	Bexar	Rock Creek - Alt 1	CoSA Project List	2016	Rock Creek - Alt 1	N	Rock Creek Channel from Loop 410 to Olmos Creek (NOM)	Infrastructure	Reducing the height of the drop structure at the Olmos Creek outfall, Bridge replacements will be required for both the railroad crossing and West Ave.	Y	-	Y	Y	Y	-	-	Y	-	Y	Y	-	-	-	-	-	Structural Flood Infrastructure Projects	12000029, 12000030	\$15,860,000	2016	-	0.1	City of San Antonio	N	-	-	Less than the 100 year	100 year	1																																																												
98	City of San Antonio	Bexar	Symphony Lane Buyout Narrative	CoSA Project List	2019	Symphony Lane Buyout Narrative	N	Symphony Lane & E Pymon Ave to SE Military	Property acquisition	Purchase 32 properties located west of the San Antonio River Symphony Reach, and along Pymon Ave and Symphony Lane.	Y	-	Y	Y	Y	-	-	-	Y	Y	Y	-	-	-	-	-	Non-Structural Flood Infrastructure Projects	12000025	\$36,736,520	2022	-	0.4	City of San Antonio	N	-	-	-	Buyout project.	1																																																												
99	City of San Antonio	Bexar	Judson and Lookout Project Narrative	CoSA Project List	2016	Judson and Lookout UWC Improvement	N	Low water crossing intersection	Infrastructure	Upgrade the low water crossings and the connecting/downstream channel	Y	-	Y	Y	Y	-	-	Y	-	Y	Y	-	-	-	-	-	Structural Flood Infrastructure Projects	12000029, 12000030	\$5,665,138	2016	-	0.9	City of San Antonio	N	-	-	Less than 100 year	100 year	1																																																												
100	City of San Antonio	Bexar	Hubbrook Road Preliminary Engineering Report	Preliminary Engineering Report	2021	Hubbrook Road Improvements	N	Woodburn Rd to approximately 2,700 feet south	Infrastructure	Offset a portion of the roadway south of Woodburn Rd	Y	-	U	Y	Y	-	-	Y	-	Y	Y	-	-	-	-	-	Structural Flood Infrastructure Projects	12000033	\$16,250,000	2022	-	0.01	City of San Antonio	Y	-	-	Less than 100 year	100 year	1			Project does not remove homes from the floodplain but gives unimproved access																																																									
101	City of San Antonio	Bexar	Shady Lane Buyout Narrative	CoSA Project List	2019	Shady Lane Dr. Buy-Outs	N	Shady Lane Drive East of Hubbrook Rd and Apple Green Rd.	Property acquisition	This project consist primarily of property buy-outs within the floodplain to mitigate structural flooding to those properties.	Y	-	Y	Y	Y	-	-	-	Y	Y	Y	-	-	-	-	-	Non-Structural Flood Infrastructure Projects	12000025	\$1,453,880	2022	-	0.2	City of San Antonio	N	-	-	-	Buyout project.	1																																																												
102	City of San Antonio	Bexar	Leon Creek Watershed Master Plan Phase 3	Watershed Master Plan	2011	Hubner Creek/Hubner Creek Trib. A RSWF (Hubner RSWF)	N	Hubner Creek intersection, south of Eckhart	Regional Detention	Construction of a Regional Storm Water Facility (RSWF, detention basin) on approximately 35 Acres (ROW to be acquired) at confluence of Hubner and Tributary to Hubner Creek. With approximately 100 acre-feet of storage	Y	-	U	U	Y	-	-	Y	-	Y	N	D	-	-	-	Structural Flood Infrastructure Projects	12000029, 12000030	\$19,401,969	2010	-	-	City of San Antonio	N	-	-	-	FRR Calculated may need to develop BCR and calculate study cost	1																																																													
103	City of San Antonio	Bexar	Cibola Creek Watershed Indefinite Master Plan	Watershed Master Plan	2018	Upper Martinez Creek Improvements	N	Woodlake Pkwy Old Pearcall Road 410 Southwest	Low water crossing improvement, infrastructure	Improvements to already channelized section of Martinez Creek (Cibola Watershed) from Montgomery Dr to Walzem Rd and bridge improvements at Gibbs Spinal Road.	Y	-	U	Y	Y	-	-	Y	-	Y	Y	-	-	-	-	-	Structural Flood Infrastructure Projects	12000029	\$4,000,000	2018	-	-	SABA	N	-	-	-	Benefit Criteria Scores were calculated. May be able to use as BCR	1	1																																																											
104	City of San Antonio	Bexar	Medina River Holistic Watershed Master Plan	Watershed Master Plan	2015	430 Center A (Old Pearcall rd at Medio Creek)	N	Old Pearcall Road 410 Southwest	Low Water Crossing Improvements	Old Pearcall Rd overlapping at Medio Creek Bridge and backwater conditions created from Railroad Bridge DS Old Pearcall rd.	Y	-	Y	Y	Y	-	-	Y	-	N	N	-	Y	Y	-	-	Flood Studies and Analysis	12000011, 12000013, 12000014	\$17,830,000	2015	-	-	SABA	N	-	-	-	Need to update with more information. May need to calculate study cost.	1																																																												
105	City of San Antonio	Bexar	Medina River Holistic Watershed Master Plan	Watershed Master Plan	2015	430 Center M (Oak Island Community)	Y	HWY 1604 East of Somerset Community	Regional Channel Improvements	Oak Island Drainage Improvements. Culvert upgrades at two locations on Oak Island Dr and 1604 with channel work.	Y	-	U	Y	Y	-	-	Y	-	N	N	-	Y	Y	-	-	Structural Flood Infrastructure Projects	12000029, 12000030	\$3,889,346	2015	-	-	SABA	N	-	-	-	Need to calculate study cost.	1																																																												
106	City of San Antonio	Bexar		Wish List	2022	Development of a Streamscaping Program for Flood Risk Management in Texas	N	San Antonio River Basin	Education and Outreach	Increase the number of public outreach and education activities to improve awareness of flood hazards and benefits of flood planning in the Flood Planning Region. Promote nature-based solution training to enable greater participation in flood risk/mitigation decisions.	Y	-	N	N	N	-	-	N	-	-	N	-	-	-	-	-	Education and Outreach	12000001	\$129,000	2022	-	-	SABA	N	-	-	-	(\$129,000) Proposed Budget.			1																																																										
107	City of San Antonio	Bexar	Leon Creek Watershed Master Plan Phase 3		2011	Culebra Creek NWWC with Culbraz Road Bridge Improvements (Damage Center 4)	N	Just upstream of Old Grissom Road	Bridge improvements, infrastructure	A basic trapezoidal channel with side slopes of 3:1 along with upgrades on the Culebra Road Bridge.	Y	-	U	Y	Y	-	-	Y	-	N	N	D	-	-	-	-	Structural Flood Infrastructure Projects	12000029	\$23,700,000	2010	-	-	CoSA	N	-	-	-	FRR Calculated (0.22). Need to calculate BCR. May need to calculate study cost	1																																																												
108	City of San Antonio	Bexar	Leon Creek Watershed Master Plan Phase 3		2011	Culebra Creek Tributary A at Tavel Road Enhanced Conveyance	N	Located along Culebra Creek Tributary A between Dover Ridge and Tavel Road	Regional Channel Improvements	Increasing the flow area by widening the channel and increasing its side slopes.	Y	-	U	Y	Y	-	-	Y	-	N	N	D	-	-	-	-	Structural Flood Infrastructure Projects	12000029	\$8,725,000	2018	-	-	CoSA	N	-	-	-	FRR Calculated (0.11). Need to calculate BCR. May need to calculate study cost	1																																																												
109	City of San Antonio	Bexar	Leon Creek Watershed Master Plan Phase 3		2011	French Creek at Guilbeau Road NWWC	Y	Downstream of Guilbeau Road	Infrastructure	A basic trapezoidal channel with side slopes of 3:1, representing an earthen channel	Y	-	U	Y	Y	-	-	Y	-	N	N	-	Y	C	-	-	Structural Flood Infrastructure Projects	12000029	\$9,310,000	2018	-	-	CoSA	N	-	-	-	FRR Calculated (0.12). Need to develop BCR. May need to calculate study cost	1																																																												
110	City of San Antonio	Bexar	Leon Creek Watershed Master Plan Phase 3		2011	French Creek RSWF	Y	Upstream of Loop 1604 on French Creek	Infrastructure	An on-channel RSWF provides approximately 150 acre-feet of storage	Y	-	U	Y	Y	-	-	Y	-	N	N	-	Y	C	-	-	Structural Flood Infrastructure Projects	12000029	\$18,246,000	2018	-	-	CoSA	N	-	-	-	FRR Calculated (0.09). Need to develop BCR. May need to calculate study cost	1																																																												
111	City of San Antonio	Bexar	Leon Creek Watershed Master Plan Phase 3		2011	Holberts Creek at Bander Road Enhanced Conveyance	N	Between Kettle Loop and Bander Road	Regional Channel Improvements	Channel modifications were designed as a basic trapezoidal channel with side slopes of 3:1	Y	-	U	N	Y	-	-	Y	-	N	N	D	-	-	-	-	Structural Flood Infrastructure Projects	12000029	\$2,416,000	2018	-	-	CoSA	N	-	-	-	FRR Calculated (1.44). Need to calculate study cost	1																																																												
112	City of San Antonio	Bexar	Leon Creek Watershed Master Plan Phase 3		2011	Holberts Creek RSWF	N	West of Texas Highway 14 and Loop 1604	Infrastructure	An off-channel RSWF provides approximately 3300 acre-ft of storage	Y	-	U	Y	Y	-	-	Y	-	Y	N	-	Y	C	-	-	Structural Flood Infrastructure Projects	12000029	\$8,493,000	2018	-	-	CoSA	N	-	-	-	FRR Calculated (1.71). Need to calculate study cost	1																																																												
113	City of San Antonio	Bexar	Leon Creek Watershed Master Plan Phase 3		2011	Leon Creek at Grissom Road Enhanced Conveyance	N	North of Grissom Road	Regional Channel Improvements	A combination of selective clearing and Channel modifications were designed as a basic trapezoidal channel with side slopes of 3:1	Y	-																																																																																							



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General ID	Community/Sponsor	County	Source Name	Source Type	Source Date	Project Title	Phase(s)/ Damage Area	Project Location	Project Type	Project Description	Screening: Already completed?	Related to Flood Mitigation/ Management Goal (Y/N)	Meets Emergency Need (P/N to define) (Y/N)	Addresses flood problem with DA + 1 mi <sup>2</sup> (Y/N)	Reduces 100-year flood risk (Y/N)	R/F/G Allows Exemption for not meeting: Problem Area Size Flood Risk Reduction (Y/N)	Type of Exemption	STRUCTURAL Sufficient Data	NONSTRUCTURAL Sufficient Data	No Negative Effect	Sufficient Project Details (ICA, Cost Estimate, Structure/Critical Facilities at Risk)	ADDITIONAL INFO FMP	STUDIES	Has a Planning Level Cost Estimate	Has a Planning Level Cost Estimate	Estimated Flood Risk or Flood Reduction	Associated Goal Types	Associated Goal IDs	Project Cost	Project Cost Date	Operations and Maintenance Cost	FMP ONLY Benefit-Cost Ratio	Sponsor Verified	Atlas 14 (Y/N/U)	FMP ONLY Pre-Project Level of Service	FMP ONLY Post-Project Level of Service	Public Comment/RFP/PG Response	Notes	FMP_ID	FME_ID	FMS_ID	
							(Y/N)											(Y/N)	(Y/N)	(Y/N)	(Y/N/C)	(Y/N)	(Y/N)	(Y/N)																		
							If "No" consider FME											If "No" consider FME	If "No" consider FME	If "No" consider FME	If "No" consider FMS If "D" develop	If "No" consider FMS	If "No" consider FMS	If "No" consider FMS																		
227	Wilson County	Wilson	Wilson County Watershed Master Plan	Watershed Master Plan	2012	County Road 302 and Tributary 216 to the Lower San Antonio River Watershed	N	County Road 302 and Tributary 116 to the Lower San Antonio River Watershed	Engineering Project Planning	Adding a bridge to allow the 1yr design storm to pass. A bridge approximately 130 ft. long with up to four spans.	Y	-	-	U	N	-	Y	-	U	N	D	-	C	-	-	-	5697,000	-	-	-	-	-	N	<5yr	>5yr	-	-	-	1	1		Need to update with more information; model - ICA - No Impact - detailed cost needed Consider FME to run model with Atlas 14.
228	Wilson County	Wilson	Wilson County Watershed Master Plan	Watershed Master Plan	2012	Bentwood Drive and Kiscadee Creek	N	Bentwood Drive and Kiscadee Creek	Engineering Project Planning	Study to upgrade and repair the Bentwood Drive Crossing. Currently not passing the 1yr storm.	Y	-	-	U	N	-	N	-	-	-	Y	-	C	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	1	1		
229	Wilson County	Wilson	Wilson County Watershed Master Plan	Watershed Master Plan	2012	County Road 202 and Macielinas Creek	N	County Road 202 and Macielinas Creek	Engineering Project Planning	Study to investigate the suitability of a stream bank stabilization project to protect County Road 202 from erosion damage.	Y	-	-	U	N	-	N	-	-	-	Y	-	C	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	1	1		
230	Wilson County/ TaOOT	Wilson	Wilson County Watershed Master Plan	Watershed Master Plan	2012	Recommend for TaOOT Roadways - Project 9 - FM 537 & Marielinas Creek	N	Wilson County	Engineering Project Planning	Study to determine upgrades for bridge so that it provides a safe evacuation route during large storm events.	Y	-	-	Y	U	-	N	-	-	-	-	D	-	Y	-	-	13,093,000	2012	-	-	-	-	Y	-	-	-	-	-	1	1		
231	Wilson County/ TaOOT	Wilson	Wilson County Watershed Master Plan	Watershed Master Plan	2012	Recommend for TaOOT Roadways - Project 10 - FM 2579 & Marielinas Creek	N	Wilson County	Engineering Project Planning	Study to determine upgrades for crossing so that it provides a safe evacuation route during large storm events.	Y	-	-	Y	U	-	N	-	-	-	-	D	-	Y	-	-	5565,000	2012	-	-	-	-	Y	-	-	-	-	-	1	1		