

LOWER RIO GRANDE REGIONAL FLOOD PLANNING GROUP MEETING

*Agenda Item 8 – Discussion and Update on
Tasks 1, 3B, 4A, and 4B*

October 13, 2021



AGENDA

Discussion and Update on:

- Task 1 – Planning Area Description
- Task 3B – Flood Mitigation and Floodplain Management Goals
- Task 4 – Flood Mitigation Needs Assessment & Identification of FMEs, FMPs, & FMSs.

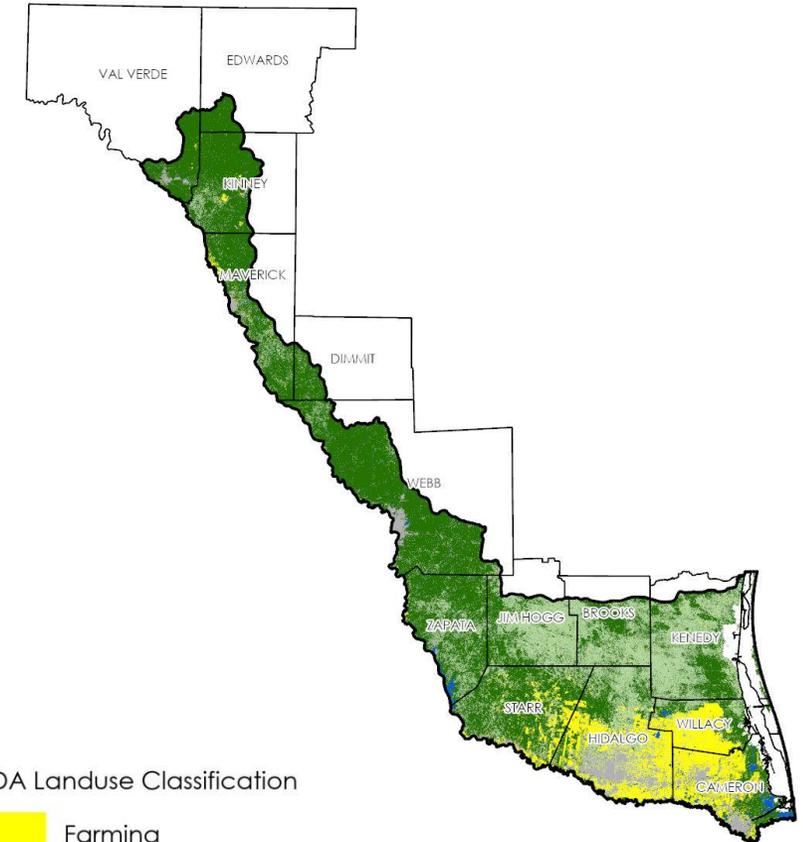


TASK 1 PLANNING AREA DESCRIPTION



TASK 1 – LAND USE

- ❑ Texas Working Lands by Land Cover
- ❑ Concentration of cover
 - ❑ Urban Development along the border
 - ❑ Farming in the Southeast
 - ❑ Ranching in lower half of the Basin
 - ❑ Forestry in the upper half of the Basin



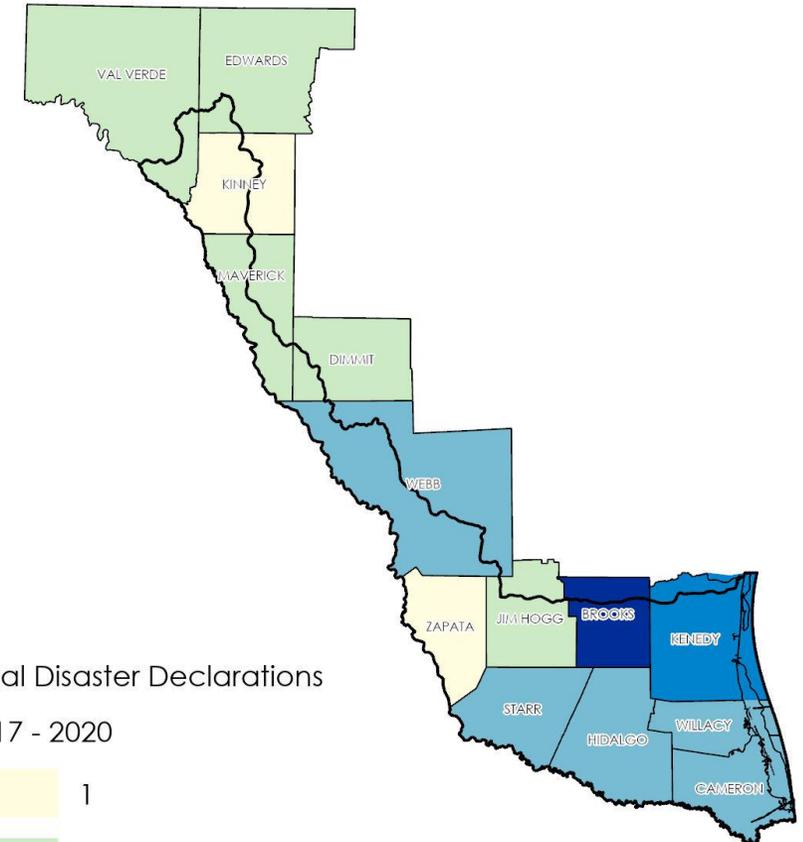
USDA Landuse Classification

-  Farming
-  Forestry
-  Open Water
-  Ranching
-  Urban Development



TASK 1 – CROP DAMAGE

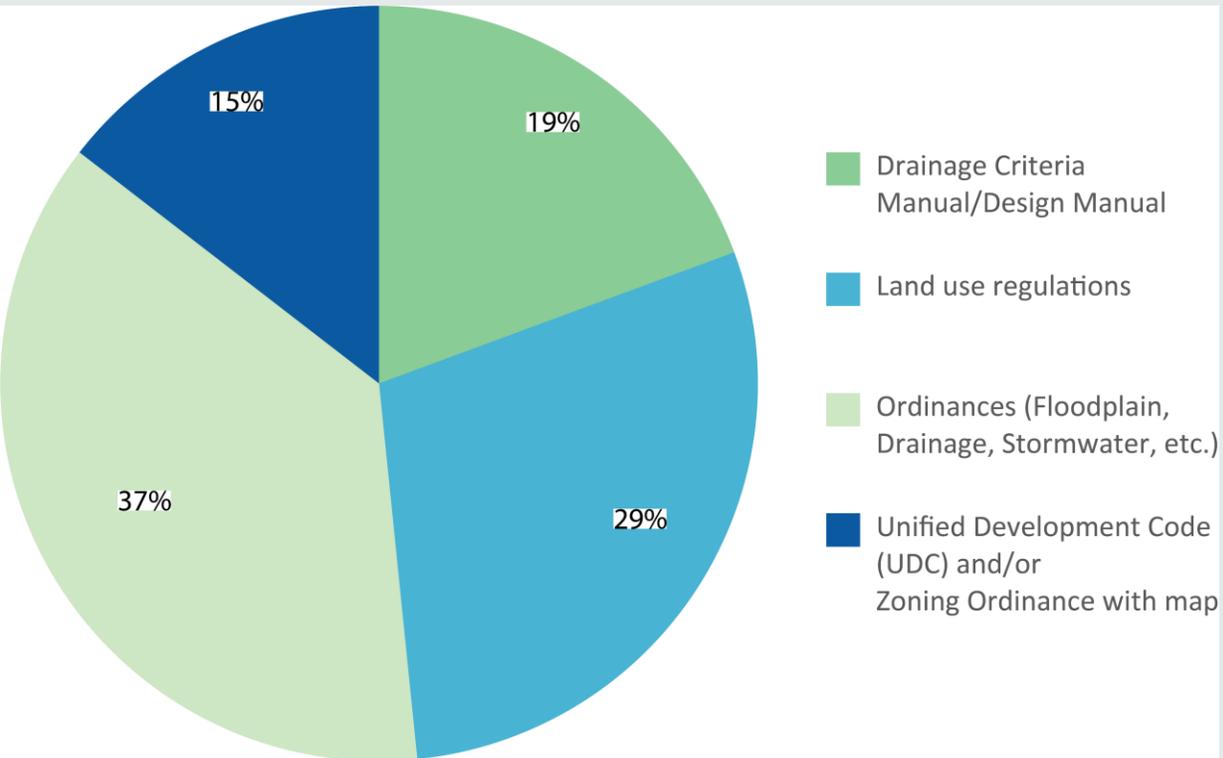
- ❑ Crop Disaster Declarations
- ❑ Crop Damage from the USDA Farm Service Agency Report
- ❑ Top losses by \$ amount:
 - ❑ Hidalgo: \$134 M
 - ❑ Cameron: \$73 M
 - ❑ Willacy: \$46 M
 - ❑ Starr: \$23 M



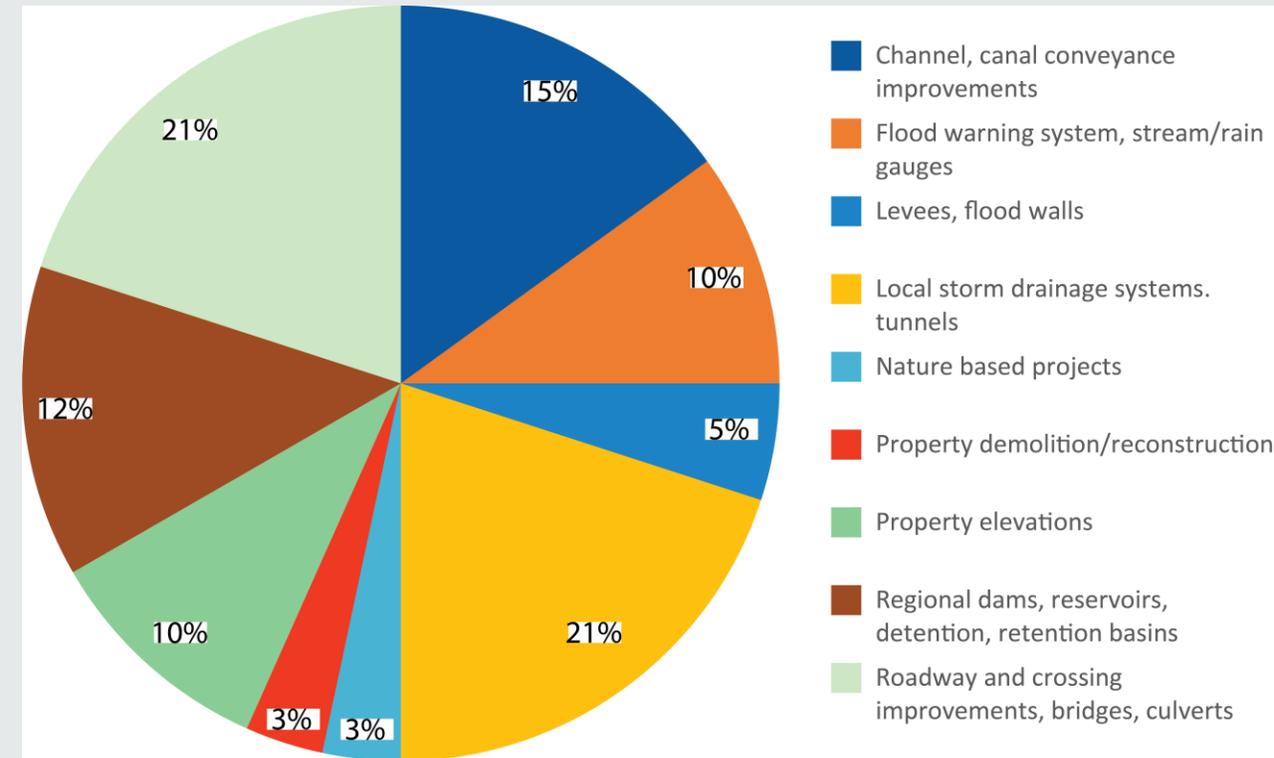


TASK 1 – DATA COLLECTION TOOL RESULTS

Flood Plans and Regulations



Proposed Flood Mitigation Projects



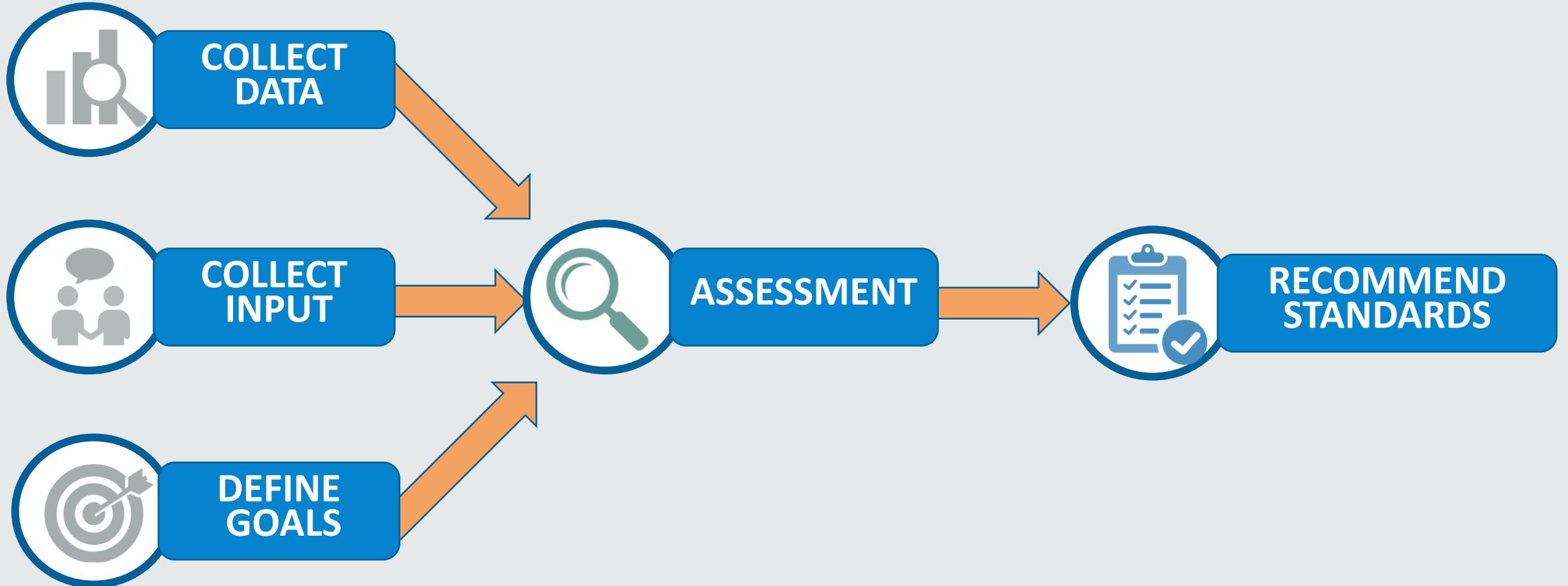


TASK 3 FLOODPLAIN MANAGEMENT PRACTICES AND FLOOD PROTECTION GOALS



TASK 3 INTRODUCTION

Process





TASK 3 DEVELOPMENT OF FLOODPLAIN MITIGATION AND MANAGEMENT GOALS & STANDARDS

July - August

September

October

November

EXPLORE/PRELIMINARY

REVISED

ADOPT

ADOPT

Overview

- Introduce goals & standards
- Preliminary drafted goal statements

Discuss

- Regionwide or sub-regional goals
- Recommendations (shoulds) or Required (musts)?

Overview

- Goal Setting Considerations
- Residual Risk
- Example Standards

Discuss

- Results of August Homework and refinement/consensus on goals
- How standards achieve goals/Preliminary Standards

Decide

- Preliminarily select goal statements (formally approve next month)

Overview

- Chapter 3 Goals / Standards

Discuss

- Preliminary drafted standards

Decide

- Adopt Chapter 3 Goals / Standards

Overview

- Ch. 3 Standards

Discuss

- Final Refinement of Standards

Decide

- Adopt Standards
- Standards: Recommended or Required



TASK 3B

GOAL SETTING



TWDB GOAL SETTING REQUIREMENTS

“to protect against the loss of life and property”



Specific &
Achievable



Short-term (10 yrs)
&/or
Long-term (30 yrs)



Residual
Risk



Regionwide
or Subregional

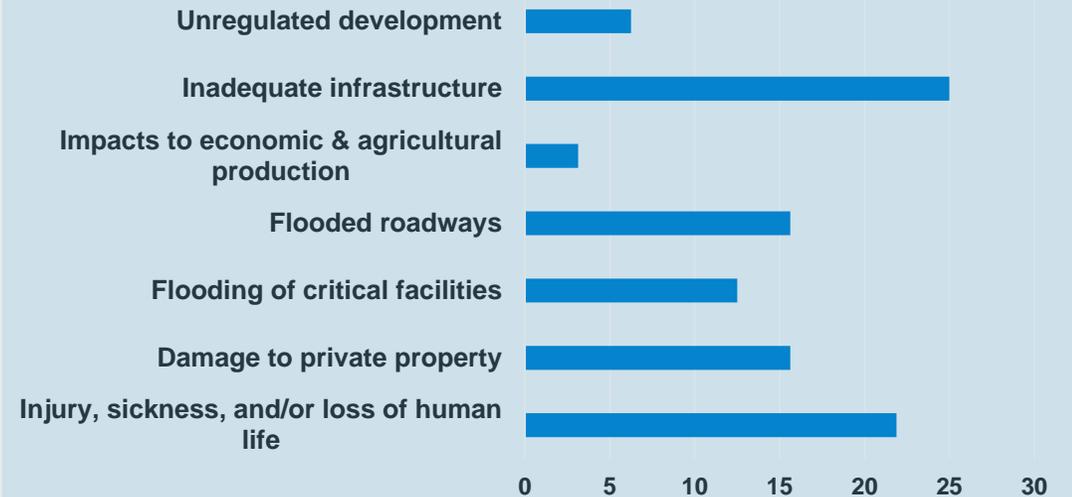


GOAL SETTING PROCESS

Items to Consider

- Currently there are 37 goal statements for your consideration
- We proposed 6 Overarching Goal Categories
 - 2 more proposed
- Consider the following:
 - No maximum or minimum number
 - Availability of existing data
 - Ease of collecting and tracking additional data
 - Time/Resources required to track selected goals

Biggest Flooding Concerns (% Responses)





GOAL SETTING CONSENSUS

During This Meeting

Text "Half" to 22333
Or go to
pollev.com/halff in
your web browser

Examine each goal statement



Review feedback received
from Task 3 homework



Poll RFPG members on which
goal statements to include
(rank by category)



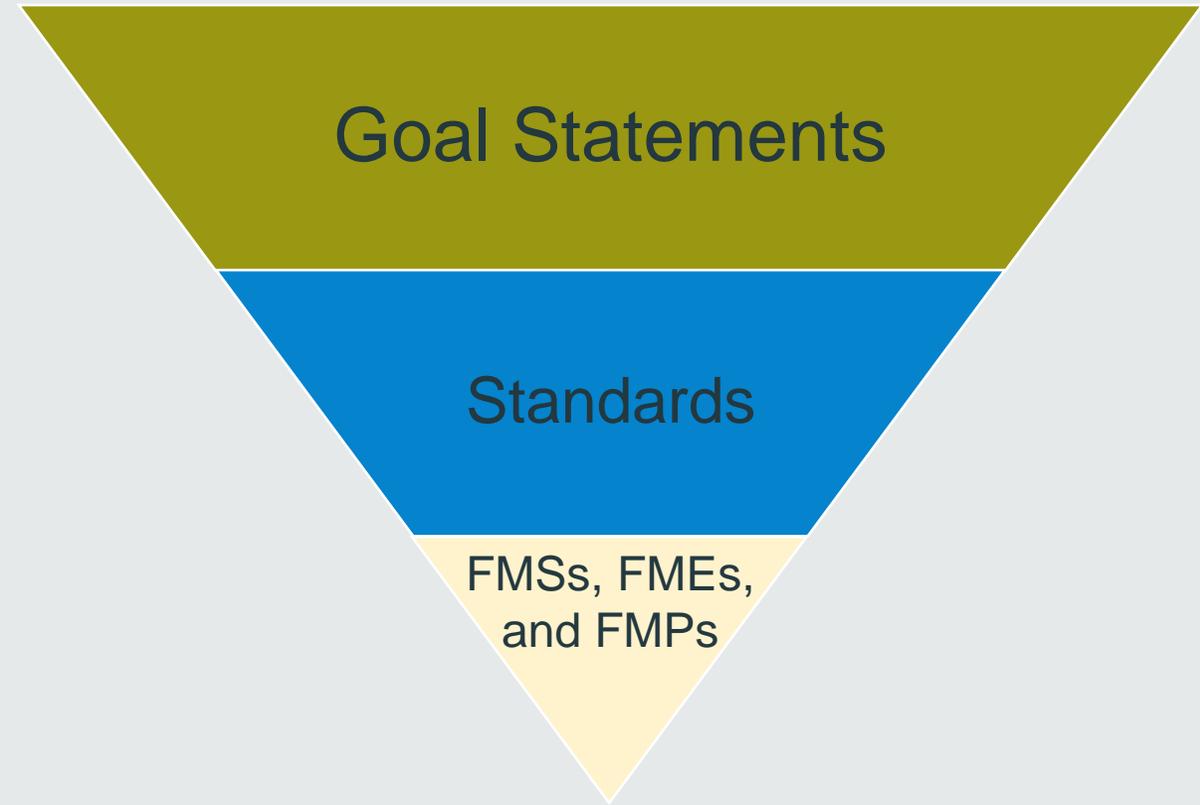
Develop focused draft list for
refinement of measures,
targets, etc.



TASK 3B – FLOOD MITIGATION AND FLOODPLAIN MANAGEMENT GOALS

Proposed Overarching Goal Categories

1. Education and Outreach
2. Flood Warning and Readiness
3. Flood Studies and Analysis
4. Regulatory and Guidance
5. Property Acquisition, Structure Elevation, and Floodproofing
6. Flood Infrastructure Projects





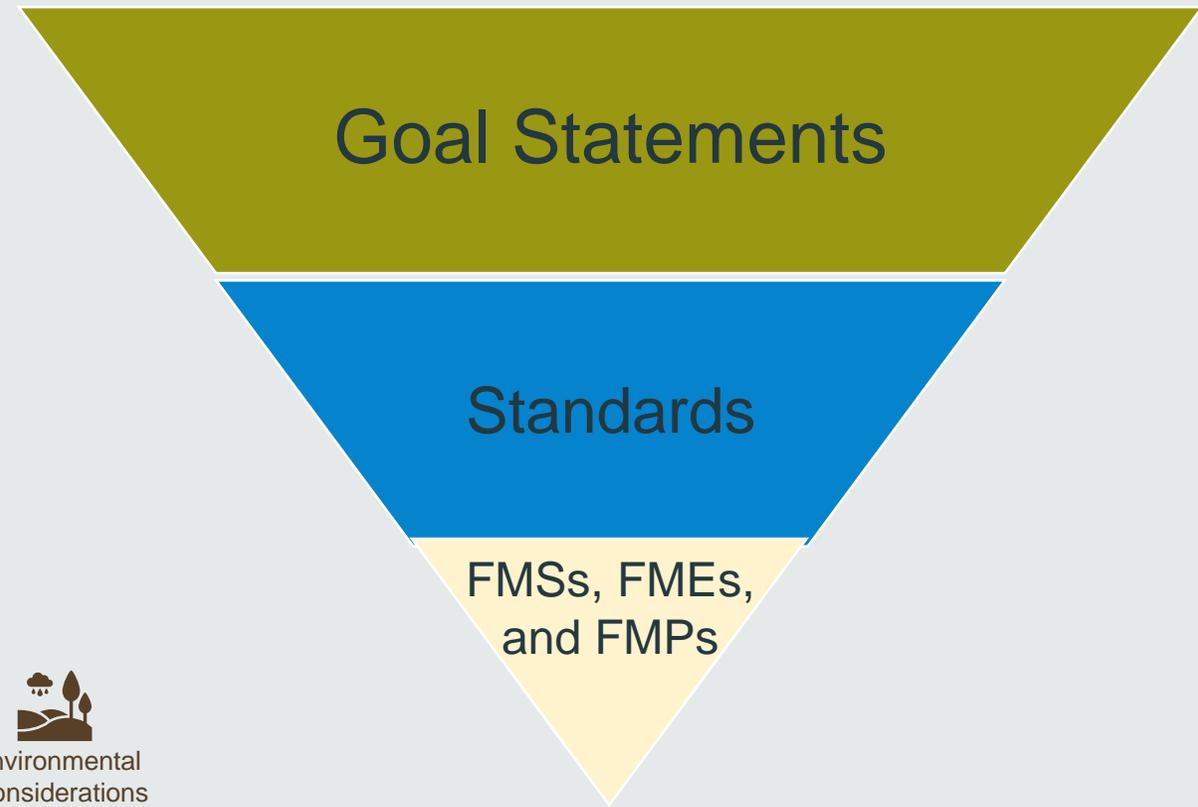
TASK 3B – FLOOD MITIGATION AND FLOODPLAIN MANAGEMENT GOALS

Proposed Overarching Goal Categories with Modifications

1. Education and Outreach
2. Flood Warning and Readiness
3. Flood Studies and Analysis
- ~~4. Regulatory and Guidance~~
5. Property Acquisition, Structure Elevation, and Floodproofing
6. Flood Infrastructure Projects
7. Funding Sources 
8. Environmental Considerations 

Funding Sources

Environmental Considerations





DRAFT GOAL STATEMENTS

1. Education and Outreach Goal Category

Proposed Goal Statement	How Goal Will be Measured	Short Term (2033) (6 Responses)	Long Term (2053) (6 Responses)	Target Area
Goal Statement 1: Increase the number of public outreach and education activities to improve awareness of flood hazards and benefits of flood planning in the region	% of entities annually performing outreach activities	<p><20% (2)</p> <p>20% - 30% (1)</p> <p>30% - 40% (2)</p> <p>40% - 50% (0)</p> <p>>50% (1)</p>	<p><30%</p> <p>30% - 40% (1)</p> <p>40% - 50% (0)</p> <p>50% - 60% (1)</p> <p>>60% (3)</p>	<p>Region-wide</p> <p>HUC 8 Specific</p>

Should this be a goal?



38% (3)



38% (3)



25% (2)

Comments Received:

- Include Community and Business Leaders
- # of entities may not be a good indicator for increased outreach due to overlapping jurisdictions and media coverage
- Add language to include information and importance of having flood insurance and how to obtain assistance
- Measure number of stories, articles, posts, etc. not # of entities
- % of entities performing outreach once/month during hurricane season and bimonthly offseason
- Critical to consider other outreach methods in colonia areas



DRAFT GOAL STATEMENTS

1. Education and Outreach Goal Category

Proposed Goal Statement	How Goal Will be Measured	Short Term (2033) (8 Responses)	Long Term (2053) (8 Responses)	Target Area
Goal Statement 2: Increase the number of entities and public stakeholders participating in the regional flood planning process.	% of entities and stakeholders participating in the regional flood planning process	<30% (2) 30% - 40% (3) 40% - 50% (1) 50% - 60% (2) >60% (0)	<40% (2) 40% - 50% (1) 50% - 60% (1) 60% - 70% (0) >70% (4)	Region-wide HUC 8 Specific

Should this be a goal?



100% (8)



0% (0)



0% (0)

Comments Received:

- If an entity provides incorrect or uneducated information than this measure is meaningless



ADDITIONAL GOAL STATEMENTS AND/OR COMMENTS

1. Education and Outreach Goal Category

- Use Region 15 RFPG website to provide the public with most current and accurate information.

Should this be a goal?

Possible Goal Statement	How Goal Will be Measured	Short Term (2033)	Long Term (2053)	Target Area
Goal Statement 3: Increase the number of entities that use the Region 15 RFPG website to provide flood mitigation and flood hazard information.	% of entities that use the Region 15 RFPG website for flood related information.	<10%	<30%	Region-wide
		10% - 20%	30% - 40%	HUC-8 specific
		20% - 30%	40% - 50%	
		30% - 40%	50% - 60%	
		>40%	>60%	



ADDITIONAL GOAL STATEMENTS AND/OR COMMENTS

1. Education and Outreach Goal Category

- Encourage commitment and continuing education of floodplain managers and officials.

Should this be a goal?

Possible Goal Statement	How Goal Will be Measured	Short Term (2033)	Long Term (2053)	Target Area
Goal Statement 4: Increase the number of continuing education webinars hosted by the Region 15 RFPG	# of flood mitigation and flood risk education webinars hosted by Region 15 RFPG, annually.	6	10	Region-wide
		6-10	10-15	
		10-15	15-20	HUC-8 specific
		15-20	20-25	
		20+	25+	



ADDITIONAL GOAL STATEMENTS AND/OR COMMENTS

1. Education and Outreach Goal Category

- ❑ Conduct a public survey every two years to assess their knowledge of flooding and flood mitigation.

Should this be a goal?

Possible Goal Statement	How Goal Will be Measured	Short Term (2033)	Long Term (2053)	Target Area
Goal Statement 5: Increase the proficiency of floodplain managers across the region	Average score of proficiency survey across the basin.	60%	70%	Region-wide
		60%-70%	70-80%	
		70-80%	80%-90%	HUC-8 specific
		80%-90%	90%-100%	
		>90%	100%	

Please vote for the following goal statements that you feel are the most important to include on Region 15's list of goals. You may vote 5 times and cast all 5 to one goal, or distribute them any way you see fit.

A - 1. Increase the number of public outreach and education activities to improve awareness of flood hazards and benefits of flood planning in the region.

B - 2. Increase the number of entities and public stakeholders participating in the regional flood planning process.

C - 3. Increase the number of entities that use the Region 15 RFPG website to provide flood mitigation and flood hazard information.

D - 4. Increase the number of continuing education webinars hosted by Region 15 RFPG.

E - 5. Increase the proficiency of floodplain managers across the region.



DRAFT GOAL STATEMENTS

2. Flood Warning and Readiness Goal Category

Proposed Goal Statement	How Goal Will be Measured	Short Term (2033)	Long Term (2053)	Target Area
Goal Statement 1: Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger to the most populated areas of the region.	% of region population covered by a warning and emergency response program.	<p><30% (1)</p> <p>30% - 40% (2)</p> <p>40% - 50% (1)</p> <p>50% - 60% (2)</p> <p>>60% (0)</p>	<p><40% (1)</p> <p>40% - 50% (1)</p> <p>50% - 60% (1)</p> <p>60% - 70% (0)</p> <p>>70% (4)</p>	<p>Region-wide</p> <p>HUC 8 Specific</p>

Should this be a goal?  63% (5)  13% (1)  25% (2)

- Comments Received:
- Modify to say the “affected areas of the region” instead of “most populated”
 - It will be difficult to establish parameters in the lower valley due to flat slopes and frequent flooding – upper end of area has more potential benefit but lower populations
 - Good starting measure – need to reevaluate on a regular basis
 - Efforts should focus on creating mitigation infrastructure. Also need to coordinate with TxDOT to ensure roads aren’t closed as improvements are made (during evacuation).



DRAFT GOAL STATEMENTS

2. Flood Warning and Readiness Goal Category

Proposed Goal Statement	How Goal Will be Measured	Short Term (2033) (7 Responses)	Long Term (2053) (7 Responses)	Target Area
Goal Statement 2: Increase the number of flood gages (rainfall/stream) in the region.	% of watershed and streams with active gages.	<p><30% (1)</p> <p>30% - 40% (3)</p> <p>40% - 50% (1)</p> <p>50% - 60% (0)</p> <p>>60% (2)</p>	<p><40% (1)</p> <p>40% - 50% (1)</p> <p>50% - 60% (1)</p> <p>60% - 70% (0)</p> <p>>70% (4)</p>	<p>Region-wide</p> <p>HUC 8 Specific</p>

Should this be a goal?



100% (8)



0% (0)



0% (0)

Comments Received:

- More measurement is better to understand flooding but not give warnings since people usually know when flooding is coming
- The number of stream gauges should be normalized by miles of stream in each watershed



ADDITIONAL GOAL STATEMENTS AND/OR COMMENTS

2. Flood Warning and Readiness Goal Category

- Flood readiness should include making sure that hurricane corridors are clear and accessible. Warning systems, like a tornado siren, do not prevent three inches of water from getting into your house.

Should this be a goal?

Possible Goal Statement	How Goal Will be Measured	Short Term (2033)	Long Term (2053)	Target Area
Goal Statement 3: Increase the number of entities that establish and coordinate hurricane evacuation routes with TxDOT	% of entities with coordinated evacuation routes	<10%	<30%	Region-wide
		10% - 20%	30% - 40%	HUC-8 specific
		20% - 30%	40% - 50%	
		30% - 40%	50% - 60%	
		>40%	>60%	



ADDITIONAL GOAL STATEMENTS AND/OR COMMENTS

2. Flood Warning and Readiness Goal Category

- I would like to better disseminate warnings and advisories from the National Weather Service to the general public

Should this be a goal?

Possible Goal Statement	How Goal Will be Measured	Short Term (2033)	Long Term (2053)	Target Area
Goal Statement 4: Increase the number of entities that partner with the National Weather Service to disseminate warnings.	% of entities using NWS to issue warnings and advisories	<10%	<30%	Region-wide
		10% - 20%	30% - 40%	HUC-8 specific
		20% - 30%	40% - 50%	
		30% - 40%	50% - 60%	
		>40%	>60%	



ADDITIONAL GOAL STATEMENTS AND/OR COMMENTS

2. Flood Warning and Readiness Goal Category

- Timely warning of flooding should rely on tv, radio, social media, and billboards

Should this be a goal?

Possible Goal Statement	How Goal Will be Measured	Short Term (2033)	Long Term (2053)	Target Area
Goal Statement 5: Increase the number of entities that use TV, radio, social media, and billboards to communicate flood warnings.	% of entities using real-time, media services to warn of flooding	<10%	<30%	Region-wide
		10% - 20%	30% - 40%	HUC-8 specific
		20% - 30%	40% - 50%	
		30% - 40%	50% - 60%	
		>40%	>60%	



ADDITIONAL GOAL STATEMENTS AND/OR COMMENTS

2. Flood Warning and Readiness Goal Category

- ❑ The State flood warning systems in the region should be integrated, and all data should have the same format

Should this be a goal?

Possible Goal Statement	How Goal Will be Measured	Short Term (2033)	Long Term (2053)	Target Area
Goal Statement 6: Increase the number of entities that integrate the State flood warning system into their local capabilities and utilize the same data format.	% of entities integrating the State Flood Warning system into their own systems (and use the same data format)	<10%	<30%	Region-wide
		10% - 20%	30% - 40%	HUC-8 specific
		20% - 30%	40% - 50%	
		30% - 40%	50% - 60%	
		>40%	>60%	

Please vote for the following goal statements that you feel are the most important to include on Region 15's list of goals. You may vote 5 times and cast all 5 to one goal, or distribute them any way you see fit.

- A - 1. Develop a regionally coordinated warning and emergency response program that can detect the flood threat and provide timely warning of impending flood danger to the most populated areas of the region **A**
- B - 2. Increase the number of flood gages (rainfall/stream) in the region **B**
- C - 3. Increase the number of entities that establish and coordinate hurricane evacuation routes with TxDOT **C**
- D - 4. Increase the number of entities that partner with the National Weather Service to disseminate warnings **D**
- E - 5. Increase the number of entities that use TV, radio, social media, and billboards to communicate flood warnings **E**
- F - 6. Increase the number of entities that integrate the State flood warning system into their local capabilities and utilize the same data format **F**



DRAFT GOAL STATEMENTS

3. Flood Studies and Analysis Goal Category

Proposed Goal Statement	How Goal Will be Measured	Short Term (2033) (7 Responses)	Long Term (2053) (7 Responses)	Target Area
Goal Statement 1: Decrease the average age of FEMA Flood Insurance Rate Maps used to define SFHAs in the region.	% of entities that have FIRM maps that are less than 20 years old	<p><30% (1)</p> <p>30% - 40% (4)</p> <p>40% - 50% (0)</p> <p>50% - 60% (2)</p> <p>>60% (0)</p>	<p><40% (1)</p> <p>40% - 50% (1)</p> <p>50% - 60% (1)</p> <p>60% - 70% (0)</p> <p>>70% (4)</p>	<p>Region-wide</p> <p>HUC 8 Specific</p>

Should this be a goal?



88% (7)



0% (0)



12% (1)

Comments Received:

- A great starting point that will vastly improve the area
- I do not believe FIRM maps are a meaningful source of information. Nobody relies on them so I do not think spending resources on this is important
- Aim for every 10 years instead of 20 years
- It may be valid to simply track the ages of FIRM maps in areas with no development but areas with rapid growth may be outdated after 5 years
- Map updates should be made based on actual updated data



DRAFT GOAL STATEMENTS

3. Flood Studies and Analysis Goal Category

Proposed Goal Statement	How Goal Will be Measured	Short Term (2033) (7 Responses)	Long Term (2053) (7 Responses)	Target Area
Goal Statement 2: Increase the coverage of available flood hazard data in the region by completing studies in areas identified as having gaps in flood mapping data.	% of entities that have completed studies (<10 years old) that identify flood hazards	<p><30% (1)</p> <p>30% - 40% (4)</p> <p>40% - 50% (1)</p> <p>50% - 60% (0)</p> <p>>60% (1)</p>	<p><40% (1)</p> <p>40% - 50% (1)</p> <p>50% - 60% (1)</p> <p>60% - 70% (1)</p> <p>>70% (3)</p>	<p>Region-wide</p> <p>HUC 8 Specific</p>

Should this be a goal?



100% (8)



0% (0)



0% (0)

Comments Received:

- Even if our region develops updated data, it does not mean that FEMA will update their maps. They have a very specific process, and we may not be able to do that locally.



DRAFT GOAL STATEMENTS

3. Flood Studies and Analysis Goal Category



Proposed Goal Statement	How Goal Will be Measured	Short Term (2033) (7 Responses)	Long Term (2053) (7 Responses)	Target Area
Goal Statement 3: Develop and maintain an operational stormwater asset management plan.	% of entities that utilize a stormwater asset management plan	<20% (0) 20% - 30% (1) 30% - 40% (3) 40% - 50% (0) >50% (3)	<40% (0) 40% - 50% (1) 50% - 60% (1) 60% - 70% (0) >70% (5)	Region-wide HUC 8 Specific

Should this be a goal?



100% (8)



0% (0)



0% (0)

Comments Received:

- It would be great to see all of the local entities come together to make this a reality
- To the extent that stormwater is going to be reused beneficially, this should be a top priority. Region 15 should work cooperatively with HCDD1 and Commissioner David Fuentes on the Delta Reclamation Project
- Stormwater asset management plans should be standardized to make sure all plans have the same level of specificity and format



ADDITIONAL GOAL STATEMENTS AND/OR COMMENTS

3. Flood Studies and Analysis Goal Category

- ❑ Flood studies need to be combined with realistic solutions to address floods. There are countless studies out there. We need answers as to how to stop flooding.

Should this be a goal?

Possible Goal Statement	How Goal Will be Measured	Short Term (2033)	Long Term (2053)	Target Area
Goal Statement 4: Reduce the number of areas that flood that do not have an identified construction project to address the flooding hazard.	% of flood hazard areas with no mitigation project identified	<10%	<30%	Region-wide
		10% - 20%	30% - 40%	HUC-8 specific
		20% - 30%	40% - 50%	
		30% - 40%	50% - 60%	
		>40%	>60%	



ADDITIONAL GOAL STATEMENTS AND/OR COMMENTS

3. Flood Studies and Analysis Goal Category

- ❑ Can we analyze risks to International Ports (bridges) which would impact local and national economies?

Should this be a goal?

Possible Goal Statement	How Goal Will be Measured	Short Term (2033)	Long Term (2053)	Target Area
Goal Statement 5: Increase the number of International Ports of Entry that have analyzed the flood risk to local and national economies.	% of number of ports of entries that have studied their existing flood risks	<10%	<30%	Region-wide
		10% - 20%	30% - 40%	HUC-8 specific
		20% - 30%	40% - 50%	
		30% - 40%	50% - 60%	
		>40%	>60%	

🌐 When poll is active, respond at pollev.com/halff

📱 Text **HALFF** to **22333** once to join

Please vote for the following goal statements that you feel are the most important to include on Region 15's list of goals. You may vote 5 times and cast all 5 to one goal, or distribute them any way you see fit.

A - 1. Decrease the average age of FEMA Flood Insurance Rate
Maps used to define SFHAs in the region

B - 2. Increase the coverage of available flood hazard data in the
region by completing studies in areas identified as having gaps
in flood mapping data

C - 3. Develop and maintain an operational stormwater asset
management plan

D - 4. Reduce the number of areas that flood that do not have an
identified construction project to address the flooding hazard

E - 5. Increase the number of International Ports of Entry that
have analyzed the flood risk to local and national economies



DRAFT GOAL STATEMENTS



4. Regulatory and Guidance Goal Category

Proposed Goal Statement	How Goal Will be Measured	Short Term (2033) (6 Responses)	Long Term (2053) (6 Responses)	Target Area
Goal Statement 1: Increase the number of Region 15 communities participating in the NFIP	% of entities that participate in the NFIP	100%	Maintain	Region-wide HUC 8 Specific

Should this be a goal?



83% (5)



0% (0)



17% (1)

Comments Received:

- Program already operates on its own and we should not spend any resources on this goal
- 10 years is a long period of time; suggest 5 years



DRAFT GOAL STATEMENTS

4. Regulatory and Guidance Goal Category

Proposed Goal Statement	How Goal Will be Measured	Short Term (2033) (5 Responses)	Long Term (2053) (5 Responses)	Target Area
Goal Statement 2: Increase the number of entities that adopt higher than NFIP minimum standards.	% of entities that require higher than minimum NFIP standards	<30% (1) 30% - 40% (1) 40% - 50% (2) 50% - 60% (0) >60% (1)	<50% (2) 50% - 60% (0) 60% - 70% (0) 70% - 80% (2) >80% (1)	Region-wide HUC 8 Specific

Should this be a goal?



75% (6)



0% (0)



25% (2)

Comments Received:

- Can we somehow encourage commitment and continuing education of Floodplain Managers and Officials
- This is meaningful; we should pursue



DRAFT GOAL STATEMENTS

4. Regulatory and Guidance Goal Category

Proposed Goal Statement	How Goal Will be Measured	Short Term (2033) (7 Responses)	Long Term (2053) (7 Responses)	Target Area
Goal Statement 3: Increase participation in the Community Rating System (CRS).	% of entities that participate in the CRS	<10% (2) 10% - 20% (1) 20% - 30% (0) 30% - 40% (3) >40% (1)	<20% (2) 20% - 30% (0) 30% - 40% (0) 40% - 50% (1) >50% (4)	Region-wide HUC 8 Specific

Should this be a goal?



75% (6)



0% (0)



25% (2)

Comments Received:

- We should not start new programs at this time; focus should be on funding new infrastructure and maintaining existing assets.



DRAFT GOAL STATEMENTS

4. Regulatory and Guidance Goal Category



Funding Sources



Proposed Goal Statement	How Goal Will be Measured	Short Term (2033) (6 Responses)	Long Term (2053) (6 Responses)	Target Area
Goal Statement 4: Increase the number of entities that have a dedicated drainage fee to help implement future Flood Mitigation Evaluations (FMEs) and Flood Mitigation Projects (FMPs) (Baseline: ~10% have fees)	% of entities that have a dedicated drainage fee	<30% (2) 30% - 40% (0) 40% - 50% (3) 50% - 60% (1) >60% (0)	<40% (2) 40% - 50% (0) 50% - 60% (0) 60% - 70% (0) >70% (4)	Region-wide HUC 8 Specific

Should this be a goal?



50% (4)



25% (2)



25% (2)

Comments Received:

- Entities should invest in FMEs and FMPs but how it is done should be up to the entity. We should not dictate that it must be through a fee to the public
- Unfunded mandates are already a big headache for cities and counties. We should not add additional burdens – need other answers
- Need to measure entities that are funding substantial CIP projects that provide drainage improvements or mitigation. They may be collecting drainage fees but they need to show that they are doing good with it not just putting it in General Fund
- Goal needs to be reformulated to better reflect the administrative reality of all jurisdictions



DRAFT GOAL STATEMENTS

4. Regulatory and Guidance Goal Category

Proposed Goal Statement	How Goal Will be Measured	Short Term (2033) (5 Responses)	Long Term (2053) (6 Responses)	Target Area
Goal Statement 5: Increase the number of communities that impose penalties for noncompliance with standards (Baseline: ~46% have penalties).	% of municipal floodplain ordinances that include penalties for noncompliance with standards	<p><50% (1)</p> <p>50% - 60% (2)</p> <p>60% - 70% (1)</p> <p>70% - 80% (1)</p> <p>>80% (0)</p>	<p><60% (2)</p> <p>60% - 70% (0)</p> <p>70% - 80% (0)</p> <p>80% - 90% (2)</p> <p>>90% (2)</p>	<p>Region-wide</p> <p>HUC 8 Specific</p>

Should this be a goal?



63% (5)



12% (1)



25% (2)

Comments Received:

- Great starting point; once this gets going, we can find newer and better tracking mechanisms
- Uniform rules and enforcement will prevent developers from negotiating with cities to minimize their obligations (say by threatening to develop in X city or county since it has more lenient standards). Those lenient standards are then paid by everyone for generations to come, while the developer obtains a short-term benefit
- There needs to be a system that provides incentives for compliance



DRAFT GOAL STATEMENTS

4. Regulatory and Guidance Goal Category

Proposed Goal Statement	How Goal Will be Measured	Short Term (2033) (6 Responses)	Long Term (2053) (6 Responses)	Target Area
Goal Statement 6: Reduce increases in future flood risk to life and property by regulating development in future conditions floodplains.	% of entities that regulate to future floodplain conditions in their ordinances.	<10% (1) 10% - 20% (1) 20% - 30% (2) 30% - 40% (2) >40% (0)	<20% (1) 20% - 30% (0) 30% - 40% (1) 40% - 50% (2) >50% (2)	Region-wide HUC 8 Specific

Should this be a goal?  88% (7)  0% (0)  12% (1)

- Comments Received:
- Ambiguous
 - How would you track this?



DRAFT GOAL STATEMENTS

4. Regulatory and Guidance Goal Category

Proposed Goal Statement	How Goal Will be Measured	Short Term (2033) (6 Responses)	Long Term (2053) (6 Responses)	Target Area
Goal Statement 7: Increase the number of entities in the Region that depict the 1% annual chance (100-yr) floodplain on the entity's future land use plan.	% of entities that depict the 1% annual chance floodplain on their future land use plan	<p><10% (2)</p> <p>10% - 20% (0)</p> <p>20% - 30% (2)</p> <p>30% - 40% (1)</p> <p>>40% (0)</p>	<p><20% (2)</p> <p>20% - 30% (0)</p> <p>30% - 40% (0)</p> <p>40% - 50% (1)</p> <p>>50% (3)</p>	<p>Region-wide</p> <p>HUC 8 Specific</p>

Should this be a goal?



75% (6)



0% (0)



25% (2)

Comments Received:

- The 1% annual rain event is not a good indicator of anything. We need to do away with this concept and focus on the fact that communities are flooding on an annual basis.
- Most small cities and many large cities do not have updated future land use plans



ADDITIONAL GOAL STATEMENTS AND/OR COMMENTS

4. Regulatory and Guidance Goal Category

- Have standard enforcement and standard development rules across the board and without exceptions.

Should this be a goal?

Possible Goal Statement	How Goal Will be Measured	Short Term (2033)	Long Term (2053)	Target Area
Goal Statement 8: Increase the number of entities that adopt Region 15 recommended standards.	% of entities who have adopted the recommended Region 15 standards	<20%	<40%	Region-wide
		20% - 30%	40% - 50%	HUC 8 Specific
		30% - 40%	50% - 60%	
		40% - 50%	60% - 70%	
		>50%	>70%	



ADDITIONAL GOAL STATEMENTS AND/OR COMMENTS



4. Regulatory and Guidance Goal Category



Funding Sources

- Entities should have annual CIP projects that mitigate drainage risk

Should this be a goal?

Possible Goal Statement	How Goal Will be Measured	Short Term (2033)	Long Term (2053)	Target Area
Goal Statement 9: Increase the number of entities that have a fully funded drainage CIP, annually	% of entities who have a fully funded drainage CIP, annually	<20%	<40%	Region-wide
		20% - 30%	40% - 50%	HUC 8 Specific
		30% - 40%	50% - 60%	
		40% - 50%	60% - 70%	
		>50%	>70%	

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Text **HALFF** to **22333** once to join

Please vote for the following goal statements that you feel are the most important to include on Region 15's list of goals. You may vote 5 times and cast all 5 to one goal, or distribute them any way you see fit.

A - 1. Increase the number of Region 15 communities participating in the National Flood Insurance Program

B - 2. Increase the number of entities that adopt higher than NFIP-minimum standards

C - 3. Increase participation in the Community Rating System

D - 4. Increase the number of entities that have a dedicated drainage fee to help implement future Flood Mitigation Evaluations (FMEs) and Flood Mitigation Projects (FMPs)

E - 5. Increase the number of communities that impose penalties for noncompliance with standards

F - 6. Reduce increases in future flood risk to life and property by regulating development in future conditions floodplains

G - 7. Increase the number of entities in the Region that depict the 1% annual chance (100-yr) floodplain on the entity's future land use plan

H - 8. Increase the number of entities that adopt Region 15 recommended standards

I - 9. Increase the number of entities that have a fully funded, drainage CIP, annually



DRAFT GOAL STATEMENTS

5. Property Acquisition, Structure Elevation, and Floodproofing Goal Category

Proposed Goal Statement	How Goal Will be Measured	Short Term (2033) (7 Responses)	Long Term (2053) (7 Responses)	Target Area
Goal Statement 1: Reduce the number of structures that have been subject to repeated flooding events through property buyouts.	Est. \$ value of benefits incurred through the utilization of property buyout programs	<\$5 M (2) \$5M - \$10M (2) \$10M - \$20M (2) \$20M - \$50M (0) >\$50M (1)	<\$10 M (2) \$10M - \$20M (0) \$20M - \$50M (2) \$50M - \$100M (2) >\$100M (1)	Region-wide HUC 8 Specific

Should this be a goal? 88% (7) 12% (1) 0% (0)

- Comments Received:
- Change goal statement to “.....through property buyouts or reuse”.
 - Measure should be “% of properties with repetitive damage history that have a buy-out BCR study”.



DRAFT GOAL STATEMENTS

5. Property Acquisition, Structure Elevation, and Floodproofing Goal Category



Proposed Goal Statement	How Goal Will be Measured	Short Term (2033) (5 Responses)	Long Term (2053) (5 Responses)	Target Area
Goal Statement 2: Increase the acreage of publicly protected open space in critical flood risk areas.	Number of acres of publicly protected open space in critical flood risk areas	<p><200 k (2)</p> <p>200 k – 400 k (2)</p> <p>400 k – 600 k (1)</p> <p>600 k – 800 k (0)</p> <p>>800 k (0)</p>	<p><400 k (1)</p> <p>400 k – 600 k (1)</p> <p>600 k – 800 k (2)</p> <p>800 k – 1 M (0)</p> <p>>1 M (1)</p>	<p>Region-wide</p> <p>HUC 8 Specific</p>

Should this be a goal?



88% (7)



0% (0)



12% (1)

Comments Received:

- I do not think this should be a priority when houses are flooding
- Measure should be “% of protected lands that are in critical flood risk areas”



DRAFT GOAL STATEMENTS

5. Property Acquisition, Structure Elevation, and Floodproofing Goal Category

Proposed Goal Statement	How Goal Will be Measured	Short Term (2033) (5 Responses)	Long Term (2053) (5 Responses)	Target Area
Goal Statement 3: Remove existing structures from the 1% annual chance floodplain by structural elevation and floodproofing.	Number of existing structures that have been removed from the 1% annual chance floodplain by elevation and floodproofing	<p><50 (2)</p> <p>500 – 100 (2)</p> <p>1,000 – 2,000 (0)</p> <p>2,000 – 5,000 (1)</p> <p>>5,000 k (0)</p>	<p><1,000 (1)</p> <p>1,000 – 2,000 (2)</p> <p>2,000 – 5,000 (1)</p> <p>5,000 – 10,000 (0)</p> <p>>10,000 k (1)</p>	<p>Region-wide</p> <p>HUC 8 Specific</p>

Should this be a goal?



57% (4)



14% (1)



29% (2)

Comments Received:

- Flood proofing should only be allowed in very specific circumstances; elevating is a better option
- Elevating will not fix things, we need to invest in infrastructure to remove them from floodplain
- We need to id these structures and monitor for future determinations
- Measurement should be: “% of structures removed from the 1% annual chance flood areas”. Need initial inventory of structures below BFE.



ADDITIONAL GOAL STATEMENTS AND/OR COMMENTS

5. Property Acquisition, Structure Elevation, and Floodproofing Goal Category

- We need to purchase as much land as possible today when the prices are very cheap, particularly in rural areas. Flooding does not stop at political boundaries. Municipalities and counties need to be willing to invest outside of their footprint to develop infrastructure in locations where it is economically feasible to do so.

Should this be a goal?

Possible Goal Statement	How Goal Will be Measured	Short Term (2033)	Long Term (2053)	Target Area
Goal Statement 4: Increase the amount of municipally-owned land in the region that can be utilized for future regional stormwater infrastructure	% increase in municipally-owned land in region (or by entity)	<20%	<40%	Region-wide
		20% - 30%	40% - 50%	HUC 8 Specific
		30% - 40%	50% - 60%	
		40% - 50%	60% - 70%	
		>50%	>70%	



ADDITIONAL GOAL STATEMENTS AND/OR COMMENTS



5. Property Acquisition, Structure Elevation, and Floodproofing Goal Category



Environ.
Consid.

- ❑ Acquire and reuse flood prone areas for other beneficial public use

Should this be a goal?

Possible Goal Statement	How Goal Will be Measured	Short Term (2033)	Long Term (2053)	Target Area
Goal Statement 5: Increase the acreage of flood-prone areas that are acquired and reused for a beneficial public use.	% increase in acquired flood-prone areas in region (or by entity) that are reused for a beneficial public use	<20%	<40%	Region-wide
		20% - 30%	40% - 50%	HUC 8 Specific
		30% - 40%	50% - 60%	
		40% - 50%	60% - 70%	
		>50%	>70%	



ADDITIONAL GOAL STATEMENTS AND/OR COMMENTS

5. Property Acquisition, Structure Elevation, and Floodproofing Goal Category

- ❑ Develop an inventory of all structures currently below BFE using best available data

Should this be a goal?

Possible Goal Statement	How Goal Will be Measured	Short Term (2033)	Long Term (2053)	Target Area
Goal Statement 6: Develop an inventory of all structures currently below BFE using best available data	% of Region 15 area with a maintained inventory of structures below BFE	<20%	<40%	Region-wide
		20% - 30%	40% - 50%	HUC 8 Specific
		30% - 40%	50% - 60%	
		40% - 50%	60% - 70%	
		>50%	>70%	

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Please vote for the following goal statements that you feel are the most important to include on Region 15's list of goals. You may vote 5 times and cast all 5 to one goal, or distribute them any way you see fit.

A - 1. Reduce the number of structures that have been subject to repeated flooding events through property buyouts

B - 2. Increase the acreage of publicly protected open space in critical flood risk areas

C - 3. Remove existing structures from the 1% annual chance floodplain by structural elevation and floodproofing

D - 4. Increase the amount of municipally-owned land in the region that can be utilized for future regional stormwater infrastructure

E - 5. Increase the acreage of flood-prone areas that are acquired and reused for a beneficial public use

F - 6. Develop an inventory of all structures currently below BFE using best available data



DRAFT GOAL STATEMENTS

6. Flood Infrastructure Projects Goal Category



Environ.
Consid.



Proposed Goal Statement	How Goal Will be Measured	Short Term (2033) (7 Responses)	Long Term (2053) (7 Responses)	Target Area
Goal Statement 1: Increase the number of nature-based flood risk reduction projects.	% of nature-based flood risk reduction projects relative to projects that are not nature-based	<p><10% (2)</p> <p>10% - 20% (1)</p> <p>20% - 30% (3)</p> <p>30% - 40% (1)</p> <p>>40% (0)</p>	<p><20% (2)</p> <p>20% - 30% (0)</p> <p>30% - 40% (1)</p> <p>40% - 50% (0)</p> <p>>50% (4)</p>	<p>Region-wide</p> <p>HUC 8 Specific</p>

Should this be a goal?



88% (7)



0% (0)



12% (1)

Comments Received:

- This is not a good option for Region 15. We are flat and have clay in our surface. There is no meaningful natural option that I am aware of. We need to focus on infrastructure development.



DRAFT GOAL STATEMENTS

6. Flood Infrastructure Projects Goal Category

Proposed Goal Statement	How Goal Will be Measured	Short Term (2033) (6 Responses)	Long Term (2053) (6 Responses)	Target Area
Goal Statement 2: Reduce the number of vulnerable critical facilities within the existing 1% annual chance floodplain event.	% of critical facilities in the region removed from the existing 1% annual chance floodplain event	<p><5% (2)</p> <p>5% - 10% (1)</p> <p>10% - 15% (1)</p> <p>15% - 20% (1)</p> <p>>20% (1)</p>	<p><10% (1)</p> <p>10% - 30% (1)</p> <p>30% - 50% (0)</p> <p>50% - 70% (3)</p> <p>>70% (1)</p>	<p>Region-wide</p> <p>HUC 8 Specific</p>

Should this be a goal?



75% (6)



0% (0)



25% (2)

Comments Received:

- This sounds expensive. For example, if a jail is in a floodplain, build a new jail somewhere else. Why not invest in infrastructure instead?
- International Ports (bridges) should be identified as critical facilities



DRAFT GOAL STATEMENTS

6. Flood Infrastructure Projects Goal Category

Proposed Goal Statement	How Goal Will be Measured	Short Term (2033) (6 Responses)	Long Term (2053) (6 Responses)	Target Area
Goal Statement 3: Reduce the number of low water crossings located within the existing 1% annual chance event floodplain.	Total number of low water crossings located within the existing 1% annual chance event floodplain	<p><10% (2)</p> <p>10% - 15% (0)</p> <p>15% - 20% (1)</p> <p>20% - 25% (2)</p> <p>>25% (1)</p>	<p><20% (2)</p> <p>20% - 25% (0)</p> <p>25% - 30% (0)</p> <p>30% - 35% (1)</p> <p>>35% (3)</p>	<p>Region-wide</p> <p>HUC 8 Specific</p>

Should this be a goal?



63% (5)



12.5% (1)



25% (2)

Comments Received:

- Measurement should be: “Reduce the number of low water crossings and other transportation facilities located.....”
 - Many roads are impassable due to flooding of agricultural lands isolating rural residents from food and rescue



DRAFT GOAL STATEMENTS

6. Flood Infrastructure Projects Goal Category

Proposed Goal Statement	How Goal Will be Measured	Short Term (2033) (6 Responses)	Long Term (2053) (6 Responses)	Target Area
Goal Statement 4: Increase the number of entities that provide regional detention as part of their floodplain management program.	% of entities that provide regional detention as part of their floodplain management program	<20% (1) 20% - 30% (2) 30% - 40% (2) >40% (1)	<30% (0) 30% - 40% (2) 40% - 50% (1) 50% - 60% (0) >60% (3)	Region-wide HUC 8 Specific

Should this be a goal?  88% (7)  0% (0)  12% (1)

Comments Received:

- This is the only meaningful thing we can do in Regin 15; this is where the majority of funding and energy should go.



ADDITIONAL GOAL STATEMENTS AND/OR COMMENTS



6. Flood Infrastructure Projects Goal Category



Funding Sources

- ❑ We should be looking into teaming opportunities with TxDOT and other agencies to seek funding to create new infrastructure for flood control as new projects are being developed. We need consistent long-term planning, not a band-aid whenever it rains

Should this be a goal?

Possible Goal Statement	How Goal Will be Measured	Short Term (2033)	Long Term (2053)	Target Area
Goal Statement 5: Develop partnerships with TxDOT and other agencies to ensure that flood mitigation infrastructure is incorporated with new projects/developments.	% of new TxDOT and agency projects that include flood mitigation infrastructure in partnership with local Region 15 entities	<20%	<40%	Region-wide
		20% - 30%	40% - 50%	HUC 8 Specific
		30% - 40%	50% - 60%	
		40% - 50%	60% - 70%	
		>50%	>70%	





ADDITIONAL GOAL STATEMENTS AND/OR COMMENTS



6. Flood Infrastructure Projects Goal Category



Environ.
Consid.

- Establish regional storage facilities that could become water supply

Should this be a goal?

Possible Goal Statement	How Goal Will be Measured	Short Term (2033)	Long Term (2053)	Target Area
Goal Statement 6: Establish regional storage facilities that could be dually used for water supply.	% of new regional storage facilities that can also provide water supply benefit	<20%	<40%	Region-wide
		20% - 30%	40% - 50%	HUC 8 Specific
		30% - 40%	50% - 60%	
		40% - 50%	60% - 70%	
		>50%	>70%	

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Please vote for the following goal statements that you feel are the most important to include on Region 15's list of goals. You may vote 5 times and cast all 5 to one goal, or distribute them any way you see fit.

A - 1. Increase the number of nature-based flood risk reduction projects

B - 2. Reduce the number of vulnerable critical facilities within the existing and future 1% annual chance floodplain event

C - 3. Reduce the number of low water crossings located within the existing and future 1% annual chance event floodplain

D - 4. Increase the number of entities that provide regional detention as part of their floodplain management program

E - 5. Develop partnerships with TxDOT and other agencies to ensure that flood mitigation infrastructure is incorporated with new projects/developments

F - 6. Establish regional storage facilities that could be dually used for water supply



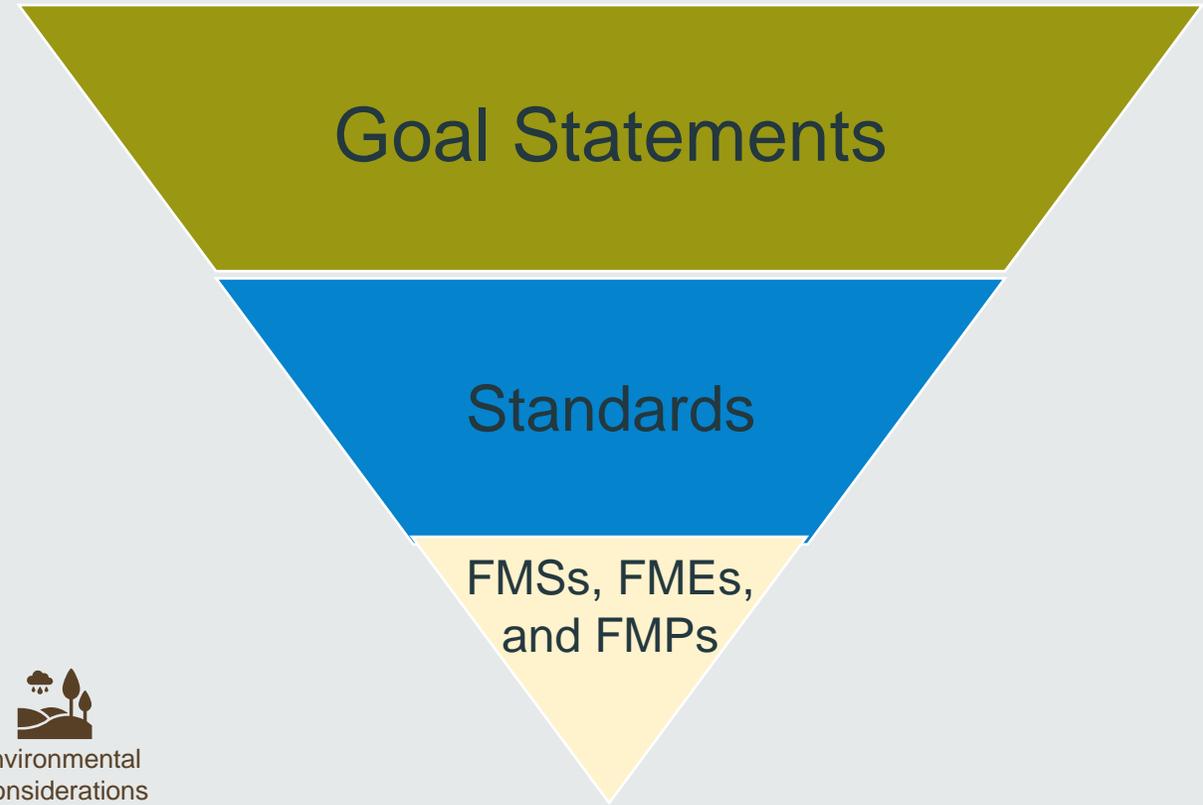
TASK 3B – FLOOD MITIGATION AND FLOODPLAIN MANAGEMENT GOALS

Proposed Overarching Goal Categories with Modifications

1. Education and Outreach
2. Flood Warning and Readiness
3. Flood Studies and Analysis
- ~~4. Regulatory and Guidance~~
5. Property Acquisition, Structure Elevation, and Floodproofing
6. Flood Infrastructure Projects
7. Funding Sources 
8. Environmental Considerations 

Funding Sources

Environmental Considerations



Should the Goal Category titled "Regulatory and Guidance" be modified to "Guidance"?

Yes

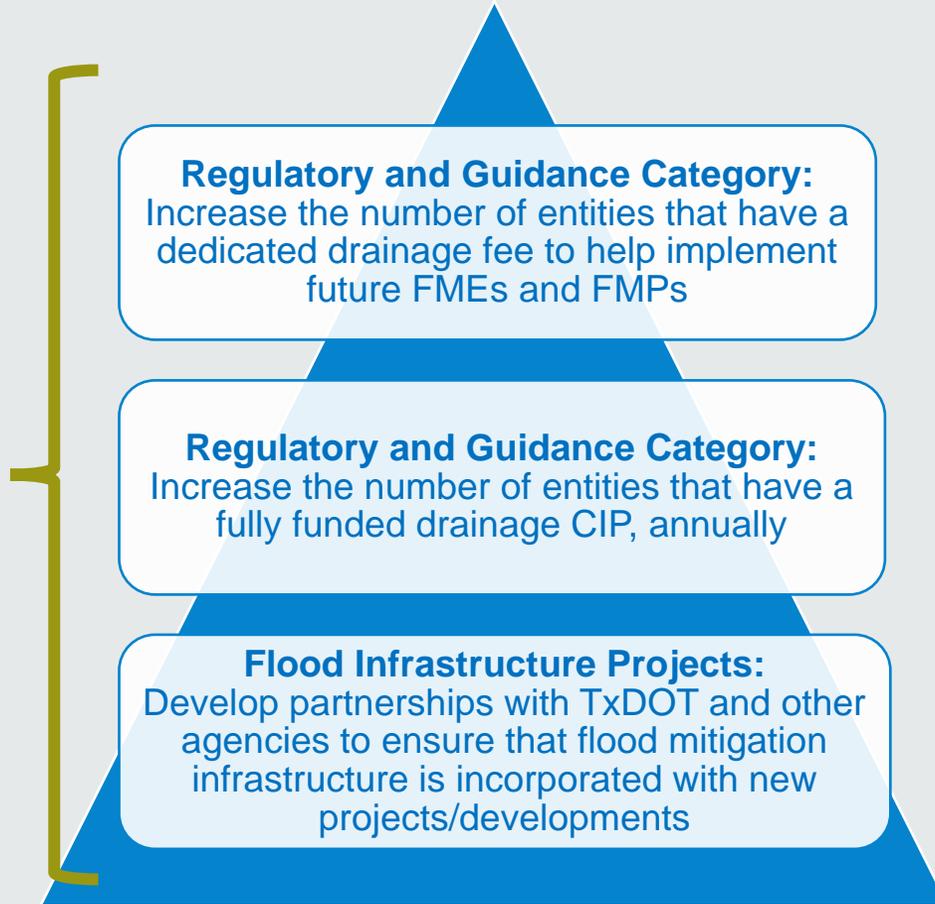
No



TASK 3B – FLOOD MITIGATION AND FLOODPLAIN MANAGEMENT GOALS

Proposed Funding Sources Category

Funding Goals



Additional funding goals?



Funding Sources Category?

Should "Funding Sources" be added as a Goal Category?

Yes

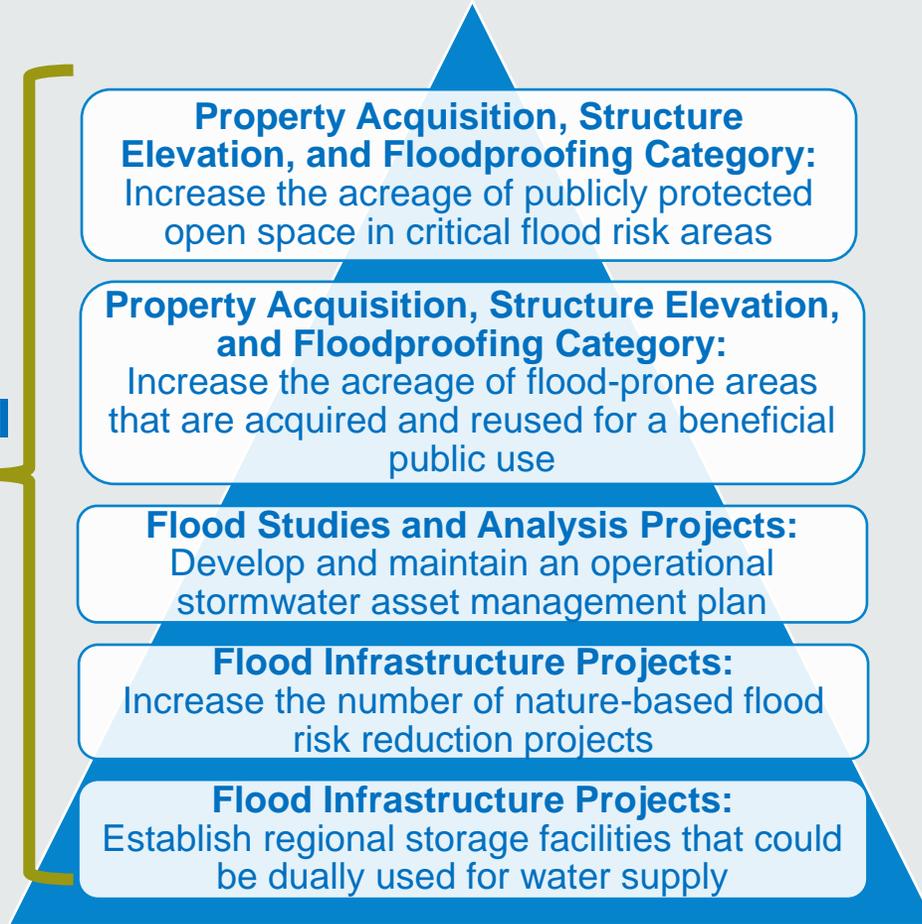
No



TASK 3B – FLOOD MITIGATION AND FLOODPLAIN MANAGEMENT GOALS

Proposed Environmental Considerations Category

Environmental Goals



Additional funding goals?



Environmental Considerations Category?

Should "Environmental Considerations" be added as a Goal Category?

Yes

No



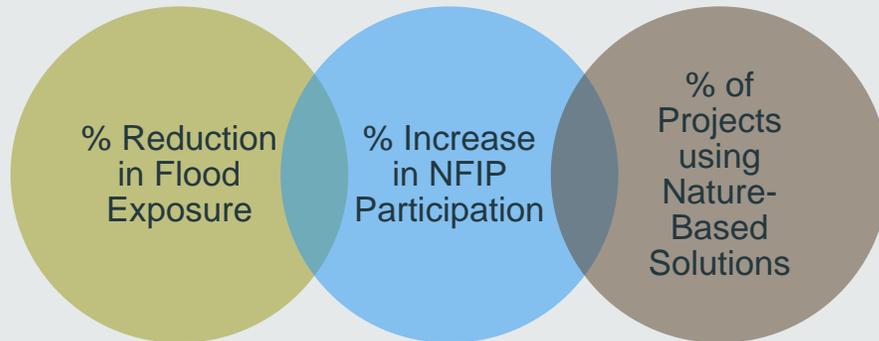
TASK 3B – FLOOD MITIGATION AND FLOODPLAIN MANAGEMENT GOALS

Goals versus Standards

Goals

Set specific timelines and goalposts to implement proven flood mitigation measures, reducing future risk for people and property.

Examples:

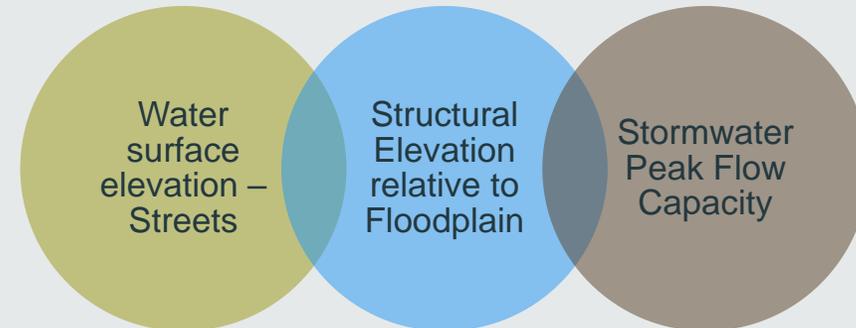


Must be measurable and have a timeframe!

Standards

Establish consistent protocols for floodplain management that can be universally applied

Examples:





TASK 3 – HOMEWORK

We need your feedback!

- Review and comment on the following items for each selected goal statement:**
 - How Each Goal Will be Measured
 - Short-Term and Long-Term Targets
 - Residual risk
 - How Each Goal Will be Considered Geographically (Regional or Sub-Regional/HUC 8 Area)
- Review example floodplain management practices/standards**
 - Think about whether the Region wants to recommend practices/standards (“shoulds”) or require minimum practices (“musts”)
- Be Prepared to Vote on Goals at the Next Meeting in October**



TASK 4

FLOOD MITIGATION NEEDS ASSESSMENT & IDENTIFICATION OF FME, FMP & FMS



TASK 4A – FLOOD MITIGATION NEEDS ANALYSIS

Goal of Task

- ❑ Identify areas in region with greatest:
 - ❑ Flood risk knowledge gaps
 - ❑ (FMEs)
 - ❑ Known flood risks and flood mitigation needs
 - ❑ FMSs
 - ❑ FMPs





TASK 4A – FLOOD MITIGATION NEEDS ANALYSIS

Review of FMEs, FMS, and FMPs

FME - Flood Management Evaluations

- Study of a specific, flood-prone area needed to assess risk and/or determine whether there are potentially feasible FMSs or FMPs

FMS - Flood Management Strategies

- Plan to reduce flood risk or mitigate flood hazards to life or property;
- action group would like to identify, evaluate, and recommend that doesn't qualify as an FME or FMP

FMP - Flood Mitigation Projects

- Project (structural or non-structural) that has non-zero capital costs or other non-recurring cost and will reduce flood risk, mitigate flood hazards to life or property



TASK 4A – FLOOD MITIGATION NEEDS ANALYSIS

Approach

COLLECT

Region Activities

- Collected Studies / Plans
- Known and Researched Studies / Plans

Historical Events

- Documentation of past flooding events

Grant Applications

- TWDB, GLO, TDEM, etc.

ANALYZE

Assess Collected Data

- Flood Prone Areas
- Data Gaps and Study Needs
- Mitigation Needs

Initial Classifications

- FMEs, FMSs, and FMPs

IDENTIFY

Greatest Risk and Need

- Infrastructure: Buildings, Roadways, etc.
- Land Cover
- Populations and Resilience

Study Needs

- FMEs

Mitigation Needs

- FMSs and FMPs



TASK 4B – POTENTIAL FMEs, FMSs & FMPs

Overview

FLOOD MANAGEMENT STRATEGIES (FMSs)	
<ul style="list-style-type: none"> • Infrastructure Projects • Property/Easement Acquisition • Elevation of Structures 	<ul style="list-style-type: none"> • Education and Outreach • Flood Warning and Measurement • Regulatory and Guidance

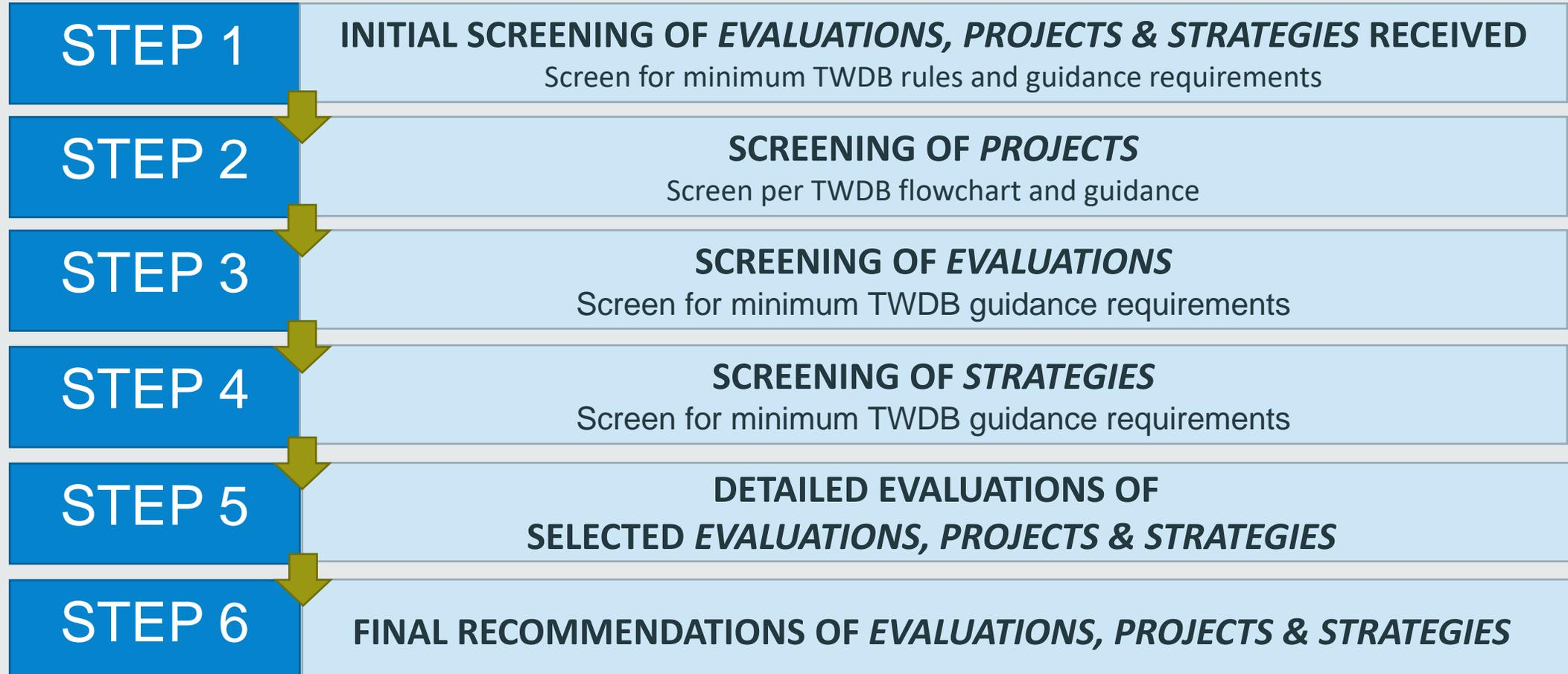
FLOOD MANAGEMENT EVALUATIONS (FMEs)			
Studies		Risk Reduction Analysis	
Flood Preparedness Study	Modeling and Mapping / Risk Identification	Alternatives Analysis / Feasibility Assessment	Preliminary Engineering (30% design)

FLOOD MITIGATION PROJECTS (FMPs)	
Structural Infrastructure	Non-Structural
Advanced Analysis / Design / Construction (30 - 100% design)	Project Implementation <ul style="list-style-type: none"> • Property/Easement Acquisition • Elevation of Structures • Floodproofing • Flood Readiness and Resilience • Flood Warning, Gauges • Regulatory Requirements



TASK 4B – Proposed Selection Process

5 General Steps





TASK 4B – Proposed Selection Process

STEP 1

INITIAL SCREENING OF *EVALUATIONS, PROJECTS & STRATEGIES RECEIVED*

Screen for minimum TWDB rules and guidance requirements

- 1.1 Flood mitigation or floodplain management goal
- 1.2 Meets an emergency need
- 1.3 Flood problem with drainage area of 1 square mile or greater*
- 1.4 Reduces flood risk for 100-year (1% annual chance) flood

*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



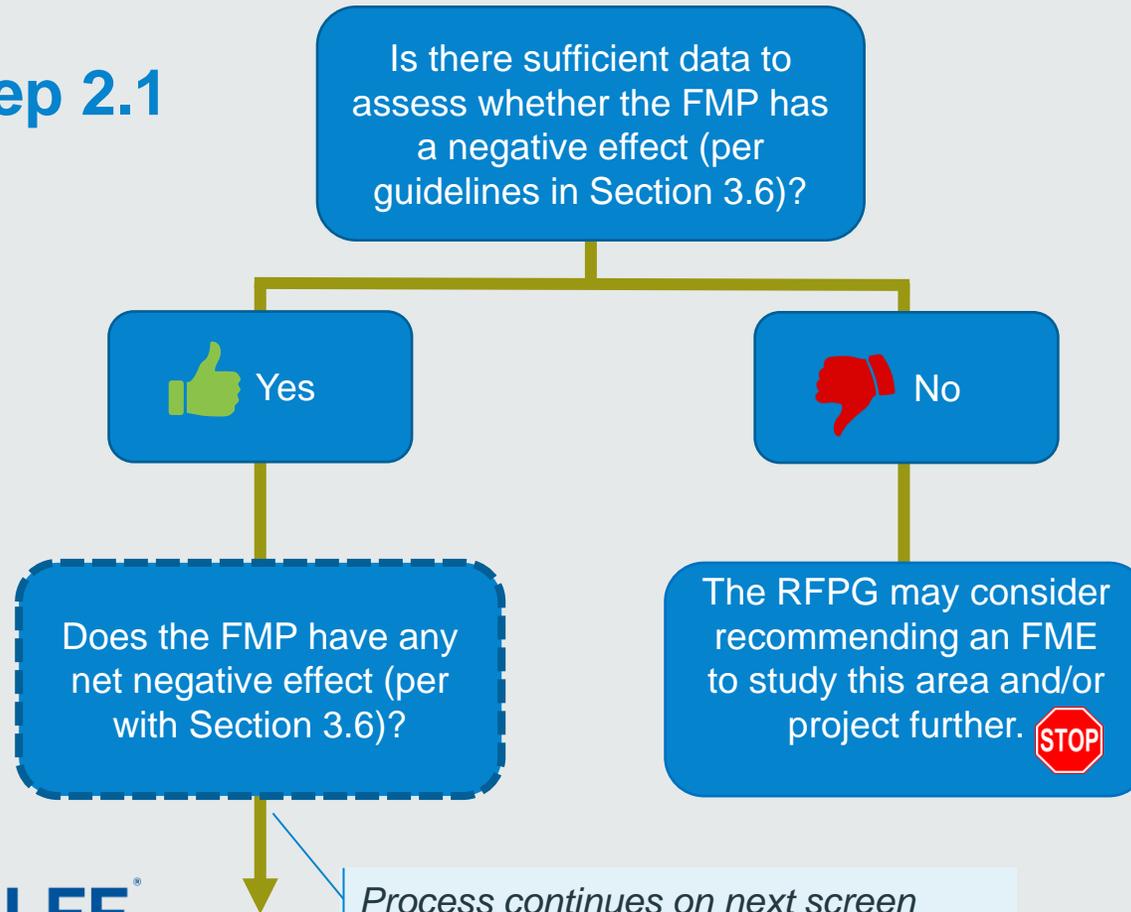
TASK 4B – Proposed Selection Process

STEP 2

SCREENING OF PROJECTS

Screen per TWDB flowchart and guidance

Step 2.1



“Sufficient data”

- H&H modeling, mapping, and basis for mitigation project analysis generally meets Section 3.5 of TWDB technical guidelines
 - Reliable
 - Minimal uncertainty



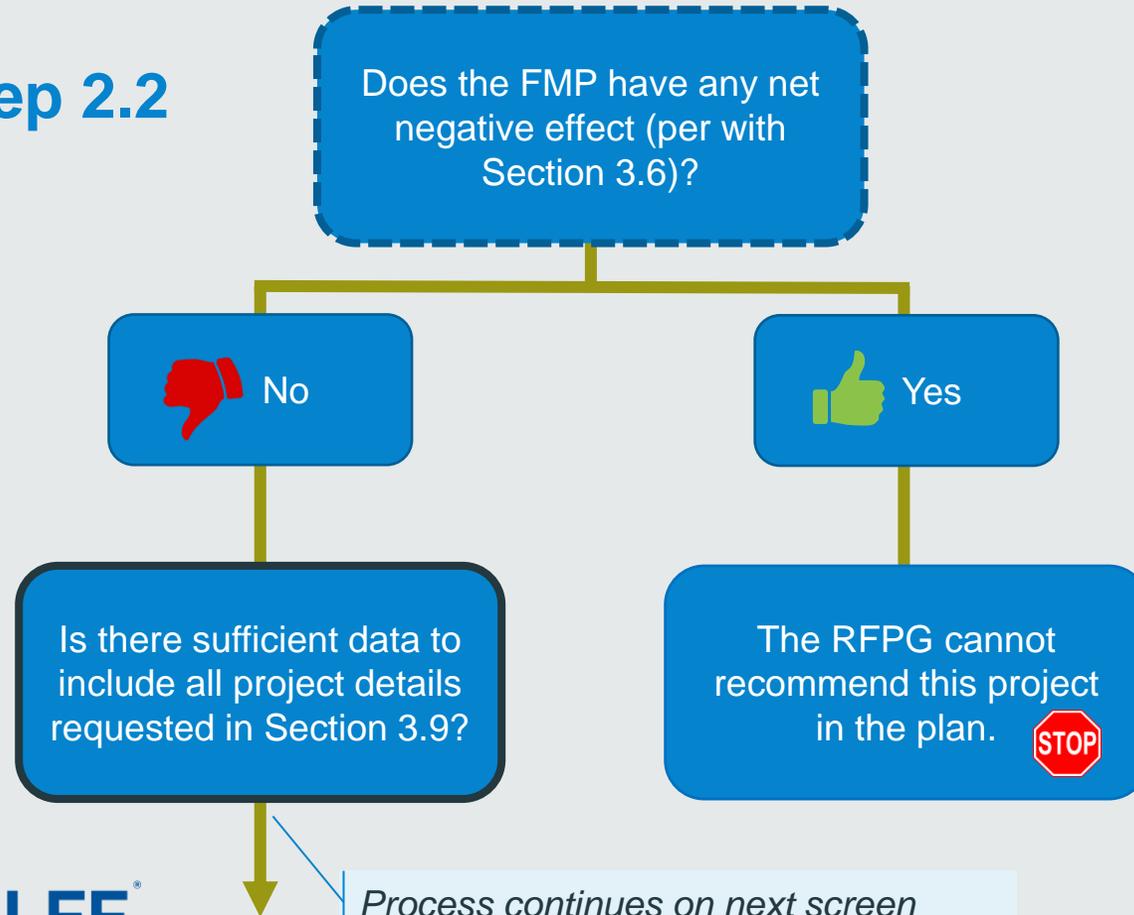
TASK 4B – Proposed Selection Process

STEP 2

SCREENING OF PROJECTS - *CONTINUED*

Screen per TWDB flowchart and guidance

Step 2.2



“Negative effect”

- For the 100-year (1% annual chance) flood event, no rise in flood elevation or discharge should be permissible. Projects should not:
 - Increase inundation on homes or commercial buildings
 - Increase inundation beyond ROW or easements
 - Increase inundation beyond existing drainage infrastructure capacity



TASK 4B – Proposed Selection Process

STEP 2

SCREENING OF PROJECTS - *CONTINUED*

Screen per TWDB flowchart and guidance

Step 2.3

Is there sufficient data to include all project details requested in Section 3.9?



Yes

The RFPG may consider recommending this FMP in the plan. 



No

The RFPG may consider recommending the project and leaving some of the project details blank (blank fields will be scored as zero). 

The RFPG may consider recommending an FME to study this area and/or project further. 

Section 3.9 “Project Details”

- Flood severity level metrics
- Flood risk/damage reduction metrics
- Estimated capital and O&M cost
- Benefit/Cost Ratios
- Environmental benefits/impacts
- Implementation constraints
- Water supply benefits
- Others...



TASK 4B – Proposed Selection Process

STEP 3

SCREENING OF *EVALUATIONS*

Screen for minimum TWDB guidance requirements

Three General Categories of Evaluations:

1. Projects (FMPs) that didn't make the cut in Step 2
2. Planned flood studies or flood risk reduction alternatives analyses provided by communities
3. Flood study or flood risk reduction alternatives analysis needs identified in Task 4A

- 3.1 If detailed H&H and mitigation alternatives analysis → *Project or Strategy*
- 3.2 Sensible
- 3.3 Reasonable planning-level cost estimate
- 3.4 Identified sponsor(s)
- 3.5 Structures, population and critical facilities at risk
- 3.6 Roadways at risk
- 3.7 Area of farm and ranch land at risk



TASK 4B – Proposed Selection Process

STEP 4

SCREENING OF STRATEGIES

Screen for minimum TWDB guidance requirements

“A proposed plan to reduce flood risk or mitigate flood hazards to life or property”

- Any proposed action that doesn't qualify as an FME or FMP
- RFPG has flexibility with Strategies
- Flood study or flood risk reduction alternatives analysis needs identified in Task 4A

Initial Screening (Step 1)

- 1.1 - *Flood mitigation or floodplain management goal*
 - 1.2 - *Meets an emergency need*
 - 1.3 - *Flood problem with drainage area of 1 square mile or greater**
 - 1.4 - *Reduces flood risk for 100-year (1% annual chance) flood*
- 4.1 Planning-level cost estimate
 - 4.2 Identified sponsor(s)
 - 4.3 Estimated flood risk and flood risk reduction



TASK 4B – Proposed Selection Process

STEP 5

DETAILED EVALUATIONS OF SELECTED *EVALUATIONS, PROJECTS & STRATEGIES*

- 5.1 Project benefit-cost ratios > 1.0
- 5.2 Have identified a *willing* sponsor(s)
- 5.3 No known challenging implementation constraints or hurdles (ROW, utility conflicts, permitting, etc.)
- 5.4 Evaluate RFPG specific requirements to incorporate a project or strategy into the RFP?



TASK 4B – Proposed Selection Process

STEP 6

FINAL RECOMMENDATIONS OF *EVALUATIONS, PROJECTS & STRATEGIES*

- 6.1 Public comment of Recommended FMEs, FMSs and FMPs
- 6.2 Initial/Final adoption

Deliverables:

Technical Memorandum

- Potentially feasible
- Potentially not feasible

Draft Regional Flood Plan

- Recommended FMEs, FMSs and FMPs



LOOK AHEAD

Next meeting

□ Key actions that are needed:

- Adoption of specific and achievable flood mitigation and floodplain management goals (Task 3B)
- Approval of proposed process to identify and select FMEs, FMSs, and FMPs (Task 4B)





**COMMENTS
WELCOMED.**